

CITY OF OMAK

OKANOGAN COUNTY

WASHINGTON



WATER SYSTEM PLAN

G&O #16015
JANUARY 2018



Gray & Osborne, Inc.
CONSULTING ENGINEERS

DOH COMMENT RESPONSE FORM
City of Omak; PWS ID 63750K; re: submittal #17-1010

DOH Comment No.	DOH - 1 st WSP draft comments	Water System Response 2 nd draft WSP received 1/25/18	Page No. of Response	DOH 2 nd draft WSP comments 4/16/18	Water System Response (2 nd draft) 5/1/18
1	Chapter 1: The most recent water facilities inventory (WFI), updated 7/13/17, identifies all sources have chlorination treatment. The Treatment and Disinfection paragraph on page 1-9 states "Chlorination is available for the City's wells that have been relegated to emergency use only." The written description for the Park Well (S06) on page 1-4 doesn't identify chlorination. Please clarify.	Park Well written description revised.	1-4	Okay - addressed	
2	Chapter 1: Table 1-4 on page 1-6 incorrectly identifies well S04 (Okoma) as a "permanent" source. SO4 should be shown as an "emergency" source. Please correct.	Table 1-4 revised to identify Okoma Well usage as emergency	1-6	Okay - addressed	
3	Chapter 1: Please provide a service area map(s) that is large enough for us to easily identify the service area boundaries and streets. We need a map large enough to determine is an address is inside or outside of the service area.	Large format wall map of Figure 1-3 provided in App R	App R	Okay - addressed	
4	Chapter 3: The water usage for the 12 Tribes Casino property (Casino) is not included in the historical water usage. Include a discussion on the Casino's water usage and the ERUs attributed to the Casino.	Historical water usage data for 12-Tribes Casino included.	Various	Okay - addressed	
5	Chapter 3: Worksheet 6-1. <ul style="list-style-type: none"> a. Provide the calculations as to how the ERUs are calculated for each of the water system components. b. The existing ERUs need to include all of the existing connections. Please update the worksheet to include the Casino water usage. c. Is the capacity of 2,800 ERUs for the Maximum Annual Volume (Qa) correct? If so, this is less than the existing number of ERUs. 	<ul style="list-style-type: none"> a) Water system component calculations provided. b) Worksheet 6-1 revised to include 12 Tribes Casino water usage. c) Revised capacity based on ADD is included on Worksheet 6-1 	3-19 & 3-20	<p>According to Worksheet 6-1, the existing number of ERUs is 3,162 and the limiting physical capacity is storage at 3,117. Therefore, the system is exceeding their capacity and should be limited to its current number of connections of 2,471 (per WFI dated 7/13/17*). This would mean no more new connections until additional storage or source capacity is in place.</p> <p>In the previous 2011 WSP approval, Omak was approved for "unspecified" number of connections because they had the sufficient capacity for the life of the plan. Before sending out the new approval letter, which limits them to their existing number of connections, I suggest that Omak and their engineer be notified of this issue and ramifications.</p> <p>*Since Omak's current WFI is</p>	<p>Storage capacity analysis calculated using <i>WSDM</i> equations 6-6 (ES) and 6-7 (SS) instead of 6-8 (CRS). The limiting physical capacity is 3,298 ERUs (source), which is greater than the existing number of ERUs of 3,162. Pages 3-20 and 3-21 (Worksheet 6-1) have been revised accordingly.</p> <p>An updated WFI is included in Appendix B.</p>

				almost a year old, they should probably update the WFI to show the current number of connections.	
6	Appendix C: Please update the Coliform Monitoring Plan (CMP) to include the Groundwater Rule and Revised Total Coliform Rule monitoring requirements and a map showing the monitoring locations. A CMP template is available on our website at http://www.doh.wa.gov/Portals/1/Documents/Pubs/331-036.pdf (DOH publication #331-036).	Updated CMP included in App C	App C	App. C, CMP system information, Section C - Wholesaling of Groundwater, states no groundwater is sold to other public water systems. The first paragraph on page 2-14 states the city began wholesaling water to the 12 Tribes Casino in June 2015. Please clarify.	No action taken per conversation between City and DOH on April 30, 2018.
7	Appendix D: Include a copy of your most recent sanitary survey letter, which is August 2016.	August 2016 Sanitary survey information included in App D	App D	Okay - addressed	
8	Appendix F: Include a copy of your most recent cross connection control Annual Summary Report (ASR).	Included 2016 CCC ASR in App F	App F	Okay - addressed	
9	Appendix K: Provide documentation for your two year Well Head Protection Plan update that notification letters were sent to owners of any new potential contaminants. The notification list provided in Appendix K is from 2011.	Updated notification list dated 12/19/16 included in App K	App K	Provide documentation that notification letters were sent to owners of any new potential contaminants.	Correspondence to new potential contaminant source (Sunrise RV Sales) dated August 28, 2017 has been added to Appendix K.
10	Other: The Omak Airport water system needs to be identified as a public water system and given an ID number. Please submit a completed Water Facilities Inventory (WFI) form for this system. A blank WFI form is enclosed.	A copy of the airport WFI form submitted to DOH, dated 1/12/18, is provided in App B	App B	Okay - addressed	

DOH COMMENT RESPONSE FORM

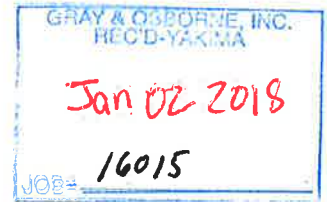
<i>DOH Comment No.</i>	DOH Comment	Water System Response	Page Number of Response
1	Chapter 1: The most recent water facilities inventory (WFI), dated 7/13/17, identifies all sources have chlorination treatment. The Treatment and Disinfection paragraph on page 1-9 states “Chlorination is available for the City’s wells that have been relegated to emergency use only.” The written description for the Park Well (S06) on page 1-4 does not identify chlorination. Please clarify.	The written description for the Park Well has been revised to indicate that chlorination equipment is available for this source.	1-4
2	Chapter 1: Table 1-4 on page 1-6 incorrectly identifies well S04 (Okoma) as a “permanent” source. S04 should be shown as an “emergency” source. Please correct.	Table 1-4 has been revised to reflect Okoma Well usage as emergency.	1-6
3	Chapter 1: Please provide service area map(s) that is large enough for us to easily identify the service area boundaries and streets. We need a map large enough to determine if an address is inside or outside of the service area.	A large format wall map of Figure 1-3 is provided in the appendix.	Appendix R
4	Chapter 3: The water usage for the 12 Tribes Casino property (Casino) is not included in the historical water usage. Include a discussion on the Casino’s water usage and the ERUs attributed to the Casino.	Historical water usage data for the 12 Tribes Casino (beginning in June 2015) has been included in Table 2-5 and historical (2015) ERUs shown in Table 2-7. Casino discussion has been included on page 2-14. Figure 2-4 and Tables 2-8, 2-11 through 2-14, 3-2, 3-3, 3-4a through 3-4c, 3-7, 3-11 and 4-4 have been updated accordingly.	ES-1, 2-8, 2-11 and 2-14
5	Chapter 3: Worksheet 6-1. a. Provide the calculations as to how the ERUs are calculated for each of the water system components. b. The existing ERUs need to include all of the existing connections. Please update the worksheet to include the Casino water usage. c. Is the capacity of 2,800 ERUs for the Maximum Annual Volume (Qa) correct? If so, this is less than the existing number of ERUs.	a. Water system component calculations provided. b. Worksheet 6-1 has been revised to include the 12 Tribes Casino water usage. c. The capacity based on Q _a was originally calculated using the MDD instead of ADD. The revised capacity based on ADD is included on Worksheet 6-1.	3-19 and 3-20

DOH COMMENT RESPONSE FORM

<i>DOH Comment No.</i>	DOH Comment	Water System Response	Page Number of Response
6	Appendix C: Please update the Coliform Monitoring Plan (CMP) to include the Groundwater Rule and Revised Total Coliform Tule monitoring requirements and a map showing the monitoring locations. A CMP template is available on our website at http://www.doh.wa.gov/Portals/1/Documents/Pubs/331-036.pdf (DOH publication #331-036).	Updated Coliform Monitoring Plan has been included in the appendix.	Appendix C
7	Appendix D: Include a copy of your most recent sanitary survey letter, which is August 2016.	DOH sanitary survey inspection report dated August 17, 2016 and August 30, 2016 DOH email documenting issues addressed by City have been included in the appendix.	Appendix D
8	Appendix F: Include a copy of your most recent cross connection control Annual Summary Report (ASR).	2016 Cross-Connection Control Annual Summary Report has been included in the appendix.	Appendix F
9	Appendix K: Provide documentation for your two-year Well Head Protection Plan update that notification letters were sent to owners of any new potential contaminants. The notification list provided in Appendix K is from 2011.	An updated notification list dated December 19, 2016 has been included in the appendix.	Appendix K
10	Other: The Omak Airport water system needs to be identified as a public water system and given an ID number. Please submit a completed Water Facilities Inventory (WFI) form for this system. A blank WFI for is enclosed.	A copy of the airport Water Facilities Inventory form submitted to DOH has been included in the appendix.	Appendix B



STATE OF WASHINGTON
DEPARTMENT OF HEALTH
EASTERN DRINKING WATER REGIONAL OPERATIONS
16201 E Indiana Avenue, Suite 1500, Spokane Valley, Washington 99216-2830
TDD Relay 1-800-833-638



December 27, 2017

Ken Mears, Public Works Director
City of Omak
PO Box 72
Omak, WA 98841

Subject: Omak, City of; PWS ID #63750K; Okanogan County
Water System Plan; Submittal #17-1010; DOH Comments

Dear Mr. Mears:

Thank you for providing a draft Water System Plan (WSP) for the City of Omak, received in this office on October 20, 2017. The following comments will need to be addressed before the Department of Health (DOH) can approve the document.

Chapter 1

1. The most recent water facilities inventory (WFI), updated July 13, 2017, identifies all sources have chlorination treatment. The Treatment and Disinfection paragraph on page 1-9 states "Chlorination is available for the City's wells that have been relegated to emergency use only." The written description for the Park Well (S06) on page 1-4 does not identify chlorination. Please clarify.
2. Table 1-4 on page 1-6 incorrectly identifies well S04 (Okama) as a "permanent" source. SO4 should be shown as an "emergency" source. Please correct.
3. Please provide a service area map(s) that is large enough for us to easily identify the service area boundaries and streets. We need a map large enough to determine if an address is inside or outside of the service area.

Chapter 3

4. The water usage for the 12 Tribes Casino property (Casino) is not included in the historical water usage. Include a discussion on the Casino's water usage and the ERUs attributed to the Casino.
5. Worksheet 6-1.
 - a. Provide the calculations as to how the ERUs are calculated for each of the water system components.

- b. The existing ERUs need to include all of the existing connections. Please update the worksheet to include the Casino water usage.
- c. Is the capacity of 2,800 ERUs for the Maximum Annual Volume (Qa) correct? If so, this is less than the existing number of ERUs.

Appendix C

6. Please update the Coliform Monitoring Plan (CMP) to include the Groundwater Rule and Revised Total Coliform Rule monitoring requirements and a map showing the monitoring locations. A CMP template is available on our website at <http://www.doh.wa.gov/Portals/1/Documents/Pubs/331-036.pdf> (DOH publication #331-036).

Appendix D

7. Include a copy of your most recent sanitary survey letter, which is August 2016.

Appendix F

8. Include a copy of your most recent cross connection control Annual Summary Report (ASR).

Appendix K

9. Provide documentation for your two-year Well Head Protection Plan update that notification letters were sent to owners of any new potential contaminants. The notification list provided in Appendix K is from 2011.

Other

10. The Omak Airport water system needs to be identified as a public water system and given an ID number. Please submit a completed Water Facilities Inventory (WFI) form for this system. A blank WFI form is enclosed.

END OF COMMENTS

The department's review of your water system plan does not confer or guarantee any right to a specific quantity of water. Our review is based on your representation of available water quantity. If the Washington Department of Ecology, a local planning agency, or other authority responsible for determining water rights and water system adequacy determines that you have use of less water than you represent, the number of approved connections may be reduced commensurate with the actual amount of water and your legal right to use it.

We hope that you have found these comments to be clear, constructive, and helpful in the development of your final Water System Plan (WSP). We ask that you submit **two copies** of the revised WSP **on or before March 27, 2018**. In order to expedite the review of your revised submittal, please complete the enclosed DOH Comment Response Form summarizing how each of the above comments was addressed in the revised WSP and where each response is located (i.e. page numbers, Appendices, etc.).

City of Omak
December 27, 2017
Page 3

Regulations establishing a schedule for fees for review of planning, engineering, and construction documents have been adopted (WAC 246-290-990). Please note that we have included an invoice for **\$3,705.00** for the review of the Water System Plan. This fee covers our cost for review of the initial submittal, plus the review of one revised document. Please remit your complete payment in the form of a check or money order within thirty days of the date of this letter to: DOH, Revenue Section, P.O. Box 1099, Olympia, WA 98507-1099.

Thank you again for submitting your draft WSP for our review. If you have any comments or questions concerning our review please contact either of us at (509) 329-2123 or (509) 329-2122, respectively.

Sincerely,

for Scott Mallery PE

Mike Wilson, PE
Regional Engineer
Office of Drinking Water
Division of Environmental Public Health



Brenda Smits
Regional Planner
Office of Drinking Water
Division of Environmental Public Health

Enclosures: Invoice
Blank Water Facilities Inventory Form

cc: **David Ellis, P.E.; Gray & Osborne, Inc.**
Ying Fu, Dept. of Ecology
George Simon, DOH Compliance Program Manager
Scott Mallery, DOH Assistant Regional Manager

DOH COMMENT RESPONSE FORM

City of Omak; PWS ID 63750K; Submittal #17-1010

DOH Comment No.	DOH Comment	Water System Response	Page No. of Response	Other Comments
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	c. Is the capacity of 2,800 ERUs for the Maximum Annual Volume (Qa) correct? If so, this is less than the existing number of ERUs.			
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7	Appendix D: Include a copy of your most recent sanitary survey letter, which is August 2016.			
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10	Other: The Omak Airport water system needs to be identified as a public water system and given an ID number. Please submit a completed Water Facilities Inventory (WFI) form for this system. A blank WFI form is enclosed.			

Water System Plan Submittal Form

This form must be completed and submitted along with the Water System Plan (WSP). It will expedite review and approval of your WSP. **All water systems should contact their regional planner before developing any planning document for submittal.**

City of Omak	63750K	City of Omak
1. Water System Name	PWS ID# or Owner ID#	Water Systems Owner's Name
Mr. Ken Mears	(509) 826-1170	Public Works Director
Contact Name for Utility	Phone Number	Title
2 North Ash Street	Omak	Washington
Contact Address	City	State
		98840
		Zip
Mr. David Ellis, P.E.	(509) 453-4833	Project Engineer
2. Project Engineer	Phone Number	Title
107 South 3 rd Street	Yakima	Washington
Project Engineer Address	City	State
		98901
		Zip
3. Billing Contact Name (required if not the same as #1)	Billing Phone Number	Billing Fax Number
Billing Address	City	State
		Zip

- | | | | |
|---|---|--|-----------------------------|
| 4. How many services are presently connected to your system? | 2019 | | |
| 5. Is your system expanding (seeking to extend service area or increase number of approved connections)? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 6. If the number of services is expected to increase, how many <i>new</i> connections are proposed in the next six years? | 82 | | |
| 7. If your system is private-for-profit, is it regulated by the State Utilities and Transportation Commission? | Not Applicable | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 8. Is the system located in a Critical Water Supply Service Area (i.e., have a Coordinated Water System Plan)? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | |
| 9. Is your system a customer of a wholesale water system? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | |
| 10. Will your system be pursuing additional water rights from the Department of Ecology in the next 20 years? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 11. Is your system proposing a new intertie? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | |
| 12. Do you have projects currently under review by us? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | |
| 13. Are you requesting distribution main project report and construction document submittal exception and if so, does the WSP contain standard construction specifications for distribution mains? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 14. The water system is responsible for sending a copy of the WSP to adjacent utilities for review or a letter notifying them that a copy of the WSP is available for their review and where the review copy is located. Has this been completed? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 15. The purveyor is responsible for sending a copy of the WSP to all local governments within the service area (county and city planning departments, etc.). Has this been completed? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 16. Are you proposing a change in the place of use of your water right? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | |

If answer to questions 7, 8, 11, 14 and/or 15 is "yes," list who you sent the WSP to: Sent notice to City of Okanogan, Duck Lake Water Association, Sandflat Water Association, Suncrest Plat Water System, Aston Estates Water Association, and Coleman Butte Water Association. Sent applicable plan chapters to the Okanogan County and Confederated Tribes of the Colville Reservation planning departments.

Is this plan: ☐ an Initial Submittal ☒ a Revised Submittal

Please enclose the following number of copies of the WSP:

3 copies for Northwest and Southwest Regional Offices **OR 2** copies for Eastern Regional Office (We will send one copy to Ecology)
1 additional copy if you answered "yes" to question 7. **2** Total copies attached

Please return completed form to the Office of Drinking Water regional office checked below.

☐ **Northwest Drinking Water Operations**
 Department of Health
 20425 72nd Avenue South, Suite 310
 Kent, WA 98032-2358
 253-395-6750

☐ **Southwest Drinking Water Operations**
 Department of Health
 PO Box 47823
 Olympia, WA 98504-7823
 360-236-3030

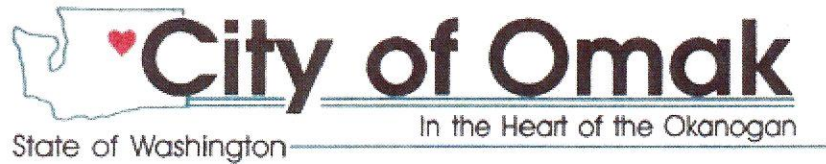
☒ **Eastern Drinking Water Operations**
 Department of Health
 16201 East Indiana Avenue Suite 1500
 Spokane Valley, WA 99216
 509-329-2100

For people with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TDD/TTY call 711).

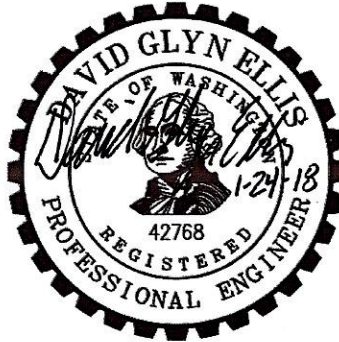
CITY OF OMAK

OKANOGAN COUNTY

WASHINGTON



WATER SYSTEM PLAN



G&O #16015
JANUARY 2018



Gray & Osborne, Inc.
CONSULTING ENGINEERS

TABLE OF CONTENTS

CITY OF OMAK WATER SYSTEM PLAN

EXECUTIVE SUMMARY

CHAPTER 1: DESCRIPTION OF THE WATER SYSTEM

OWNERSHIP AND MANAGEMENT	1-1
HISTORY AND BACKGROUND	1-1
EXISTING FACILITIES	1-2
Sources	1-3
Storage	1-7
Booster Pumping Stations	1-7
Transfer Stations	1-8
Transmission and Distribution	1-8
Treatment and Disinfection	1-9
Telemetry and controls	1-9
WATER RIGHTS	1-10
INTERTIES	1-11
PLANNING AND POLICIES	1-12
Related Planning Documents	1-12
Watershed Planning	1-12
SERVICE AREA CHARACTERISTICS	1-12
Existing and Future Service Area	1-12
Zoning	1-13
Neighboring Water Purveyors	1-13
Duty to Serve	1-13
Service Area Policies and Conditions of Service	1-13

CHAPTER 2: BASIC PLANNING DATA

HISTORICAL DATA	2-1
Historical Population	2-1
Service Connections	2-2
HISTORICAL WATER USE	2-3
Average Day Demand (Add)	2-3
Maximum Day Demand (MDD)	2-6
Peak Hour Demand (PHD)	2-7
Consumption History	2-7
Distribution System Leakage	2-9
Equivalent Residential Units	2-10
Largest Water Users	2-11
PROJECTED LAND USE, FUTURE POPULATION, AND WATER DEMANDS	2-12
Projected Population	2-12

Projected ERUs	2-14
Projected ADD, MDD and PHD	2-14
Water Use Efficiency	2-15
 CHAPTER 3: WATER SYSTEM ANALYSIS	
SYSTEM DESIGN STANDARDS	3-1
General Facility Standards	3-1
Construction Standards	3-3
WATER QUALITY ANALYSIS	3-3
FACILITY ANALYSIS	3-4
Source	3-4
Storage	3-10
Booster Pumping Stations	3-16
Transfer Stations	3-17
Transmission and Distribution	3-18
Water System Physical Capacity Analysis	3-19
OPERATION AND MAINTENANCE ANALYSIS	3-22
SYSTEM DEFICIENCIES AND PROPOSED IMPROVEMENTS	3-22
 CHAPTER 4: WATER USE EFFICIENCY	
BACKGROUND	4-1
Source Meters	4-2
Service Meters and Water Consumption	4-2
Interties	4-2
WATER USE EFFICIENCY PROGRAM	4-2
Current Water Use Efficiency Program	4-3
New WUE Goals	4-3
WUE Measures	4-4
WUE Education	4-5
Evaluating WUE Effectiveness	4-5
Distribution System Leakage	4-6
Conservation Rate Structure	4-6
Water Reclamation	4-7
Water Supply Characteristics	4-7
 CHAPTER 5: SOURCE WATER PROTECTION	
GENERAL	5-1
OBJECTIVE	5-1
WELLHEAD PROTECTION AREA DELINEATIONS	5-1
Definition of a Wellhead Protection Area	5-1
Calculated Fixed Radius (CFR) Model	5-3
POTENTIAL CONTAMINATION SOURCES	5-5
Inventory of Potential Contaminant Sources	5-5
Notifications	5-5
Notification to Regulatory Agencies and local Governments	5-6

Notification to Local Emergency Incident Responders	5-6
LON-TERM CONTINGENCY PLANNING	5-7
Drill New Wells	5-7
Groundwater Treatment	5-8
Interconnection	5-8
Water Conservation	5-8
Surface Water Treatment	5-8
OMAK WELLHEAD PROTECTION MANAGEMENT	5-8

CHAPTER 6: OPERATION AND MAINTENANCE

SYSTEM PERSONNEL	6-1
OPERATION AND MAINTENANCE PROGRAM	6-2
RECORD KEEPING	6-4
COMPLAINT RESPONSE	6-4
SAFETY PROCEDURES	6-5
DEFICIENCIES	6-5

CHAPTER 7: CONSTRUCTION STANDARDS

DESIGN AND CONSTRUCTION STANDARDS	7-1
---	-----

CHAPTER 8: CAPITAL IMPROVEMENT PROGRAM

WATER RIGHTS	8-1
SOURCE PROTECTION	8-1
TELEMETRY	8-1
SOURCE IMPROVEMENTS	8-1
TREATMENT	8-2
STORAGE	8-2
DISTRIBUTION	8-3
OPERATIONS AND MAINTENANCE	8-5
SCHEDULE	8-5

CHAPTER 9: CAPITAL IMPROVEMENT FINANCING

EXISTING RATES AND CHARGES	9-1
HISTORICAL FINANCIAL STATUS	9-2
FUNDING SOURCES	9-4
City Funded	9-4
Public Works Trust Fund	9-4
Community Development Block Grant (CDBG)	9-4
Drinking Water State Revolving Fund (DWSRF)	9-4
USDA Rural Development	9-4
Revenue Bonds	9-4

LIST OF TABLES

<u>No.</u>		<u>Page</u>
1-1	City Contact Information	1-1
1-2	Operator Certifications.....	1-1
1-3	Major Water System Projects	1-2
1-4	Existing Water System - Sources.....	1-6
1-5	Existing Water System - Storage	1-7
1-6	Existing Water System – Booster Pumping Stations.....	1-8
1-7	Existing Water System – Transmission and Distribution Piping.....	1-9
1-8	Existing Water System – Source Chlorination	1-9
1-9	Service Area Policies	1-14
2-1	2015 Customer Accounts.....	2-2
2-2	2010 – 2016 Service Area Populations.....	2-3
2-3	2010 – 2015 Average Daily Demand (ADD)	2-4
2-4	2010 – 2015 Maximum Day Demand (MDD).....	2-7
2-5	2012 – 2015 Water Consumption (gal.).....	2-8
2-6	2010 – 2015 Distribution System Leakage.....	2-10
2-7	2015 Equivalent Residential Units.....	2-11
2-8	2015 Largest Water Users.....	2-12
2-9	Projected Service Area Population	2-13
2-10	Projected Growth Distribution by Pressure Zone	2-13
2-11	Projected ERUs.....	2-14
2-12	Projected ADD, MDD, and PHD.....	2-15
2-13	Projected ADD, MDD, and PHD with Conservation	2-17
2-14	Projected Savings with Reduced Consumption While Maintaining Current DSL Levels	2-18
3-1	General Facility Requirements	3-2
3-2	Source Production Capacity Analysis.....	3-4
3-3	2037 Source Production Capacity Analysis.....	3-5
3-4	Water Rights Self Assessment	3-7
3-5	Largest Fire Flow Requirements.....	3-12
3-6	Storage Volumes by Pressure Zones.....	3-13
3-7	Storage Volume Components by Pressure Zone	3-14
3-8	2037 Storage Analysis – Lower Pressure Zone	3-15
3-9	2037 Storage Analysis – Middle Pressure Zone	3-15
3-10	2037 Storage Analysis – Upper Pressure Zone.....	3-16
3-11	2037 Open System Booster Pump Station Analysis	3-17
3-12	Summary of System Deficiencies and Proposed Improvements	3-23
4-1	Summary of Water Use Efficiency Rule Requirements	4-1
4-2	Mandatory Water Use Efficiency Measures	4-4

LIST OF TABLES - CONTINUED

<u>No.</u>		<u>Page</u>
4-3	Demand-Side Water Use Efficiency Measures.....	4-5
4-4	Projected Water Demands with Water Savings	4-6
4-5	Inclined Block Rate Structure Pros and Cons.....	4-7
5-1	Calculated Fixed Radius Wellhead Protection Areas	5-4
6-1	Operation and Maintenance Program Elements	6-1
6-2	Water System Personnel	6-1
6-3	Operation and Maintenance Practices.....	6-2
6-4	Normal Equipment Settings.....	6-3
6-5	Supplies and Suppliers.....	6-4
6-6	Record Keeping Practices	6-4
8-1	Capital Improvement Plan	8-6
9-1	2017 Water Service Rates	9-1
9-2	Water System Development Fees	9-2
9-3	Historical Water Utility Revenue and Expenditures.....	9-3
9-4	Grant and Loan Programs	9-5
9-5	10-Year Financing Plan	9-6

LIST OF FIGURES

<u>No.</u>	<u>Figure</u>	<u>On or Follows Page</u>
1-1	Existing System	1-2
1-2	Hydraulic Profile.....	1-4
1-3	City Limits, UGA & Service Areas	1-12
1-4	Zoning.....	1-14
1-5	Okanogan County Comprehensive Plan Zoning.....	1-14
2-1	Historical Population	2-1
2-2	2010-2015 Monthly Water Production	2-5
2-3	2010-2015 Monthly Water Production by Well	2-6
2-4	2015 Seasonal Variations in Consumption by Customer Classification	2-9
3-1	Pressure Zone Map	3-12
5-1	Wellhead Protection Delineation Map.....	5-2
8-1	10-Year Capital Improvement Plan	8-8

LIST OF APPENDICES

Appendix A – Annual Operating Permit
 Appendix B – Water Facilities Inventory
 Appendix C – Water Quality Monitoring
 Appendix D – Sanitary Survey
 Appendix E – Consumer Confidence Report

LIST OF APPENDICES - CONTINUED

Appendix F – Cross Connection Control Program
Appendix G – Emergency Response Plan
Appendix H – Consistency Statements
Appendix I – SEPA Checklist
Appendix J – Nesting Approval Letter
Appendix K – Source Protection
Appendix L – Agreements
Appendix M – Water Rights
Appendix N – Cost Estimates
Appendix O – Service Area Policies
Appendix P – Public Meetings
Appendix Q – Notice to Adjacent Utility Providers
Appendix R – Large Format Figure 1-3

EXECUTIVE SUMMARY

The objectives of this water system plan are to evaluate the performance and adequacy of the City of Omak's existing water supply and distribution system and to describe what steps the City must take to meet the demands of its 10 and 20 year planning horizons. This plan has been written to comply with WAC 246-290-100, the Washington State Department of Health's rules for developing a water system plan.

PLANNING

The latest estimate from the Washington State Office of Financial Management (OFM) indicates a 2016 population of 4,925 residents in the City. The average annual growth rate from 2005 to 2016, based on US Census data and OFM estimates, is approximately 0.4 percent. City population projections utilized in this Plan for water system facilities will be based on the 0.4 percent average annual growth rate from 2005 to 2016. This population growth will increase the City's water system demands, in addition to the growth of commercial use which is expected to increase proportional to residential growth. The City's average day demand is project to increase from 1,375,000 gallons per day (gpd) in 2016 to 1,494,000 gpd in 2037. Its maximum day demand requirement is projected to increase from 3,713,000 gpd in 2016 to 4,034,000 gpd in 2037.

WATER RIGHTS

The City plans to file change applications with the Washington State Department of Ecology to consolidate its existing water rights to give the City greater flexibility in managing its water resources.

The City includes areas within the boundaries of the Confederated Tribes of the Colville Reservation (CTCR). The City plans to work with the CTCR to review and coordinate water rights applications as deemed beneficial to preserve, enhance and support predictable growth within this area of joint planning jurisdiction.

SOURCE PROTECTION

The City plans to pursue protective covenants for all City wells.

SOURCE IMPROVEMENTS

The City has identified the following source improvements for its 10-year improvement schedule:

1. **Julia Maley Park Well Equipping** – Equip Julia Maley Park Well with vertical turbine pump and VFD motor, well house, gas chlorination,

- pipings, electrical, telemetry, instrumentation and trailer-mounted generator.
2. **Eastside Well Pump No. 4** – Rebuild Eastside Well pump.
 3. **Well Improvements** – Install automatic transfer switches at OWP No. 2 and Eastside well, and reconfigure transfer switch NE Omak well to accommodate trailer-mounted generator to be purchased for the Julia Maley Park well.
 4. **Okoma Well Inspection** – Provide downhole video inspection and report to investigate possible well rehabilitation.
 5. **Okoma Well Rehabilitation** – Rehabilitate Okoma Well in accordance with the findings and recommendations of the well inspection and feasibility study (20-year plan).
 6. **New Well** – Drill and equip a new well to increase source reliability with the City’s water system (20-year plan).

TREATMENT

The City has identified the following treatment improvements for its 10-year improvement schedule:

7. **Arsenic Treatment Pilot Study** – Pilot study to investigate alternatives make recommendations for arsenic treatment at the Julia Maley Park well if further sampling and testing at the well demonstrate arsenic levels in excess of the maximum contaminant level.
8. **Arsenic Treatment Facility** – Construct an arsenic treatment facility for the Julia Maley Park in accordance with recommendations of the arsenic treatment pilot study, if required.

STORAGE

The City has identified the following storage improvements for its 10- and 20-year improvement schedules:

9. **South Hill Reservoir Altitude Valve** – Repair non-operational altitude valve.
10. **Ross Canyon Reservoirs Inspection and Repair** – Perform reservoir cleaning, inspection, and repairs to correct reservoir weeping issues.

11. **Reservoir Cleaning and Inspection** – Cleaning and inspection of Riverside, South Hill, and Coleman Butte reservoirs.
12. **Coleman Butte Reservoir Mixing** – Installation of mixing system to reduce risk of water stagnation and icing.

DISTRIBUTION

The City has identified the following distribution system improvements for its 10- and 20-year improvement schedules:

13. **Hospital Water Main Loop** – Developer installation of 8-inch water line to Hospital to provide for fire flow.
14. **Riverside Reservoir Transmission Line Valve Replacement** – Replacement leaking and non-operational valves.
15. **Ash Street Booster Pump Station Improvements** – Replacement of booster pump station pumps, valves, piping, and appurtenances and installation of a variable speed drive.
16. **Columbia Street Water Main** – Construct new 12-inch water main on Columbia Street from Omak Avenue to 5th Avenue.
17. **Jackson Street Water Upsize** – Upsize water main on Jackson Street from 4th Avenue to 5th Avenue and on 5th Avenue from Jackson to east to 8-inch.
18. **Granite Street Water Main** – Upsize water main on Granite Street from 5th Avenue to 6th Avenue.
19. **7th Avenue Water Main Improvements** – Upsize water main on 7th Avenue from Edmonds to Jackson Street with 12-inch water main and on Jackson Street from 7th Avenue to just north of 6th Avenue. This improvement includes the jack and bore installation of 24-inch steel casing pipe crossing the Cascade & Columbia River Railroad track on 7th Avenue.
20. **Garfield Street Water Main** – Construct new 8-inch water line on Garfield Street from Omak Avenue to 5th Avenue to provide looping and install hydrants for fire flow.
21. **Hanford Street Alley Water Main** – Construct new 8-inch water line in alley west of Hanford Street from Omak Avenue to 5th Avenue to provide looping and install hydrants for fire flow.

22. **Skyview Drive/Skyview Circle Water Main Upsize** – Upsize water main on Skyview Drive from Grape Avenue to Locust Street and on Skyview Circle to 8-inch.
23. **Hydrant Installation** – Install and connect new fire hydrants to larger water mains in areas where parallel water lines are active and fire flows in existing hydrants are insufficient.
24. **Elberta Avenue Water Main Loop** – Construct 8-inch water main on Elberta Avenue from Ash Street to Ironwood Street.
25. **Hale Avenue Water Main Loop Improvements** – Construct 8-inch water main on Hale Avenue between Ironwood and Kenwood Streets and on Juniper and Jack Pine Streets from Hale Avenue to Jonathan Avenue.
26. **Birch Street Water Main Loop** – Construct 8-inch water main on Birch Street from Elberta to Grape Avenues and on Grape Avenue from Ash Street to just west of Birch Street.
27. **Fig Avenue Water Main Upsize** – Install 8-inch water main on Fig Avenue from Ironwood to Locust Avenues.
28. **Dewberry Avenue Loop** – Construct 8-inch water main on Dewberry Avenue from Locust to Kenwood Streets, north in alley and east to Locust Street.
29. **Pine Street Upsize** – Upsize two dead-end hydrant lines on Pine Street and east of Pine Street just south of Riverside Drive to 8-inch (20-year plan).
30. **Sunrise Drive/Ironwood Street Water Main Upsize** – Upsize water main on Sunrise Drive from valve cluster to Ironwood Street north to end to 8-inch (20-year plan).
31. **Pan Vista Drive/Vista Place Water Main Upsize** – Upsize water mains on Pan Vista Drive and Vista Place from Lime Street north to 8-inch (20-year plan).
32. **Apple Avenue Water Main Upsize** – Upsize water main on Apple Avenue between Cedar and Ash Streets to 8-inch (20-year plan).
33. **Canyon Court Drive Water Main Upsize** – Upsize water main on Canyon Court Drive to 8-inch (20-year plan).

34. **Dewberry Avenue/Riverside Drive Water Main Upsize** – Upsize water main on Dewberry Avenue from Kenwood to Locust Streets and from Ash to Main Streets and on Riverside Drive from Dewberry to Cherry Avenues to 8-inch (20-year plan).
35. **Grainger Avenue Water Main Upsize** – Upsize water main on Grainger Avenue between Locust and Maple Streets to 8-inch (20-year plan).
36. **Riverside Drive Water Main Upsize** – Upsize water main on Riverside Drive from Grape Avenue to just west of Locust Street to 8-inch (20-year plan).
37. **Hillcrest Circle Water Main Upsize** – Upsize water main on Hill Crest Circle and Hill Crest Place to 8-inch (20-year plan).
38. **Hale Avenue Cul-de-Sac Water Main Upsize** – Upsize water main on Hale Avenue from last valve cluster west to cul-de-sac to 8-inch (20-year plan).
39. **Omak River Road Water Main Upsize** – Upsize water main on Omak River Road to 8-inch (20-year plan).
40. **Edmonds Street/4th Avenue Loop** – Construct 8-inch water main on Edmonds Street from 3rd to 4th Avenues and on 4th Avenue from Edmonds Street to Dayton Street (20-year plan).

OPERATIONS AND MAINTENANCE

41. **Eastside Park Metering** – Install meters in Eastside Park.
42. **Water Valve Replacement** – Install valves in downtown Omak for isolation control.
43. **AMR Meter Reading Upgrade** – Replace standard residential meters throughout the City with radio-read meters.

A summary of the 2017 costs for each of the improvements planned for the next 10 years is provided in Table ES-1 (improvements outside of the 10-year planning horizon are also shown in this table).

TABLE ES-1

Capital Improvement Plan

PROJECT	MAY 2017 COST ⁽¹⁾	YEAR PLANNED										
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	>2026
MISCELLANEOUS												
Water Rights Consolidation	\$10,000		X									
Source Protective Covenants	-----	X										
SOURCE												
1. Julia Maley Park Well Equipping	\$1,400,000	X										
2. Eastside Well Pump No. 4	\$35,000 ⁽²⁾	X										
3. Well Improvements	\$183,000				X							
4. Okoma Well Inspection	\$67,000				X							
5. Okoma Well Rehabilitation												X
6. New Well												X
TREATMENT												
7. Arsenic Treatment Pilot Study	\$30,000		X									
8. Arsenic Treatment Facility	\$1,385,000			X								
STORAGE												
9. South Hill Reservoir Altitude Valve	\$30,000 ⁽²⁾	X										
10. Ross Canyon Reservoirs Inspect./Repair	\$30,000				X							
11. Reservoir Cleaning and Inspection	\$60,000				X							
12. Coleman Butte Reservoir Mixing	\$60,000				X							

TABLE ES-1-continued

Capital Improvement Plan

PROJECT	MAY 2017 COST ⁽¹⁾	YEAR PLANNED											
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	>2026	
DISTRIBUTION													
13. Hospital Water Main Loop	N/A ⁽³⁾	X											
14. Riverside Res. Transmission Line Valve Repl.	\$120,000				X								
15. Ash Street Booster Pump Station Improvements	\$716,000		X										
16. Columbia Street Water Main	\$445,000						X						
17. Jackson Street Water Main Upsize	\$206,000						X						
18. Granite Street Water Main	\$214,000					X							
19. 7 th Avenue Water Main Improvements	\$832,000							X					
20. Garfield Street Water Main	\$158,000								X				
21. Hanford Street Alley Water Main	\$128,000								X				
22. Skyview Drive/Skyview Circle Water Main Upsize	\$208,000									X			
23. Hydrant Installation	\$40,000		X										
24. Elberta Avenue Water Main Loop	\$163,000									X			
25. Hale Avenue Water Main Loop Impr.	\$354,000									X			
26. Birch Street Water Main	\$237,000										X		
27. Fig Avenue Water Main Upsize	\$244,000										X		
28. Dewberry Avenue Loop	\$405,000										X		

TABLE ES-1-continued

Capital Improvement Plan

PROJECT	MAY 2017 COST ⁽¹⁾	YEAR PLANNED											
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	>2026	
DISTRIBUTION (con't)													
29. Pine Street Upsize													X
30. Sunrise Drive/Ironwood Street Water Main Upsize													X
31. Pan Vista Drive/Vista Place Water Main Upsize													X
32. Apple Avenue Water Main Upsize													X
33. Canyon Court Drive Water Main Upsize													X
34. Dewberry Avenue/Riverside Drive Water Main Upsize													X
35. Grainger Avenue Water Main Upsize													X
36. Riverside Drive Water Main Upsize													X
37. Hillcrest Circle Water Main Upsize													X
38. Hale Avenue Cul-de-Sac Water Main Upsize													X
39. Omak River Road Water Main Upsize													X
40. Edmonds Street/4th Avenue Loop													X
OPERATIONS AND MAINTENANCE													
41. Eastside Park Metering	\$275,000 ⁽²⁾	X											
42. Water Valve Replacement	\$66,000 ⁽²⁾	X											
43. AMR Meter Reading Upgrade	\$300,000 ⁽²⁾	X											

(1) 10-year capital improvement only; construction costs for 20-year capital improvements not included.

(2) From City's 2017 final budget request.

(3) Water system improvement to be performed by developer.

CHAPTER 1

DESCRIPTION OF WATER SYSTEM

This chapter presents information on ownership and management of the water system, system background data, an inventory of existing system facilities, related planning documents, existing and future service areas and characteristics, and service area agreements and policies.

OWNERSHIP AND MANAGEMENT

The City of Omak, which is governed by a Mayor and City Council, owns, operates and manages the City's water system. The Washington State Department of Health water system identification number for the water system is 63750K. The City's Public Water System Operating Permit is included in Appendix A. Contact information for the City is shown in Table 1-1. City staff involved in management of the water system and their certifications are shown in Table 1-2.

TABLE 1-1

City Contact Information

Name	Address	Phone No.
Todd McDaniel, City Administrator	2 North Ash St, PO Box 72, Omak, WA 98841	(509) 826-1170

TABLE 1-2

Operator Certifications

Operator	Title	Certification⁽¹⁾
Todd McDaniel	City Administrator	WDM1, CCS
Ken Mears	Public Works Director	WDS1
Corey Wilder	Water Department Manager	WDM2, CCS, BAT
Wayne Beetchenow	Assistant Public Works Director	WDM1
Jordan Verstegen	Assistant Water Department Manager	WDM1

(1) WDM = Water Distribution Manager; WDS = Water Distribution Specialist; CCS = Cross-Connection Control Specialist; BAT = Backflow Assembly Tester

HISTORY & BACKGROUND

The City of Omak is located in north central Washington on the banks of the Okanogan River, which forms the western boundary of the Colville Indian Reservation. Settlers arrived in the area around 1886 and the City proper grew with development of the

Okanogan Irrigation Project just after the turn of the century. The City was platted in 1907 and was eventually incorporated in 1911.

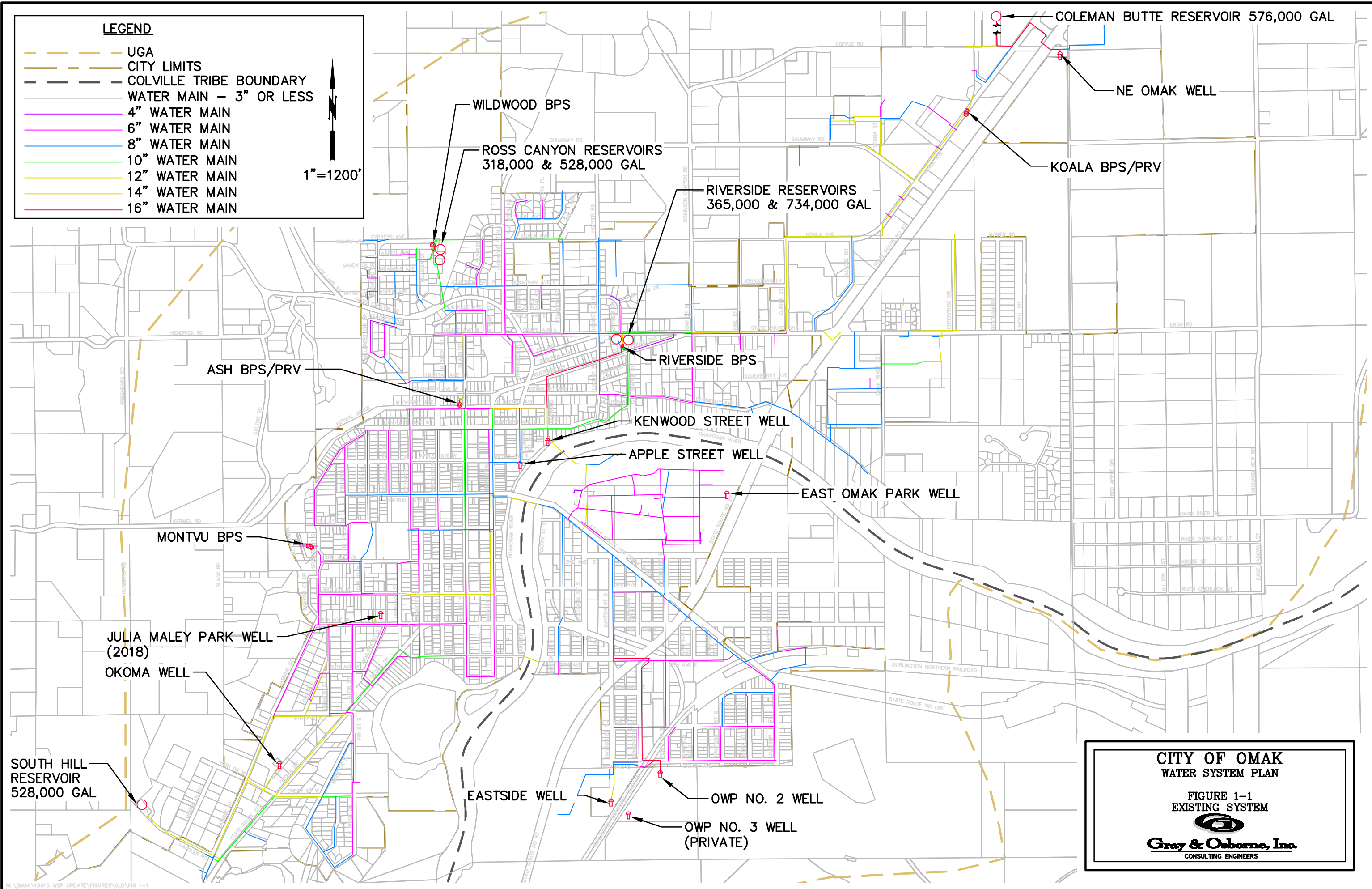
Historical information regarding the City's water system is sparse; however, recent water system improvement projects are shown in Table 1-3.

TABLE 1-3
Major Water System Projects

Year	Project Description
1968	East Omak Well
1969	Memorial Cemetery Well
1972	Ash Street Booster Station
1988	Okoma Well
1988	Autocon Telemetry System
1990	Comprehensive Water System Plan
1994	Residential Meters Installed
1995	OWP Well No. 2 Improvements and incorporation into City's System
1996	Comprehensive Water System Plan Update
1998	Coleman Butte Reservoir
1998	Third Okanogan River water transmission main
1999	Koala Booster and PRV Station
2000	Telemetry System replaced with Zetron system and radio communication
2001	NE Omak Well
2004	Comprehensive Water System Plan Update
2008	Ash Street and Riverside Booster Pump Stations Improvements
2011	Water System Plan Update
2011	Well OWP No. 2 Rehabilitation
2011	Equipping Well OWP No. 2
2016	Julia Maley Park Well Drilling
2016	Telemetry System upgrades
2017	Eastside Park Metering

EXISTING FACILITIES

The City of Omak's water system consists of seven wells, six reservoirs, four booster stations, two pressure reducing valve transfer stations, and approximately 42 miles of transmission and distribution piping. Equipping of the recently drilled Julia Maley Park Well, anticipated for completion in late 2017, will provide the City with an additional source. An inventory of major system components is presented herein. A map showing the existing water system is provided on Figure 1-1. The City's water system has three



CITY OF OMAK
WATER SYSTEM PLAN

FIGURE 1-1
EXISTING SYSTEM



Gray & Osborne, Inc.
CONSULTING ENGINEERS

open and one closed pressure zone. Photographs of the City's existing well houses, reservoirs, booster stations, and transfer stations are presented in Chapter 6, Operation and Maintenance.

SOURCES

The City's domestic water is currently supplied from three of its seven groundwater wells, which are all shown on Figure 1-2. An eighth source shown on the figure, the Julia Maley Park Well, is scheduled for completion in 2017.

Eastside Well (SO1)

The City's Eastside well is located on Dayton Street South approximately 500 feet south of 8th Avenue East. This 14-foot diameter, 30-foot deep well constructed of reinforced concrete is equipped with four turbine pumps into a common 12" header with a total capacity of approximately 2,800 gpm at 130 feet of head when running simultaneously. Individual pump and motor information follows:

- Peerless pump, 30hp Westinghouse motor, rated 600 gpm at 130 feet.
- Peerless pump, 40hp Westinghouse motor, rated 800 gpm at 130 feet.
- Fairbanks Morse pump, 50hp Westinghouse motor, rated 700 gpm at 130 feet.
- Fairbanks Morse pump, 75hp Westinghouse motor, rated 1,550 gpm at 130 feet.

Individual pump discharge lines contain gate and check valves and the common header is equipped with a Sparling in-line flow meter. Chlorination is provided by a Regal gas chlorinator.

Apple Well (SO2)

The City's Apple well is located at the intersection of Juniper Street North and Apple Avenue East near the west bank of the Okanogan River. This 11-foot diameter, 30-foot deep well constructed of reinforced concrete is equipped with a vertical turbine pump and 40 hp motor with a rated capacity of 300 gpm at 150 feet of head. Well discharge piping includes gate, check and air valves and a flow meter. This well has been categorized by the Department of Health as being in hydraulic connection with surface water and is currently relegated to emergency use only, although this well is currently non-functional. In correspondence dated February 24, 2010, the Department of Health requires full-time disinfection of this source with a minimum CT of 6 prior to the first service connection. Chlorination equipment is available for this source.

Kenwood Well (SO3)

The City's Kenwood Well is located on the south end of Kenwood Street North near the west bank of the Okanogan River. This well, varying in diameter from 11 feet to 14 feet,

is 20 feet deep, constructed of reinforced concrete, and is equipped with a vertical turbine pump and 40 hp motor with a rated capacity of 350 gpm at 150 feet of head. Well discharge piping includes gate, check and air valves and a Sparling flow meter. This well has been categorized by the Department of Health as being in hydraulic connection with surface water and is currently relegated to emergency use only. In correspondence dated February 24, 2010, the Department of Health requires full-time disinfection of this source with a minimum CT of 6 prior to the first service connection. Chlorination equipment is available for this source.

Okoma Well (SO4)

The City's Okoma Well is located approximately 275 feet northwest of Okoma Drive immediately south of the Omak High School football field. This 90-foot deep well is cased to 53 feet bgs with a 16-inch welded steel casing and is constructed with a 16-inch stainless steel screen and gravel pack from 53 feet to 88 feet bgs. The well is equipped with a vertical turbine pump and 40 hp motor with a rated capacity of 500 gpm at 150 feet of head. Well discharge piping includes a butterfly and check valve, in-line flow meter, and Regal gas chlorinator system. This source is currently not in service due to diminished well capacity and is relegated to emergency use only.

Park Well (SO6)

The City's Park Well is located in Eastside Park. This 28-foot deep well is constructed of 48-inch reinforced concrete pipe and is equipped with a vertical turbine pump and 40 hp motor with a rated capacity of 300 gpm at 205 feet of head. Well discharge piping includes a check valve and flow meter. This well is used for irrigation only at the Eastside Park. Chlorination equipment is available for this source.

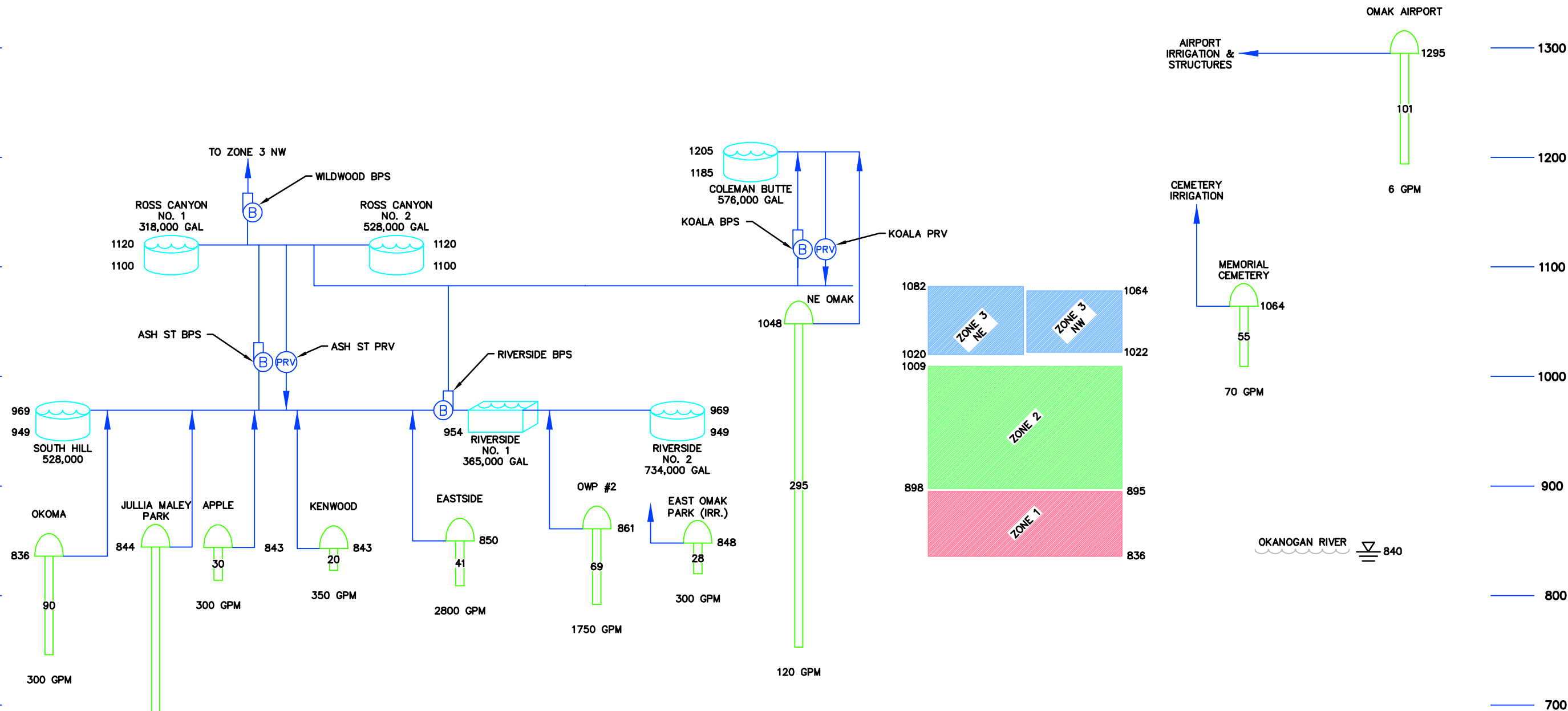
OWP No. 2 Well (SO7)

OWP No. 2 Well, leased by the City, is located near the intersection of 8th Avenue East and Ferry Street South. This 69-foot deep well has a 24-inch outer casing/22-inch screen assembly for the full depth with a 18-inch inner screen and gravel pack from 47 feet to 69 feet bgs. The well is equipped with a vertical turbine pump and 150 hp motor with a rated capacity of 2,200 gpm at 210 feet of head. Well discharge piping includes a 12-inch check valve, flow meter, 12- and 16-inch butterfly valves and an air valve. A two-cylinder Regal gas chlorinator provides disinfection.

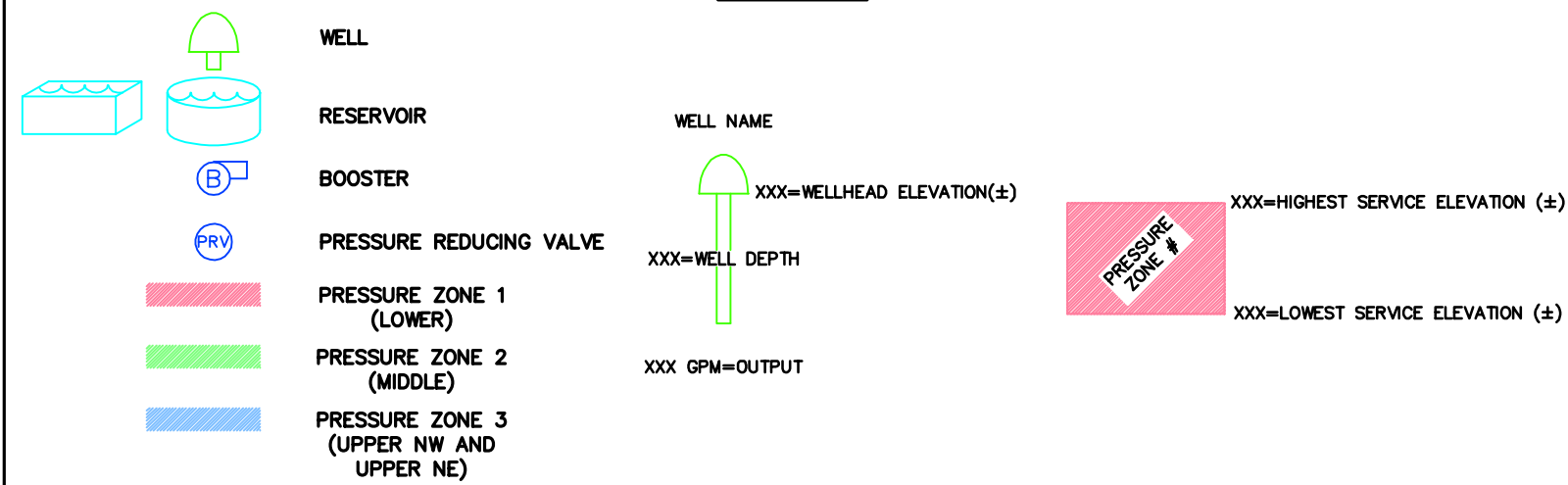
NE Omak Well (SO8)

The City's NE Omak Well is located at the intersection of Copple Road and Sand Flat road. This 12-inch diameter, 295-foot deep well has a 12-inch screen assembly from 268 feet to 282 feet bgs with an artificial gravel pack from 200 feet to 295 feet bgs. The well is equipped with a submersible pump and 20 hp motor with a rated capacity of 120 gpm at 400 feet of head. The well has an actual capacity of approximately 105 gpm. Well discharge piping includes a 4-inch check valve, McCrometer flow meter, and butterfly valve. Well disinfection is provided by a Regal Model 216 gas chlorinator.

ELEVATION



LEGEND



CITY OF OMAK
WATER SYSTEM PLAN

FIGURE 1-2
HYDRAULIC PROFILE

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CONSULTING ENGINEERS

Julia Maley Park Well

The City's Julia Maley Park Well, drilled in 2016, is located in Julia Maley Park near the intersection of 4th Avenue West and Hemlock Street South. This 16-inch diameter, 400-foot deep well is cased to a depth of 380 feet bgs and has a 16-inch telescoping screen from 375 feet to 400 feet bgs. This well will be equipped in 2017 with a vertical turbine pump and 150 hp motor with a rated capacity of 800 gpm. Well discharge piping will include a check valve, gate valve, and flow meter, and well disinfection will be provided by a gas chlorination system.

Omak Airport Well

The City's Airport Well, located at the Omak Airport, provides the airport with domestic water service. This 8-inch diameter, 95-foot deep well is cased for the full depth with perforated casing from 92 feet to 94 feet bgs. The well is equipped with a 6 gpm pump and flow meter.

Memorial Cemetery Well

The City's Memorial Cemetery Well, located approximately one mile southwest of the City limits, provides irrigation water for the City's cemetery grounds. This 55-foot deep well is equipped with a 70 gpm submersible turbine pump and 7.5 hp motor.

Existing source information is presented in Table 1-4.

TABLE 1-4**Existing Water System - Sources**

Parameter	Eastside	Apple	Kenwood	Okoma	Park	OWP No. 2	NE Omak	Julia Maley
DOH Source Well Tag No.	SO1 AGJ179	SO2 N/A	SO3 N/A	SO4 ABR843	SO6 AGJ178	SO7 AAR993	SO8 AEC887	TBD BIF542
DOH status/ usage	Active Permanent	Active Emergency /out of service	Active Emergency	Active Emergency	Inactive Irrigation- use only	Active Permanent	Active Permanent	TBD
Year drilled	1958	1958	1931	1988-1989	1968	1978	2001	2016
Ground surface	850 ft. msl	844 ft. msl	843 ft. msl	836 ft. msl	848 ft. msl	861 ft. msl	1048 ft. msl	842 ft. msl
Well depth	30 ft.	30 ft.	20 ft.	90 ft.	28 ft.	69 ft.	295 ft.	400 ft.
SWL	28.5 ft. bgs	10 ft. bgs	16.5 ft. bgs	9 ft. bgs	14 ft. bgs	36.1 ft. bgs	203 ft. bgs	7 ft. bgs
Well Casing	14' dia. (dug well)	11' dia. (dug well)	11'-14' dia. (dug well)	16" WCS (0-90' bgs.)	48" (0-28' bgs)	24" WCS (0-44' bgs)	12" WCS (0-295' bgs)	16" WCS (0-380' bgs)
Well screen	N/A	N/A	N/A	16" SS 40-slot (53-88' bgs)	Perforated casing 12" OC each way 1" dia. (15-28' bgs)	22" SS 150/250-slot (44-60' bgs) 18" SS 65-slot (47-69' bgs)	12" SS 35-slot (268-282' bgs)	16" SS tel. 5- slot (375'-380' bgs) 16" SS tel. 80- slot (380-400' bgs)
Gravel pack	N/A	N/A	N/A	10x20 (43-90' bgs)	Natural formation	Natural/6x9 (37-69' bgs)	10x20 (200-295' bgs)	Natural formation
Pump type	VT	VT	VT	VT	VT	VT	S	VT
Pump manuf./model	2-Peerless 2-Fairbanks Morse	Sterling	Fairbanks Morse	Peerless 10LB 5 stage, 1760 rpm	N/A	Peerless 12HXH 6 stage, 1770 rpm	Goulds CLC1564C	Hydroflo 11MDL 8 stage
Pump motor	30/50/50/75 hp	US Motors 40 hp	40 hp	US Motors 40 hp	40 hp	US Motors 150 hp	20 hp	150 HP
Rated/ Actual Flow	600/800/700/ 1550 gpm	300 gpm	350 gpm	500 gpm 300 gpm	300 gpm	2200 gpm 1750 gpm	120 gpm 105 gpm	800 gpm
Rated Head	130 ft.	150 ft.	150 ft.	150 ft.	205 ft.	210 ft.	400 ft.	480

STORAGE

The City of Omak has six reservoirs, the characteristics of which are summarized in Table 1-5. The City's total available water storage capacity is 2,775,000 gallons, consisting of the storage volumes of the Riverside No. 1 and No. 2, Ross Canyon No. 1 and 2, South Hill, and Coleman Butte reservoirs. The two Riverside reservoirs together with the South Hill reservoir serve the lower pressure zone, while the two Ross Canyon reservoirs serve the middle pressure zone. The upper pressure zone is served by the Coleman Butte reservoir.

TABLE 1-5

Existing Water System – Storage

Parameter	Riverside No. 1	Riverside No. 2	South Hill	Ross Canyon No. 1	Ross Canyon No. 2	Coleman Butte
Pressure zone	Lower	Lower	Lower	Middle	Middle	Upper
Type of construction	Concrete	Concrete	Concrete	Concrete	Concrete	Steel
Nominal storage capacity, gal	365,000	734,000	528,000	318,000	528,000	576,000
Diameter, ft	N/A	79	67	52	67	70
Height, ft	15	20	20	20	20	20
Base elevation, ft msl	954	949	949	1,100	1,100	1,185
Overflow elev., ft msl	969	969	969	1,120	1,120	1,205

BOOSTER PUMPING STATIONS

The City operates four booster pumping stations serving the middle and upper pressure zones and a small closed pressure zone in northeast Omak. The characteristics of these booster pumping stations are summarized in Table 1-6. The Riverside and Wildwood booster pump stations are equipped with variable frequency drives that allow the pumps to run at variable speeds.

The City also maintains a small booster station that serves five homes on Montvu Drive South. This booster station, equipped with a 1.5 hp booster pump and 1-inch bypass line, is set to maintain 60 psi at these homes.

TABLE 1-6**Existing Water System – Booster Pumping Stations**

Parameter	Ash Street Booster Station	Koala Booster Station	Riverside Booster Station	Wildwood Booster Station
Pressure zone	Middle	Upper	Middle	Closed-zone
Year installed	1972	2000	2008	1996
Pump	Byron Jackson	Peerless	Paco	N/A
Rated capacity, gpm	670/670/670	700	1,500	175/175/400/400
TDH, ft	235	150	180	150
Motor horsepower, hp	60/60/60	25	78	10/10/20/20

TRANSFER STATIONS

The City has two transfer stations that allow the automatic conveyance of water from a higher pressure zone to a lower zone. The Ash Street booster station contains a 6-inch pressure reducing valve (PRV) with a surge-anticipator valve that allows water conveyance from the middle pressure zone to the lower pressure zone, while the Koala booster station vault includes a 10-inch PRV allowing water to flow from the upper zone to the middle zone. These transfer stations allow the storage volumes of the Ross Canyon reservoirs and Coleman Butte reservoir to serve as back-up supply to the zones immediately lower should pressures drop in the lower zones during a high-demand event such as a fire event.

TRANSMISSION AND DISTRIBUTION

The City has approximately 42 miles of existing transmission and distribution system piping, consisting of primarily cast and ductile iron. All new and replacement piping primarily consists of ductile iron or PVC. A summary of the City's piping infrastructure is summarized in Table 1-7.

TABLE 1-7**Existing Water System - Transmission & Distribution Piping**

Pipe Diameter	Length, feet	Percent of Total
<= 3	15,300	7%
4	3,400	2%
6	85,200	38%
8	53,600	24%
10	17,500	8%
12	37,800	17%
14	900	<1%
16	7,100	3%
20	1,500	1%
Total	222,300	100%

TREATMENT AND DISINFECTION

The City provides disinfection via gas chlorinator injection directly into the discharge piping of each well currently in use (Eastside, OWP No. 2, and NE Omak wells). Chlorination is available for the City's wells that have been relegated to emergency use only. The Julia Maley Park well will also provide disinfection via gas chlorination. Table 1-8 presents source chlorination information for the City's active sources.

TABLE 1-8**Existing Water System – Source Chlorination**

Source	Disinfection Information
Eastside	Regal gas chlorinator.
OWP No. 2	Two cylinder Regal gas chlorinator and scale. Chlorination equipment housed in separate chlorine room.
NE Omak	Regal Model 216 gas chlorinator housed in separate chlorine room.

TELEMETRY AND CONTROLS

The City's water system has an automated radio-based telemetry system with a master telemetry station located at City Hall. The system indicates reservoir levels, provides high and low level alarms and level recording; automatic well starting and stopping, transfer station flow control and data recording of the status of the various system components. The water telemetry computer and software systems were updated in 2016 and now provide for remote system access via the internet.

Well production for all wells except the City's NE Omak well is controlled by the water levels in the lower pressure zone. Water levels in the Ross Canyon reservoirs control the Ash Street and Riverside booster pump stations while water levels in the Coleman Butte Reservoir controls the operation of the NE Omak well and Koala booster pump station. The Wildwood booster pump station is set to maintain a minimum pressure of 50 psi at the booster pump station.

WATER RIGHTS

The City currently has municipal water rights for instantaneous withdrawal of 10,205 gpm and 3,500 acre-feet annually. However, the instantaneous water right for the OWP No. 2 Well of 5,000 gpm is interruptible subject to set minimum flows in the Okanogan River. The City's water rights are summarized in tabular format in Chapter 3. Additional water rights information is contained in Appendix M. A brief description of each right is provided herein.

EASTSIDE WELL

Ground Water Certificate (GWC) No. 3655-A - Eastside Well, Source No. 1, 1,300 gpm, 2,080 ac-ft per year, Priority date March 20, 1958. This is the second authorization from the Eastside well (see GWC-1082-D).

GWC No. 1082-D - Eastside Well, Source No. 1, 1,630 gpm, 1,430 ac-ft annually, Priority date May 1, 1944. This is the first authorization from the Eastside well. Additional authorized points of withdrawal for this water right include Apple, Kenwood, Okoma, OWP No. 2, Well No. 9, and proposed Julia Maley and Oak Street Park wells as described in the Report of Examination dated May 29, 2015.

APPLE WELL

GWC No. 3656-A - Apple Well, Source No. 2, 375 gpm, 600 ac-ft annually, Priority date March 20, 1958. This is the second authorization from the Apple Well (see GWC-446-D).

GWC No. 446-D - Apple Well, Source No. 2, 800 gpm, 96 ac-ft annually, Priority date March 1936. This is the first authorization from the Apple Well (see GWC-446-D). Water Right Change Authorization No. CG4-GWC446-D@1 added Well No. 9 (Source No. 8) as an additional source to this Certificate.

KENWOOD WELL

GWC No. 445-D - Kenwood Well, Source No. 3, 500 gpm, 600 ac-ft annually, Priority date December 1913.

OKOMA WELL

GWC No. 7332-A - Okoma Well, Source No. 4, 600 gpm, 560 ac-ft annually from May 1 through October 31, Priority date June 22, 1970. Any water withdrawal by the City in excess of 3,456 ac-ft from any municipal source was to be deducted from the annual volume authorized by this right.

PARK WELL

GWC No. 6530-A - Park Well, Source No. 6, 300 gpm, 180 ac-ft annually from April 1 through October 31 for park irrigation, 5 ac-ft may be withdrawn for domestic supply for the park during the entire year. Priority date is March 28, 1968.

G4-29859 - Park Well, Source No. 6, 500 gpm, 278 ac-ft annually.

OWP NO. 2 WELL

Colville Indian Reservation Water Permit No. 93-02-22-01G - Omak Wood Products Well No. 2 (OWP No. 2), Source No. 7, 5,000 gpm, 3,500 ac-ft annually, permitted rate of withdrawal and volume of diversion may be reduced to satisfy minimum flows needed in the Okanogan River to protect anadromous fish and Indian reserved water rights.

NE OMAK WELL

CG4-GWC446-D@1 - NE Omak Well, Source No. 8, 800 gpm, 96 ac-ft annually, Priority date March 1936. This change authorizes an additional point of withdrawal for the Apple Well water right (*GWC-446-D*, see above) from the NE Omak Well.

AIRPORT WELL

GWC No. 5041-A - Airport Well, 10 gpm, 16 ac-ft annually for Omak Airport supply. Priority Date of October 9, 1959.

CEMETERY WELL

GWC No. 6412-A - Omak Cemetery Well, 70 gpm, 24 ac-ft annually for the irrigation of 8 acres from March 15 to October 15 and 1 ac-ft per year continuously during the entire year for domestic supply. Priority Date of March 28, 1960.

INTERTIES

The City wholesales water to the Confederate Tribes of the Colville Reservation's 12 Tribes Casino property via a metered connection located on 8th Avenue near Ferry Street.

PLANNING AND POLICIES

The following sections describe the City's current water system planning efforts and water service policies.

RELATED PLANNING DOCUMENTS

The following planning documents were used in the preparation of the City of Omak Water System Plan Update:

- City of Omak *Water System Plan Amendment*, Gray & Osborne, Inc., February 2015
- City of Omak *Water System Plan Update*, Gray & Osborne, Inc., June 2011
- *Greater Omak Area Comprehensive Plan 2013 Update*, Highlands Associates
- Okanogan County *Comprehensive Plan*, 2014

WATERSHED PLANNING

Concerning endangered and threatened species listed in the area, the Okanogan River is tributary to the Upper Columbia River. The Upper Columbia River spring-run Chinook salmon were listed as Endangered in 1994, critical habitat was established in September 2005; Upper Columbia River steelhead were listed as Endangered in June 2007 and critical habitat was established in September 2005; Columbia River Chum Salmon were listed as Threatened in June 2005, critical habitat was designated in September 2005; Columbia River bull trout were listed as Threatened in 1998 and the latest critical habitat determination was in September 2005.

The City of Omak is located in Water Resource Inventory Area (WRIA) 49, which is in Phase 2 & 3 of implementation. The Department of Ecology lists the status of Watershed Planning Act Activities in WRIA 49 as "Currently working on Phase 2: Watershed Assessment and Phase 3: Plan Development at the same time" in regards to RCW 90.82 Watershed Planning.

SERVICE AREA CHARACTERISTICS

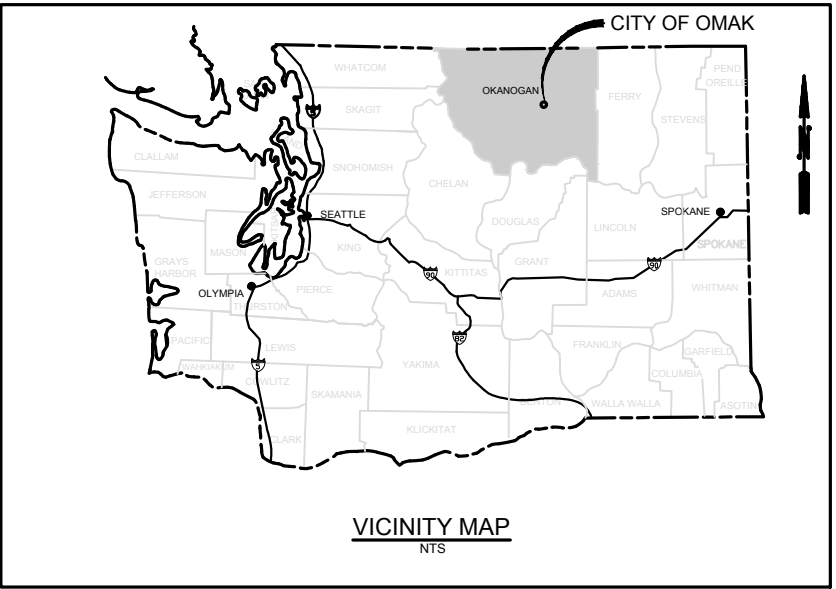
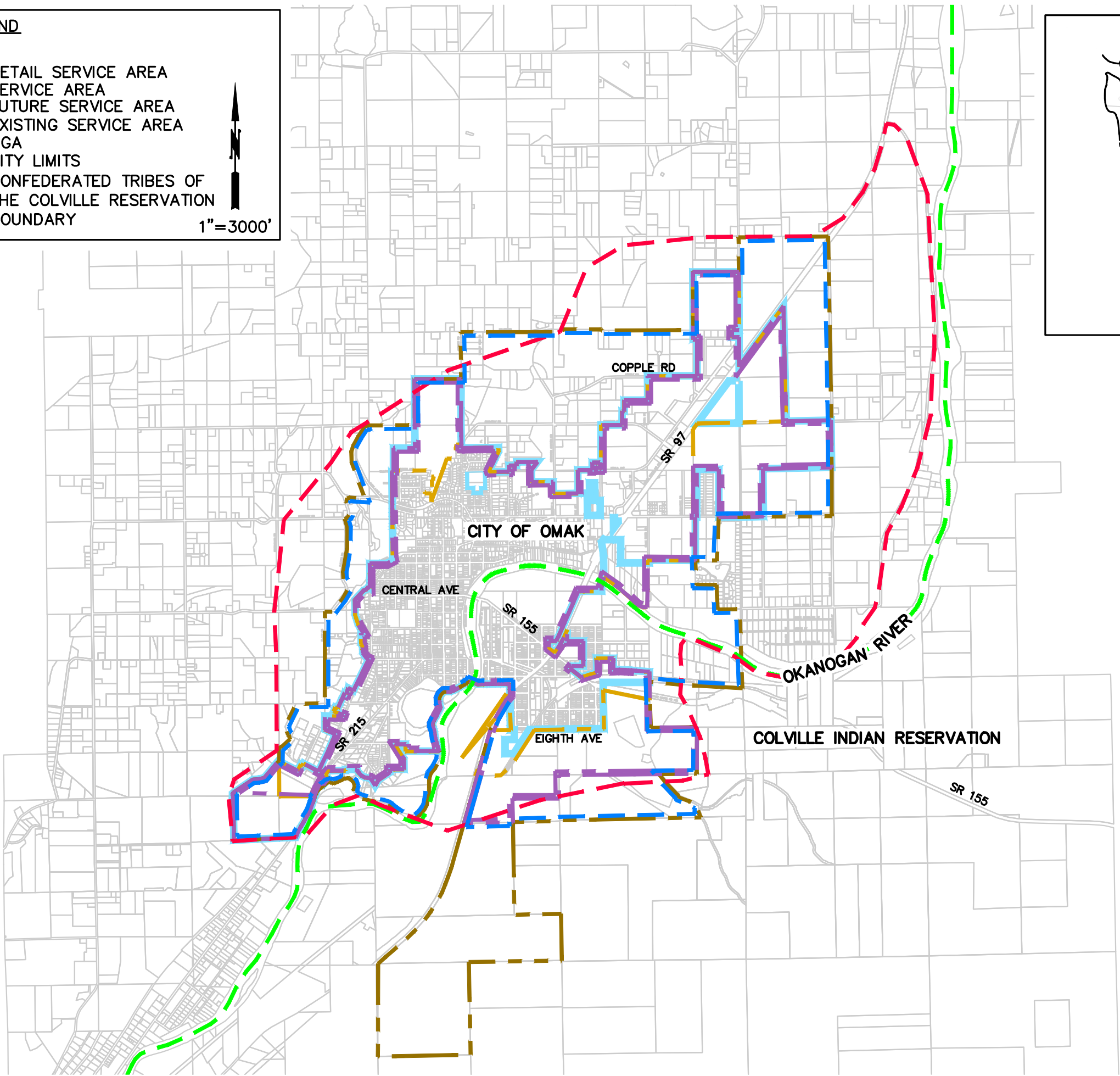
EXISTING AND FUTURE SERVICE AREA

The City of Omak's existing service area, retail service area, future service area and service area are shown on Figure 1-3. A large format wall map of Figure 1-3 is also provided in the appendix. The City's water rights place of use is defined as the area within the service area in accordance with WAC 246-290-107. Omak Municipal Code Section 9.04.140(e) prohibits additional water utility connections for locations outside the city water service area. The portion of the City east of the river is located within the boundaries of the Colville Confederated Tribes Reservation.

LEGEND

- RETAIL SERVICE AREA
- SERVICE AREA
- FUTURE SERVICE AREA
- EXISTING SERVICE AREA
- UGA
- CITY LIMITS
- CONFEDERATED TRIBES OF THE COLVILLE RESERVATION BOUNDARY

1"=3000'



VICINITY MAP
NTS

CITY OF OMAK
WATER SYSTEM PLAN
FIGURE 1-3
CITY LIMITS, UGA & SERVICE AREAS



ZONING

Extensive zoning changes are not expected to the area in and around the City within the next 20 years. Residential development is expected to continue at the system extremities, with commercial and industrial growth centered on the major traffic routes through the City. The majority of growth is anticipated to be in the northeast portion of the City. The City's zoning is presented on Figure 1-4. County zoning for the surrounding Omak area is shown on Figure 1-5.

NEIGHBORING WATER PURVEYORS

The City has six neighboring water purveyors:

- City of Okanogan (Group A Water System ID 63200)
- Duck Lake Water Association (Group A Water System ID 20200)
- Sandflat Water Association (Group A Water System ID 090646)
- Suncrest Plat Water System (Group A Water System ID 85207)
- Aston Estates Water Association (Group A Water System ID 090667)
- Coleman Butte Water Association (Group A Water System ID 13940)

The City of Omak has no water service area agreements with any of these neighboring purveyors at this time.

DUTY TO SERVE

Per RCW 43.20.260, the City has a duty to serve within its retail service area if a potential user approaches the City with a request for connection and the following threshold factors apply:

- The City has sufficient capacity to serve water in a safe and reliable manner.
- The service request is consistent with adopted local plans and development regulations.
- The City has sufficient water rights to provide service.
- The City can provide service in a timely and reasonable manner.

The Mayor and staff determine whether the request meets the above criteria, and make recommendations to the Planning Commission and the City Council.

SERVICE AREA POLICIES AND CONDITIONS OF SERVICE

Service area policies are addressed in the City's ordinances. These ordinances have been developed to be consistent with the City's Comprehensive Plan and with the City's development standards.

Table 1-9 summarizes the service area policies and definitions recommended by the Department of Health and those adopted by the City of Omak.

TABLE 1-9
Service Area Policies

Policy Name	Policy Summary	City of Omak Policy Reference
Wholesaling of Water	Policy on wholesaling or wheeling water.	Adopted. ⁽¹⁾
Connection Policy	Establishes the City as the exclusive provider of domestic water within the city limits.	OMC 9.04.040
Extensions	Policy requiring developer to pay for water main extensions.	OMC 9.04.500
Design and Performance Policy	Policy establishing construction and design standards in accordance to the City's standards for all connection and extensions.	OMC 9.04.520
Materials Policy	Policy stating minimum requirements for materials in providing water service.	OMC 9.04.520
System Extensions Policy	Policy stating that extensions meet certain criteria, including cost responsibilities, design standards, design responsibilities, and department approval.	OMC 9.04.500-580
Latecomer Agreement Policy	Allows developers to recover the cost of improvements through Latecomers Fees.	Case by case approval.
Connection Fee Policy	An established connection fee required to be paid in full before connection to the system.	OMC 9.04.150
Surcharge Policy	Policy determining surcharge assessed to water connections outside corporate limits.	OMC 9.04.370
Meters Policy	Policy requiring all services in place, or to be installed, to have a meter installed.	OMC 9.04.140
Oversizing	Policy providing funds to install larger facilities than needed so that future developments may be served.	Case by case approval. OMC 17.32.040
Water Meter Test Policy	Policy providing for the testing of service meter accuracy.	OMC 9.04.330-340
Cross Connection Control	Policy establishing the requirements for cross connection prevention devices.	OMC 9.04.091-098

(1) See Service Area Policies (adopted by the City in the 2004 Water System Plan) in the Appendix O.

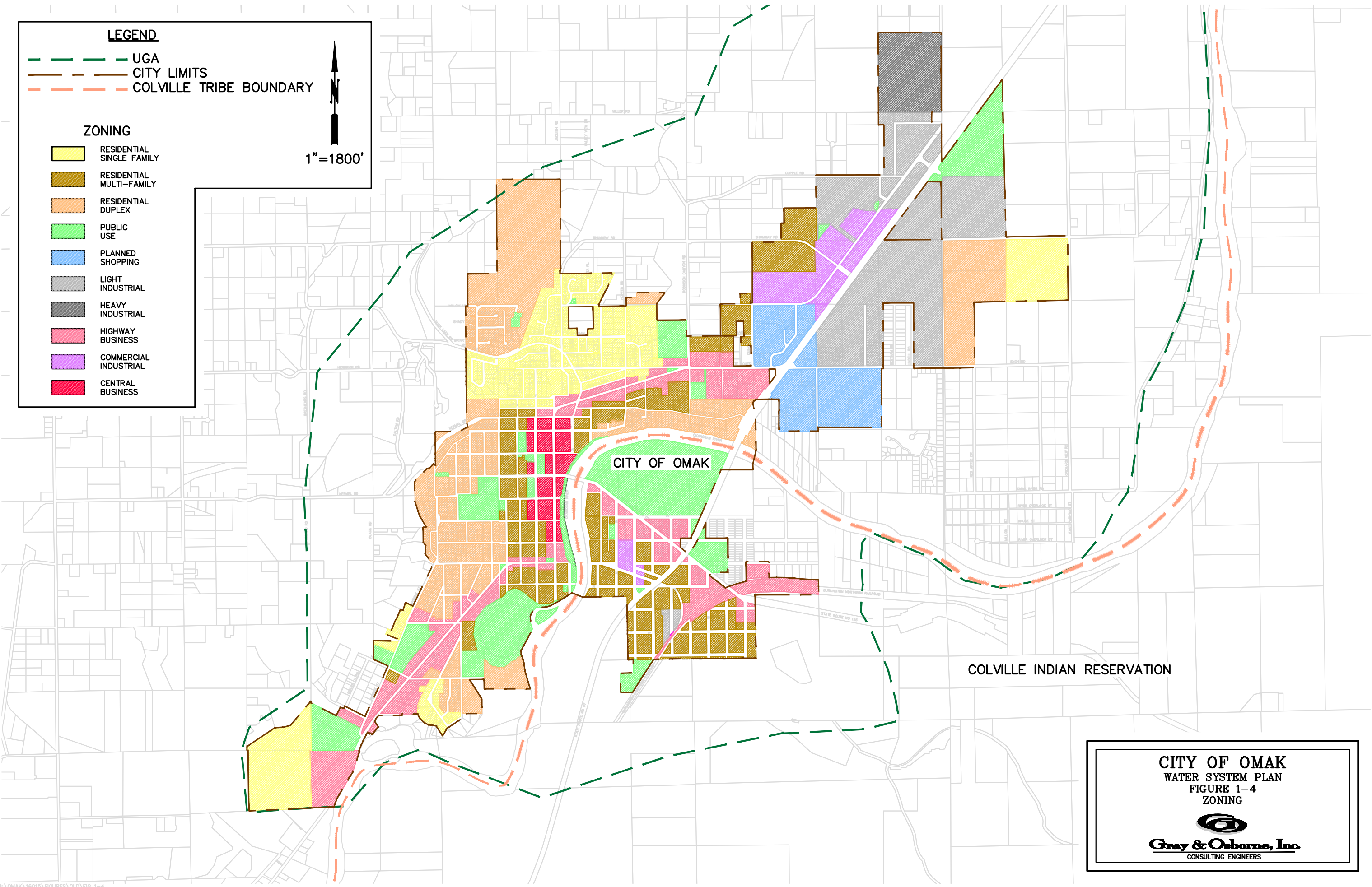
LEGEND

--- UGA
--- CITY LIMITS
--- COLVILLE TRIBE BOUNDARY

ZONING

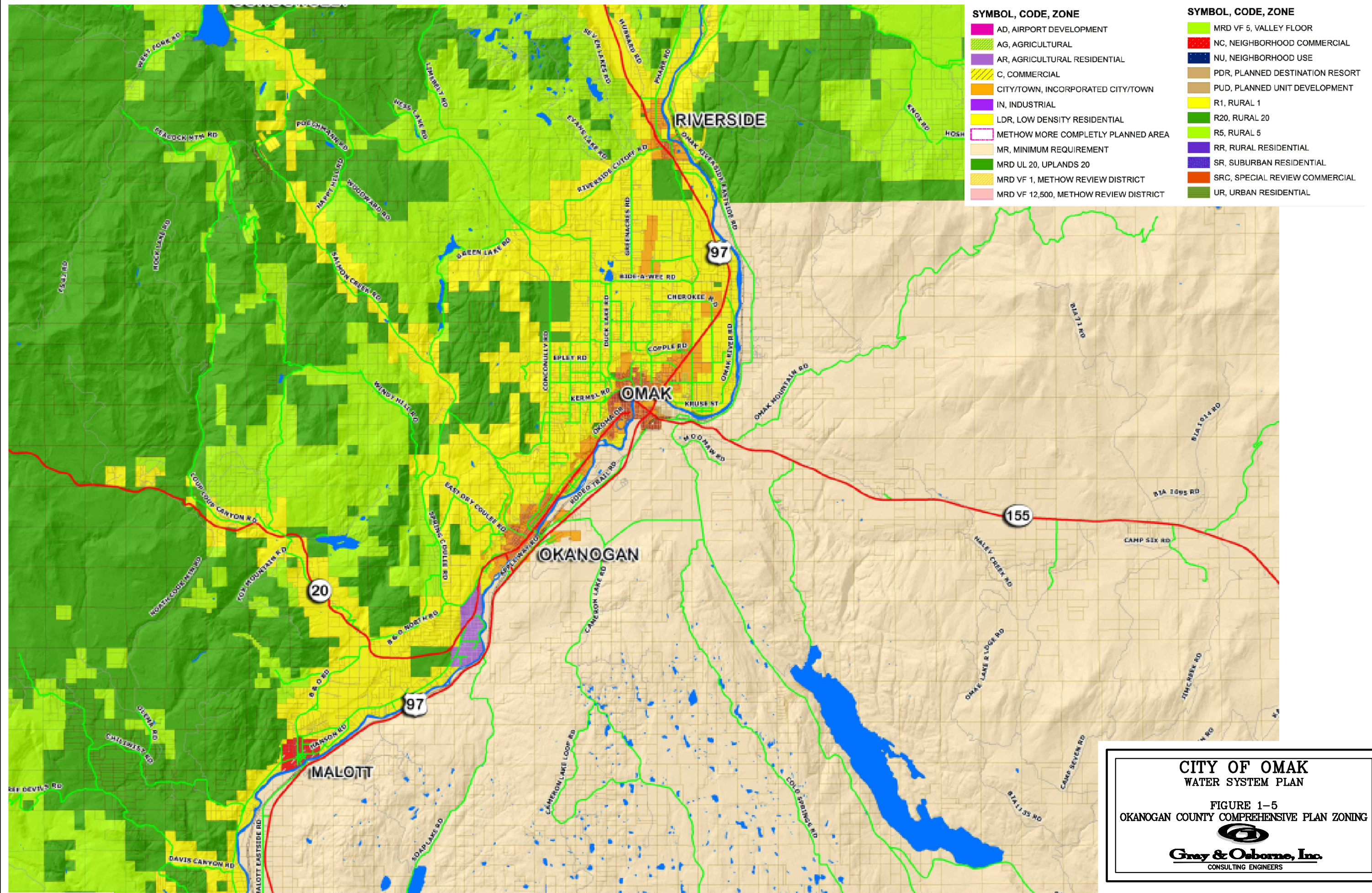
[Yellow Box]	RESIDENTIAL SINGLE FAMILY
[Brown Box]	RESIDENTIAL MULTI-FAMILY
[Orange Box]	RESIDENTIAL DUPLEX
[Green Box]	PUBLIC USE
[Blue Box]	PLANNED SHOPPING
[Light Gray Box]	LIGHT INDUSTRIAL
[Dark Gray Box]	HEAVY INDUSTRIAL
[Pink Box]	HIGHWAY BUSINESS
[Purple Box]	COMMERCIAL INDUSTRIAL
[Red Box]	CENTRAL BUSINESS

1"=1800'



CITY OF OMAK
WATER SYSTEM PLAN
FIGURE 1-4
ZONING

Gray & Osborne, Inc.
CONSULTING ENGINEERS



CITY OF OMAK
WATER SYSTEM PLAN

FIGURE 1-5
 OKANOGAN COUNTY COMPREHENSIVE PLAN ZONING

Gray & Osborne, Inc.
 CONSULTING ENGINEERS

CHAPTER 2

BASIC PLANNING DATA

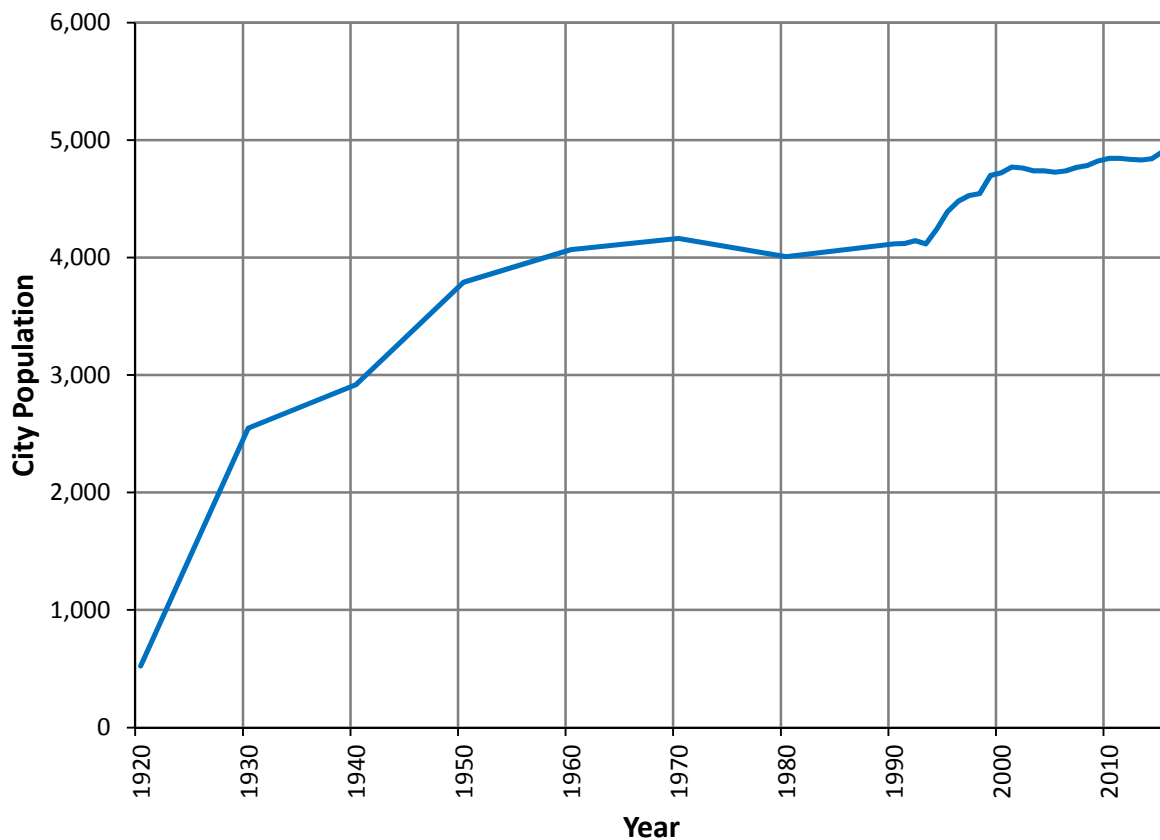
This chapter presents the basic planning data used to estimate Omak's future water demands. Water demand projections are used in Chapter 3 to evaluate the adequacy of the City's existing water system.

HISTORICAL DATA

In this section historical population trends, number of services, and water production and consumption are presented.

HISTORICAL POPULATION

Population in Omak has slowly increased over the past 15 years as shown on Figure 2-1.



(1) From US Census data and the Washington State Office of Financial Management

FIGURE 2-1

Historical Population⁽¹⁾

SERVICE CONNECTIONS

Table 2-1 lists the number of connections in each of the City's main customer categories for 2015.

TABLE 2-1
2015 Customer Accounts

Customer Classification	Number of Connections⁽¹⁾	Percent of Connections
Apartment	46	2.3%
Commercial	248	12.3%
Grocery	2	0.1%
Irrigation	102	5.1%
Medical	6	0.3%
Mobile Home Park	6	0.3%
Motel	5	0.2%
Multi Rental	54	2.7%
Out of City	36	1.8%
Residential ⁽²⁾	1,473	73.0%
Restaurant	25	1.2%
School	16	0.8%
Total	2,019	100%

(1) Approximate - count may vary during the year.

(2) Includes City's Senior Citizen billing customer classification.

Water Service Population

Of the 36 "Out of City" service meters shown in Table 2-1, approximately 30 are residential service meters. The City has 1,473 residential service meters inside of the City Limits. At an average of 2.38 persons per residence (based on 2010 U.S. Census information), the "Out of City" service meters are estimated to serve approximately 72 people. Therefore, in 2015, the water system served a population of 4,972 including these "Out of City" service meters.

The total water system populations are shown in Table 2-2.

TABLE 2-2
2010-2016 Service Area Populations

Year	Population Data ⁽¹⁾	Population Served Outside City Limits⁽¹⁾	Service Area Population
2010	4,845	72	4,917
2011	4,845	72	4,917
2012	4,835	72	4,907
2013	4,830	72	4,902
2014	4,840	72	4,912
2015	4,900	72	4,972
2016	4,925	72	4,997

(1) Population data from Washington State Office of Financial Management.

(2) Calculated by taking estimated residential service connections located outside the limits (30) and multiplying by 2.38 persons per residence.

HISTORICAL WATER USE

Water production data is collected from source meters by the City's telemetry system. Several years ago the City started replacing customer meters with "touch-read" meters. All meters in the City are now touch read-meters, with the exception of approximately 300 radio-read meters that the City utilizes. Water consumption is recorded monthly at individual water service meters, except during those winter months when meters are snow-covered and inaccessible. During those months, customers are billed the base rate only and the first spring reading is averaged for unread months. Customers are then charged accordingly for any overages.

AVERAGE DAY DEMAND (ADD)

Table 2-3 lists water production between 2010 and 2015. Annual production, or demand, is commonly reduced to a daily value, and is referred to as the average day demand (ADD). The ADD is useful in determining the adequacy of the City's annual withdrawal quantity water rights. The 2014-2015 average ADD will be used for analysis in this Plan.

TABLE 2-3
2010-2015 Average Daily Demand (ADD)

Year	Service Area Population⁽¹⁾	Total Annual Production (gal)	ADD⁽²⁾ (gpd)	ADD (ac-ft/yr)
2010	4,917	471,710,000	1,293,000	1,448
2011	4,917	442,433,000	1,213,000	1,358
2012	4,907	465,398,000	1,272,000	1,428
2013	4,902	436,185,000	1,196,000	1,339
2014	4,912	461,535,000	1,265,000	1,416
2015	4,972	505,306,000	1,385,000	1,551
2014-2015 Year Average			1,325,000	1,484

(1) From Table 2-2.

(2) Rounded up to the nearest 1,000 gallons.

The monthly distribution of production is shown on Figure 2-2 for 2010-2015. Typical of most eastern Washington communities without separate irrigation, demands increase significantly in the summer as the result of irrigation.

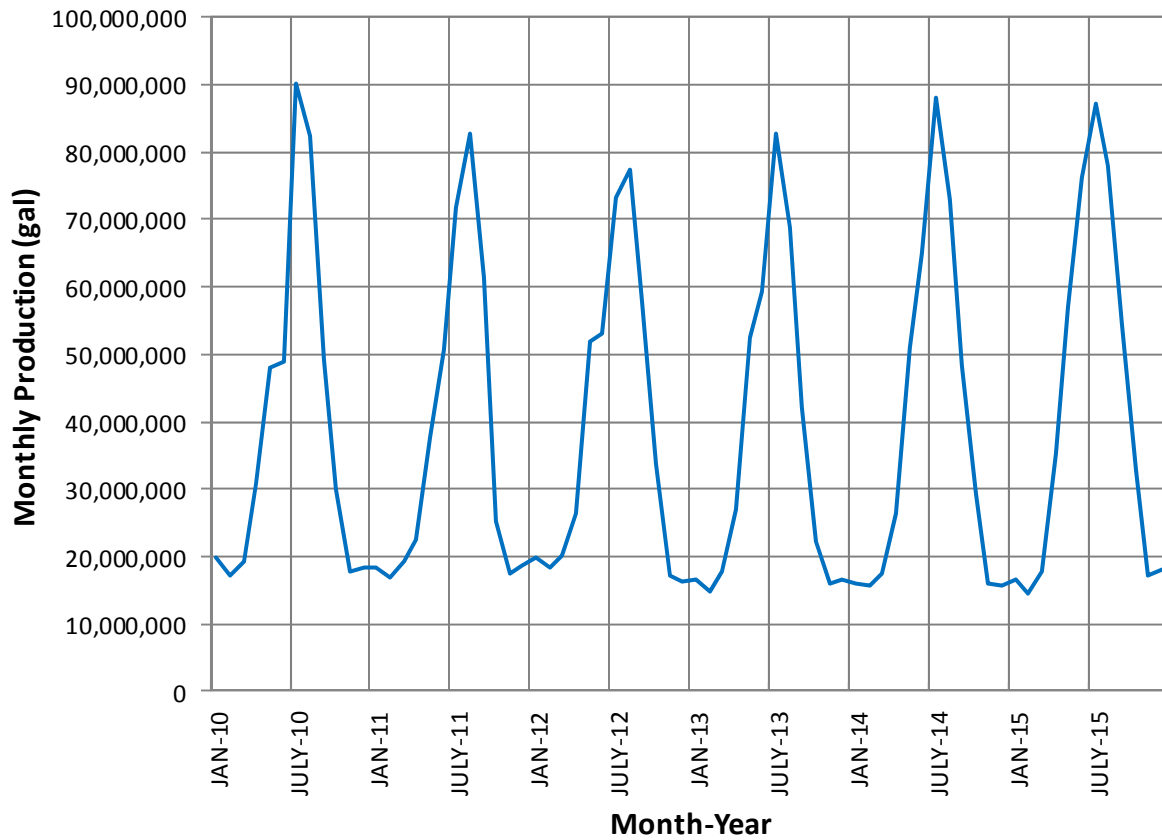


FIGURE 2-2

2010-2015 Monthly Water Production

In general, peak month water production has remained relatively steady over the past six years.

Figure 2-3 shows monthly production for each well and all wells combined from 2010 to 2015.

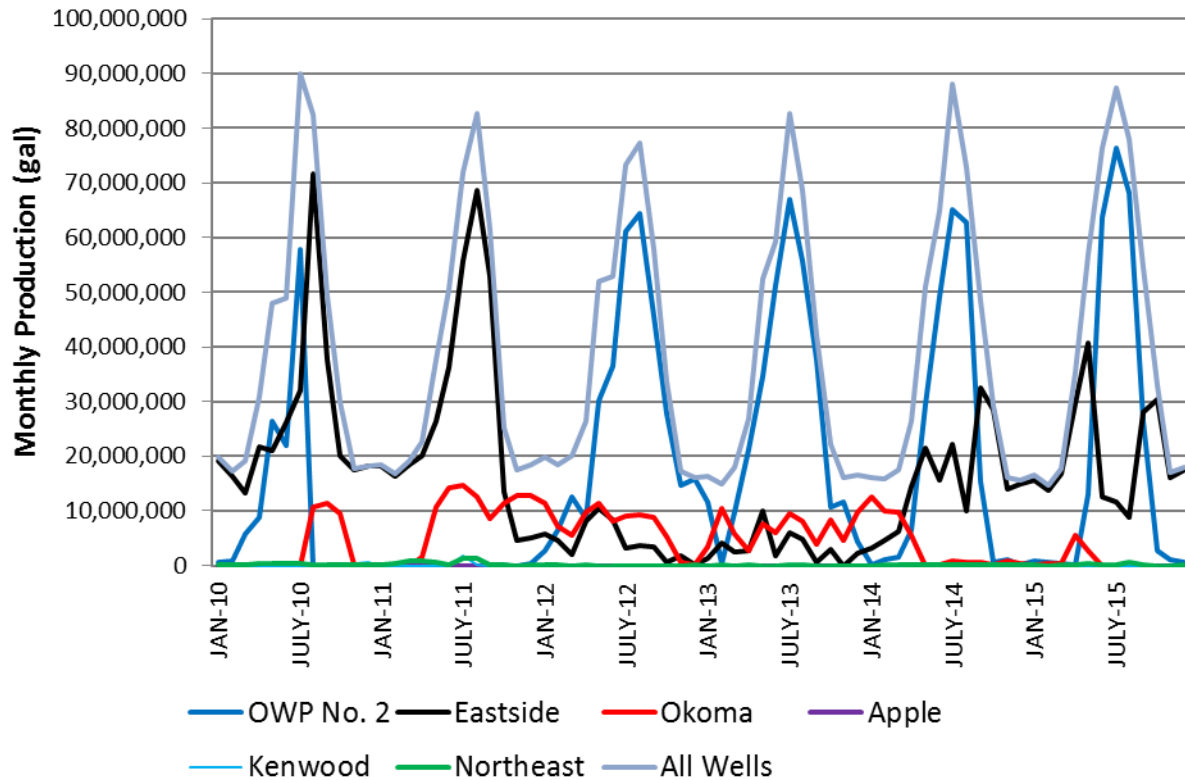


FIGURE 2-3

2010-2015 Monthly Water Production By Well

MAXIMUM DAY DEMAND (MDD)

The maximum amount of water pumped from the City's wells in a 24-hour period is called the maximum day demand (MDD). MDD values are important in determining whether the water system source capacity is sufficient to meet current and future production demands, and are indicative of the requirements for instantaneous water rights. MDD values presented in Table 2-4 are based on data collected by the City between 2010 and 2015. The data show that while the ADD and MDD have both varied significantly since 2010, the MDD/ADD ratio has remained reasonably constant. Consequently, the 2014-2015 average MDD/ADD ratio will be used for projecting the MDD beyond 2015. The 2014-2015 average MDD/ADD ratio of 2.7 is slightly higher to the MDD/ADD ratio from the 2009 *Water System Plan* of 2.5.

TABLE 2-4**2010-2015 Maximum Day Demand (MDD)**

Year	ADD ⁽¹⁾ (gpd)	MDD (gpd)	MDD ⁽²⁾ (gpm)	MDD/ADD Ratio
2010	1,293,000	3,458,000	2,401	2.7
2011	1,213,000	2,946,000	2,046	2.4
2012	1,272,000	3,140,000	2,181	2.5
2013	1,196,000	3,073,000	2,134	2.6
2014	1,265,000	3,441,000	2,390	2.7
2015	1,385,000	3,716,000	2,581	2.7
2014-2015 Average⁽³⁾	1,325,000	3,579,000	2,485	2.7

(1) From Table 2-3.

(2) $MDD\ (gpm) = MDD\ (gpd) \div 1440\ \text{minutes/day}$.

(3) Average ADD and MDD figures rounded up to the nearest 1,000 gpd.

PEAK HOUR DEMAND (PHD)

The maximum amount of water produced in a one-hour period during a maximum day is the peak hour demand (PHD). PHD is an important parameter in determining the amount of reservoir storage needed to make up the difference between the peak hour production requirement and the system's pumping capacity.

A method for estimating PHD is provided by DOH in its 2009 *Water System Design Manual* (WSDM). Equation 5-1 from the WSDM is as follows:

$$PHD = MDD \times [(C)(N) + F] + 18$$

where PHD is in gpm, MDD is in gpm/ERUs, N is the number of ERUs (see discussion below), and C and F are coefficients based on N from the WSDM. For 2015,

$$PHD = (2,581/2,913) \times [(1.6)(2,913) + 225] + 18 = 4,347\ \text{gpm}$$

This results in a PHD to MDD ratio for 2015 of 1.7 (4,347 gpm / 2,581 gpm). This value will be used to project future PHD requirements. The 2009 *Water System Plan* also used 1.7 for this ratio.

CONSUMPTION HISTORY

Table 2-5 shows the annual water consumption for 2012 through 2015 broken out into the City's various customer classifications.

TABLE 2-5
2012-2015 Water Consumption⁽¹⁾ (gal.)

Customer Classification	2012	2013	2014	2015
Apartment	24,642,000	26,347,000	27,097,000	29,773,000
Commercial	42,651,000	41,702,000	43,830,000	46,974,000
Grocery	5,403,000	5,306,000	2,079,000	2,224,000
Irrigation	17,821,000	11,584,000	53,024,000	61,056,000
Medical	14,517,000	14,090,000	18,008,000	18,110,000
Mobile Home Park	9,884,000	10,348,000	10,574,000	11,865,000
Motel	4,339,000	3,498,000	5,574,000	6,857,000
Multi Rental	7,775,000	7,665,000	9,016,000	8,680,000
Out of City	2,935,000	3,398,000	3,655,000	3,102,000
Residential ⁽²⁾	198,689,000	206,114,000	207,076,000	221,822,000
School	11,642,000	11,722,000	9,398,000	10,585,000
12 Tribes Casino ⁽³⁾	----	----	----	9,243,000
Total	345,891,000	348,949,000	396,275,000	438,838,000

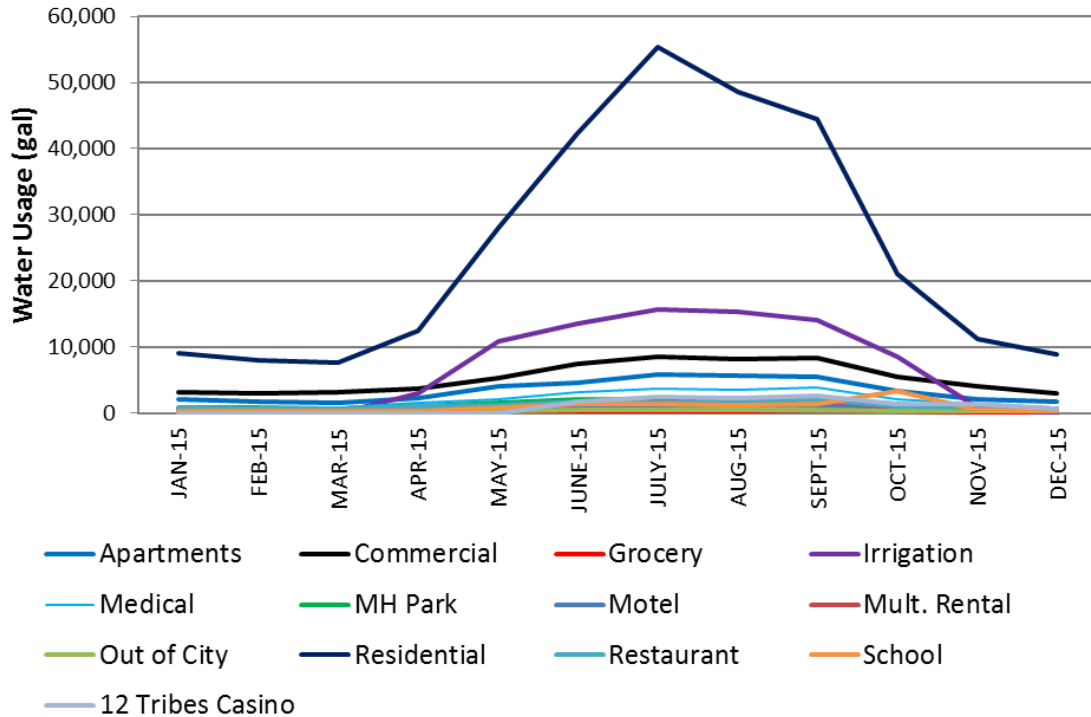
(1) Values rounded up to the nearest 1,000 gallons.

(2) Residential classification includes City's Senior Citizen billing classification

(3) 12 Tribes Casino became new City customer in June 2015.

Seasonal Variations in Consumption

The City's 2015 monthly water use by classification is shown on Figure 2-4. As can be seen in the figure, many of the classification usages vary significantly depending upon the season of the year, with irrigation demands playing a significant role in water consumption during the summer months for residential, irrigation, commercial and apartment customer classifications.

**FIGURE 2-4**

2015 Seasonal Variations in Consumption by Customer Classification

DISTRIBUTION SYSTEM LEAKAGE

Distribution system leakage (DSL) is defined as the difference between total water produced and authorized consumption. DSL includes any water loss due to leaks or unauthorized uses such as illegal service connections. DSL also includes accounting errors, inaccurate source and customer meters and storage tank overflows. Water leaving the system for un-metered usage such as flushing of mains and fire flows, if accounted for, is counted as an authorized use of water. Table 2-6 shows the calculation of DSL for the years 2010 to 2015.

The Washington State Legislature passed the Municipal Water Supply – Efficiency Requirements Act of 2003, better known as the Municipal Water Law. This law presents municipal water suppliers with certain obligations to comply with, one of which is to meet a “Distribution System Leakage Standard” of 10 percent or less by July 1, 2011 (see DOH Water Use Efficiency Guidebook) or three years after installing all service meters. The City is pursuing efficient use of water resources and seeking to reduce DSL in order to meet this new standard.

The criteria for meeting the distribution leakage standard is based upon the DSL rolling average based on the most recent 3 years. For the City of Omak, the most recent 3-year average (from the years 2013 through 2015) is shown in Table 2-6 to be just over 6 percent.

TABLE 2-6
2010-2015 Distribution System Leakage

Year	Annual Production⁽¹⁾ (gal)	Annual Consumption⁽¹⁾ (gal)	Distribution System Leakage⁽²⁾ (gal)	Percent of Total Production⁽³⁾ (%)	3-Year Average (%)
2010	471,710,000	458,512,000	13,198,000	2.8%	----
2011	442,433,000	409,939,000	32,494,000	7.3%	----
2012	465,398,000	424,393,000	41,005,000	8.8%	6.3%
2013	436,185,000	407,551,000	28,634,000	6.6%	7.6%
2014	461,535,000	438,822,000	22,713,000	4.9%	6.8%
2015	505,306,000	467,687,000	37,619,000	7.4%	6.3%

(1) Annual production and consumption from City records; consumption data includes hydrant meter readings and other authorized water uses.

(2) Distribution System Leakage = (Annual Production) – (Annual Consumption).

(3) Percent of Total Production = (Distribution System Leakage) ÷ (Annual Production).

Through the recently completed Eastside Park Metering project the City has metered all connections to the water system. The City also meters water used at its other parks, the City Library and City Hall complex, Wastewater Treatment Facility and the City's pool.

EQUIVALENT RESIDENTIAL UNITS

The use of Equivalent Residential Units (ERUs) is a way to express water use by non-residential customers as an equivalent number of residential customers. ERUs are calculated by dividing the total volume of water utilized in the single-family customer class by the total number of single-family residential connections. This number defines the average residential water use. The volume of water used by the other customer classes can then be divided by the average residential use to determine the equivalent residential units utilized by the other customer classes. The ERUs for each customer class are shown in Table 2-7. The average daily single-family residential consumption for the City of Omak for 2015 was determined to be 413 gallons/day/ERU {221,822,000 gal/yr ÷ 365 days/yr ÷ 1,473 residential connections = 413 gallons/day/ERU}.

TABLE 2-7**2015 Equivalent Residential Units**

Classification	Annual Consumption⁽¹⁾ (gal)	Number of Connections⁽²⁾	ERUs⁽³⁾	ERUs/ Conn.	Percent of Total ERUs
Apartment	29,773,000	46	198	4.3	6.8%
Commercial	46,974,000	248	312	1.3	10.7%
Grocery	2,224,000	2	15	7.4	0.5%
Irrigation	61,056,000	102	405	4.0	13.9%
Medical	18,110,000	6	120	20.0	4.1%
Mobile Home Park	11,865,000	6	79	13.1	2.7%
Motel	6,857,000	5	45	9.1	1.6%
Multi Rental	8,680,000	54	58	1.1	2.0%
Out of City	3,102,000	36	21	0.6	0.7%
Residential ⁽¹⁾	221,822,000	1,473	1,473	1.0	50.6%
Restaurant	10,585,000	25	70	2.8	2.4%
School	8,547,000	16	57	3.5	1.9%
12 Tribes Casino	9,243,000	1	61	61.3	2.1%
Total	429,595,000	2,020	2,913	--	100%

(1) Annual consumption from Table 2-5.

(2) Number of connections from Table 2-1 plus 1 connection for the 12 Tribes Casino.

(3) ERUs = (Annual Consumption) / (365 days) / (413 gpd/ERU).

LARGEST WATER USERS

Water consumption by the 22 largest water users in the City of Omak is shown in Table 2-8. These customers accounted for approximately 20.2 percent of metered consumption in 2015. Peak consumption patterns among the large water users are important because a modest increase or decrease in consumption by a large water user could significantly increase/decrease the demands on the water system.

TABLE 2-8
2015 Largest Water Users

Customer	Address	Consumption (gal)	Percent of Total⁽¹⁾
Mid Valley Hospital	810 Jasmine #3	10,416,596	2.4%
12 Tribes Casino	28968 US-97	9,243,000	2.1%
Home Depot	920 Engh	6,960,605	1.6%
The Springs	905 Engh	6,628,471	1.5%
Apple Springs	1001 Senna	4,589,287	1.0%
Okanogan Behavioral Health	1007 Koala	4,584,050	1.0%
Omak Lube & Wash	707 Omache Drive	3,950,452	0.9%
Omak School District	OHS Football Field	3,945,964	0.9%
Omak School District	619 Jasmine	3,893,600	0.9%
Omak Sewer Plant	635 South Fir	3,583,908	0.8%
Wal-Mart	902 Engh	3,412,604	0.8%
Regency Omak	901 Shumway	3,101,415	0.7%
City of Omak	336 Oak Street	3,088,698	0.7%
Colville Tribe	601-607 Benton	2,985,468	0.7%
Omak Stampede Housing	204 Ferry	2,603,214	0.6%
Best Western Peppertree	820 Koala	2,556,087	0.6%
Confluence Health	916 Koala	2,369,822	0.5%
Wal-Mart	902 Engh Road	2,363,090	0.5%
Koskorp	601-605 Okoma Drive	2,303,994	0.5%
East Village Apts	902 Apple Lane	2,143,911	0.5%
Omak School District	615 Oak Street	2,061,626	0.5%
Safeway	607 Omache Drive	2,027,964	0.5%
Total		88,813,827	20.2%

(1) As a percentage of 2015 Total Annual Consumption (Table 2-5).

PROJECTED LAND USE, FUTURE POPULATION, AND WATER DEMANDS

This section provides population and water use projections based on the historical data presented in the previous sections.

PROJECTED POPULATION

The latest estimate from the Washington State Office of Financial Management (OFM) indicates a 2016 population of 4,925 residents in the City. The average annual growth rate from 2005 to 2016, based on US Census data and OFM estimates, is approximately 0.4 percent. City population projections utilized in this Plan for water system facilities will be based on the 0.4 percent average annual growth rate from 2005 to 2016. Table 2-9 provides future population projections based in this anticipated growth rate.

TABLE 2-9**Projected Service Area Population**

Year	City⁽¹⁾	Out of City⁽²⁾	Total
2016	4,925	72	4,997
2017	4,945	72	5,017
2018	4,964	72	5,036
2019	4,984	72	5,056
2020	5,004	72	5,076
2021	5,024	72	5,096
2022	5,044	72	5,116
2023	5,065	72	5,137
2024	5,085	72	5,157
2025	5,105	72	5,177
2026	5,126	72	5,198
2027	5,146	72	5,218
2037	5,356	72	5,428

(1) 2016 population from Table 2-2; population data for other years projected from 2016 population at anticipated annual growth rate of 0.4 percent.

(2) From Table 2-2 (assumes no growth in service connections located outside city limits).

The location of the City's new water services may impact storage, booster pumping and distribution and transmission piping requirements. In general, the City anticipates the majority of future growth to occur in north/northeast Omak within its City limits and it's UGA. Downtown Omak and east Omak are generally built out and growth in these areas is expected as infill only.

The City anticipates growth distribution within the City pressure zones as shown in Table 2-10.

TABLE 2-10**Projected Growth Distribution by Pressure Zone**

Pressure Zone	Percent of City's Residential Growth	Percent of City's Commercial Growth
Lower Zone	10%	10%
Middle Zone	50%	40%
Upper Zone (NE)	30%	50%
Upper Zone (NW)	10%	0%

12 Tribes Casino

The City began wholesaling water to the 12 Tribes Casino in June 2015. Information in the City's *2015 Water System Plan Amendment* indicates anticipated annual water usage of approximately 10,500,00 gallons; however, actual consumption records indicate the sale of 16,135,439 and 16,932,112 gallons in 2016 and 2017, respectively, the first full years of data available. With no known additional development at the Casino, for the purposes of this plan, it is assumed that future annual consumption at the 12 Tribes Casino will be 17,000,000 gallons.

PROJECTED ERUS

Projected ERUs are summarized in Table 2-11 for the City and Outside City Limits. Projected ERUS for the 12 Tribes Casino is calculated to be 113 ERUs (17,000,000 gal/365 days/413 gpd/ERU = 113 ERUs).

TABLE 2-11

Projected ERUs

Year	Service Area Population ⁽¹⁾	ERUs			Total Service Area
		City ⁽²⁾	Outside City Limits ⁽³⁾	12 Tribes Casino ⁽³⁾⁽⁴⁾	
2016	4,997	2,842	21	107	2,975
2017	5,017	2,853	21	113	2,987
2018	5,036	2,865	21	113	2,998
2019	5,056	2,876	21	113	3,010
2020	5,076	2,888	21	113	3,021
2021	5,096	2,899	21	113	3,033
2022	5,116	2,911	21	113	3,044
2023	5,137	2,923	21	113	3,056
2024	5,157	2,934	21	113	3,068
2025	5,177	2,946	21	113	3,079
2026	5,198	2,958	21	113	3,091
2027	5,218	2,970	21	113	3,103
2037	5,428	3,091	21	113	3,224

(1) From Table 2-9.

(2) City ERUs includes all customer classification except those within the Outside City Limits classification and 12 Tribes Casino. Anticipated annual growth rate of 0.4 percent for City customer classifications other than Outside City Limits.

(3) No growth in connections anticipated for Outside City Limits and 12 Tribes Casino.

(4) 2016 ERUs = 107 ERUs (16,135,439 gal/365 days/413 gpd/ERU = 107 ERU).

PROJECTED ADD, MDD, AND PHD

DOH requires planning for ten and twenty year planning horizons. Table 2-12 summarizes the projected population, ADD, MDD and PHD through 2037. Projected

water demands were based on the projected growth rate of 0.40 percent and the 2014-2015 ADD (1,325,000 gpd as shown in Table 2-3), except as noted in the table.

The production data was used to project the peak day and peak hour demands through the year 2037 by applying the peak day factor of 2.7 and peak hour peaking factor of 1.7 to the average day production and the peak day production, respectively.

TABLE 2-12**Projected ADD, MDD, and PHD**

Year	Service Area Population⁽¹⁾	ERUs⁽²⁾	ADD⁽³⁾ (gpd)	Annual Prod.⁽⁴⁾ (af/yr)	MDD⁽⁵⁾ (gpd)	MDD⁽⁶⁾ (gpm)	PHD⁽⁷⁾ (gpm)
2016	4,997	2,969	1,375,000	1,550	3,713,000	2,580	4,330
2017	5,017	2,987	1,383,000	1,550	3,734,000	2,590	4,350
2018	5,036	2,998	1,388,000	1,560	3,748,000	2,600	4,360
2019	5,056	3,010	1,393,000	1,570	3,761,000	2,610	4,380
2020	5,076	3,021	1,399,000	1,570	3,777,000	2,620	4,400
2021	5,096	3,033	1,404,000	1,580	3,791,000	2,630	4,410
2022	5,116	3,044	1,410,000	1,580	3,807,000	2,640	4,430
2023	5,137	3,056	1,415,000	1,590	3,821,000	2,650	4,450
2024	5,157	3,068	1,421,000	1,600	3,837,000	2,660	4,470
2025	5,177	3,079	1,426,000	1,600	3,850,000	2,670	4,480
2026	5,198	3,091	1,432,000	1,610	3,866,000	2,680	4,500
2027	5,218	3,103	1,437,000	1,610	3,880,000	2,690	4,520
2037	5,428	3,224	1,494,000	1,680	4,034,000	2,800	4,700

(1) From Table 2-9.

(2) From Table 2-11.

(3) ADD assumed to increase at the same rate as ERUs (except 12 Tribes Casino ADD remains constant from 2017 to 2037) and rounded up to the nearest 1,000 gpd. The 2014-2015 average ADD shown in Table 2-3 was used as the basis for projections.

(4) Annual Production = $\text{ADD} \times 365 / 43,560 \text{ cf/af} / 7.48 \text{ gal/cf}$ (rounded up to the nearest 10 acre-ft/yr)

(5) MDD/ADD peaking factor is 2.7; MDD values rounded to the nearest 1,000 gpd.

(6) MDD values rounded to the nearest 10 gpm.

(7) PHD/MDD peaking factor is 1.7; PHD values rounded to the nearest 10 gpm.

WATER USE EFFICIENCY

The City's current WUE program consists of the following:

- Program Promotion: The City makes DOH water conservation flyers available at City Hall and encourages water conservation through inserts with the City newsletters. These inserts explain the purpose and need for water conservation practices and serve to educate the public as to how water usage reduction can be achieved through water-saving devices and practices.

- Source Meters: The City's active wells are equipped with source meters. Data is collected and saved at City Hall through the City's telemetry system. Source meters are scheduled for calibration every three years.
- Service Meters: All residential, commercial, and industrial water customers are metered. Maintenance and replacement of service meters occurs as needed.
- Purveyor Assistance/Customer Assistance: The City continues to assist all City water users regarding the development and implementation of water conservation measures.
- Water Usage Tracking: Increased enforcement of requirement to use portable hydrant meters during construction-related water use as it occurs within the City.
- Water Reuse: Continue to use disinfected wastewater for irrigation of the grounds at the City's wastewater treatment facility.

Since the City's last water system plan update in 2011, the City has continued to keep its 3-year average distribution system leakage below the DOH requirement of 10 percent.

The demand estimates provided in Table 2-12 will be used for a conservative analysis of the City's water system infrastructure without allowances for further conservation. However, the City anticipates making any future rate adjustments with further conservation in mind. The City's goal is to reduce its per capita consumption 1 percent each year through 2037.

Table 2-13 summarizes the projected population, ADD, MDD and PHD through 2037 assuming a reduction in per capita consumption of 1 percent per year. Projected water demands were based on the projected growth rate of 0.40 percent and the 2014-2015 ADD (1,325,000 gpd as shown in Table 2-3), except as noted in the table. Anticipated water savings with reduced consumption while maintaining current DSL levels are shown in Table 2-14.

TABLE 2-13**Projected ADD, MDD, and PHD with Conservation**

Year	Service Area Population⁽¹⁾	ERUs⁽²⁾	ADD⁽³⁾ (gpd)	Annual Prod.⁽⁴⁾ (af/yr)	MDD⁽⁵⁾ (gpd)	MDD⁽⁶⁾ (gpm)	PHD⁽⁷⁾ (gpm)
2016	4,997	2,969	1,361,000	1,530	3,675,000	2,550	4,280
2017	5,017	2,987	1,369,000	1,540	3,696,000	2,570	4,310
2018	5,036	2,998	1,374,000	1,540	3,710,000	2,580	4,330
2019	5,056	3,010	1,379,000	1,550	3,723,000	2,590	4,350
2020	5,076	3,021	1,385,000	1,560	3,740,000	2,600	4,360
2021	5,096	3,033	1,390,000	1,560	3,753,000	2,610	4,380
2022	5,116	3,044	1,396,000	1,570	3,769,000	2,620	4,400
2023	5,137	3,056	1,401,000	1,570	3,783,000	2,630	4,410
2024	5,157	3,068	1,407,000	1,580	3,799,000	2,640	4,430
2025	5,177	3,079	1,412,000	1,590	3,812,000	2,650	4,450
2026	5,198	3,091	1,418,000	1,590	3,829,000	2,660	4,470
2027	5,218	3,103	1,423,000	1,600	3,842,000	2,670	4,480
2037	5,428	3,224	1,479,000	1,660	3,993,000	2,770	4,650

(1) From Table 2-9.

(2) From Table 2-11.

(3) ADD assumed to increase at the same rate as ERUs (except 12 Tribes Casino ADD remains constant) with a reduction in per capita consumption of 1 percent each year through 2037 and rounded to the nearest 1,000 gpd. The 2014-2015 average ADD shown in Table 2-3 was used as the basis for projections. Annual Production = $\text{ADD} \times 365 / 43,560 \text{ cf/af} / 7.48 \text{ gal/cf}$ (rounded up to the nearest 10 acre-ft/yr)

(4) MDD/ADD peaking factor is 2.7; MDD values rounded to the nearest 1,000 gpd.

(5) MDD values rounded to the nearest 10 gpm.

(6) PHD/MDD peaking factor is 1.7; PHD values rounded to the nearest 10 gpm.

TABLE 2-14

**Projected Savings with Reduced Consumption
While Maintaining Current DSL Levels**

Year	Consumption Savings (gpd)⁽¹⁾
2016	14,000
2017	14,000
2018	14,000
2019	14,000
2020	14,000
2021	14,000
2022	14,000
2023	14,000
2024	14,000
2025	14,000
2026	14,000
2027	14,000
Total	168,000

(1) Savings assumes a 1 percent reduction in per capita consumption each year.

CHAPTER 3

WATER SYSTEM ANALYSIS

The purpose of this chapter is to determine the ability of the City's existing water system to meet current and future water quality and system demand requirements. The major sections of this chapter are:

- System Design Standards
- Water Quality Analysis
- Facility Analysis
- Operation and Maintenance Analysis
- System Deficiencies and Proposed Improvements

SYSTEM DESIGN STANDARDS

WAC 246-290 contains general criteria and standards that must be followed in the development of public water systems. In addition, the Washington State Department of Health's 2009 *Water System Design Manual (WSDM)* provides specific guidance for water system design.

GENERAL FACILITY STANDARDS

The Department of Health (Health) relies on various regulations, publications, and the purveyor to establish design criteria. WAC 246-290 is the primary drinking water regulation used by Health to assess capacity, water quality, and compliance with drinking water standards. The *WSDM* serves as guidance for the preparation of plans and specifications for Group A public water systems in compliance with WAC 246-290. The *WSDM* also references the following codes and guidelines:

- Uniform Building Code (the International Building Code was adopted by all state and local agencies in 2004);
- Uniform Plumbing Code;
- Recommended Standards for Water Works (RSWW), Ten State Standards;
- Local codes;
- American Water Works Association (AWWA) Standards;
- American Society of Civil Engineers (ASCE) Standards; and
- American Public Works Association (APWA) Standards.

Table 3-1 lists the suggested *WSDM* guidance and the City's policies with regard to each standard for general facility requirements.

TABLE 3-1**General Facility Requirements**

Standard	Department of Health Water System Design Manual	City of Okanogan Standards
Average Day and Maximum Day Demand	Average Day Demand (ADD) should be determined from metered water use data. Maximum Day Demand (MDD) is estimated at approximately two times the ADD if metered data is not available.	ADD = Metered consumption MDD = Based on 2.7 peaking factor on historical average day demand data
Peak Hour Demand	Peak hour demand (PHD) is determined using the following equation: $PHD = (MDD/1440)(CN + F) + 18,$ where MDD is in gpd/ERU, and C and F are coefficients based on N, the number of ERUs. See Eq. 5-3, <i>WSDM</i>	PHD = Applying 1.7 peaking factor to MDD based on metered consumption
Source Capacity	Capacity must be sufficient to meet MDD and replenish fire suppression storage within 72 hours.	Same as <i>WSDM</i> , Chapter 7.
Storage Requirements	The sum of: <u>Operational Storage</u> Volume sufficient to prevent pump recycling. <u>Equalizing Storage</u> $V_{ES} = (Q_{PH} - Q_S) * 150$ <u>Standby Storage</u> $V_{SB} = (2 * ADD * N) - t_m * (Q_S - Q_L)$ <u>Fire Suppression Storage</u> $V_{FSS} = NFF * T$ Where, ADD = average day demand, gpd/ERU N = number of ERU's Q _{PH} = peak hour demand, gpm Q _S = capacity of all sources, excluding emergency sources, gpm Q _L = capacity of largest source, gpm t _m = daily pump source run time, min (1440) NFF = needed fire flow, gpm T = fire flow duration, min	Same as <i>WSDM</i> , using the formulas provided in the manual, Chapter 9.
Minimum System Pressure	The system should be designed to maintain a minimum of 30 psi in the distribution system under peak hour demand and 20 psi under fire flow conditions during MDD.	Same as <i>WSDM</i> , Chapter 8.
Fire Flow Rate & Duration	The minimum fire flow shall be determined by the local fire authority.	Fire flow requirements are based on the local Fire Department standards which follow the International Fire Code (IFC).
Minimum Pipe Size	The diameter of a transmission line shall be determined by hydraulic analysis. The minimum size distribution system line shall not be less than 6-inches in diameter.	Same as <i>WSDM</i> , Chapter 8. The diameter of a transmission line shall be determined by hydraulic analysis except that the minimum size distribution system line shall not be less than 8-inches in diameter.

TABLE 3-1 (cont.)**General Facility Requirements**

Standard	Department of Health Water System Design Manual	City of Okanogan Standards
Reliability Recommendations	<ul style="list-style-type: none"> • Sources capable of supplying MDD within an 18-hour period • Sources meet ADD with largest source out of service • Back-up power equipment for pump stations unless there are two independent public power sources • Provision of multiple storage tanks • Standby storage equivalent to ADD x 2, with a minimum of 200 gpd/ERU • Low and high level storage alarms • Looping of distribution mains when feasible • Pipeline velocities not > 8 fps at PHD • Flushing velocities of 2.5 fps for all pipelines 	Same as <i>WSDM</i> , Chapter 5.
Valve and Hydrant Spacing	Sufficient valving should be placed to keep a minimum of customers out of service when water is turned off for maintenance, repair, replacement or addition. As a general rule, valves on distribution mains 12-inches and smaller should be provided at least every 1,000 feet. Fire hydrants on laterals should be provided with their own auxiliary gate valve.	The City has adopted the International Fire Code (IFC). Valve and hydrant standards are outlined in the City's developer standards.
Water Quality Standards	The primary drinking water regulation utilized by Health to assess capacity, water quality, and overall compliance with drinking water standards.	WAC 246-290

CONSTRUCTION STANDARDS

The City has prepared a set of standards for developers to follow when constructing water system components. These standards are included in Chapter 7.

WATER QUALITY ANALYSIS

Group A public community water systems must comply with the drinking water standards of the federal Safe Drinking Water Act and its amendments. The Washington State Department of Health adopted these federal standards under WAC 246-290. To enable Group A water systems to comply with the regulations, Health issues Water Quality Monitoring Report's (WQMR) listing a system's reporting requirements. The City's current WQMR is provided in Appendix C.

The City is currently in compliance with all bacteriological, organic, and inorganic testing. According to the DOH Office of Drinking Water website, one sample from the Kenwood well taken 11/9/2010, and four samples from the OWP No. 2 well, taken between 12/29/2011 and 3/26/2013, demonstrated arsenic levels higher than the

Maximum Contaminant Level (MCL) of 0.010 mg/l. Subsequent samples both wells demonstrate compliance with drinking water standards for all contaminants tested.

FACILITY ANALYSIS

This section presents an evaluation of the City's water system source, storage, transmission, distribution, and telemetry facilities.

SOURCE

Department of Health rules, as described in WAC 246-290-222 (4), require source production capacity to be sufficient to supply maximum day demands. In addition, the City's water rights must be sufficient to meet maximum day and total annual demands.

Source Capacity

Since 2012 the City has relied upon Eastside, Okoma, OWP No. 2, and NE Omak Well for their municipal water needs. However, the Okoma well has been out of service since September 2015 due to diminished well capacity and electrical issues. The following analyses have been performed assuming the capacities of the three wells currently in use and the Julia Maley Park well, which is scheduled for completion in 2017, pending project funding. A summary of the City's ground water sources is presented in Chapter 1. Table 3-2 compares the peak daily well production capacity of the existing wells with projected peak day production requirements through the year 2037.

TABLE 3-2

Source Production Capacity Analysis

Year	MDD (gpm)	Source Capacity (gpm)	Surplus (+)/Deficit (-) (gpm)
2016	2,580	3,405 ⁽¹⁾	+825
2027 ⁽²⁾	2,690	4,205 ⁽²⁾	+1,515
2037 ⁽³⁾	2,800	4,205 ⁽²⁾	+1,405

(1) Current primary sources, Eastside (1,550 gpm) + OWP No. 2 (1,750 gpm) + NE Omak (105 gpm) = 3,405 gpm.

(2) Includes current primary sources plus Julia Maley Park Well (800 gpm) expected to be in service in 2017.

(3) 10-year planning horizon.

(4) 20-year planning horizon.

Table 3-2 indicates that the City's primary wells have sufficient rated pumping capacity to meet the MDD through the 10- and 20-year planning periods. The City's wells all have flow control valves and may be operated at a lower output than full capacity at the City's option. The Julia Maley Park Well will be equipped with a variable frequency drive that will allow pump operation at variable speeds.

Besides the requirements of WAC 246-290-222 (4), the WSDM recommends that systems wishing to provide a high level of reliability to its customers consider the following source criteria for emergency conditions:

- Provide sufficient source capacity to meet the MDD and replenish fire suppression storage within 72 hours. The largest fire suppression storage requirement is 1,320,000 gallons (5,500 gpm for 4 hours).
- Meet the MDD with 18 (rather than 24) hours of pumping.
- Meet the ADD with the largest source out of service.
- Provide two independent power feeds, or portable or in-place backup power unless the power grid meets the following minimum reliability criteria:
 - Outage frequency averages three or less per year based on data for the three previous years with no more than six outages in a single year. A power outage is considered a loss of power for 30 minutes or longer.
 - Outage duration averages less than four hours based on data for the three previous years with not more than one outage during the three previous year period exceeding eight hours.

Table 3-3 summarizes the City's ability to meet the first three of these recommendations.

TABLE 3-3

2037 Source Production Capacity Analysis

Criteria	Q(req'd) (GPM)	Q(avail) (gpm)	Surplus (+) / Deficit (-) (gpm)
Meet MDD & Replenish FSS within 72 Hours	3,106 ⁽¹⁾	4,205 ⁽³⁾	+1,099
Meet MDD with 18 Hours Pumping	2,800	3,154	+354
Meet ADD without Largest Source	1,038 ⁽²⁾	2,455 ⁽⁴⁾	+1,418

(1) Calculation: 2037 MDD (2,800 gpm) + largest fire suppression storage requirement (1,320,000 gallons/(72*60)) = 3,106 gpm.

(2) Calculation: 2037 ADD (1,494,000 gpd/1,440 min/day) = 1,038 gpm.

(3) Includes all currently active wells, including Eastside (1,550 gpm), OWP No. 2 (1,750 gpm), and NE Omak (105 gpm), and the Julia Maley Park well (800 gpm), scheduled for construction in 2017.

(4) Assumes OWP No. 2 well (1,750 gpm) is out of service.

Table 3-3 indicates that the City's active wells, together with the Julia Maley Park well, are expected to meet the MDD and replenish the reservoirs with the Fire Suppression Storage (FSS) within 72 hours, and to meet the MDD with 18 (rather than 24) hours of pumping. These wells are also expected to meet the ADD with the largest source out of service (OWP No 2).

Regarding the fourth recommendation, available records from Public Utility District No. 1 of Okanogan County indicate that three substations provide power to the City; Sandflat,

Omak, and Okanogan substations. Over the past three years, 11 feeder lines from these substations experienced 152 power outages 30 minutes or longer averaging 51 outages per year. Average outage duration over the past three years is 139 minutes (1.2 hours) with four outages exceeding eight hours. However, the PUD indicated that these substations also feed areas outside of the City and that the exact number and duration of outages within the City limits are unknown.

Discussions with City personnel indicate that there have been outages at City water facilities over the past three years, specifically affecting the Eastside and OWP No. 2 wells; however, the City recollects only a couple outages, none longer than four hours in duration.

None of the City's wells currently have backup power, however, the Julia Maley Park Well will be equipped with a trailer mounted diesel-fueled 175 kW generator set with sufficient power to run the Julia Maley Park, Eastside, OWP No. 2 and NE Omak wells. Improvements will be made at the Eastside, OWP No. 2 and NE Omak wells in order to facilitate connection to the new generator set.

Water Rights

A description of the City's water rights was presented in Chapter 1. The City's maximum instantaneous and annual withdrawals for each source must comply with the limitations of its water rights. Appendix M provides copies of selected information from Ecology's water rights files as well as Ecology's Reports of Examination for these water rights and claims. Figure 1-3 shows the place of use for the City's water rights.

Tables 3-4a, 3-4b, and 3-4c provide an analysis of the current and projected adequacy of the City's water rights, using the DOH-formatted table for water rights self assessment. The tables show totals for the current water rights as well as the 2027 and 2037 expected water consumption for the City's active sources. As indicated, the City's total available water rights are not expected to exceed its needs by the year 2037.

TABLE 3-4a

Water Rights Self-Assessment

Permit Certificate or Claim #	Name of Rightholder or Claimant	Priority Date	Source Name/ Number	Primary/ Alternate	Existing Water Rights		Existing Water Use From Source		Current Water Right Status (Excess/Deficiency)	
					Maximum Instantaneous Flow Rate (Qi, gpm)	Maximum Annual Volume (Qa, ac-ft)	Maximum Instantaneous Flow Rate (Qi, gpm)	Maximum Annual Volume (Qa, ac-ft)	Maximum Instantaneous Flow Rate (Qi, gpm)	Maximum Annual Volume (Qa, ac-ft)
CG4-GWC445-D@1 ⁽¹⁾	Omak	12/1913	Kenwood/S03	Primary	500	600	0	0	+ 500	+ 600
CG4-GWC446-D@3 ⁽²⁾	Omak	3/1936	Apple/S02	Primary	800	96	0	0	+ 800	+ 96
CG4-GWC1082-D@1 ^(3,4)	Omak	5/1944	Eastside/S01	Primary	1,630	1,430	250	115	+ 1,380	+ 1,315
CG4-GWC3655-A@1 ⁽⁵⁾	Omak	3/20/1958	Eastside/S01	Primary & Alt.	1,300	2,080 ⁽⁶⁾	1,300	640	+ 0	+ 1,440
CG4-GWC3656-A@1 ⁽²⁾	Omak	3/20/1958	Apple/S02	Primary & Alt.	375	600 ⁽⁷⁾	0	0	+ 375	+ 600
CG4-GWC7332-A@1 ⁽⁸⁾	Omak	7/19/1971	Okoma/S04	Primary & Alt.	600	560 ⁽⁹⁾	0	0	+ 600	+ 560
G4-31525P ⁽¹⁰⁾	Omak	11/23/1992	OWP #2/S07	Primary & Alt.	5,000	3,500	1,750	800	+ 3,250	+ 2,700
CG4-GWC 446-D@1 ⁽¹¹⁾	Omak	Dec-'00	NE Omak/S08 ⁽¹¹⁾	Alternate	500	96	105	5	+ 395	+ 91
TOTAL DOMESTIC RIGHTS					10,205⁽¹²⁾	3,500⁽¹²⁾	3,405	1,560	+ 6,800	+ 1,940
Other City of Omak Water Rights										
6412-A ⁽¹³⁾	Omak	3/28/1968	Cemetery	Primary	70	24	70	23.6	+ 0	+ 0.4
6530-A ⁽¹⁴⁾	Omak	3/1968	E. Omak	Primary	400	185	300	0	+ 100	+ 185
G4-28244P	Omak	6/1983	E. Omak	Alternate	500	278	0	0	+ 500	+ 278
G4-81058JWRIS	Omak	10/9/1959	Airport	Primary	10	3	6	0.5	+ 4	+ 2.5
(1)	This certificate was originally authorized under Ground Water Declaration Claim No. 486 dated November 3, 1947. On June 7, 2005 Ecology approved Change Application authorizing the use of the Apple Well, the Eastside Well, the Okoma Well, and OWP No. 2 under this certificate. On August 11, 2005 approved an Application for Water Right Change to add Well No. 9, the Hicks Well, the Dean Well, and the proposed Powers Well to this certificate. The instantaneous withdrawals for all rights were limited to their original quantities.									
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(3)	This certificate was originally authorized under Ground Water Declaration Claim No. 489 dated March 11, 1958. On June 7, 2005 Ecology approved Change Application authorizing the use of the Apple Well, the Kenwood Well, the Okoma Well, and OWP No. 2 under this certificate. On August 11, 2005 approved an Application for Water Right Change to add Well No. 9, the Hicks Well, the Dean Well, and the proposed Powers Well to this certificate. On May 29, 2015 Ecology approved change application authorizing the use of proposed Julia Maley Park and Oak Street Wells and eliminated the proposed Hicks, Dean, and Powers wells under this certificate. The instantaneous withdrawals for all rights were limited to their original quantities.									
(4)	The City of Omak has a permit in good standing with the Confederated Tribes of the Colville Reservation for this well.									
(5)	On June 7, 2005 Ecology approved Change Application authorizing the use of the Apple Well, the Kenwood Well, the Okoma Well, and OWP No. 2 under this certificate. On August 11, 2005 approved an Application for Water Right Change to add Well No. 9, the Hicks Well, the Dean Well, and the proposed Powers Well to this certificate. The instantaneous withdrawals for all rights were limited to their original quantities.									
(6)	The March 20, 1958 Report of Examination recommended limiting the withdrawal from this well to Qi of 1,300 gpm and Qa of 2,080 ac-ft/yr, and the City's total annual withdrawal to 3,500 ac-ft/yr.									
(7)	The June 30th, 1960 certificate is for Qi of 375 gpm and Qa of 600 ac-ft/yr.									
(8)	The July 19, 1971 certificate limits use of this right between May 1 and October 31.									
(9)	The January 6, 1971 Report of Examination recommended limiting the annual quantity to 3,456 acre-feet per year for a population of 6,000.									
(10)	The April 22, 1993 Report of Examination limited the total annual withdrawal from all sources to 3,500 acre-feet per year, and provides that this authorization is subject to availability of water in the Okanogan River. The June 7, 2005 Report of Examination notes that adding non-interruptable rights to this right "would, in essence, allow the City to pump from OWP No. 2 Well at times when they would historically have to shut it down. But, at times when the Okanogan River drops below minimum instream flows, the 5,000 gpm authorized under G4-31525 cannot be used."									
(11)	Called Well No. 9 in Ecology's 2005 Reports of Examination.									
(12)	The April 22, 1993 Report of Examination limited the maximum instantaneous withdrawal from all sources to 10,205 gpm, and the maximum annual withdrawal to 3,500 acre feet per year.									
(13)	This primary right is for use at the City's cemetery only. It is not additive to the City's domestic rights, i.e., those rights associated with wells identified as points of withdrawal under the 2005 change									
(14)	Authorized the withdrawal of 500 gpm, 278 acre-feet per year from the East Omak Park Well, for the following purposes:									
	a. Irrigation of 90 acres from April 1 to October 1 (allocated 270 acre-feet per year with 180 acre-feet being alternate/non-additive to withdrawals under Certificate no. 6530).									
	b. Municipal supply from April 1 to October 1 (allocated 8 acre-feet with 5 acre-feet being alternative/non-additive to withdrawals under Certificate no. 6530)									

TABLE 3-4b

Water Rights Self-Assessment

Permit Certificate or Claim #	Name of Rightholder or Claimant	Priority Date	Source Name/ Number	Primary/ Alternate	Existing Water Rights		Forecasted Water Use From Sources (10-Year Demand)		Forecasted Water Right Status (Excess/Deficiency)	
					Maximum Instantaneous Flow Rate (Qi, gpm)	Maximum Annual Volume (Qa, ac-ft)	Maximum Instantaneous Flow Rate (Qi, gpm)	Maximum Annual Volume (Qa, ac-ft)	Maximum Instantaneous Flow Rate (Qi, gpm)	Maximum Annual Volume (Qa, ac-ft)
CG4-GWC445-D@1 ⁽¹⁾	Omak	12/1913	Kenwood/S03	Primary	500	600	0	0	+ 500	+ 600
CG4-GWC446-D@3 ⁽²⁾	Omak	3/1936	Apple/S02	Primary	800	96	0	0	+ 800	+ 96
CG4-GWC1082-D@1 ^(3,4)	Omak	5/1944	Eastside/S01	Primary	1,630	1,430	1,365	165	+ 265	+ 1,265
CG4-GWC3655-A@1 ⁽⁵⁾	Omak	3/20/1958	Eastside/S01	Primary & Alt.	1,300	2,080 ⁽⁶⁾	1,300	640	+ 0	+ 1,440
CG4-GWC3656-A@1 ⁽²⁾	Omak	3/20/1958	Apple/S02	Primary & Alt.	375	600 ⁽⁷⁾	0	0	+ 375	+ 600
CG4-GWC7332-A@1 ⁽⁸⁾	Omak	7/19/1971	Okoma/S04	Primary & Alt.	600	560 ⁽⁹⁾	0	0	+ 600	+ 560
G4-31525P ⁽¹⁰⁾	Omak	11/23/1992	OWP #2/S07	Primary & Alt.	5,000	3,500	1,750	800	+ 3,250	+ 2,700
CG4-GWC 446-D@1 ⁽¹¹⁾	Omak	Dec-'00	NE Omak/S08 ⁽¹¹⁾	Alternate	500	96	105	5	+ 395	+ 91
TOTAL DOMESTIC RIGHTS					10,205⁽¹²⁾	3,500⁽¹²⁾	4,520	1,610	+ 5,685	+ 1,890
Other City of Omak Water Rights										
6412-A ⁽¹³⁾	Omak	3/28/1968	Cemetery	Primary	70	24	70	23.6	+ 0	+ 0.4
6530-A ⁽¹⁴⁾	Omak	3/1968	E. Omak	Primary	400	185	300	0	+ 100	+ 185
G4-28244P	Omak	6/1983	E. Omak	Alternate	500	278	0	0	+ 500	+ 278
G4-81058JWRIS	Omak	10/9/1959	Airport	Primary	10	3	6	0.5	+ 4	+ 2.5
(1)	This certificate was originally authorized under Ground Water Declaration Claim No. 486 dated November 3, 1947. On June 7, 2005 Ecology approved Change Application authorizing the use of the Apple Well, the Eastside Well, the Okoma Well, and OWP No. 2 under this certificate. On August 11, 2005 approved an Application for Water Right Change to add Well No. 9, the Hicks Well, the Dean Well, and the proposed Powers Well to this certificate. The instantaneous withdrawals for all rights were limited to their original quantities.									
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(4)	The City of Omak has a permit in good standing with the Confederated Tribes of the Colville Reservation for this well.									
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(6)	The March 20, 1958 Report of Examination recommended limiting the withdrawal from this well to Qi of 1,300 gpm and Qa of 2,080 ac-ft/yr, and the City's total annual withdrawal to 3,500 ac-ft/yr.									
(7)	The June 30th, 1960 certificate is for Qi of 375 gpm and Qa of 600 ac-ft/yr.									
(8)	The July 19, 1971 certificate limits use of this right between May 1 and October 31.									
(9)	The January 6, 1971 Report of Examination recommended limiting the annual quantity to 3,456 acre-feet per year for a population of 6,000.									
(10)	The April 22, 1993 Report of Examination limited the total annual withdrawal from all sources to 3,500 acre-feet per year, and provides that this authorization is subject to availability of water in the Okanogan River. The June 7, 2005 Report of Examination notes that adding non-interruptable rights to this right "would, in essence, allow the City to pump from OWP No. 2 Well at times when they would historically have to shut it down. But, at times when the Okanogan River drops below minimum instream flows, the 5,000 gpm authorized under G4-31525 cannot be used."									
(11)	Called Well No. 9 in Ecology's 2005 Reports of Examination.									
(12)	The April 22, 1993 Report of Examination limited the maximum instantaneous withdrawal from all sources to 10,205 gpm, and the maximum annual withdrawal to 3,500 acre feet per year.									
(13)	This primary right is for use at the City's cemetery only. It is not additive to the City's domestic rights, i.e., those rights associated with wells identified as points of withdrawal under the 2005 change									
(14)	Authorized the withdrawal of 500 gpm, 278 acre-feet per year from the East Omak Park Well, for the following purposes:									
	a. Irrigation of 90 acres from April 1 to October 1 (allocated 270 acre-feet per year with 180 acre-feet being alternate/non-additive to withdrawals under Certificate no. 6530).									
	b. Municipal supply from April 1 to October 1 (allocated 8 acre-feet with 5 acre-feet being alternative/non-additive to withdrawals under Certificate no. 6530)									

TABLE 3-4c

Water Rights Self-Assessment

Permit Certificate or Claim #	Name of Rightholder or Claimant	Priority Date	Source Name/ Number	Primary/ Alternate	Existing Water Rights		Forecasted Water Use From Sources (20-Year Demand)		Forecasted Water Right Status (Excess/Deficiency)	
					Maximum Instantaneous Flow Rate (Qi, gpm)	Maximum Annual Volume (Qa, ac-ft)	Maximum Instantaneous Flow Rate (Qi, gpm)	Maximum Annual Volume (Qa, ac-ft)	Maximum Instantaneous Flow Rate (Qi, gpm)	Maximum Annual Volume (Qa, ac-ft)
CG4-GWC445-D@1 ⁽¹⁾	Omak	12/1913	Kenwood/S03	Primary	500	600	0	0	+ 500	+ 600
CG4-GWC446-D@3 ⁽²⁾	Omak	3/1936	Apple/S02	Primary	800	96	0	0	+ 800	+ 96
CG4-GWC1082-D@1 ^(3,4)	Omak	5/1944	Eastside/S01	Primary	1,630	1,430	1,545	235	+ 85	+ 1,195
CG4-GWC3655-A@1 ⁽⁵⁾	Omak	3/20/1958	Eastside/S01	Primary & Alt.	1,300	2,080 ⁽⁶⁾	1,300	640	+ 0	+ 1,440
CG\$-GWC3656-A@1 ⁽²⁾	Omak	3/20/1958	Apple/S02	Primary & Alt.	375	600 ⁽⁷⁾	0	0	+ 375	+ 600
CG4-GWC7332-A@1 ⁽⁸⁾	Omak	7/19/1971	Okoma/S04	Primary & Alt.	600	560 ⁽⁹⁾	0	0	+ 600	+ 560
G4-31525P ⁽¹⁰⁾	Omak	11/23/1992	OWP #2/S07	Primary & Alt.	5,000	3,500	1,750	800	+ 3,250	+ 2,700
CG4-GWC 446-D@1 ⁽¹¹⁾	Omak	Dec-'00	NE Omak/S08 ⁽¹¹⁾	Alternate	500	96	105	5	+ 395	+ 91
TOTAL DOMESTIC RIGHTS					10,205⁽¹²⁾	3,500⁽¹²⁾	4,700	1,680	+ 5,505	+ 1,820
Other City of Omak Water Rights										
6412-A ⁽¹³⁾	Omak	3/28/1968	Cemetery	Primary	70	24	70	23.6	+ 0	+ 0.4
6530-A ⁽¹⁴⁾	Omak	3/1968	E. Omak	Primary	400	185	300	0	+ 100	+ 185
G4-28244P	Omak	6/1983	E. Omak	Alternate	500	278	0	0	+ 500	+ 278
G4-81058JWRIS	Omak	10/9/1959	Airport	Primary	10	3	6	0.5	+ 4	+ 2.5
<p>(1) This certificate was originally authorized under Ground Water Declaration Claim No. 486 dated November 3, 1947. On June 7, 2005 Ecology approved Change Application authorizing the use of the Apple Well, the Eastside Well, the Okoma Well, and OWP No. 2 under this certificate. On August 11, 2005 approved an Application for Water Right Change to add Well No. 9, the Hicks Well, the Dean Well, and the proposed Powers Well to this certificate. The instantaneous withdraw als for all rights were limited to their original quantities.</p> <p>(2) This certificate was originally authorized under Ground Water Declaration Claim No. 488 dated December 15, 1947. On December 7, 2000, Ecology approved a Change Application authorizing the use of Well No. 9 under this certificate. On June 7, 2005 Ecology approved Change Application authorizing the use of the Kenwood Well, the Eastside Well, the Okoma Well, and OWP No. 2 under this certificate. On August 11, 2005 Ecology approved an Application for Water Right Change to add the Hicks Well, the Dean Well, and the proposed Powers Well to this certificate. The instantaneous withdraw als for all rights were limited to their original quantities.</p> <p>(3) This certificate was originally authorized under Ground Water Declaration Claim No. 489 dated March 11, 1958. On June 7, 2005 Ecology approved Change Application authorizing the use of the Apple Well, the Kenwood Well, the Okoma Well, and OWP No. 2 under this certificate. On August 11, 2005 approved an Application for Water Right Change to add Well No. 9, the Hicks Well, the Dean Well, and the proposed Powers Well to this certificate. On May 29, 2015 Ecology approved change application authorizing the use of proposed Julia Maley Park and Oak Street Wells and eliminated the proposed Hicks, Dean, and Powers wells under this certificate. The instantaneous withdraw als for all rights were limited to their original quantities.</p> <p>(4) The City of Omak has a permit in good standing with the Confederated Tribes of the Colville Reservation for this well.</p> <p>(5) On June 7, 2005 Ecology approved Change Application authorizing the use of the Apple Well, the Kenwood Well, the Okoma Well, and OWP No. 2 under this certificate. On August 11, 2005 approved an Application for Water Right Change to add Well No. 9, the Hicks Well, the Dean Well, and the proposed Powers Well to this certificate. The instantaneous withdraw als for all rights were limited to their original quantities.</p> <p>(6) The March 20, 1958 Report of Examination recommended limiting the withdraw al from this well to Qi of 1,300 gpm and Qa of 2,080 ac-ft/yr, and the City's total annual withdraw al to 3,500 ac-ft/yr.</p> <p>(7) The June 30th, 1960 certificate is for Qi of 375 gpm and Qa of 600 ac-ft/yr.</p> <p>(8) The July 19, 1971 certificate limits use of this right between May 1 and October 31.</p> <p>(9) The January 6, 1971 Report of Examination recommended limiting the annual quantity to 3,456 acre-feet per year for a population of 6,000.</p> <p>(10) The April 22, 1993 Report of Examination limited the total annual withdraw al from all sources to 3,500 acre-feet per year, and provides that this authorization is subject to availability of water in the Okanogan River. The June 7, 2005 Report of Examination notes that adding non-interruptable rights to this right "would, in essence, allow the City to pump from OWP No. 2 Well at times when they would historically have to shut it down. But, at times when the Okanogan River drops below minimum instream flows, the 5,000 gpm authorized under G4-31525 cannot be used."</p> <p>(11) Called Well No. 9 in Ecology's 2005 Reports of Examination.</p> <p>(12) The April 22, 1993 Report of Examination limited the maximum instantaneous withdraw al from all sources to 10,205 gpm, and the maximum annual withdraw al to 3,500 acre feet per year.</p> <p>(13) This primary right is for use at the City's cemetery only. It is not additive to the City's domestic rights, i.e., those rights associated with wells identified as points of withdraw al under the 2005 change</p> <p>(14) Authorized the withdraw al of 500 gpm, 278 acre-feet per year from the East Omak Park Well, for the following purposes:</p> <p>a. Irrigation of 90 acres from April 1 to October 1 (allocated 270 acre-feet per year with 180 acre-feet being alternate/non-additive to withdraw als under Certificate no. 6530).</p> <p>b. Municipal supply from April 1 to October 1 (allocated 8 acre-feet with 5 acre-feet being alternative/non-additive to withdraw als under Certificate no. 6530)</p>										

STORAGE

As outlined in the *WSDM*, storage requirements are based on the sum of the following storage components:

- Operating storage;
- Equalizing storage;
- Standby storage; and
- Fire suppression storage.

Operating Storage (OS)

Operating storage is the amount of storage taken up by the first few feet of the reservoir to account for cycling of the supply pumps. The City of Omak has generally used the top two feet of its reservoirs for this purpose.

Equalizing Storage (ES)

Equalizing storage is used to meet diurnal peaks that exceed the average demand during MDD. The volume of equalizing storage required depends on peak system demands, the magnitude of diurnal water system demand variations, the source production rate, and the mode of system operation. Equalizing storage must be provided at a minimum pressure of 30 psi.

$$V_{ES} = (Q_{PH} - Q_S) * 150 \text{ minutes,}$$

where,

$$V_{ES} = \text{Volume of equalizing storage (gallons)}$$
$$Q_{PH} = \text{Peak hourly demand (gpm)}$$
$$Q_S = \text{Total capacity of source supply, excluding emergency sources (gpm)}$$

Standby Storage (SB)

Standby storage provides a measure of reliability should the City's source of supply fail, or should unusual conditions create increased system demands. Standby storage calculations are based on the assumption that adequate source capacity will be developed to meet average daily demands with the largest source out of service. Standby storage must be provided at a minimum pressure of 20 psi.

$$V_{SB} = 2 \text{ days} * (ADD) - t_m * (Q_S - Q_L)$$

where,

$$V_{SB} = \text{Required volume of standby storage (gallons)}$$
$$ADD = \text{Average daily demand for the design year (gal/day)}$$
$$t_m = \text{Time remaining sources are pumped when the largest source is unavailable (minutes). Usually taken conservatively as 1,440 minutes, or one day.}$$
$$Q_S = \text{Rate of all source capacities summed together, except emergency}$$

$$Q_L = \frac{\text{sources (gpm)}}{\text{Rate of largest capacity source available to system (gpm)}}$$

In no case, however, shall the standby storage volume be less than the following:

$$V_{SB} = 200 \text{ gallons times the number of ERUs}$$

Fire Suppression Storage (FSS)

The amount of water required for fire fighting purposes is specified in terms of rate of flow in gallons per minute (gpm) for an associated duration. The City's fire chief, whose advice the City relies on for matters related to fire flow, has indicated that a peak fire flow requirement of 5,500 gpm for a 240-minute duration is appropriate for the City's highest fire flow requirement. The City's largest fire flow requirements are shown in Table 3-5. Fire flows must be provided at a residual water system pressure of at least 20 psi.

$$V_{FSS} = NFF * T,$$

where,

$$V_{FSS} = \text{Volume required for fire suppression storage (gallons)}$$

$$NFF = \text{Needed fire flow (gpm)}$$

$$T = \text{Flow duration (minutes)}$$

WAC 246-290-235(4) allows standby and fire suppression storage volumes to be combined or "nested", provided the local fire protection authority does not require them to be additive. A copy of correspondence from the City's fire chief allowing nesting is included in Appendix J.

TABLE 3-5**Largest Fire Flow Requirements**

Structure	Fire Flow (gpm)	Duration (hrs)
Bare Fruit Warehouse	5,500	4
Coleman Oil Company	5,200	4
Warehouse on Benton St.	4,500	4
Omak High School	4,000	4
Home Depot	4,000	4
Wal-Mart	4,000	4
Omak Home Center	4,000	4
PepperTree Hotel	2,875	3
Apple Springs	2,750	2
Omake Mall	2,750	2
East Village Apartments	2,750	2
N. Omak Elementary School	2,750	2
North Cascades Athletic Club	2,750	2
Kettle Valley Dried Fruit	2,750	2
Mid Valley Hospital	2,750	2
Omak Inn	2,500	2
Okanogan Behavioral Health	2,375	2
Roadway Inn	2,100	2
Stampede Apartments	2,000	2
Valley Lanes Bowling	2,000	2
Ace Hardware	2,000	2
J.C. Penny	2,000	2
Apple Meadows Building	1,750	2

Storage Requirements

Table 3-6 shows the City's total water storage capacity within each reservoir and pressure zone. Pressure zones are shown on Figure 3-1. The City's total available storage capacity within its six reservoirs is 2,775,000 gallons.

TABLE 3-6**Storage Volumes by Pressure Zone**

	Lower Zone			Middle Zone		Upper Zone
	Riverside No. 1	Riverside No. 2	South Hill	Ross Canyon No. 1	Ross Canyon No. 2	Coleman Butte
Storage Capacity⁽¹⁾ (gal)	329,000	678,000	488,000	286,000	475,000	519,000
Total Zone Storage (gal)	1,495,000			761,000		519,000
High Service El.	895			1,009		1,064
Pressure⁽²⁾ (psi)	31			46		59
Pressure⁽³⁾ (psi)	26			42		55

- (1) Storage capacity includes operational, equalizing, and standby/fire suppression (nested).
 (2) Pressure at highest service elevation from bottom of equalization storage volume (30 psi min required), based on 20-year planning period storage volumes.
 (3) Pressure at highest service elevation from bottom of fire suppression storage volume (20 psi min required), based on 20-year planning period storage volumes.

Storage volume requirements within the City's three open pressure zones within the next 10- and 20-years are shown in Table 3-7.

As shown in Table 3-7, the City has sufficient water storage for the next 20 years in its lower and upper open pressure zones with the nesting of the standby and fire suppression storage volumes. However, the City's middle pressure zone currently lacks sufficient water storage. The 284,000 gallon deficiency in the middle pressure zone can, however, be resolved with the transfer of water from the lower pressure zone via the City's Ash Street and Riverside booster stations in lieu of construction of a new storage reservoir. The middle pressure zone's 284,000 gallon deficiency equates to approximately 1,183 gpm over 4 hours, which is the duration of the largest fire flow requirement in the middle pressure zone (4,000 gpm for 4 hours). The City's Ash Street and Riverside booster stations could make up for the storage deficiency by pumping water to the middle pressure zone with their combined pumping capacities in excess of the 1,183 gpm deficiency. The lower pressure zone's sources have sufficient pumping capacity to provide water for this transfer. In addition, the City could transfer water from the upper to the middle pressure zone via the Koala pressure reducing valve (PRV) station.

Tables 3-8, 3-9, and 3-10 contain storage analysis results for each pressure zone for the 20-year planning period. These tables indicate that the City is able to provide more than the minimum required 30 psi pressure when operational, and equalization storage volumes are depleted in each pressure zone. Additionally, the City is able to provide more than the minimum required 20 psi pressure when fire suppression storage is depleted in each pressure zone.

TABLE 3-7**Storage Volume Components by Pressure Zone⁽¹⁾**

Year	Operational Storage⁽²⁾ (gal)	Equalization Storage⁽³⁾ (gal)	Standby Storage 1⁽⁴⁾ (gal)	Standby Storage 2⁽⁴⁾ (gal)	Fire Suppression Storage⁽⁵⁾ (gal)	Total Required Storage⁽⁶⁾ (gal)	Total Available Storage⁽⁷⁾ (gal)	Surplus (Deficit) (gal)
Lower Pressure Zone								
2016	175,000	0	0	318,000	1,320,000	1,495,000	1,495,000	0
2027	175,000	0	0	332,000	1,320,000	1,495,000	1,495,000	0
2037	175,000	0	0	345,000	1,320,000	1,495,000	1,495,000	0
Middle Pressure Zone								
2016	85,000	0	195,000	251,000	960,000	1,045,000	761,000	(284,000)
2027	85,000	0	248,000	262,000	960,000	1,045,000	761,000	(284,000)
2037	85,000	0	296,000	272,000	960,000	1,045,000	761,000	(284,000)
Upper Pressure Zone								
2016	58,000	0	0	26,000	120,000	178,000	519,000	341,000
2027	58,000	0	0	27,000	120,000	178,000	519,000	341,000
2037	58,000	0	0	28,000	120,000	178,000	519,000	341,000

(1) Lower zone reservoirs include Riverside No. 1 and No. 2, and South Hill; Middle zone reservoirs include Ross Canyon No. 1 and No. 2; Upper zone reservoir includes Coleman Butte. Storage volumes rounded to the nearest 1,000 gallons.

(2) OS set at 2 ft. for all reservoirs across all pressure zones and expected to remain constant over the planning period.

(3) $ES = (Q_p - Q_s) * 150 \text{ minutes}$; if ≤ 0 use zero.

(4) $SB1 \text{ (recommended volume)} = 2 * (ADD) - t_m (Q_s - Q_L)$, where $t_m = 1,440$; $SB2 \text{ (minimum volume)} = 200 * ERUs$

(5) $FSS = 5,500 \text{ gpm} * 240 \text{ min} = 1,320,000 \text{ gal}$ (lower zone); $FSS = 4,000 \text{ gpm} * 240 \text{ min} = 960,000 \text{ gal}$ (middle zone); $FSS = 1,000 \text{ gpm} * 120 \text{ min} = 120,000 \text{ gal}$ (upper zone).

(6) Total required storage = sum of OS, ES, and the largest of SB1, SB2, and FSS volumes (nesting).

(7) Total available storage volume from Table 3-6 for lower and upper pressure zones; total available storage volume for middle pressure zone = 761,000 gallons (available middle zone storage volume from Table 3-6).

TABLE 3-8**2037 Storage Analysis – Lower Pressure Zone**

Component	Storage Reservoir			High Static Pressure⁽¹⁾ (psi)	Low Static Pressure⁽¹⁾ (psi)	Storage (gal)		
	Riverside No. 1	Riverside No. 2	South Hill			Actual	Required	Surplus/ (Deficit)
Overflow Elevation	969	969	969	32	58	---	---	---
Top of Storage	967.5	967.5	967.5	31	57	---	---	---
Operational Storage	965.5	965.5	965.5	31	56	175,000	175,000	---
Equalization Storage	965.5	965.5	965.5	31	56	0	0	---
Fire Suppression Storage	954	954	954	26	51	1,320,000	1,320,000	---
Standby ⁽²⁾	954	954	954	26	51	---	---	---
Total Storage						1,495,000	1,495,000	

(1) Highest service connection elevation in pressure zone is 895 feet msl; lowest service connection elevation is 836 feet msl.

(2) Standby storage volume nested within the fire suppression storage volume.

TABLE 3-9**2037 Storage Analysis – Middle Pressure Zone**

Component	Storage Reservoir		High Static Pressure⁽¹⁾ (psi)	Low Static Pressure⁽¹⁾ (psi)	Storage (gal)		
	Ross Canyon No. 1	Ross Canyon No. 2			Actual	Required	Surplus/ (Deficit)
Overflow Elevation	1,120	1,120	48	58	---	---	---
Top of Storage	1,118.0	1,118.0	47	57	---	---	---
Operational Storage	1,116.0	1,116.0	46	56	85,000	85,000	---
Equalization Storage	1,116.0	1,116.0	46	56	0	0	---
Fire Suppression Storage	1,107.0	1,107.0	42	51	676,000	960,000	(284,000) ⁽³⁾
Standby ⁽²⁾	1,107.0	1,107.0	42	51	---	---	---
Total Storage							

(1) Highest service connection elevation in pressure zone is 1,009 feet msl; lowest service connection elevation is 898 feet msl.

(2) Standby storage volume nested within the fire suppression storage volume.

(3) Storage deficiency made up by water transfer from lower pressure zone through Ash Street and Riverside booster stations.

TABLE 3-10**2037 Storage Analysis – Upper Pressure Zone**

Component	Storage Reservoir	High Static Pressure ⁽¹⁾ (psi)	Low Static Pressure ⁽¹⁾ (psi)	Storage (gal)		
	Coleman Butte			Actual	Required	Surplus/ (Deficit)
Overflow Elevation	1,205	61	80	---	---	---
Top of Storage	1,203.0	60	79	---	---	---
Operational Storage	1,201.0	59	78	58,000	58,000	---
Equalization Storage	1,201.0	59	78	0	0	---
Fire Suppression Storage	1,192.0	55	74	461,000	120,000	341,000
Standby ⁽²⁾	1,192.0	55	74	---	---	---
Total Storage				519,000	178,000	341,000

(1) Highest service connection elevation in pressure zone is 1,064 feet msl; lowest service connection elevation is 1,020 feet msl.

(2) Standby storage volume nested within the fire suppression storage volume.

BOOSTER PUMPING STATIONS

The City currently operates four booster pumping stations (BPS) serving the middle and upper open pressure zones and a small closed pressure zone in northeast Omak.

Open System Booster Pump Stations

Based on WAC 246-290 and the *WSDM*, an open system BPS must meet the following requirements:

1. The BPS **must** be designed to provide the MDD for the zone with all pumps in service.
2. It **should** be designed meet the ADD with the largest pump out of service.

The City's has three open system booster pump stations; two serving the middle pressure zone (Ash Street and Riverside BPSs), and one serving the upper pressure zone (Koala BPS). As shown in Table 3-11, the middle pressure zone booster pump stations meet the above criteria for open system booster pump stations through the 20-year planning period.

The upper pressure zone booster pump station cannot meet the requirement of meeting the ADD with the largest pump out of service. However, in addition to the Koala Street booster station, the NE Omak well also serves as a source for the upper pressure zone. This well's 105 gpm capacity could meet the 44 gpm ADD requirement with the Koala Street booster station out of service.

TABLE 3-11

2037 Open System Booster Pump Station Analysis

Total BPS Capacity ⁽¹⁾ (gpm)	BPS Capacity ⁽²⁾ (gpm)	ADD ⁽³⁾ (gpm)	MDD ⁽³⁾ (gpm)	PHD ⁽³⁾ (gpm)	Surplus (Deficit) to Meet MDD/ADD Requirements ⁽⁴⁾ (gpm)
Middle Pressure Zone					
2,500	1,000	437	1,181	1,982	1,319 ⁽⁵⁾ /563 ⁽⁵⁾
Upper Pressure Zone					
700	0	44	118	199	582 ⁽⁶⁾ /(-44) ⁽⁶⁾

- (1) Total BPS capacity for the middle pressure zone equals combined capacity of the Ash Street (1,000 gpm) and Riverside (1,500 gpm) booster pump stations. Upper pressure zone BPS capacity equals capacity of the Koala booster station (700 gpm).
- (2) BPS capacity for the middle pressure zone represent total BPS capacity with the largest pump out of service (Riverside capacity of 1,500 gpm).
- (3) ADD, MDD, and PHD requirements shown for each pressure zone.
- (4) Surplus (Deficit) to meet MDD with all pumps in service and ADD with the largest pump out of service.
- (5) 2,500 – 1,181 = 1,319 gpm; 1,000 – 437 = 563 gpm.
- (6) 700 – 118 = 582 gpm; 0 – 44 = -44 gpm; this apparent deficiency could be made up with the NE Omak well capacity of 105 gpm.

Closed System Booster Pump Station

Based on WAC 246-290 and the *WSDM*, a closed system BPS must meet the following requirements:

1. The BPS **must** be designed to provide the PHD at 30 psi. It **should** be designed to do so with the largest pump out of service.
2. The BPS **must** be designed to provide MDD plus fire flow using fire pumps, domestic pumps, or a combination of the two, while maintaining a 20 psi residual on both the suction and delivery sides of the BPS.

The City's Wildwood booster station runs continuously to keep up with water system demands within the closed system. The pressure zone includes a largely residential neighborhood of the City that currently has 82 single-family residential connections. The Wildwood BPS consists of two 10 hp, 175 gpm pumps and two 20 hp 400 gpm pumps. The fire flow requirement with this zone is 1,000 gpm for 2 hours. The hydraulic model analysis indicates that the City's Wildwood booster station can meet the closed system booster station requirements.

TRANSFER STATIONS

The City has two transfer stations that allow the automatic conveyance of water from a higher pressure zone to a lower zone. The Ash Street booster station contains a 6-inch pressure reducing valve (PRV) with a surge-anticipator valve that allows water conveyance from the middle pressure zone to the lower pressure zone, while the Koala booster station vault includes a 10-inch Cla-Val PRV allowing water to flow from the upper zone to the middle zone.

TRANSMISSION AND DISTRIBUTION

This section includes a discussion of the hydraulic model calibration and results, and the improvements resulting from the modeling.

Hydraulic Capacity Analysis - Modeling

The Cybernet hydraulic model for the Omak water system was converted to H₂ONet for this analysis. Fire flow testing was conducted on June 7, 2016. All wells were turned off, and the transfer stations did not open during the testing period. The flow tests produced the following results:

- 401 Hillcrest Circle Drive (Upper pressure zone) – Field fire flow testing at this location resulted in a residual pressure of 10 psi, corresponding to 530 gpm fire flow capability. Static pressures at this location were approximately 74 psi.
- Copple Road/Koala Drive (Closed upper pressure zone) – Field fire flow testing at this location resulted in a residual pressure of 32 psi, corresponding to a 950 fire flow capability. Static pressures near this location were approximately 67 psi.
- North end of Senna Street (Middle pressure zone) - Field fire flow testing at this location resulted in a residual pressure of 32 psi, corresponding to a 950 fire flow capability. Static pressures near this location were approximately 56 psi.
- Bartlett Avenue/Elm Street (Lower pressure zone) - Field fire flow testing at this location resulted in a residual pressure of 18 psi, corresponding to a 710 fire flow capability. Static pressures near this location were approximately 44 psi.
- 7th Avenue/Jackson Street (Lower pressure zone) - Field fire flow testing at this location resulted in a residual pressure of 20 psi, corresponding to a 750 fire flow capability. Static pressures near this location were approximately 38 psi.

In general, the results of the computer hydraulic model of the City's water system matched the field-measured flows.

The City was hydraulically modeled with the following parameters:

- System-wide demands (excluding largest users) are equally distributed between the model's 350 demand nodes
- Largest users demands applied proportionately to their 2015 consumption percentage (Table 2-8)
- 1,000 gpm fire flow requirement for residential areas.
- 1,500 gpm fire flow requirement for commercial and light industrial areas.
- Pipe velocities were limited to a maximum of 10 feet per second.
- Pipe roughness coefficients (Hazen-Williams C values) of 100 to 140 were used for balancing the model with actual field flow measurements at hydrants.

- For PHD, both operational and equalization storage depleted; Eastside, OWP No. 2, NE Omak, and Julia Maley Park wells operating.
- For MDD, operational, equalization and fire suppression storage depleted; Eastside, NE Omak, and Julia Maley Park wells operating (OWP No. 2 is the largest well at 1,850 gpm is assumed out of service per DOH recommendation)

The City's fire flow delivery requirements for large structures identified by the Fire Marshall as having specific fire flow needs are not addressed in this Plan. The hydraulic model flow capacities as identified at each particular node are an indication of the flow capacity available to the area via the pipes/proposed pipes serving the hydrants, and not the specific flows withdrawn from the hydrants.

Transmission and Distribution Improvements

The City has developed a schedule of proposed improvements for transmission and distribution improvements which is included in Chapter 8.

WATER SYSTEM PHYSICAL CAPACITY ANALYSIS

Chapter 6 of the *WSDM* provides methodology for determining the physical capacity of a water system. The basic unit of a system's service capacity is the ERU. An ERU was defined in Chapter 2 as the average amount of water used by a residential household, or 413 gpd for the City of Omak. Historically, DOH has used the physical capacity of a water system (based on the limiting system component) to establish system growth limits for the system. DOH has provided Worksheet 6-1 in the *WSDM* to summarize the water system physical capacity for source, storage, and water rights. Worksheet 6-1 summarizes the water system physical capacity for source, storage, and water rights.

The method for calculating source capacity is provided by Equation 6-4 from the *WSDM*:

$$N = \frac{V_d}{MDD} = \sum \frac{Q_d t_d}{MDD}$$

where N is the number of ERUs, MDD is 1,115 gpd/ERU (413 gpd/ERU * 2.7 MDD/ADD ratio), V_d in gallons/day is total volume of water used during MDD, Q_d is the flow rate of source "d" in gpm (1,550 gpm for Eastside Well, 1,750 gpm for OWP No. 2, and 105 gpm for NE Omak), and t_d is time that the source operates per day in minutes (18 hours = 1080 minutes).

$$N = \frac{(1,550) \times (1080) + (1,750) \times (1080) + (105) \times (1080)}{1,115} = 3,298 \text{ ERUs}$$

The method for calculating equalizing storage is provided by Equation 6-6 from the *WSDM*:

$$N = (1/C)[(1440/MDD)((ES/150)+Q_s-18)-F]$$

where N is the number of ERUs, C = 1.6 (Table 5-1 from *WSDM*), MDD is 1,115 gpd/ERU, ES is total system equalizing storage (139,000 gallons), Q_s is total source pumping capacity in gpm (1,550 gpm for Eastside Well, 1,750 gpm for OWP No. 2, and 105 gpm for NE Omak), and F = 225 (Table 5-1 from *WSDM*).

$$N = (1/1.6)[(1440/1,115)((139,000/150)+(1,550+1,750+105)-18)-225] = 3,341 \text{ ERUs}$$

The method for calculating standby storage is provided by Equation 6-7 from the *WSDM*:

$$N = (SBT)/[(SBI)(td)]$$

where N is the number of ERUs, SBT is the total volume of water in standby storage component (Total available storage – FSS – EQ – OS = 2,775,000 – 1,320,000 – 139,000 – 318,000 = 998,000 gallons), SBI is the design level of standby storage to meet reliability considerations per ERU in gallons/day/ERU (594,000 gallons/2,913 ERUs), and td is the time that storage is to be used, in days.

$$N = (998,000 \text{ gallons})/[(594,000 \text{ gallons}/2,913 \text{ ERUs} \times 1) = 4,894 \text{ ERUs}$$

Capacity analysis based on existing maximum instantaneous (Q_i) and annual volume (Q_a) water rights are also shown on Worksheet 6-1. ERUs for water rights were calculated as follows:

$$N = \frac{Q_i}{MDD} = 6,722 \text{ ERUs}$$

where Q_i, the City's uninterruptable maximum instantaneous water right, is 7,495,200 gpd (5,205 gpm * 1440 minutes/day = 7,495,200 gpd) and MDD is 1,115 gpd/ERU.

$$N = \frac{Q_a}{ADD} = 7,559 \text{ ERUs}$$

where Q_a, the City's maximum annual volume, is 3,122,010 gpd (3,500 ac-ft/yr * 325,581 gallons/ac-ft / 365 days/yr = 3,122,010 gpd) and ADD is 413 gpd/ERU.

WORKSHEET 6-1: ERU Determinations					
Water System Physical capacity Documentation based on MDD					
Note: Capacity determinations are only for existing facilities that are operational for the water system.					
Specific Single-Family Residential Connection Criteria (measured or estimated demands)					
(see Chapter 5):					
Average Day Demand (ADD):		413 gpd/ERU			
Max. Day Demand (MDD):		1,115 gpd/ERU			
Water System Service Connections Correlated to ERUs					
Service Classification	Total MDD for the Classification ⁽¹⁾ , gpd	Total # Connections in the Classification	ERUs		
Residential					
Residential	1,641,000	1,473	1,473		
Apartment	220,000	46	198		
Mobile Home Park	88,000	6	79		
Multi Rental	64,000	54	58		
Out of City	23,000	36	21		
Nonresidential					
Commercial	347,000	248	312		
Grocery	16,000	2	15		
Irrigation	452,000	102	405		
Medical	134,000	6	120		
Motel	51,000	5	45		
Restaurant	78,000	25	70		
School	63,000	16	57		
12 Tribes Casino	68,000	1	61		
DSL	278,000	N/A	250		
Total existing ERUs (Residential + Nonresidential + other) =			3,162		
(1) Rounded to the nearest 1,000 gallons per day					
Physical Capacity as ERUs					
Water System Component	Calculated Capacity in ERUs for each component				
Source(s) ⁽¹⁾	3,298				
Treatment	N/A				
Equalizing Storage ⁽³⁾	3,341				
Standby Storage ⁽⁴⁾	4,894				
Distribution	⁽²⁾				
Transmission	N/A				
Other (specify) ⁽⁵⁾	6,722				
Other (specify) ⁽⁶⁾	7,559				
Water System Physical Capacity (ERUs) =		3,298			
(based on the limiting water system component shown above)					
(1) Based on Eastside, OWP No. 2 and NE Omak wells operating 18 hours/day					
(2) Distribution system physical capacity varies					
(3) ERUs related to equalizing storage					
(4) ERUs related to standby storage					
(5) Maximum Instantaneous Flow Rate, Qi					
(6) Maximum Annual Volume, Qa					

OPERATION AND MAINTENANCE ANALYSIS

Operation and control of the City's water system and the City's preventive maintenance procedures are described in Chapter 6. Other operation and maintenance (O&M) elements, including water quality monitoring, cross connection control, and emergency response are described elsewhere in this Plan. In general, the City's O&M program is satisfactory. Operations and maintenance projects for the 10-year planning period are shown in Table 3-12.

SYSTEM DEFICIENCIES AND PROPOSED IMPROVEMENTS

A summary of the City of Omak's system deficiencies and proposed improvements is presented in Table 3-12. A comprehensive description of proposed improvements including costs is presented in Chapter 9: Capital Improvement Financing.

TABLE 3-12**Summary of System Deficiencies and Proposed Improvements**

SYSTEM DEFICIENCY	PROPOSED IMPROVEMENT	SCHEDULE
Water Rights		
The City has sufficient instantaneous and annual withdrawal water rights to meet its 10- and 20-year demands.	The City plans file change applications to consolidate its existing water rights to give the City greater flexibility in managing its water resources.	10-year
Source Protection		
The City is in compliance with source protection, i.e., wellhead protection requirements, except for protective covenants for each of the City's wells.	Pursue protective covenants for the City's wells.	10-year
Telemetry		
There are no deficiencies with the City's telemetry system, which was updated in 2016.	N/A	N/A
Source Improvements		
To increase source reliability the City plans to develop an additional source.	Drill a new well.	10-year
No backup power for the City's sources except for the Julia Maley Park Well (2017).	Provide all active wells with automatic transfer switches for hook up to trailer-mounted generator to be purchased in 2017.	
Eastside Well pump failure.	Rebuild pump no. 4.	
The Okoma well is currently out of service due to diminished well capacity.	Provide downhole video inspection to investigate possible rehabilitation. Rehabilitate well in accordance with report recommendations.	10- and 20-year
Treatment		
Arsenic levels in Julia Maley Park Well may exceed mcl.	Feasibility study to investigate alternatives for arsenic treatment at the Julia Maley Park well if arsenic levels exceed the MCL.	10-year
	Construct arsenic treatment facility in accordance with feasibility study recommendations, if required.	

TABLE 3-12 (cont.)**Summary of System Deficiencies and Proposed Improvements**

SYSTEM DEFICIENCY	PROPOSED IMPROVEMENT	SCHEDULE
Storage		
Ross Canyon reservoirs weeping water.	Investigate cause and provide appropriate corrective action.	10-year
Water puddles on rectangular Riverside reservoir roof.	City to investigate whether the roof leaks and develop an action plan to address.	
South Hill reservoir altitude valve non-operational.	Altitude valve repair.	10-year
Distribution System		
Lack of water line and hydrants required for fire flow on Columbia Street.	Construct new 12" water line and hydrants on Omak Ave. to Columbia and South on Columbia to 5 th Ave.	10-year
Garfield Street water line not looped and lacks sufficient hydrants.	Construct new 8" water line and hydrants on Garfield Street between Omak Ave. and 5 th Ave.	
Riverside Reservoir transmission line valves leaking/non-operational.	Replace valves.	
Ash Street booster pump station pump failure and problematic pressure reducing valve.	Upgrade booster pump station with new pumps with VFD drive, valves, piping, and appurtenances.	
Old water lines in numerous locations throughout the City with significant repair history.	Replace problematic water lines identified by the City.	
Insufficient fire flow and undersized water lines in numerous locations.	Upsize water lines and provide system looping in locations of insufficient fire flow.	10- and 20-year
Operations and Maintenance		
Ash, Birch, and Cedar Streets water mains lack isolation valves between Central and 3 rd Ave.	Install InsertaValves.	10-year
City unable to read residential meters during winter.	Replace standard residential meters with radio-read.	

CHAPTER 4

WATER USE EFFICIENCY

BACKGROUND

In 2003, the Washington State Legislature passed Engrossed Second Substitute House Bill 1338, which has come to be known as the 2003 Municipal Water Law. Among other things, the new law required the Washington State Department of Health (DOH) to develop a rule that defines how municipalities are to demonstrate efficient use of their water supplies. In response, DOH developed the Water Use Efficiency (WUE) Rule, which became effective on January 22, 2007. Key elements of the rule and the City of Omak's progress in meeting the rule are summarized in Table 4-1.

TABLE 4-1

Summary of Water Use Efficiency Rule Requirements

Requirement	Deadline⁽¹⁾	Status - City of Omak
Include WUE program in planning documents	January 22, 2008	Completed
Submit service meter installation schedule	July 1, 2008	All Meters Installed
Submit first annual performance report	July 1, 2008	On-going Annually ⁽²⁾
Set WUE goals through a public process	July 1, 2009	Completed
Meet distribution leakage standard (based on 3-year rolling average)	July 1, 2010, or 3 years after installing all service meters	Completed
Complete installation of all service meters	January 22, 2017	Complete

(1) These are the deadlines for municipalities with > 1,000 connections. Deadlines are generally later for smaller municipalities.

(2) A copy of the City's historical water use efficiency reports are included at the end of this chapter.

SOURCE METERS

The City's water sources are each metered at the source. Sources meters for the Okoma, Eastside, OWP, Apple, Kenwood and NE Omak wells all report well daily well production to the City Hall via the City's telemetry control system. Further description of the City's wells is provided in Chapter 1.

Monthly water production from the City's wells for 2010 through 2015 is shown in Figures 2-2 and 2-3. Annual production data, including average day and maximum day demands are summarized in Tables 2-3 and 2-4. Water demand forecasts for the 10- and 20-year planning periods are provided in Tables 2-12 and 2-13.

Normal maintenance is performed on the source meters as recommended by each of the meter manufacturers. These meters are scheduled for calibration every three years. Meter maintenance and calibration is critical for accurate source production records.

SERVICE METERS AND WATER CONSUMPTION

Water consumption is metered at individual service water meters. Consumption data is recorded on a monthly basis, typically April through October, except for the high use commercial meters, which are read each month of the year. During the winter months, when weather conditions make meter reading difficult, the base rate is typically billed and any overage addressed once the meters are again read in the spring.

Meters are required upon hookup to the City's system. The City uses coil-type meter setters with Sensus touch-read meters on all ¾" service connections. Consumption is read via the touch-read device and the information processed for billing at City Hall. The City performs maintenance and replacement on service meters as needed.

INTERTIES

The City wholesales water to the Confederated Tribes of the Colville Reservation. The agreement between the City and the Colville Tribe is contained in the Appendix L.

WATER USE EFFICIENCY PROGRAM

In January 2011, DOH published the third edition of its Water Use Efficiency Guidebook (Guidebook). Section 5.3 of the Guidebook summarizes the items that are to be included in a WUE program. A discussion of each item is provided in this section.

CURRENT WATER USE EFFICIENCY PROGRAM

The City's current WUE program consists of the following:

- **Program Promotion:** The City makes DOH water conservation flyers available at City Hall and encourages water conservation through inserts with the City newsletters. These inserts explain the purpose and need for water conservation practices and serve to educate the public as to how water usage reduction can be achieved through water-saving devices and practices.
- **Source Meters:** The City's active wells are equipped with source meters. Data is collected and saved at City Hall through the City's telemetry system. Source meters are scheduled for calibration every three years.
- **Service Meters:** All residential, commercial, and industrial water customers are metered. Maintenance and replacement of service meters occurs as needed.
- **Purveyor Assistance/Customer Assistance:** The City continues to assist all City water users regarding the development and implementation of water conservation measures.
- **Water Usage Tracking:** Increased enforcement of requirement to use portable hydrant meters during construction-related water use as it occurs within the City.
- **Water Reuse:** Continue to use disinfected wastewater for irrigation of the grounds at the City's wastewater treatment facility.

Since the City's last water system plan update in 2011, the City has continued to keep its 3-year average distribution system leakage below the DOH requirement of 10 percent.

NEW WUE GOALS

The WUE rule requires a water system's elected governing body to establish WUE goals that are measurable and have a timeframe for implementation. The City of Omak's new WUE goals are:

- **Supply side goal:** Maintain distribution system leakage at less than 10 percent.
- **Demand side goal:** Reduce per capita consumption by 1 percent each year through 2035.

A copy of the minutes from the City Council meeting at which these goals were approved is provided in the appendix.

WUE MEASURES

The WUE Rule requires all municipal water systems to implement and evaluate certain mandatory water use efficiency measures. The City is also required to identify additional demand (i.e., customer) side measures. The purpose of adopting a particular set of water use efficiency measures is to develop a strategy to meet the City's water use efficiency goals. The mandatory measures the City is required to address are summarized in Table 4-2.

TABLE 4-2

Mandatory Water Use Efficiency Measures

Mandatory Measures	Requirement	Status
Install source meters	Implementation	Complete
Install service meters	Implementation	Complete
Calibrate meters per industry standards	Implementation	As Needed Based on Readings
Water loss control action plan if DSL>10%	Implementation	Not applicable
Educate customers about WUE once per year	Implementation	On-going every year
Water conservation rates	Evaluation	Evaluated regularly

In addition to these mandatory measures, WAC 246-290-810 (4)(d) requires systems with more than 1,000 connections and less than 2,499 connections to adopt another five demand (i.e. customer) side water use efficiency measures. The Guidebook provides that a qualified WUE measure that is implemented for different customer classes counts as multiple WUE measures.

The City has determined that implementing these measures will be cost effective, and plans to pay for these measures using operating funds. The City believes these measures, in addition to ongoing efforts to educate its customers about water use efficiency, will enable it to meet its second WUE goal of reducing per capita consumption by 1 percent each year through 2035. Table 4-3 summarizes the demand-side water use efficiency measures the City plans to implement over the next six years.

TABLE 4-3**Demand-Side Water Use Efficiency Measures**

Demand-Side Measures	Customer Classes Affected	Number of Measures ⁽¹⁾	Estimated Annual Water Savings ⁽²⁾	Status	Cost
Notify customers of high meter reads	All	3	1%	On-going	Minimal
Consumption history on water bill	All	3		On-going	Minimal
Total Measures (5 required)		6	-	-	-

(1) Per the Guidebook, if a qualified WUE measure is implemented for different customer classes, it counts as multiple WUE measures (up to three customer classes).

(2) Savings are expected to enable the City to meet its goal, i.e., to reduce per capita consumption 1% each year through 2035.

WUE EDUCATION

The City encourages water use efficiency by providing newsletters and/or bill stuffers providing water saving ideas to its customers. The City plans to continue this effort.

EVALUATING WUE EFFECTIVENESS

The City plans to track the effectiveness of its WUE efforts by annually checking its distribution system leakage to determine whether its on-going leak detection and repair efforts are enabling it to meet its first goal of maintaining its DSL at 10 percent or less. The City also plans to check its residential per capita water use to see if its education and outreach efforts are helping reduce water use.

Table 4-4 shows how meeting the City's water use efficiency goals would affect its projected water demands. The water savings shown in the table are due to meeting its demand side goal of reducing its per capita consumption 1% each year through 2037 while maintaining DSL at current levels.

TABLE 4-4**Projected Water Demands with Water Savings⁽¹⁾**

Year	Population	ERUs	ADD (gpd)	Annual Prod. (af/yr)	MDD (gpd)	MDD (gpm)	PHD (gpm)
Without Savings⁽²⁾							
2016	4,997	2,969	1,375,000	1,550	3,713,000	2,580	4,330
2027	5,218	3,103	1,437,000	1,610	3,880,000	2,690	4,520
2037	5,428	3,224	1,494,000	1,680	4,034,000	2,800	4,700
With Savings⁽³⁾							
2016	4,997	2,969	1,361,000	1,530	3,675,000	2,550	4,280
2027	5,218	3,103	1,423,000	1,600	3,842,000	2,670	4,480
2037	5,428	3,224	1,479,000	1,660	3,993,000	2,770	4,650
Net Savings							
2016	4,997	2,969	14,000	20	38,000	30	50
2027	5,218	3,103	14,000	10	38,000	20	40
2037	5,428	3,224	15,000	20	41,000	30	50

(1) Savings attributable to reducing per capita consumption 1% each year through 2035.

(2) From Table 2-12.

(3) From Table 2-13.

DISTRIBUTION SYSTEM LEAKAGE

Current DOH rules require calculation of the three-year average DSL to determine compliance with its maximum 10 percent DSL allowance. The analysis of the City's DSL presented in Chapter 2 indicates the City's 2013-2015 three-year average DSL was just over 6 percent (Table 2-6).

CONSERVATION RATE STRUCTURE

The City currently has a base rate plus uniform block rate structure. It charges different rates based on customer class and whether or not they are in or out of the city limits. Although the City charges customers for every gallon used, which promotes water conservation, the City is required to evaluate either an inclining block or seasonal rate structure.

Inclined Block Rate Structure Evaluation

The City has evaluated the feasibility of adopting and implementing an inclined block rate structure. Doing so could further reduce excess water use during the summer months when irrigation is high. The pros and cons of adopting an inclined block rate structure are shown in Table 4-5.

TABLE 4-5**Inclined Block Rate Structure Pros and Cons**

Pros	Cons
Only those customers who use more water pay the higher rate.	Could result in drastic increase in monthly bill for current high use consumers.
Premium cost charge for higher usage could be used for infrastructure improvements.	Could be difficult to apply to commercial customers due to wide range of commercial usage.
Promotes water conservation due to increasing cost with higher usage.	Could result in lost revenues in difficult economic times as customers seek to curtail spending.

Increased revenues possible from an inclined block rate structure could help fund required water system improvements as well as operations and maintenance costs to keep the system in good working order.

WATER RECLAMATION

The City's wastewater is treated at the City of Omak's Wastewater Treatment Facility. Per WAC 246-290-100(4)(f)(vii), City's with more than 1,000 connections are required to evaluate opportunities for use of reclaimed water. The City has determined that converting the wastewater treatment plant to a water reclamation facility is not economically feasible. The City has decided not to pursue water reclamation for the following reasons:

- The City has sufficient water rights beyond the 20-year planning period.
- The City has determined it is not economically feasible.
- The City currently has sufficient source capacity for its water system.

WATER SUPPLY CHARACTERISTICS

Omak's water supply characteristics are summarized as follows:

A. Name and Location

The City's water supply consists of three active wells currently in use known as Eastside, OWP No. 2, and NE Omak. Wells currently out of service and designated as emergency use only include Apple (non-functional), Kenwood, and Okoma. A map of the wells and the City's water system is provided on Figure 1-1. Additional description of the City's sources is provided in Chapter 1.

B. Capacity and Seasonal Limitations

Well capacities are as follows:

- Eastside – 2,800 gpm (1,550 gpm max current usage)
- Apple – 300 gpm (emergency source; non-functional)
- Kenwood – 350 gpm (emergency source)
- Okoma – 300 gpm (well not currently in service)
- OWP No. 2 – 1,750 gpm
- NE Omak – 120 gpm (105 gpm current usage)

These wells adequately meet the City's water needs. There are no seasonal limitations to the use of these wells.

C. Water Rights

The City has sufficient water rights to serve its existing population, and has a surplus that is sufficient to meet 20-year demands. Additional discussion of the City's water rights is provided in Chapters 1 and 3. The City's water right self-assessment form is provided in Table 3-4. Pertinent water right documentation is provided in the appendix.

D. Legal Constraints

There are currently no legal constraints that would affect the City's ability to supply water to its customers over the next 20 years.

In general, the City has adequate source capacity and water rights, and does not foresee any obstacles that would prevent it from continuing to provide a safe, reliable, and affordable water supply to its customers for the 20-year planning period.



Date Submitted: 12/10/2009

Water Use Efficiency Annual Performance Report - 2007

WS Name: OMAK, CITY OF

Water System ID# : 63750

WS County: OKANOGAN

Report submitted by:

Meter Installation Information:

Is your water system fully metered? Yes

If not fully metered - Current status of meter installation:

Fully Metered was set to Yes as default - no data provided

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: _____ To _____

Incomplete or missing data for the year? No

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	557,110,000 gallons
Authorized Consumption (AC) – Annual Volume	530,433,000 gallons
Distribution System Leakage – Annual Volume TP – AC	26,677,000 gallons
Distribution System Leakage – Percent DSL = $[(TP - AC) / TP] \times 100$	4.8 %
3-year annual average	%

Goal-Setting Information:

Date of Most Recent Public Forum: _____ Has goal been changed since last performance report? No

Note: Customer goal must be re-established every 6 years through a public process

WUE Goals:

Customer Goal (Demand Side):

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

Additional Information Regarding Supply and Demand Side WUE Efforts

Include any other information that describes how you and your customers use water efficiently:



Date Submitted: 12/10/2009

Water Use Efficiency Annual Performance Report - 2008

WS Name: OMAK, CITY OF

Water System ID# : 63750

WS County: OKANOGAN

Report submitted by: Michael N. Ervin

Meter Installation Information:

Is your water system fully metered? No

If not fully metered - Current status of meter installation:

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: _____ To _____

Incomplete or missing data for the year? No

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	540,351,000 gallons
Authorized Consumption (AC) – Annual Volume	519,271,000 gallons
Distribution System Leakage – Annual Volume TP – AC	21,080,000 gallons
Distribution System Leakage – Percent DSL = $[(TP - AC) / TP] \times 100$	3.9 %
3-year annual average	%

Goal-Setting Information:

Date of Most Recent Public Forum: _____ Has goal been changed since last performance report? No

Note: Customer goal must be re-established every 6 years through a public process

WUE Goals:

Customer Goal (Demand Side):

Reduce the current residential and commercial winter time per service use by 2% within the next 6 years.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

Additional Information Regarding Supply and Demand Side WUE Efforts

Include any other information that describes how you and your customers use water efficiently:

Water Use Efficiency Annual Performance Report - 2009

WS Name: OMAK, CITY OF

Water System ID# : 63750

WS County: OKANOGAN

Report submitted by: Michael Ervin

Meter Installation Information:

Is your water system fully metered? No

If not fully metered - Current status of meter installation:

Prior to 2009, the City of Omak was fully metered with the exception of Eastside Park and Oak Street Park. At this writing, approximately 50 per cent of Eastside is now metered as well as all of Oak Street.

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: 01/01/2009 To 12/31/2009

Incomplete or missing data for the year? No

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	566,573,900 gallons
Authorized Consumption (AC) – Annual Volume	538,725,768 gallons
Distribution System Leakage – Annual Volume TP – AC	27,848,132 gallons
Distribution System Leakage – Percent DSL = $[(TP - AC) / TP] \times 100$	4.9 %
3-year annual average	4.5 %

Goal-Setting Information:

Date of Most Recent Public Forum: 01/01/2008 Has goal been changed since last performance report? No

Note: Customer goal must be re-established every 6 years through a public process

WUE Goals:

Customer Goal (Demand Side):

Reduce the current residential and commercial winter time per service use by 2 % within the next 6 years.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

By more closely scrutinizing the meter read reports, we have been able to identify leaks on the consumer side more efficiently, and getting the leaks repaired more quickly.

Consumption history is shown on each utility bill.

Have implemented a higher conservation rate schedule.

Additional Information Regarding Supply and Demand Side WUE Efforts

Include any other information that describes how you and your customers use water efficiently:

Rain sensors have been installed on the areas that have the most water use so that a rain event will prevent sprinklers from activating.

DOH water saving pamphlets have been made available to consumers.

Do not mail, fax, or email this report to DOH

Water Use Efficiency Annual Performance Report - 2010

WS Name: OMAK, CITY OF

Water System ID# : 63750

WS County: OKANOGAN

Report submitted by: *Ervin Michael*

Meter Installation Information:

Is your water system fully metered? *No*

If not fully metered - Current status of meter installation:

*Approximately one half of the Eastside Park, Okoma Well Site, and the Dike Park are not metered.
Will be metered by 2017.*

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: *01/01/2010 To 12/31/2010*

Incomplete or missing data for the year? *Yes*

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	<i>471,672,000</i> gallons
Authorized Consumption (AC) – Annual Volume	<i>458,511,856</i> gallons
Distribution System Leakage – Annual Volume TP – AC	<i>13,160,144</i> gallons
Distribution System Leakage – Percent DSL = $[(TP - AC) / TP] \times 100$	<i>2.8 %</i>
3-year annual average	<i>3.9 %</i>

Goal-Setting Information:

Date of Most Recent Public Forum: *01/07/2010* Has goal been changed since last performance report? *No*

Note: Customer goal must be re-established every 6 years through a public process

WUE Goals:

Customer Goal (Demand Side):

Reduce the current residential and commercial winter time use per service by 2% within next 6 years.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

*Have saved approximately 10.2 million gallons between winter 2009-2010 and winter 2010-2011.
At the present time, it appears we are making progress.
Have made available conservation flyers, instituted, have increased the cost for exceeding the minimum usage by 21%.*

Additional Information Regarding Supply and Demand Side WUE Efforts

Include any other information that describes how you and your customers use water efficiently:

Quick repair of all leaks and breaks.

Customers are shown consumption comparisons on their utility bill.

Customers with higher than normal consumption are notified by mail and/or telephone.

Do not mail, fax, or email this report to DOH

Water Use Efficiency Annual Performance Report - 2011

WS Name: OMAK, CITY OF

Water System ID# : 63750

WS County: OKANOGAN

Report submitted by: Michael Ervin

Meter Installation Information:

Estimate the percentage of metered connections: *More Than 75%*

If not fully metered - Current status of meter installation:

Presently approximately one-third of the Eastside Park, Okoma Well grass, and the Dike Park are not metered. The decision has been made to not irrigate Okoma Well grass. Metering of all non-metered areas will be done by 2017.

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: 01/01/2011 To 12/31/2011

Incomplete or missing data for the year? No

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	439,696,000 gallons
Authorized Consumption (AC) – Annual Volume	409,939,002 gallons
Distribution System Leakage – Annual Volume TP – AC	29,756,998 gallons
Distribution System Leakage – Percent DSL = $[(TP - AC) / TP] \times 100$	6.8 %
3-year annual average	4.8 %

Goal-Setting Information:

Date of Most Recent Public Forum: 01/07/2008 Has goal been changed since last performance report? No

Note: Customer goal must be re-established every 6 years through a public process

WUE Goals:

Customer Goal (Demand Side):

Reduce the current residential and commercial winter time use by 2% within the next 6 years.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

The City has saved approximately 4,547,840 gallons or 3.4% in wintertime usage. Presently we have attained and surpassed our goal ahead of schedule. Water conservation pamphlets have been made available to our consumers, conservation rates have been increased 4% after a 21% increase the previous year.

Additional Information Regarding Supply and Demand Side WUE Efforts

Include any other information that describes how you and your customers use water efficiently:

Timely repair of all leaks and breaks.

All customers are show consumption history on utility bill.

Customers are notified of excess consumption by mail and/or phone.

The City has installed rain sensors on irrigation systems that shut down sprinklers when a rain event occurs.

Through our SCADA system it has become clear that when a rain event occurs, the City's customers have been shutting down their sprinkler systems, showing a drastic reduction in water production during these rain events.

Do not mail, fax, or email this report to DOH

Water Use Efficiency Annual Performance Report - 2012

WS Name: OMAK, CITY OF

Water System ID# : 63750

WS County: OKANOGAN

Report submitted by: *Michael Ervin*

Meter Installation Information:

Estimate the percentage of metered connections: *More Than 75%*

If not fully metered - Current status of meter installation:

The City of Omak Will be 100 % metered by 2017.

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: *01/01/2012* To *12/31/2012*

Incomplete or missing data for the year? *No*

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	<i>466,541,000</i> gallons
Authorized Consumption (AC) – Annual Volume	<i>424,392,920</i> gallons
Distribution System Leakage – Annual Volume TP – AC	<i>42,148,080</i> gallons
Distribution System Leakage – Percent DSL = $[(TP - AC) / TP] \times 100$	<i>9.0 %</i>
3-year annual average	<i>6.2 %</i>

Goal-Setting Information:

Date of Most Recent Public Forum: *01/07/2008* Has goal been changed since last performance report? *No*

Note: Customer goal must be re-established every 6 years through a public process

WUE Goals:

Customer Goal (Demand Side):

Reduce the current residential and commercial winter time use by 2% within the next 6 years.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

We have reduced residential and commercial winter time use by 2.6% in this reporting period. Though the goal has been reached, it is less than the 2011 reporting period. We have increased the cost of exceeding minimum usage by an additional 5%.

Additional Information Regarding Supply and Demand Side WUE Efforts

Include any other information that describes how you and your customers use water efficiently:

Though our supply side goal of reducing leakage has been attained, our leakage in this reporting period was up to 9.0%, versus 6.8% in 2011. This was due to two major breaks that occurred in 2012. Both were repaired as quickly as possible but both were large losses. We at the City have instituted a program of reducing the amount of water we place on our park system. Whether we can maintain this lower amount (and keep the public happy) remains to be seen. When there is a rain event, our drop in demand is obvious, indicating that the City's residents as well as the City itself has halted irrigation, until the need arises again.

Do not mail, fax, or email this report to DOH

Water Use Efficiency Annual Performance Report - 2013

WS Name: OMAK, CITY OF

Water System ID# : 63750

WS County: OKANOGAN

Report submitted by: Corey Wilder

Meter Installation Information:

Estimate the percentage of metered connections: *More Than 75%*

If not fully metered - Current status of meter installation:

A portion of Eastside park and Dike park are not metered The listed parks are irrigation accounts that are on our meter installation plan.

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: 01/01/2013 To 12/31/2013

Incomplete or missing data for the year? *No*

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	436,246,000 gallons
Authorized Consumption (AC) – Annual Volume	407,550,494 gallons
Distribution System Leakage – Annual Volume TP – AC	28,695,506 gallons
Distribution System Leakage – Percent DSL = $[(TP - AC) / TP] \times 100$	6.6 %
3-year annual average	7.5 %

Goal-Setting Information:

Date of Most Recent Public Forum: 01/07/2008 Has goal been changed since last performance report? *No*

Note: Customer goal must be re-established every 6 years through a public process

WUE Goals:

Customer Goal (Demand Side):

Reduce the current residential and commercial winter time use by 2% within the next 6 years.

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

The goal to reduce residential and commercial winter usage by 2% has been achieved at 2.6% as of 6/30/13

Additional Information Regarding Supply and Demand Side WUE Efforts

Include any other information that describes how you and your customers use water efficiently:

The City has purchased and implemented the use of leak detecting equipment. Water dept. personnel advise customers on issues such as using timers on irrigation systems, and how to recognize leaking toilets.

Do not mail, fax, or email this report to DOH



Date Submitted: 6/2/2015

Water Use Efficiency Annual Performance Report - 2014

WS Name: OMAK, CITY OF

Water System ID# : 63750

WS County: OKANOGAN

Report submitted by: Corey Wilder

Meter Installation Information:

Estimate the percentage of metered connections: *More Than 75%*

If not fully metered - Current status of meter installation:

Portions of the City park are not yet metered. Planning and budgeting is taking place in order to make the 2017 deadline

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: 01/01/2014 To 12/31/2014

Incomplete or missing data for the year? *No*

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	461,639,000 gallons
Authorized Consumption (AC) – Annual Volume	438,822,044 gallons
Distribution System Leakage – Annual Volume TP – AC	22,816,956 gallons
Distribution System Leakage – Percent DSL = $[(TP - AC) / TP] \times 100$	4.9 %
3-year annual average	6.8 %

Goal-Setting Information:

Date of Most Recent Public Forum: 05/18/2015 Has goal been changed since last performance report? Yes

Note: Customer goal must be re-established every 6 years through a public process

WUE Goals:

Customer Goal (Demand Side):

reduce residential water use by 1% over the six year goal period

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

The above goal will be accomplished through customer education using our monthly news letter to provide tips and techniques for conserving water.

Additional Information Regarding Supply and Demand Side WUE Efforts

Include any other information that describes how you and your customers use water efficiently:



Date Submitted: 1/27/2016

Water Use Efficiency Annual Performance Report - 2015

WS Name: OMAK, CITY OF

Water System ID# : 63750

WS County: OKANOGAN

Report submitted by: Corey Wilder

Meter Installation Information:

Estimate the percentage of metered connections: *More Than 75%*

If not fully metered - Current status of meter installation:

Metering of unmetered connections will be completed by Jan. 2017 deadline

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: 01/01/2015 To 12/31/2015

Incomplete or missing data for the year? *No*

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	505,180,000 gallons
Authorized Consumption (AC) – Annual Volume	467,686,498 gallons
Distribution System Leakage – Annual Volume TP – AC	37,493,502 gallons
Distribution System Leakage – Percent DSL = $[(TP - AC) / TP] \times 100$	7.4 %
3-year annual average	6.3 %

Goal-Setting Information:

Date of Most Recent Public Forum: 05/18/2015 Has goal been changed since last performance report? *No*

Note: Customer goal must be re-established every 6 years through a public process

WUE Goals:

Customer Goal (Demand Side):

reduce residential water use by 1% over the six year goal period

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

Educating water customers on identifying common water loss problems such as leaking toilets and irrigation through our city news letter. The City also notifies customers of "high water use"

Additional Information Regarding Supply and Demand Side WUE Efforts

Include any other information that describes how you and your customers use water efficiently:

Water Use Efficiency Annual Performance Report - 2016

WS Name: OMAK, CITY OF

Water System ID# : 63750

WS County: OKANOGAN

Report submitted by: Corey wilder

Meter Installation Information:

Estimate the percentage of metered connections: 100%

If not fully metered - Current status of meter installation:

The City is finishing installing meters at the last known unmetered connections. We have one connection left to tie in to new meter that is already installed. That will happen this week of 6/26/17 This will complete the project known as East side metering project performed by POW contractors. To the best of my knowledge this will capture all known unmetered connections remaining in the City water system.

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period: 01/01/2016 To 12/31/2016

Incomplete or missing data for the year? No

If yes, explain:

Distribution System Leakage Summary:

Total Water Produced and Purchased (TP) – Annual Volume	481,687,000 gallons
Authorized Consumption (AC) – Annual Volume	449,081,940 gallons
Distribution System Leakage – Annual Volume TP – AC	32,605,060 gallons
Distribution System Leakage – Percent DSL = $[(TP - AC) / TP] \times 100$	6.8 %
3-year annual average	6.4 %

Goal-Setting Information:

Date of Most Recent Public Forum: 05/18/2015 Has goal been changed since last performance report? No

Note: Customer goal must be re-established every 6 years through a public process

WUE Goals:

Customer Goal (Demand Side):

reduce residential water use by 1% over the six year goal period

Describe Progress in Reaching Goals:

Customer (Demand Side) Goal Progress:

Water production for 2016 is down 4.6% over 2015

Additional Information Regarding Supply and Demand Side WUE Efforts

Include any other information that describes how you and your customers use water efficiently:

We have installed meters on our equipment that use water such as our vacor truck, Water truck and street sweepers. This gives us very accurate usage opposed to counting loads and or estimating use such as partial loads.

Metering project is complete in Eastside park, this will capture actual usage for 2nd half of 2017 and all of 2018 and beyond.

Do not mail, fax, or email this report to DOH

CHAPTER 5

SOURCE WATER PROTECTION

GENERAL

This chapter presents the Wellhead Protection Program for the City of Omak.

OBJECTIVE

Water from underground aquifers, commonly referred to as groundwater, forms the primary source of drinking water for approximately 65 percent of Washington State residents. The City of Omak relies on groundwater wells to meet its water supply needs. To protect groundwater supplies, the Environmental Protection Agency (EPA) and Washington Department of Health (DOH) require public water utilities to develop a wellhead protection program as a component of its water system plan. The purpose of a wellhead protection program is to provide water systems with a proactive program for preventing groundwater contamination. The minimum requirements for a wellhead protection plan are specified in WAC 246-290-135(3).

WELLHEAD PROTECTION AREA DELINEATIONS

DEFINITION OF A WELLHEAD PROTECTION AREA

A wellhead protection area (WHPA) is defined as the surface and subsurface area surrounding a well that supplies a public water system through which contaminants are likely to pass and eventually reach the well (DOH, 1995). In Washington, WHPAs are based on time-of-travel criteria, or the theoretical distance a particle of water travels in a prescribed period of time. At a minimum, the DOH requires communities to look at the following five WHPAs:

- Sanitary control area
- 6-month time-of-travel WHPA
- 1-year time-of-travel WHPA
- 5-year time-of-travel WHPA
- 10-year time-of-travel WHPA

A discussion of the WHPAs is provided in the following sections.

Sanitary Control Area

The sanitary control area is the protective area around the wellhead as required by WAC 246-290-135. According to this statute, the minimum sanitary control area for wells is 100 feet, unless engineering justification supports a smaller area. Conversely, DOH may

require a larger sanitary control area if geological and hydrological data support such a decision.

Time-of-Travel WHPAs

The time-of-travel WHPAs are determined by estimating the travel distance of a hypothetical particle of water traveling through the aquifer to a pumping well for a selected travel time, (e.g., 1-year). The WHPAs define aquifer management regions around the well that can be used to identify and control potential sources of contamination. The management of WHPAs is often done incrementally with the most aggressive management strategies being applied in the 6-month and 1-year WHPAs.

Time-of-travel WHPAs are based on several assumptions. First, time-of-travel criteria do not consider vertical movement of water or contaminants from the land surface to the screened interval of the well. Therefore, time-of-travel zones tend to be inherently conservative. Also, it is assumed that contaminants move at the same rate as water in the subsurface, where actual contaminants may move slower or faster than water. This assumption is also typically conservative because the soil matrix, biological processes, and chemical processes tend to retard the transport of contaminants in the subsurface.

Time-of-travel criteria may not be applicable in every situation. DOH notes that in some areas of the state, time-of-travel criteria may not be appropriate if the capture zone is recharged in less than 10 years, if complicated geographic features are present, or if a significant contribution to the well is from a nearby surface source. In these settings, alternate WHPA delineation criteria may be used with DOH approval. While the Okanogan River has been shown to influence some of the City's wells, the City feels that time-of-travel criteria are appropriate for its wells at this time.

Six-Month Time-of-Travel Zone

The six-month time-of-travel zone represents the surface area overlying the portion of aquifer supplying water to the well within a six-month period. Aggressive management strategies are recommended in the six-month time-of-travel zone because of the limited time a purveyor can respond to contamination in this zone. The six-month time-of-travel zone is vulnerable to both microbial and chemical contamination. EPA literature suggests that bacteria and viruses survive less than one year in groundwater, so potential sources of microbial contamination should be monitored carefully. Similarly, limited response times for mitigation actions following chemical contamination require aggressive control of potential sources of chemical contamination within this zone.

One-Year Time-of-Travel Zone

The one-year time-of-travel zone represents the surface area overlying the portion of aquifer supplying water to the well within a one-year period. As in the six-month time-of-travel zone, the susceptibility of the one-year time-of-travel zone to both microbial and chemical contamination requires aggressive controls of potential contamination sources.

Five-Year Time-of-Travel Zone

The five-year time-of-travel zone represents the surface area overlying the portion of aquifer supplying water to the well within a five-year period. Microbial contamination in the five-year time-of-travel zone is not a major concern, because existing literature suggests that bacteria and viruses cannot survive more than one year in groundwater. However, chemical contamination is a concern and potential sources of chemical contamination should be monitored closely. The primary difference between the five-year time-of-travel zone and the zones closer to the well is that the five-year zone provides an increased response time to mitigate the effects of chemical releases.

Ten-Year Time-of-Travel Zone

The ten-year time-of-travel zone represents the surface area overlying the portion of aquifer supplying water to the well within a ten-year period. The purpose of the ten-year zone is to control high risk chemical contamination sources, and to encourage long-term planning for contaminant risk reduction. Public education of contamination prevention measures is a key management tool used in protecting this zone.

CALCULATED FIXED RADIUS (CFR) MODEL

In developing a wellhead protection program, a first step is to establish the land areas around each well from which groundwater may flow to the well. These areas are likely to contribute pollutants to the groundwater and are referred to as “zones of contribution”. Zones of contribution require proper land use management to minimize the possibility of contaminants entering the groundwater system. The most commonly accepted tools for delineating wellhead protection zones include the calculated fixed radius (CFR) method, analytical models, and numerical models.

The calculated fixed radius method was used to analyze the wellhead protection area zones of contribution. Based on WAC 246-290-135 and through the use of the DOH susceptibility analysis techniques, wellhead protection areas are estimated for 6-month, 1-year, 5-year, and 10-year periods. The delineations of the City’s zones of contribution are shown on Figure 5-1. The CFR method was utilized to determine the wellhead protection areas with the current pumping rates by using the following equation:

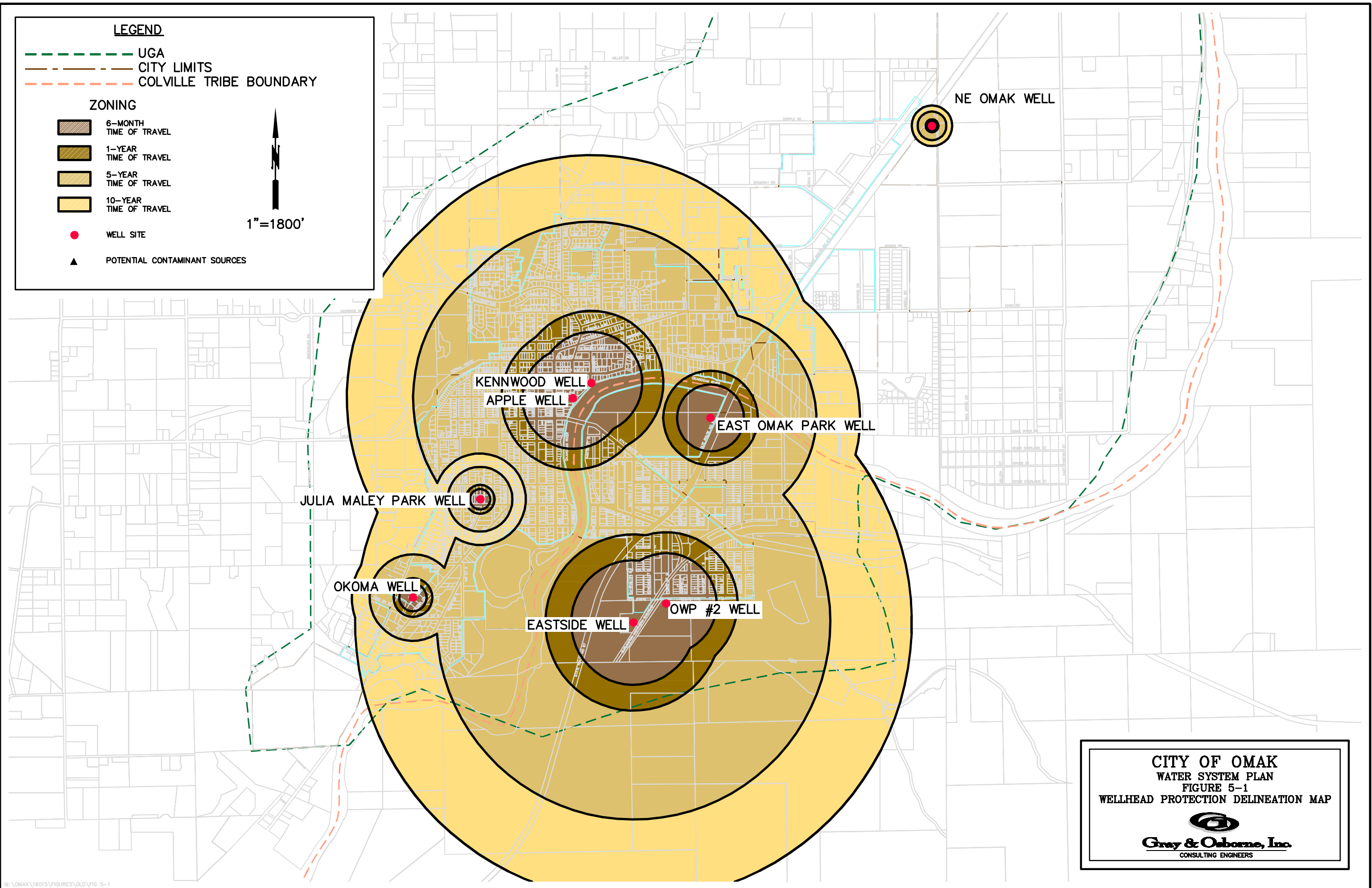
$$r = \sqrt{\frac{Qt}{n\pi H}}$$

A summary of the values used to calculate the CFRs for each source, including the proposed Julia Maley Park well, are provided in Table 5-1.

TABLE 5-1**Calculated Fixed Radius Wellhead Protection Areas**

Parameter	WHP Zone	Eastside	Apple	Kenwood	Okoma	Park	OWP No. 2	NE Omak	Julia Maley
		SO1	SO2	SO3	SO4	SO6	SO7	SO8	TBD
Calculated radius of protection zone, r (ft)	6 Months	1,308	1,063	1,070	288	703	1,060	95	215
	1 Year	1,850	1,503	1,513	407	994	1,499	135	304
	5 Years	4,137	3,360	3,383	910	2,223	3,352	302	680
	10 Years	5,850	4,752	4,784	1,286	3,144	4,740	427	961
Well pump rate ⁽¹⁾ , Q (cfy)	-	32,255,180	21,279,500	21,570,500	5,458,896	12,109,680	33,881,834	240,075	2,178,185
Estimated porosity ⁽²⁾ , n	-	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Open interval/length of well screen, H (ft)	-	10	10	10	35	13	16	14	25

- (1) Based on 2015 production volumes for Eastside, OWP No. 2, and NE Omak wells; based on 2014 production volume for Okoma well; Park well based on maximum annual volume of 278 acre-ft/year; Apple and Kenwood wells based on the City's 1998 *Water System Wellhead Protection Plan*; Julia Maley Park well based on anticipated usage of 50 acre-ft/year from City's Water Rights Self-Assessment (Table 3-4).
- (2) Aquifer porosity taken from the City's 1998 *Water System Wellhead Protection Plan*.



LEGEND

- UGA
- CITY LIMITS
- COLVILLE TRIBE BOUNDARY

ZONING

- 6-MONTH TIME OF TRAVEL
- 1-YEAR TIME OF TRAVEL
- 5-YEAR TIME OF TRAVEL
- 10-YEAR TIME OF TRAVEL

- WELL SITE
- POTENTIAL CONTAMINANT SOURCES

1"=1800'

CITY OF OMAK
WATER SYSTEM PLAN
FIGURE 5-1
WELLHEAD PROTECTION DELINEATION MAP


Gray & Osborne, Inc.
CONSULTING ENGINEERS

POTENTIAL CONTAMINANT SOURCES

Within a wellhead protection zone, there are many diverse activities that may contaminate an aquifer and potentially prevent its use as a viable drinking water source. It is important that these activities are properly inventoried and, if necessary, regulated to prevent degradation of groundwater quality. Relevant activities and sources at a minimum include land use practices, industrial and commercial operations, underground storage tanks, hazardous materials storage and use, septic tanks, and dry wells. These activities are potential sources for groundwater contamination. A discussion of these practices and their potential effects on groundwater, and the regulatory requirements that may apply are included in the sections that follow.

INVENTORY OF POTENTIAL CONTAMINANT SOURCES

The purpose of maintaining an inventory of potential contaminant sources is to identify past, present, and proposed activities that may pose a threat to a water supply source. Other purposes include assisting the development of plan management strategies, establishing a mailing list for notifying potential contaminant sources within the wellhead protection areas, and notifying agencies regarding inventory findings. An accurate inventory and description of hazardous material handlers is required in WAC 246-290-135.

A list of the current potential contaminant sources throughout the City of Omak is provided in Appendix K.

NOTIFICATIONS

Minimum requirements for notification of wellhead protection areas are issued to owners and operators of potential sources of contamination, to regulatory agencies and local governments, and to local emergency incident responders.

Notices to Owners of Potential Sources of Contamination

A standard letter (included at the end of this chapter) has been sent to all land or business owners identified on the list of potential contaminant sources. The standard letter states that their property is in the wellhead protection area, and states that the activities of their business may be a potential source for ground water contamination. Residents within the WHPAs have been notified through public service messages of their potential impact upon the City's drinking water supply. Landowners with on-site septic systems should be notified that, when operated properly, septic systems would not be a significant threat to the City's wells. However, the dumping of chemicals into septic systems, onto the ground, or into storm drains in the wellhead protection area could contaminate the City's water supply and that enforcement action may be taken.

NOTIFICATION TO REGULATORY AGENCIES AND LOCAL GOVERNMENTS

Under WAC 246-290-135, it is required that notification is provided to regulatory agencies and local government of the WHPAs and an inventory of potential sources of contamination in the area be identified. The regulatory agencies and local government office that must receive the notification are listed as follows:

Washington State Department of Health
Wellhead Protection Program, Headquarters
243 Israel Rd. SE 2nd floor
Tumwater, WA 98501
P.O. Box 47823
Olympia, WA 98504-7822
Phone: (360) 236-3114

U.S. Environmental Protection Agency
Attn: Ground Water Unit
1200 Sixth Avenue
Seattle, WA 98101
(206) 553-6708

Washington State Department of Ecology
Central Regional Office
1250 Alder Street
Union Gap, WA 98903
Phone: (509) 575-2490

Washington State Department of Health
Division of Drinking Water
Eastern Regional Office
Contact: Mike Wilson, P.E.
River View Corporate Center
16201 East Indiana Avenue, Suite 1500
Spokane Valley, Washington 99216
Phone: (509) 329-2116

Okanogan County Public Health
1234 South 2nd Avenue
P.O. Box 231
Okanogan, WA 98840
Business: (509) 422-7140

The City has sent notification to regulatory agencies and local governments of the boundaries of the WHPAs and the finding of the WHPAs inventory.

NOTIFICATION TO LOCAL EMERGENCY INCIDENT RESPONDERS

It is required by regulation that documentation of coordination with incident responders be provided. The following incident responders have been contacted and provided with information regarding the City's WHPAs:

Omak Police Department
8 North Ash Street
Omak, WA 98841
(509) 826-0383

Omak Fire Department
16 North Ash Street
Omak, WA 98841
(509) 826-0760

Washington State Department of Health
Division of Drinking Water
Eastern Regional Office
Contact: Mike Wilson, P.E.
River View Corporate Center
16201 East Indiana Avenue, Suite 1500
Spokane Valley, Washington 99216
Phone: (509) 329-2116

Okanogan County Sheriff's Office
123 5th Avenue North
Okanogan, WA 98840
Emergency: 911
Business: (509) 422-7200

Fire Protection Bureau
Washington State Patrol
PO Box 42600
Olympia, WA 98504-2600
Emergency: 911
Business: (360) 596-3902

Okanogan County Sheriff's Office
Department of Emergency Management
123 5th Avenue North
Room 200
Okanogan, WA 98840
Emergency: 911
Business: (509) 422-7207

Emergency Response, Washington
State Department of Transportation
Doug Pierce
Transportation Bldg. 47358
Olympia, WA 98504-7358
Emergency: 911
Business: (360) 705-7812

Okanogan County Public Health
1234 South 2nd Avenue
P.O. Box 231
Okanogan, WA 98840
Business: (509) 422-7140

Spill Response Program
Washington State Department of Ecology
Central Regional Office
1250 Alder Street
Union Gap, WA 98903
(509) 575-2490

Washington State Emergency Management
20 Aviation Drive
Building 20, MS TA-20
Camp Murray, WA 98430-5112
(800) 562-6108

LONG-TERM CONTINGENCY PLANNING

Long-term water replacement options differ from emergency and short-term options in two ways. First, the amount of time available to evaluate the various alternatives is longer, permitting more extensive analysis of the considerations of future needs and other factors prior to decision-making. Second, the range of viable alternatives is larger. The following sections provide a discussion of long-term options.

DRILL NEW WELLS

If investigations indicate that there is an untapped supply of groundwater in the form of a separated aquifer or a portion of the contaminated aquifer which is up-gradient and uncontaminated, it may be feasible for the City to drill new wells. This alternative can often be more economical and carry lower risk than treatment.

GROUNDWATER TREATMENT

The same treatment technologies previously described are available as permanent solutions for contaminant removal. As discussed above, treatment of contaminated water should be viewed as a last resort and should be considered only after the other alternatives have been completely abandoned.

INTERCONNECTION

Interties with other water systems are sometimes a cost effective solution. The nearest city with a reliable water supply is the City of Okanogan, located just south of Omak. The City may explore the possibility of an intertie with the City of Okanogan should conditions warrant.

WATER CONSERVATION

While it is possible to use conservation strategies to reduce consumption over the long-term, the water savings from conservation are not likely to be large enough to replace the production of a contaminated well.

SURFACE WATER TREATMENT

As in the short-term surface water treatment discussion, the water quality, water right, and costs associated with surface water treatment make it an unattractive alternative.

OMAK WELLHEAD PROTECTION MANAGEMENT

Development of management strategies is essential for a successful wellhead protection program. Without proper management, potential contamination sources are likely to become a reality. An informed public that understands the link between potential contamination sources and its drinking water is one of the most effective ways of protecting groundwater supplies. The City will send out information pertaining to wellhead protection on an annual basis with billing to provide continuous education of the public on the merits of wellhead protection. The City has also notified the potential contaminant sources listed in Appendix K. Finally, WHPP literature will be maintained at City Hall to increase public awareness of the need to protect water supplies.

Sample of Agency Notification Letter

Date:

[agency/local government]
P.O. Box 123
123 Anywhere St
City, WA 99999

Subject: OMAK WELLHEAD PROTECTION PROGRAM

Dear [agency/local government];

As part of the wellhead protection program for the City of Omak, we are hereby informing you of the findings of our wellhead protection area delineation. This is in accordance with State regulations (WAC 246-290-135).

Our City has approximately 2,000 active services, and serves a population of approximately 5,000 people. Due to the groundwater nature of our water system sources, our drinking water supply is vulnerable to contamination.

The enclosed map shows the 6-month, 1-, 5-, and 10-year time of travel boundaries for our wellhead protection areas. Any ground water contamination that occurs within these wellhead protection areas has a high potential to reach our wells. It is therefore of utmost importance to us that all reasonable steps be taken to ensure that land use activities within this area do not contaminate our customers' drinking water supplies.

Thank you for your support in protecting our drinking water.

Sincerely,

Ken Mears
Public Works Director

Sample of Contaminant Notification Letter

Date:

Mr/Ms.
P.O. Box 123---
123 Anywhere St
Omak, WA 98841

Subject: OMAK WELLHEAD PROTECTION PROGRAM

Dear Owner;

In Omak we rely on ground water as our only source for drinking water. We take a proactive approach to ensure a safe and secure source of quality water for our community. To do so, we have developed a Wellhead Protection Plan in accordance with State guidelines. A copy of this document is located at City Hall.

As part of our Wellhead Protection Plan, we mapped the areas overlying the most sensitive areas around each of our wells, designated as protection zones. These protection zones represent the time it can take for water to travel from the edge of the zone to the well. Following the mapping of the wellhead protection zones, an inventory of potential sources of groundwater contamination was conducted. Your business, residence or property was found to lay within one of the wellhead protection zones. As such, it has been identified to be a potential contamination source for our wellhead protection plan following a review of such source in the DOE database. The presence of your business, residence or property within the City's wellhead protection zone means that activities in these areas can have the potential to affect the City's drinking water supplies.

We have notified the State of the existence of your business, residence or property within the City's wellhead protection zone. The State can assist you with technical information to help you manage activities within the wellhead protection zone in a way that will best prevent groundwater contamination. Additionally, we will include guidelines in our water statements on how to protect our water supply.

We realize you are already careful to protect the environment in and around your property. Our hope is that informing you that your business, residence or property is within our wellhead protection zone will reinforce the need to be ever diligent in day to day activities to help ensure we keep a safe and secure source of quality water for our community.

Sincerely,

Ken Mears
Public Works Director

CHAPTER 6

OPERATION AND MAINTENANCE

The Washington State Department of Health considers several elements to be important in a properly managed operation and maintenance (O&M) program. A list of these elements and where they are discussed or presented in this plan is provided in Table 6-1.

TABLE 6-1

Operation & Maintenance Program Elements

Operation and Maintenance Component	Location in Plan
Water System Management and Personnel	Chapter 1, p. 1-1 & Table 6-2
Operator Certification	Chapter 1, p. 1-1 & Table 6-2
Routine Operating Procedures	Chapter 6
Water Quality Sampling Procedures	Appendix C
Coliform Monitoring Plan	Appendix C
Emergency Response Plan	Appendix G
Safety Procedures	Appendix G
Cross-Connection Control	Appendix F
Customer Complaint Response Program	Appendix G
Record Keeping and Reporting	Appendix G
Operation and Maintenance Analysis	Chapter 3

SYSTEM PERSONNEL

The City's water system personnel are listed below. The City's Public Works Director's daytime phone number is (509) 846-5964. A more extensive list of emergency phone numbers is provided in Appendix G.

TABLE 6-2

Water System Personnel

Name	Title	Certification ⁽¹⁾	Emergency Phone
Todd McDaniel	City Administrator	WDM1, CCS	(509) 826-1170 (Cell)
Ken Mears	Public Works Director	N/A	(509) 846-5964 (Cell)
Corey Wilder	Water Department Manager	WDM2, CCS, BAT	(509) 826-1170 (Office) (509) 322-4047 (Cell)
Wayne Beetchenow	Assistant Public Works Director	WDM1	(509) 826-1390 (509) 429-5101 (Cell)
Jordan Verstegen	Assistant Water Department Operator	WDM1	(509) 826-1170 (Office)

(1) WDM = Water Distribution Manager; WDS = Water Distribution Specialist; CCS = Cross Connection Control Specialist; BAT = Backflow Assembly Tester.

OPERATION AND MAINTENANCE PROGRAM

Tables 6-3 through 6-6 provide general information on the City's operation and maintenance program. Table 6-3 summarizes the City's principal operating and preventive maintenance activities and their frequency. Photos of the City's wells, reservoirs and booster stations are provided at the end of this chapter.

TABLE 6-3

Operation and Maintenance Practices

Operation and Maintenance Activities	Frequency
Wells	
Visual and aural inspection of building exterior, interior and equipment	Daily
Record flow data	Telemetry performs continuously
Measure static and dynamic water levels	Telemetry performs continuously
Well pump maintenance	Per manufacturer recommendation
Storage	
Exterior and interior inspection	Monthly by water department/Formal inspection every 5 years
Inspect vents and screens	Annually
Source meters	Checked annually for accuracy
Booster Pump Stations	
Visual and aural inspection of building exterior, interior, and equipment	Daily
Record flow data	Recorded daily
Distribution System	
Exercise valves	Biennially
Exercise hydrants	Biennially
Perform preventative maintenance on control valves	Annually
Control valve inspection and testing	Monthly
Small service meter tests/replacements	Every 10 Years (10% annually)
Read service meters	Monthly, except when snow covered
Collect water samples for coliform testing	Monthly

Table 6-4 summarizes the normal settings, positions and readings used for the City's water system equipment. Lead-lag sequencing, pump hand-off-auto, and reservoir set points are set at the master telemetry control station computer located at the public works /wastewater treatment facility office.

TABLE 6-4
Normal Equipment Settings

	Control Tank	Start Level (ft)	Stop Level (ft)
Source Wells			
Eastside Well (SO1)	South Hill	15'	18.6'
Apple Well (SO2)	Source not is use		
Kenwood Well (SO3)	Source not is use		
Okoma Well (SO4)	Source not in use		
Park Well (SO6)	Source used for Eastside Park irrigation only.		
OWP Well No. 2 (SO7)	South Hill	15'	18.6'
NE Omak Well (SO8)	Coleman Butte	15'	18.6'
Julia Maley Park Well (TBD)	Source expected in service in 2018		
Booster Pump Stations		(ft)	(ft)
Ash Street	Ross Canyon	15'	18.6'
Koala	Coleman Butte	15'	18.6'
Riverside	Ross Canyon	15'	18.6'
Wildwood	N/A (closed-pressure zone)		
Reservoirs	High Alarm (ft)	Low Alarm (ft)	
Riverside No. 1	19'	10'	
Riverside No. 2	19'	10'	
South Hill	19'	10'	
Ross Canyon No. 1	19'	10'	
Ross Canyon No. 2	19'	10'	
Coleman Butte	19'	10'	
Automatic Control Valves	Size and Type	Setting	
Ash Street Booster building	6" PRV	20 psi	
Koala Booster vault	10" PRV	On 13'/Off 18' (Controlled by Ross Canyon reservoirs)	

Table 6-5 provides a list of the typical water system supplies used by the City, and their current supplier for these materials.

TABLE 6-5**Supplies and Suppliers**

Supply	Supplier	Phone
Gate Valves	Consolidated Supply, Wenatchee HD Fowler, East Wenatchee HD Supply, Spokane	(509) 662-7128 (509) 886-8804 (800) 456-0531
Fire Hydrants		
Meter Boxes		
PVC Pipe		
Service Meters & Setters		
Repair Bands		
Dresser Couplings		
Miscellaneous Pipe Fittings		

RECORD KEEPING

The City keeps the following water system records and data shown in Table 6-6.

TABLE 6-6**Record Keeping Practices**

Record Type	Comment
Source meter readings	Daily readings kept indefinitely
Service meter readings	Monthly readings kept for 3 years
Non-revenue water	Records kept indefinitely
Bacteriological test results	Records kept indefinitely
Static and dynamic water level in wells	No records
Sanitary surveys	Records kept indefinitely
Chemical Analysis	Records kept indefinitely
Other Department of Health correspondence	Records kept indefinitely
Legal documents (water rights, easements, etc.)	Records kept indefinitely

The City also keeps water system mapping, including the location of pipelines, hydrants, and valves up to date.

COMPLAINT RESPONSE

The City maintains customer complaint records to verify trends that may assist the City improve service to its customers. Response to questions and complaints is typically verbal, either through a field visit or a telephone call. However, depending on the nature of the question or complaint, written response can also be given. Bi-monthly City Council meetings are the main venue for public involvement in the water system.

SAFETY PROCEDURES

The City practices a safety program to ensure the health and welfare of water system operators. All appropriate Occupational Safety and Health Administration (OSHA) and Washington Industrial Safety and Health Administration (WISHA) regulations are routinely followed during operation of the system. Operation and maintenance staff are trained in safety practices including confined space, first-aid, fall restraint, and chlorine safety. The City maintains fall equipment for inspecting reservoir hatches and screens, and confined space equipment for underground vaults. The City has some old asbestos-cement water pipe, which means that training water system personnel for asbestos handling has been necessary.

DEFICIENCIES

The City has identified O&M deficiencies on which to take corrective action. These deficiencies and corrective actions are listed in Table 3-12.



KENWOOD WELL AND PIPING



KENWOOD WELL AND PIPING

CITY OF OMAH
WATER SYSTEM FACILITIES
Kenwood Well and Piping



Gray & Osborne, Inc.
CONSULTING ENGINEERS



ASH STREET BOOSTER STATION



**3 BOOSTER PUMPS AT THE ASH STREET
BOOSTER STATION**

CITY OF OMAK
WATER SYSTEM FACILITIES
Ash Street Booster Station


Gray & Osborne, Inc.
CONSULTING ENGINEERS



ASH STREET PRV



ASH STREET PRV METER

CITY OF OMAK
WATER SYSTEM FACILITIES
Ash Street Booster Station



Gray & Osborne, Inc.
CONSULTING ENGINEERS



ASH STREET PRV VALVES

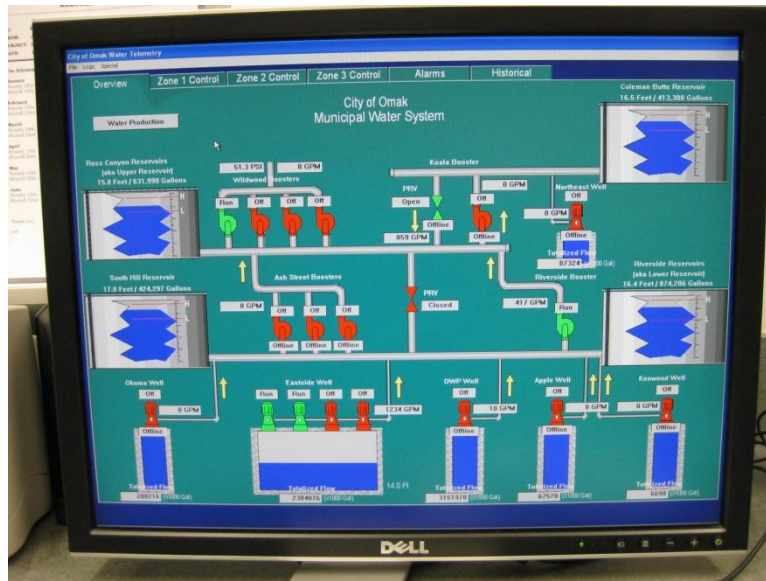


ASH STREET PRV SURGE VALVE

CITY OF OMAK
WATER SYSTEM FACILITIES
Ash Street Booster Station



Gray & Osborne, Inc.
CONSULTING ENGINEERS



TELEMETRY SYSTEM OVERVIEW SCREEN AT BASE STATION



SENSUS TOUCH READ SYSTEM

CITY OF OMAK
WATER SYSTEM FACILITIES
 Telemetry System



Gray & Osborne, Inc.
 CONSULTING ENGINEERS



COLEMAN BUTTE RESERVOIR



SOLAR PANEL AND TELEMETRY STATION

CITY OF OMAK
WATER SYSTEM FACILITIES
Coleman Butte Reservoir


Gray & Osborne, Inc.
CONSULTING ENGINEERS



NE OMAK WELL HOUSE



NE OMAK WELL GAS CHLORINATION

CITY OF OMAK
WATER SYSTEM FACILITIES
NE Omak Well House


Gray & Osborne, Inc.
CONSULTING ENGINEERS



NE OMAK WELL CHLORINATION BOOSTER PUMP



NE OMAK WELL CHLORINATION METER

CITY OF OMAK
WATER SYSTEM FACILITIES
NE Omak Well House


Gray & Osborne, Inc.
CONSULTING ENGINEERS



NE OMAK WELL TELEMETRY CONTROL & POWER



NE OMAK WELL

CITY OF OMAK
WATER SYSTEM FACILITIES
NE Omak Well House



Gray & Osborne, Inc.
CONSULTING ENGINEERS



NE OMAK WELL BACKUP POWER CONNECTION



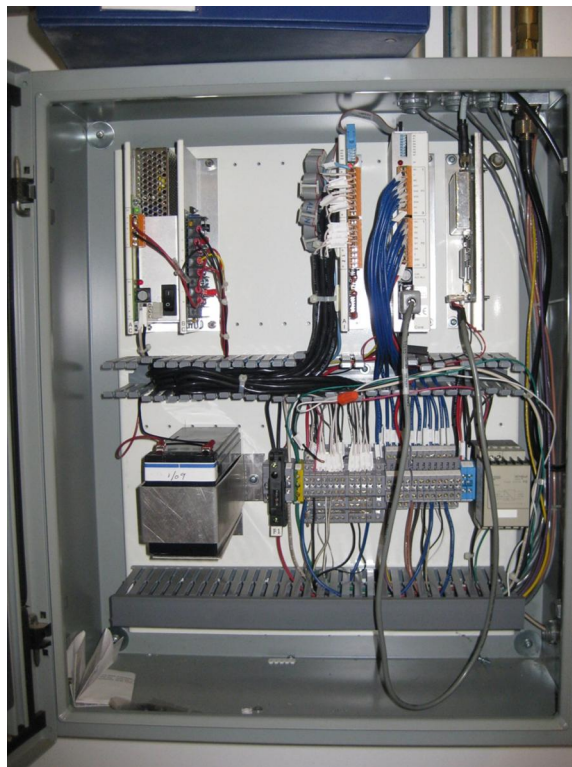
NE OMAK WELL BREATHING APPARATUS

CITY OF OMAK
WATER SYSTEM FACILITIES
NE Omak Well House


Gray & Osborne, Inc.
CONSULTING ENGINEERS



NE OMAK WELL PANELS



NE OMAK WELL TELEMETRY

CITY OF OMAK
 WATER SYSTEM FACILITIES
 NE Omak Well House



Gray & Osborne, Inc.
 CONSULTING ENGINEERS



NE OMAK WELL CHLORINE EMERGENCY REPAIR KIT

CITY OF OMAK
WATER SYSTEM FACILITIES
NE Omak Well House



Gray & Osborne, Inc.
CONSULTING ENGINEERS



RIVERSIDE RESERVOIR BOOSTER WITH GENERATOR



RIVERSIDE RESERVOIR BOOSTER
TELEMETRY PANEL

CITY OF OMAK
WATER SYSTEM FACILITIES
Riverside Reservoir Booster Station



Gray & Osborne, Inc.
CONSULTING ENGINEERS



RIVERSIDE RESERVOIR (CIRCULAR)



RIVERSIDE RESERVOIR (RECTANGULAR)

CITY OF OMAK
WATER SYSTEM FACILITIES
Riverside Reservoir Booster Station



Gray & Osborne, Inc.
CONSULTING ENGINEERS



RIVERSIDE RESERVOIR BOOSTER STATION



RIVERSIDE BOOSTER STATION CONTROL PANEL

CITY OF OMAK
WATER SYSTEM FACILITIES
Riverside Reservoir Booster Station


Gray & Osborne, Inc.
CONSULTING ENGINEERS



RIVERSIDE BOOSTER STATION VFD CONTROLS



RIVERSIDE BOOSTER STATION CONTROL PANEL

CITY OF OMAK
 WATER SYSTEM FACILITIES
 Riverside Reservoir Booster Station



Gray & Osborne, Inc.
 CONSULTING ENGINEERS



RIVERSIDE BOOSTER STATION PUMP & PIPING

CITY OF OMAK
WATER SYSTEM FACILITIES
Riverside Reservoir Booster Station



Gray & Osborne, Inc.
CONSULTING ENGINEERS



WILDWOOD BOOSTER STATION PANELS



WILDWOOD BOOSTER STATION GENERATOR

CITY OF OMAH
WATER SYSTEM FACILITIES
Wildwood Booster Station



Gray & Osborne, Inc.
CONSULTING ENGINEERS



**WILDWOOD BOOSTER STATION GENERATOR
MONITORING PANEL**



WILDWOOD BOOSTER STATION CONTROL PANEL

CITY OF OMAH
WATER SYSTEM FACILITIES
Wildwood Booster Station



Gray & Osborne, Inc.
CONSULTING ENGINEERS



WILDWOOD BOOSTER STATION PUMPS

CITY OF OMAK
WATER SYSTEM FACILITIES
Wildwood Booster Station



Gray & Osborne, Inc.
CONSULTING ENGINEERS



KENWOOD WELL CHLORINATION AND
TELEMETRY PANEL



KENWOOD WELL WELLHOUSE

CITY OF OMAK
WATER SYSTEM FACILITIES
Kenwood Wellhouse



Gray & Osborne, Inc.
CONSULTING ENGINEERS



APPLE WELL



APPLE WELL CONTROL PANELS

CITY OF OMAH
WATER SYSTEM FACILITIES
Apple Well



Gray & Osborne, Inc.
CONSULTING ENGINEERS



APPLE WELL INTERIOR



APPLE WELL WELLHOUSE

CITY OF OMAK
WATER SYSTEM FACILITIES
Apple Well



Gray & Osborne, Inc.
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OKOMA WELL WELLHOUSE



OKOMA WELL DISCHARGE PIPING

CITY OF OMAK
WATER SYSTEM FACILITIES
Okoma Well



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OKOMA WELL ELECTRICAL PANELS

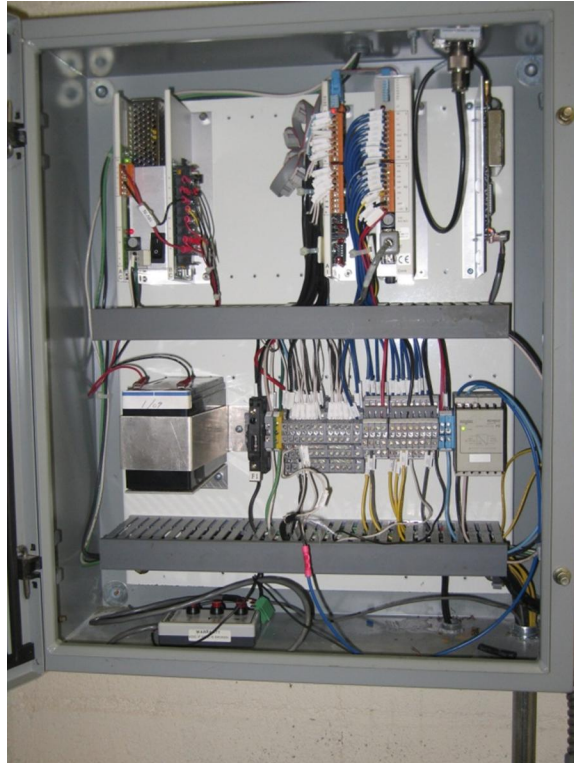


OKOMA WELL CHLORINATION EQUIPMENT

CITY OF OMAK
WATER SYSTEM FACILITIES
Okoma Well



Gray & Osborne, Inc.
CONSULTING ENGINEERS



OKOMA WELL TELEMTRY PANEL

CITY OF OMAK
WATER SYSTEM FACILITIES
Okoma Well



Gray & Osborne, Inc.
CONSULTING ENGINEERS



SOUTH HILL RESERVOIR



**SOUTH HILL RESERVOIR ACCESS AND
TELEMETRY PANELS**

CITY OF OMAK
WATER SYSTEM FACILITIES
South Hill Reservoir



Gray & Osborne, Inc.
CONSULTING ENGINEERS



SOUTH HILL RESERVOIR ALTITUDE VALVE



SOUTH HILL ALTITUDE VALVE

CITY OF OMAK
WATER SYSTEM FACILITIES
East Omak Park Well



Gray & Osborne, Inc.
CONSULTING ENGINEERS



EAST OMAK PARK WELL DISCHARGE PIPING



EAST OMAK PARK PANELS AND IRRIGATION
CONTROLLER

CITY OF OMAK
WATER SYSTEM FACILITIES
East Omak Park Well



Gray & Osborne, Inc.
CONSULTING ENGINEERS



EAST OMAK PARK WELLHOUSE

CITY OF OMAK
WATER SYSTEM FACILITIES
East Omak Park Well



Gray & Osborne, Inc.
CONSULTING ENGINEERS



OWP WELL #2 WELLHOUSE



OWP WELL #2 DISCHARGE PIPING

CITY OF OMAK
WATER SYSTEM FACILITIES
OWP No. 2 Well



Gray & Osborne, Inc.
CONSULTING ENGINEERS



OWP WELL #2 CONTROL PANELS



OWP WELL #2 CONTROL PANELS

CITY OF OMAK
WATER SYSTEM FACILITIES
OWP No. 2 Well



Gray & Osborne, Inc.
CONSULTING ENGINEERS



OWP WELL #2 DISCHARGE PIPING
(WITH MOTOR AND PUMP REMOVED)



OWP WELL #2 DISCHARGE PIPING
(WITH MOTOR AND PUMP REMOVED)

CITY OF OMAK
WATER SYSTEM FACILITIES
OWP No. 2 Well



Gray & Osborne, Inc.
CONSULTING ENGINEERS



OWP WELL NO. 2 CEILING ABOVE WELL



OWP WELL #2 WELLHOUSE

CITY OF OMAK
 WATER SYSTEM FACILITIES
 OWP No. 2 Well



Gray & Osborne, Inc.
 CONSULTING ENGINEERS



OWP WELL #2 WELLHOUSE



OWP WELL #2 WELLHOUSE

CITY OF OMAK
WATER SYSTEM FACILITIES
OWP No. 2 Well



Gray & Osborne, Inc.
CONSULTING ENGINEERS



OWP WELL #2 CHLORINATION EQUIPMENT
(IN CHLORINATION ROOM)



OWP WELL #2 CHLORINATION BOOSTER PUMP
EQUIPMENT

CITY OF OMAK
WATER SYSTEM FACILITIES
OWP No. 2 Well



Gray & Osborne, Inc.
CONSULTING ENGINEERS



EASTSIDE WELL WELLHOUSE



EASTSIDE WELL ELECTRICAL PANEL

CITY OF OMAK
WATER SYSTEM FACILITIES
Eastside Well



Gray & Osborne, Inc.
CONSULTING ENGINEERS



EASTSIDE WELL DISCHARGE PIPING



EASTSIDE WELL CHLORINATION EQUIPMENT
AND INJECTION POINT

CITY OF OMAK
WATER SYSTEM FACILITIES
Eastside Well



Gray & Osborne, Inc.
CONSULTING ENGINEERS



EASTSIDE WELL CHLORINATION EQUIPMENT

CITY OF OMAK
WATER SYSTEM FACILITIES
Eastside Well



Gray & Osborne, Inc.
CONSULTING ENGINEERS



KOALA PRV STATION



KOALA PRV CONTROL PANEL

CITY OF OMAK
WATER SYSTEM FACILITIES
Koala PRV



Gray & Osborne, Inc.
CONSULTING ENGINEERS



KOALA DRIVE BOOSTER PUMP & VALVES



KOALA DRIVE BOOSTER PUMP & VALVES

CITY OF OMAK
WATER SYSTEM FACILITIES
Kenwood Well



Gray & Osborne, Inc.
CONSULTING ENGINEERS



KENWOOD WELL CONTROL PANEL

CITY OF OMAK
WATER SYSTEM FACILITIES
Kenwood Well



Gray & Osborne, Inc.
CONSULTING ENGINEERS



MONTVU BOOSTER PUMP



MONTVU BOOSTER CHECK & GAUGES

CITY OF OMAK
WATER SYSTEM FACILITIES
Montvu Booster Pump



Gray & Osborne, Inc.
CONSULTING ENGINEERS

CHAPTER 7

CONSTRUCTION STANDARDS

DESIGN AND CONSTRUCTION STANDARDS

The City has prepared a set of standards for developers and the City to follow when constructing water system components. These standards are contained in this chapter so that they can be approved by the Department of Health as part of this Plan. Such approval is one of the requirements that will allow the City to construct distribution mains and distribution-related projects without submittal to Health of project reports in accordance with WAC 246-290-110 and construction documents in accordance with WAC 246-290-020.

CITY OF OMAK

CONSTRUCTION STANDARDS ***FOR*** ***THE PRIVATE CONSTRUCTION*** ***OF*** ***PUBLIC FACILITIES***

November 2001

INDEX

CHAPTER 1 - GENERAL	1
1. ENACTING AUTHORITY	1
2. PURPOSE	1
3. STATE ENVIRONMENT POLICY ACT (SEPA)	1
4. CONFLICTING PROVISIONS	1
5. SEVERANCE	1
6. PROCESS	1
7. ENGINEERING DESIGN PLAN REQUIREMENTS	2
8. PLAN REVIEW AND INSPECTION FEE	2
9. RECORD DRAWINGS	3
10. TRANSFER OF OWNERSHIP	3
11. EASEMENTS	3
CHAPTER 2 - GENERAL PLAN REQUIREMENTS	5
GENERAL PLAN FORMAT	5
SANITARY SEWER SYSTEM PLAN REQUIREMENTS	6
WATER SYSTEM PLAN REQUIREMENTS	6
STORM DRAIN SYSTEM PLAN REQUIREMENTS	7
STREET PLAN REQUIREMENTS	8
CHAPTER 3 - STANDARD SPECIFICATIONS	10
FORWARD	10
CHAPTER 4 - GENERAL REQUIREMENTS FOR ALL PROJECTS	11
GENERAL	11
1-01 DEFINITIONS AND TERMS	11
1-03 AWARD AND EXECUTION OF CONTRACT	12
1-04 SCOPE OF THE WORK	13
1-05 CONTROL OF WORK	13
1-07 LEGAL RELATION AND RESPONSIBILITIES TO THE PUBLIC	17
1-08 PROSECUTION AND PROGRESS	20
CHAPTER 5 - WATER SYSTEM IMPROVEMENTS	22
GENERAL REQUIREMENTS FOR WATER MAINS	22
SPECIAL PROVISIONS FOR WATER MAINS	23
7-09 PIPE AND FITTINGS FOR WATER MAINS	23
7-10 TRENCH EXCAVATION, BEDDING, AND BACKFILL FOR WATER MAINS	23
7-12 VALVES FOR WATER MAINS	24
7-14 FIRE HYDRANTS	25
7-15 SERVICE CONNECTIONS	26

INDEX
(continued)

CHAPTER 6 - SANITARY SEWER SYSTEM IMPROVEMENTS	28
GENERAL REQUIREMENTS FOR SANITARY SEWER MAINS	28
SPECIAL PROVISIONS FOR SANITARY SEWER MAINS	29
7-05 MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS	29
7-08 GENERAL PIPE INSTALLATION REQUIREMENTS	30
7-17 SANITARY SEWERS	30
7-18 SIDE SEWERS	31
CHAPTER 7 - STREET IMPROVEMENTS	32
GENERAL REQUIREMENTS FOR STREETS	32
SPECIAL PROVISIONS FOR STREETS	32
1-10 TEMPORARY TRAFFIC CONTROL	33
8-30 CONTROLLED DENSITY FILL (NEW SECTION)	33
CHAPTER 8 - STORM DRAINAGE	35
GENERAL REQUIREMENTS FOR STORM DRAINAGE IMPROVEMENTS	35
SPECIAL PROVISIONS FOR STORM SEWERS	35
7-02 CULVERTS	35
7-04 STORM SEWERS	36
7-05 MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS	37
APPENDIX A - TRANSFER OF OWNERSHIP FORMS	
APPENDIX B - STANDARD DETAILS	

CHAPTER 1 - GENERAL

1. ENACTING AUTHORITY

These Development Standards are enacted by the City of Omak to protect and preserve the public health, safety, and general welfare; and in accordance with State law.

2. PURPOSE

The purpose of these Development Standards is to provide consistent development requirements and standards for the design and construction of public improvements by private developers.

3. STATE ENVIRONMENT POLICY ACT (SEPA)

These Standards will not affect any considerations involving issues under the State Environmental Policy Act (SEPA). The City's responsible official will continue to make all necessary SEPA decisions when individual proposals are submitted.

4. CONFLICTING PROVISIONS

The standards, procedures, and requirements of these Standards are the minimum necessary to promote the health, safety, and welfare of the residents of the City of Omak. The City may adopt more rigorous or different standards, procedures, and requirements whenever necessary. If the provisions of these Standards conflict with one another, or if a provision of these Standards conflicts with the provision of another Ordinance of the City, the most restrictive provision or the provision imposing the highest standard shall prevail.

5. SEVERANCE

If any provision of these Standards or its application to any person or circumstance is for any reason held to be invalid, the remainder of these Standards or the application of the provisions is not affected.

6. PROCESS

Design Phase

Any person, firm, or corporation (the "Developer") which plans to construct a public works improvement shall apply to the Director of Public Works. The request by the Developer shall include a map showing the area to be served; the number and type of units, or the type and size of facility should be indicated.

Upon receipt of the design requirements from the Director of Public Works, the Developer shall cause plans and specifications for the public works improvements to be prepared in accordance with these Construction Standards and the City of Omak Municipal Code. The Developer or his consulting engineer shall submit two

(2) paper sets of plans and specifications for review by the City or the City's engineer.

The City shall review the initial submittal and indicate corrections or additions or request additional information and return one "red lined" set to the Developer. The Developer shall make the required corrections and resubmit one (1) paper set of revised plans and specifications to the Director of Public Works.

When it has been determined that the plans and specifications indicate compliance with City of Omak standards, the Developer will submit the original plan tracings and specifications for approval and the City of Omak will stamp the tracings and specifications with an approval stamp. Such approved plans and specifications shall not be changed, modified, or altered without authorization from the Public Works Director. The City of Omak will make copies of the approved plans and specifications for use by City Inspectors and City Departments as required.

Upon receipt by the Director of Public Works of the plan review fee, as discussed in Section 8, the approved original plans and specifications will be returned to the Developer.

Construction Phase

All construction shall be inspected by the City of Omak or its authorized agent. The Contractor shall give ten (10) days minimum prior notice to the Public Works Director of the start of any construction activities.

Before the Developer's Contractor commences any work, he shall be required to attend a preconstruction conference with the Department of Public Works, the City's Engineer, and utility companies as determined by the City of Omak. The purpose of the meeting is to discuss the scheduling, method of construction, responsibilities, concerns of other utilities, and other pertinent project conditions. The Contractor will submit his insurance and construction schedule at or prior to this meeting.

After cleanup by the Contractor and final inspection by the City, the City will calculate the inspection fees and submit them to the Developer. The Developer will pay the inspection fee, as discussed in Section 8, to the Public Works Department.

7. ENGINEERING DESIGN PLAN REQUIREMENTS

All plans, specifications, engineering calculations, diagrams, and other relevant data shall be designed and prepared by a Civil Engineer licensed by the State of Washington, in accordance with Chapter 2 - General Plan Requirements.

8. PLAN REVIEW AND INSPECTION FEE

Plan review and inspection fees are hereby established to defray the administrative expense of plan review and inspection costs incurred by the City of Omak. The total plan review and inspection fee shall be paid by the Developer to the City of Omak prior to the

issuance of a Certificate of Occupancy or to the signing and recording of a final plat or short plat.

The plan review fee and the inspection fee shall be the total actual costs incurred by the City of Omak, its agents, employees, and elected or appointed officials, for review and approval of the plans and specifications and for inspection of construction of the public improvements. The fees shall include, but not be limited to, initial plan review, subsequent meetings with the Developer, explanations to the Developer's engineering consultant, re-reviews of revised plans, inspection construction, re-inspections, and a final inspection prior to the expiration of the maintenance period.

The plan review fee shall be tabulated and sent to the Developer and paid by the Developer in full prior to the City releasing the approved original plans and specifications prior to construction.

The construction inspection fee shall be tabulated and sent to the Developer and paid by the Developer in full prior to the City issuing a Certificate of Occupancy or signing the final short plat or plat for recording.

9. RECORD DRAWINGS

The Developer shall maintain a neatly marked, full-sized set of record drawings showing the final location and layout of all new construction of the public facilities. Prior to final acceptance by the City of Omak, one set of reproducible mylar Record Drawings and two sets of prints prepared by the Developer's Engineer and clearly marked "RECORD DRAWINGS" shall be delivered to the Director of Public Works for review and acceptance.

10. TRANSFER OF OWNERSHIP

The Developer shall complete a Transfer of Ownership of Utility System Form upon completion of the construction of the public works improvements. This form may be found in Appendix A.

11. EASEMENTS

Public utility easements shall be established for the location of new and future public improvements serving new land divisions and land developments. Easements shall also be granted across the front of new lots and existing lots to provide future utility access as required.

All easements required shall be prepared by the Developer on the proper form and format for recording at the Okanogan County Auditor's Office. The easement legal description shall be prepared by a land surveyor licensed in the State of Washington. The executed and notarized easement document shall be submitted to the Director of Public Works for recording.

Eight (8) foot wide utility easements shall be dedicated along the front of each lot in subdivisions and short subdivisions. Easements for new and/or future utility lines shall be a minimum of fifteen (15) feet wide, provided the width of the easements for buried utilities will be at least twice the depth of the planned excavation.

Utility easements shall be continuous and aligned from block to block within a subdivision and with easements in adjoining subdivisions to facilitate the extension and future extension of public utilities.

CHAPTER 2 - GENERAL PLAN REQUIREMENTS

All plans, specifications, engineering calculations, diagrams, and other relevant data shall be designed and prepared by a Civil Engineer licensed by the State of Washington.

GENERAL PLAN FORMAT

1. Plan sheets and profile sheets or combined plan and profile sheets and detail sheets shall be on a sheet size of 24" x 36".
2. Each sheet shall contain the following project information:
 - a. Project title and City project number, work order number, or LID number, if appropriate.
 - b. Name, address, and phone number of the Owner/Developer.
 - c. Name, address, and phone number and stamp of the Civil Engineer preparing the plans.
 - d. Quarter section, Section - Township - Range
 - e. Sheet title.
 - f. Page (of page) numbering.
 - g. Revision block.
3. All plan sheets must have a NORTH arrow preferably pointing to the top of the sheet or to the left, and must indicate the drawing scale. All engineering plans must be drawn to an appropriate engineer's scale. For profiles, the vertical scale shall be 1"=2', 1"=5' or 1"=10'. The horizontal scale shall be the same for both plan and profile and normally be 1"-20'. Plan and profile stationing shall generally read left to right.
4. The Vertical Datum for all plan submittals must be based on the CITY OF OMAK DATUM. The benchmark used shall be referenced on the plans. An assumed datum will not be accepted.
5. Existing features and topography within the project construction limits must be shown on the plans. This shall include existing road width and surfacing, utility poles, existing underground utilities and surface appurtenances, significant trees, landscaping, and other elements that may affect design/construction.
6. Plan sheets shall indicate all adjacent property lines, right of way lines, and easements.
7. Plan sheets shall show all horizontal survey control as required to properly locate and tie the improvements in horizontal location.
8. Vicinity map showing the project site location.

If the engineering plans include more than three (3) sheets, a cover/title sheet may be required. This sheet shall include an overall site plan with contours, a vicinity map, table of contents, and applicable project information.

SANITARY SEWER SYSTEM PLAN REQUIREMENTS

1. Show all existing and proposed sanitary sewer system features including, but not limited to, the following:
 - a. Sewer mains, gravity and force mains
 - b. Side service, proposed locations
 - c. Manholes
 - d. Clean outs
 - e. Pump Stations.
2. Indicate all easements required for the sanitary sewer main extensions and laterals.
3. Provide a profile for each sanitary sewer main extension. Clearly indicate the vertical and horizontal scale. Show the profile on the same sheet with, and aligned underneath, the plan view as practical.
4. Show the sanitary sewer system and water system on the same plan and profile for verification of minimum separation requirements. The design information for each may be on individual drawings for that system.
5. Slope, length, size, and pipe type shall be indicated for all mains and side sewers. Pipe length shall be measured from centerline of manholes.
6. Each manhole shall be uniquely numbered and shall be stationed off of a referenced centerline. Indicate rim and invert elevations in and out at all manholes. Indicate the length of each side sewer stub, the centerline stationing for each side sewer, and the size.
7. The plan and profile must show the location of all existing and proposed water, irrigation, storm drain, power, telephone, cable TV, and other utility crossings.
8. Generally show all vertical data in the profile view and all horizontal data in the plan view. It is not desirable to repeat the vertical data in the plan view unless it does not show in a profile.
9. Provide an overall site plan of development with contours, to show that all lots/parcels will be served by the proposed sewer system at design depth for all new development.

WATER SYSTEM PLAN REQUIREMENTS

1. Show all existing and proposed water system features if known, including but not limited to:
 - a. Water mains
 - b. Water valves
 - c. Water meters
 - d. Fire hydrants
 - e. Blow offs
 - f. Air and vacuum release valve assemblies

- g. Pressure reducing valves
 - h. Fire sprinkler system lines
 - l. Double check valves
 - j. Post indicator valves
 - k. Thrust blocking
- 2. Identify all joint connections; provide detail of all non-standard joints.
 - 3. Station or dimension the location of all fire hydrants, tees, crosses, services relative to centerlines or property lines.
 - 4. Indicate all easements required for the water main extensions and future extensions.
 - 5. Show the length, size, and pipe type for all main extensions, fire sprinkler system services, and domestic services where applicable.
 - 6. Show the water system and the sanitary sewer system on the same plan and profile view for verification of minimum separation requirements. The design information for each system may be on individual drawings for that system.
 - 7. A profile view shall be shown for all City water main extensions, aligned if practical with the plan view. Clearly indicate the horizontal and vertical scales.
 - 8. Show the minimum cover and minimum separation on each sheet.
 - 9. In the profile view, show all utilities crossing the proposed water main.

STORM DRAIN SYSTEM PLAN REQUIREMENTS

- 1. Show all existing features if known and all proposed storm drain system features including but not limited to:
 - a. Storm drain mains
 - b. Catch basins
 - c. Inlets
 - d. Drywells
 - e. Retention systems
 - f. Biofiltration swales
 - g. Culverts
 - h. Streams
 - l. Ditches
 - j. Natural drainage swales
 - k. Headwalls
 - l. Oil/water separator assembly
- 2. Show slope, length, size, and pipe material for all storm drain mains and lines.

3. All catch basins and inlets shall be uniquely numbered and shall be clearly labeled. Stationing and offsets shall be indicated from referenced centerline. Show all proposed storm drain features within the right of way in a profile.
4. Indicate all grate, rim, and invert elevations in the profile view.
5. Show all horizontal measurements and control in the plan view.
6. Indicate all easements required for the storm drainage system.
7. The plan shall clearly indicate the location of the storm drainage items stationed from a referenced centerline.
8. Provide storm water runoff and drainage calculations as described in Chapter 8.

STREET PLAN REQUIREMENTS

1. Show all existing and proposed roadway improvements including but not limited to:
 - a. Pavement
 - b. Concrete curb and gutter
 - c. Edge of pavement
 - d. Sidewalk
 - e. Utilities (manholes, power poles, signs, valves, etc.)
 - f. Handicap ramps
 - g. Barricades
 - h. Driveways
 - i. Rockery or retaining walls
 - j. Mailboxes
 - k. Monuments
 - l. Streetlights
 - m. Compliance with ADA requirements.
2. Show all right of way lines, centerlines, and roadway widths for all rights of way.
3. Clearly differentiate between areas of existing pavement, areas of new pavement, and areas to be overlaid.
4. Provide a cross section or typical section of all rights of way indicating right of way width, centerline, pavement width, sidewalk, curb and gutter, pavement, and base thickness of new and existing pavement.
5. Provide a profile of all new public roadways or extensions of existing roadways. Indicate all vertical curve data, percent of grade, centerline stationing, finish grade elevations, and existing ground line. The profile of the existing centerline ground should extend a minimum of 100 feet before the beginning and at the end of the proposed improvements to show the gradient blend.

6. Align the profile view with the plan view, if practical. Clearly indicate the horizontal and the vertical scale.
7. Clearly label all profiles with respective street names and plan sheet reference numbers if drawn on separate sheets.

CHAPTER 3 - STANDARD SPECIFICATIONS

FORWARD

The City of Omak has adopted the Standard Specifications for Road, Bridge, and Municipal Construction prepared by the Washington State Department of Transportation, and the Washington State Chapter of the American Public Works Association as the standard specifications governing all design and construction of public improvements by private developers.

All references hereinafter made to the "Standard Specifications" shall refer to the latest edition of the Standard Specifications described above. Except as may be amended, modified, or supplemented hereinafter, each section of the Standard Specifications shall be considered as much a part of these requirements as if they were actually set forth herein.

The Standard Specifications, Special Provisions, and City Standard Details contained in these **City Construction Standards** shall apply in their entirety to all City of Omak public works projects. These Standards have been prepared to form a compiled document intended to assist and inform developers, consultants, and contractors of the construction requirements to be used on public works improvements.

The Standard Specifications, Special Provisions, and City Standard Details shall periodically be revised and updated. It shall be the responsibility of each user of this information to verify that he has the latest revisions prior to submitting any work covered by these specifications and details.

Developers and contractors are encouraged to contact the City of Omak Public Works Department regarding these standards.

City of Omak
Public Works Department
2 North Ash
P.O. Box 72
Omak, WA 98841

Telephone: (509) 826-1170
Fax: (509) 826-6531

CHAPTER 4 - GENERAL REQUIREMENTS FOR ALL PROJECTS

GENERAL

All work shall be done in accordance with the Plans, the latest edition of Standard Specifications for Road, Bridge, and Municipal Construction prepared by the Washington State Department of Transportation, and the Washington State Chapter of the American Public Works Association, referenced codes and organizations, and these Special Provisions.

All references hereinafter made to Standard Specifications shall refer to the latest edition of the Standard Specifications for Road, Bridge, and Municipal Construction prepared by the Washington State Department of Transportation and the Washington State Chapter of the American Public Works Association.

NOTE: THE "APWA AMENDMENTS TO DIVISION ONE OF THE WSDOT/APWA STANDARD SPECIFICATIONS" SHALL REPLACE DIVISION ONE OF THE "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION."

1-01 DEFINITIONS AND TERMS

1-01.3 Definitions

The terms defined in Section 1-01.3 of the APWA Amendments to Division One of the Standard Specifications shall be further described by the following:

Consultant:	Means a civil engineer licensed in the State of Washington, employed by the Developer to prepare plans and specifications, perform construction staking, or similar services.
Contract Documents:	Means the plans and specifications prepared by the Developer or his consultant for the public works improvements contemplated.
City:	Means the City of Omak, a municipal corporation.
Contractor:	Means the person or firm employed by the Developer to do the construction of the public works improvements.
Developer:	Means the person or firm engaging the services of and employing consultants, and/or contractors and paying for the design and construction of the public works improvements.
Drawings:	Means the plans and specifications prepared by the Developer or his consultant for the public works contemplated. The terms "Contract Documents," "Plans," "Engineer's Plans," "Engineer's Drawings," "Working Drawings," and "Project Manual" are synonymous.

Engineer:	Means the Director of Public Works of the City of Omak or his duly authorized agent or representative.
Owner:	Means the City of Omak acting through its legally established officials, boards, commissions, etc., as represented by its authorized officers, employees, or agents.
Standard Details:	Means specific drawings adopted by the City of Omak and revised from time to time which show frequently recurring components of work which have been standardized for use.
Standard Specifications:	The latest edition of the Standard Specifications for Road, Bridge, and Municipal Construction published by the Washington State Department of Transportation and the Washington State Chapter of the American Public Works Association are, by this reference, made part of these Contract documents. Except as may be amended, modified, or supplemented hereinafter, each section of the Standard Specifications shall be considered as much a part of these Contract Documents as if they were actually set forth herein. All references hereinafter made to Standard Specifications shall refer to the latest edition of the Standard Specifications for Road, Bridge, and Municipal Construction prepared by the Washington State Department of Transportation and the Washington State Chapter of the American Public Works Association.
Special Provisions:	<p>The Special Provisions supersede any conflicting provisions of the Standard Specifications for Road, Bridge, and Municipal Construction and the appended amendments to the Standard Specifications and are made a part of this Contract.</p> <p>Should any conflicts be encountered, the following inter-relationships shall govern: The Special Provisions shall supersede the APWA Amendments, which shall supersede the WSDOT Amendments, which shall supersede the Standard Specifications.</p>

1-03 AWARD AND EXECUTION OF CONTRACT

1-03.4 Contract Bond (APWA only)

The Contractor shall guarantee the material provided and workmanship performed under the Contract for a period of two years from and after the final acceptance thereof by the Developer and the City of Omak.

The Developer shall be responsible for the maintenance of all public improvements for a period of twenty four (24) months following final inspection in accordance with Chapter 17.22.080 of the Omak Municipal Code.

1-04 SCOPE OF THE WORK

1-04.4 Changes

The provisions of Section 1-04.4 of the APWA Amendments to Division One shall be modified as follows:

No changes in the work covered by the approved Contract Documents shall be made without having prior written approval of the Developer and the City.

1-04.11 Final Cleanup

The Contractor shall perform final cleanup as provided in this section to the Developer's and Owner's satisfaction. The date of completion will not be established until this is done. The material sites and all ground the Contractor occupied to do the work shall be left neat and presentable. The Contractor shall:

1. Remove all rubbish, surplus materials, discarded materials, falsework, temporary structures, equipment, and debris, and
2. Deposit in embankments, or remove from the project, all unneeded, oversized rock left from grading, surfacing, or paving.

Partial clean-up shall be done by the Contractor when he feels it is necessary or when, in the opinion of the Owner or Developer, partial clean-up should be done prior to either major clean-up or final inspection.

1-04.12 Waste Site (New Section)

The following new section shall be added to the Standard Specifications:

Where there is additional waste excavation in excess of that needed for the project and in excess of that needed for compliance with requests of the Owner, the Contractor shall secure and operate his own waste site at his own expense. The Contractor shall also be required to secure and operate his own waste site at his own expense for the disposal of all unsuitable material, asphalt, concrete, debris, waste material, and any other objectionable material which is directed to waste by the Owner.

The Contractor shall comply with the State of Washington's regulations regarding disposal of waste material as outlined in WAC 173-304, Subchapter 461.

1-05 CONTROL OF WORK

1-05.1 Authority of the Engineer

Add the following:

Unless otherwise expressly provided in the Contract Drawings, Specifications and Addenda, the means and methods of construction shall be such as the Contractor may choose; subject, however, to the Consultant and the Engineer's right to reject means and methods proposed by the Contractor which (1) will constitute or create a hazard to the work, or to persons or property; or (2) will not produce finished work in accordance with the terms of the Contract. Approval of the Contractor's means and methods of construction or his failure to exercise his right to reject such means or methods shall not relieve the Contractor of the obligation to accomplish the result intended by the Contract; nor shall the exercise of such right to reject create a cause for action for damages.

1-05.3(1) Project Record Drawings (New Section)

The following new section shall be added to the Standard Specifications:

The Contractor shall maintain a neatly marked, full-size set of record drawings showing the final location and layout of all new construction. Drawings shall be kept current weekly, with all field instruction, change orders, and construction adjustment.

Drawings shall be subject to the inspection of the Developer and the City at all times. Prior to acceptance of the work, the Contractor shall deliver to the Developer record drawings in accordance with paragraph 9 of Chapter 1 - General.

1-05.5 Construction Staking (New Section)

The following new section shall be added to the Standard Specifications:

The Consultant retained by the developer will establish the line and grade of proposed construction by offset stakes. The Consultant will establish the centerline for minor structures and establish bench marks at convenient locations for use by the Contractor.

The Contractor shall establish grades from the Consultant's stakes at suitable intervals in accordance with good practice. Where new construction adjoins existing construction, the Contractor shall make such adjustments in grade as are necessary.

1-05.10 Guarantees (APWA only)

The following new section shall be added to the APWA Supplement:

If, within two years after the date of Final Acceptance of the Work, defective and unauthorized work is discovered, the Contractor shall promptly, upon written request, return and in accordance with the instructions either correct such work, or if such work has been rejected, remove it from the Project Site and replace it with non-defective and authorized work, all without cost to the Owner or Developer. If the Contractor does not promptly comply with the written request to correct defective and unauthorized work, or if an emergency exists, the Owner/Developer reserves the right to have defective and unauthorized work corrected or rejected, removed, and replaced pursuant to the provisions of Section 1-05.8 of these Specifications.

The Contractor agrees the above two-year limitation shall not exclude nor diminish any rights under any law to obtain damages and recover costs resulting from defective and unauthorized work discovered after two years.

1-05.16 Water and Power (APWA only)

Water shall be furnished and applied in accordance with the provisions of Sections 1-05.16 of the APWA Amendments to Division One and 2-07 of the Standard Specifications modified as follows:

Water Supply: Water for use on the projects may be obtained/purchased from the City of Omak and the Contractor shall arrange for and convey the water from the nearest convenient hydrant or other source at his own expense. The hydrants shall be used in accordance with the City of Omak Water Department regulations.

The City reserves the right to deny the use of fire hydrants where deemed inappropriate by the City.

1-05.18 Testing (New Section)

The following new section shall be added to the Standard Specifications:

The Contractor shall be responsible for scheduling and paying for all material testing required by these Contract Documents. All testing services shall be performed by an independent, certified testing firm and/or laboratory meeting the approval of the Engineer. The Contractor shall submit information relating to the qualifications of the proposed testing firm to the Engineer for review and approval prior to the preconstruction conference. The testing frequencies listed below may be increased to assure compliance with the Specifications.

Trench Backfill

Copies of moisture-density curves for each type of material encountered and copies of all test results shall be provided to the Engineer as construction progresses.

Compaction tests shall be taken at a frequency and at depths sufficient to document that the required density has been achieved. At a minimum, one (1) compaction test shall be taken for each 100 linear feet of mainline pipeline trench and one (1) test for each street crossing. At alternating 100-foot locations along the main trench line, tests shall be taken at 1-foot, 2-foot, and 3-foot depths below finish grade.

The Engineer may request additional tests be performed at the Contractor's expense, if test results do not meet the required trench backfill densities.

All trenches shall be backfilled and compacted to at least 95 percent of maximum density as determined by ASTM D 698 (Standard Proctor).

Roadway Embankment

Copies of the moisture density curves for each type of material encountered and copies of all test results shall be provided to the Engineer as construction progresses.

Compaction tests shall be taken at a frequency sufficient to document that the required density has been achieved. At a minimum, one (1) compaction test shall be taken for every 5,000 square feet of surface area for each lift of roadway embankment.

The Engineer may request additional tests be performed at the Contractor's expense, if test results do not meet the required subgrade densities.

Roadway embankment compaction shall be as specified in SECTION 2-03.3(14).

Roadway Subgrade

Copies of the moisture density curves for each type of material encountered and copies of all test results shall be provided to the Engineer as construction progresses.

Compaction tests shall be taken at a frequency sufficient to document that the required density has been achieved. At a minimum, one (1) compaction test shall be taken for every 5,000 square feet of subgrade.

The Engineer may request additional tests be performed at the Contractor's expense, if test results do not meet the required subgrade densities. Subgrade compaction shall be as specified for Roadway Embankment.

Ballast and Crushed Surfacing

Copies of the moisture density curves for each type of material incorporated into the project and copies of all test results shall be provided to the Engineer as construction progresses.

Compaction tests shall be taken at a frequency sufficient to document that the required density has been achieved. At a minimum, one (1) compaction test shall be taken for every 5,000 square feet of surface area for each lift of ballast or crushed surfacing.

The Engineer may request additional tests be performed at the Contractor's expense, if test results do not meet the required subgrade densities.

Compaction of ballast and crushed surfacing shall be as specified in SECTION 4-04.3(5).

Asphalt Paving

Copies of the maximum Rice density test for each class of asphalt concrete pavement and copies of all test results shall be provided to the Engineer as construction progresses.

Density tests shall be taken at a frequency sufficient to document that the required density has been achieved. At a minimum, one (1) compaction test shall be taken for every 5,000 square feet of surface area for each lift of asphalt concrete pavement.

The Engineer may request additional tests be performed at the Contractor's expense, if test results do not meet the required subgrade densities.

Compaction of asphalt concrete pavement shall be as specified in SECTION 5-04.3(10)B.

Cement Concrete Curb, Gutter, and Sidewalk

A copy of the cement concrete design mix or certification from the concrete supplier that the concrete provided has been prepared to the strength requirement as specified elsewhere in these specifications.

Concrete strength cylinders shall be taken and tested for each truck load of concrete delivered to the job. All testing procedures shall be conducted in accordance with applicable Sections of Division 6-02 of the Standard Specifications.

Copies of all test results shall be provided to the Engineer as construction progresses.

1-07 LEGAL RELATION AND RESPONSIBILITIES TO THE PUBLIC

1-07.1 Laws to be Observed

Amend the second sentence of the first paragraph to read:

The Contractor shall indemnify and save harmless the State (including the Commission, the Secretary, and any agents, officers, and employees) and the Contracting Agency (including any agents, officers, employees, and representatives) against any claims that may arise because the Contractor (or any employee of the Contractor or subcontractor or material-man) violated a legal requirement.

1-07.5 Fish and Wildlife and Ecology Regulations

In addition to the requirements of Section 1-07.5 of the APWA Amendments to Division One, the Contractor shall comply with the environmental provisions of local air pollution authorities, Okanogan County Clean Air Authority.

A method of dust control during construction shall be submitted to, and approved by, the Okanogan County Clean Air Authority. A written copy of their approval shall be submitted to the Public Works Department prior to commencement of construction. The Developer shall designate a project coordinator for contact during construction regarding alleged air quality violations and other complaints.

1-07.17 Utilities and Similar Facilities

Section 1-07.17 of the APWA Amendments to Division One is supplemented by the following:

Locations and dimensions shown on the plans for existing facilities are in accordance with available information obtained without uncovering, measuring, or other verification. It shall be the Contractor's responsibility to investigate the presence and location of all utilities prior to submitting a bid.

The Contractor shall call for field location not less than two nor more than ten business days before the scheduled date for commencement of excavation which may affect underground utility facilities, unless otherwise agreed upon by the parties involved. A business day is defined as any day other than Saturday, Sunday, or a legal local, state, or federal holiday. The phone number for Omak is 1-800-424-5555. If no one-number locator service is available, notice shall be provided individually by the Contractor to those owners known to or suspected of having underground facilities within the area of proposed excavation.

The Contractor is alerted to the existence of Chapter 19.122 RCW, a law relating to underground utilities. Any cost to the Contractor incurred as a result of this law shall be at the Contractor's expense.

No excavation shall begin until all known facilities, in the vicinity of the excavation area, have been located and marked.

1-07.18 Public Liability and Property Damage Insurance

The Contractor shall obtain and maintain in full force and effect during the duration of this Contract public liability and property damage insurance in accordance with Section 1-07.18 of the APWA Amendments to Division One and as modified herein.

Prior to start of construction, the Contractor shall furnish the Owner a Certificate of Insurance as evidence of compliance with these requirements. This certificate shall name the Owner and the Engineer as "additional insureds" and shall stipulate that the policies named thereon cannot be canceled unless at least twenty (20) days written notice has been given to the Owner.

The following is an example of deletions and language which is required on the standard "ACORD Certificate of Insurance" form:

~~THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND, OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.~~

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

The City of Omak, their agents, employees, and elected or appointed officials, are hereby named as additional insured with respect to the ((name of project)) Project.

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR ~~TO MAIL 20 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS, OR REPRESENTATIVES.~~

1-07.23 Public Convenience and Safety

The provisions of the latest edition of the Manual on Uniform Traffic Control Devices for Streets and Highways and amendments thereto published by the U.S. Department of Transportation, Federal Highway Administration, by this reference are made a part of these Contract Documents.

The provisions of Section 1-07.23 of the Standard Specifications are modified as follows:

All signs, barricades, traffic control devices, and labor for traffic control required by construction activities for the control of traffic shall be supplied, placed, and maintained by the Contractor. This shall apply to detours and traffic control both within and outside the limits of the project. All costs for furnishing, placing, and maintaining the referenced traffic control devices and labor for traffic control shall be considered incidental to the bid items of the Contract.

All work shall be done under a program which shall have the approval of the Consultant and the City of Omak and create a minimum of interruption or inconvenience to pedestrian and vehicular traffic. All arrangements to care for such traffic will be the Contractor's responsibility and shall be made at his expense. All work shall be carried out with due regard for public safety. Open trenches shall be provided with proper barricades and at night they shall be distinctly indicated by adequately placed lights. At entrances to business properties and other private roads, driveways, bridges, or other such means as to provide access shall be provided by the Contractor. The Contractor shall maintain vehicular and pedestrian access to businesses at all times that businesses are open for business.

Upon failure of the Contractor to provide immediately and maintain adequate suitable barricades, lights and detour signs, when ordered to do so, the Owner shall be at liberty, without further notice to the Contractor or the Surety, to provide the same and request payment for providing proper barricades, lights, and signs, and the Owner assumes no liability connected therewith.

Any traffic restriction must have prior approval of the City of Omak. Appropriate traffic control measures and signing are required during such temporary road closures.

It shall be the responsibility of the Contractor to secure the approval of and notify the Developer, City of Omak, and the Police and Fire Departments at least 24 hours prior to

closing any street, in addition to correlating the proposed closures with the City of Omak to ensure proper detouring of traffic. When the street is re-opened, it shall again be the responsibility of the Contractor to notify the above named departments and persons.

1-07.29 Safety Standards (New Section)

The following new section shall be added to the Standard Specifications:

All work shall be performed in accordance with all applicable local, state, and federal health and safety codes, standards, regulations, and/or accepted industry standards. It shall be the responsibility of the Contractor to ensure that his work force and the public are adequately protected against any hazards.

The Owner or Developer shall have the authority at all times to issue a stop work order at no penalty if, in their opinion, working conditions present an undue hazard to the public, property, or the work force. Such authority shall not, however, relieve the Contractor of responsibility for the maintenance of safe working conditions or assess any responsibility to the Owner or Developer for the identification of any or all unsafe conditions.

1-07.30 Notifying Property Owners (New Section)

The following new section shall be added to the Standard Specifications:

When construction activities will affect ingress and egress to a property along the project alignment, the Contractor shall be responsible for notifying the occupant/occupants of the property 24 hours prior to the construction activity beginning. If personal contact with the occupant is not possible, the Contractor shall leave written notification.

1-08 PROSECUTION AND PROGRESS

1-08.3 Progress Schedule

The provisions of SECTION 1-08.3 of the Standard Specifications, Division One shall be supplemented with the following:

Prior to the commencement of any work, a preconstruction conference shall be held. The Contractor or Developer shall contact the City of Omak and set a date and time for the meeting. It shall be the responsibility of the Contractor and Engineer to notify and invite all parties having an interest in the project to the meeting.

At this conference all points of the Plans and Specifications will be open to discussion including scope, order and coordination of work, equipment lead time required, means and methods of construction, inspection and reporting procedures, etc. The Contractor should satisfy himself that all provisions and intentions of the work are fully understood.

The Contractor shall prepare and submit to the Owner and Engineer at the Preconstruction Conference a Construction Progress and Completion Schedule using a bar graph format.

Items in the Schedule shall be arranged in the order and sequence in which they will be performed. The schedule shall be drawn to a time scale, shown along the base of the diagram, using an appropriate measurement per day with weekends and holidays indicated. The Construction Progress Schedule shall be continuously updated and, if necessary, redrawn upon the first working day of each month or upon issuance of any Change Order which substantially affects the scheduling. Copies (2 prints or 1 reproducible) of newly updated Schedules shall be forwarded to the Owner and Engineer, as directed, immediately upon preparation.

1-08.3(1) Means and Methods (New Section)

The following new section shall be added to the Standard Specifications:

Unless otherwise expressly provided in the Contract Drawings, Specifications and Addenda, the means and methods of construction shall be such as the Contractor may choose; subject, however, to the Consultant's or Engineer's right to reject means and methods proposed by the Contractor which (1) will constitute or create a hazard to the work, or to persons or property; or (2) will not produce finished work in accordance with the terms of the Contract. The Consultant's or Engineer's approval of the Contractor's means and methods of construction or his failure to exercise his right to reject such means or methods shall not relieve the Contractor of the obligation to accomplish the result intended by the Contract; nor shall the exercise of such right to reject create a cause for action for damages.

1-08.3(2) Contractor Responsibility (New Section)

The following new section shall be added to the Standard Specifications:

The Contractor is responsible for constructing and completing all work included in the Contract Documents and any other work directed by the Developer in a professional manner with first-class workmanship.

The Contractor shall keep the City of Omak, the Developer, and the Consultant informed in writing of the address to which official correspondence is to be directed, the address and phone number of the person in charge of his field personnel, and the address and telephone number of the Contractor's representative who will be responsible and available outside of normal working hours for emergency repairs and the maintenance of traffic control and safety devices.

CHAPTER 5 - WATER SYSTEM IMPROVEMENTS

GENERAL REQUIREMENTS FOR WATER MAINS

All extensions to the City of Omak's domestic water system shall conform to the design standards of the City of Omak and the State Department of Health as follows:

All new lots and developments shall be served by a public water supply line maintained by the City of Omak and located adjacent to the lot or development site. The water supply line shall be capable of providing sufficient flow and pressure to satisfy the fire flow and domestic service requirements of the proposed lots and development requirements.

Water lines shall be extended by the Owner or Developer to the point where the adjoining property owner's responsibility for further extension begins. This typically requires an extension across the entire frontage of the property to the property line of the adjoining owner. In some cases, it will require dedication of an easement and a line extension across the property or extension across two or more sides of the developing property. Extensions will be consistent with and implement the City's adopted Water Comprehensive Plan.

All new public domestic water mains shall be a minimum diameter of 8-inch. Fire hydrant runs less than 50 feet from the water main to the fire hydrant shall be a minimum of 6-inch.

Larger public water mains may be required depending upon fire flow requirements as determined by the City Fire Chief and City Building Code Department.

Water main oversizing, above that required for the particular development being submitted, may be required by the City of Omak to be installed for future extension. The cost of the materials only for the oversizing shall be reimbursed to the Developer by the City. The Developer shall submit actual material invoices showing the actual cost of the materials furnished and the cost of the same materials of the size required for the development.

The Developer shall be responsible for pressure reducing valve stations in areas of excessive pressure.

Eight-inch dead-end water main over 1,500 feet in length will only be allowed where future looping via public right of way can be assured. Dead-end mains exceeding 1,500 feet in length will be at least 10-inch diameter pipe where looping is not practical or is unlikely to occur in the future.

Maximum valve spacing in public water mains will be 1,200 linear feet. Valves will be furnished and installed on all legs of new water main intersections.

All new water meters shall be a minimum of 3/4-inch and shall be furnished and installed by the City of Omak. If more than 10 meters are required, they shall be furnished and installed by the Developer to City of Omak standards.

Only one meter shall be served from each main tap.

Two-inch air and vacuum release valves shall be furnished and installed at high points in the system.

Fire hydrants shall be spaced no greater than every 300 feet. Additional hydrants may be required to protect structures as determined by the City Fire Chief. Additional fire hydrants required on a site may require a looped, on-site fire hydrant main. Easements will be provided for all on-site, public, looped water mains.

All irrigation services shall be installed with a State approved, double check valve assembly. Water and sewer mains shall be separated in accordance with Section C1-9.1 of the latest edition of the Criteria for Sewage Works Design by the Washington State Department of Ecology.

The design of water mains and appurtenances is subject to review and approval by the City of Omak Director of Public Works. The Director of Public Works may, at his discretion, adjust these Standards as necessary to facilitate installation of water lines and appurtenances for the health, safety, and protection of the general public.

All double detector check valve assemblies shall conform to City of Omak standards. Initial and annual testing will be required.

SPECIAL PROVISIONS FOR WATER MAINS

The following sections of the Standard Specifications have been amended or supplemented as described below.

7-09 PIPE AND FITTINGS FOR WATER MAINS

7-09.2 Materials

Section 7-09.2 of the Standard Specifications shall be revised as follows:

Pipe shall be either:

Ductile Iron, conforming to the requirements of Section 9-30.1(1) of the Standard Specifications, except that it shall be Standard Thickness Class 52. Joints shall be rubber gasket, push-on type (Tyton Joint). Fittings shall be mechanical joint or flanged, as shown on the Plans, and shall conform to Section 9-30.2(1) of the Standard Specifications.

7-10 TRENCH EXCAVATION, BEDDING, AND BACKFILL FOR WATER MAINS

7-10.1(1)C Bedding

Add the following:

Imported pipe bedding for rigid pipe shall be crushed gravel, placed and compacted in layers per the Standard Specifications. Use as directed by the Engineer.

Imported pipe bedding for flexible pipe shall be crushed gravel, placed and compacted per the Standard Specifications. Bedding shall be placed under all flexible pipe.

7-10.2 Materials

Delete entire Section and replace with the following:

Pipe Bedding for Ductile Iron pipe shall conform to the requirements of Section 9-03.15, Bedding Materials for Rigid Pipe. Native material may be used for bedding rigid pipe if it meets the requirements of Section 9-03.15.

Imported Select Backfill shall conform to the requirements of Section 9-03.9(3), Crushed Surfacing Top Course.

7-10.3(10) Backfilling Trenches

Add the following:

Street crossing trenches shall be backfilled for the full depth of the trench with imported Select Backfill. The Director of Public Works may require the use of Controlled Density Fill (CDF) for trench backfill in certain circumstances. The requirements for CDF are set forth in Section 8-30 of these Special Provisions.

7-12 VALVES FOR WATER MAINS

7-12.2 Materials

Add the following:

All valves sizes 4-inch through 8-inch shall be epoxy coated gate valves and shall conform to the latest revision of AWWA Resilient Seated Gate Valves Standard C509. Valves shall be Mueller, Dresser, Clow, or approved equal.

All gate valves shall have non-rising stems, open counterclockwise, and shall be provided with a 2-inch square operating nut. Gate valves 4-inch and larger shall have mechanical joint connections.

All valves sizes 10-inch and larger shall be butterfly valves suitable for direct burial and shall be rubber seated and conform to the latest revision of AWWA Standard C504.

Valve operators shall be worm gear type, sealed, gasketed, and lubricated for underground service. All valves shall open counterclockwise and shall be provided with a 2-inch square operating nut.

Valve Boxes shall be two piece adjustable. The top section shall be similar to Rich Model 940-B, or equal, 18-inches high. The bottom section shall be a Rich Model R-36, or equal, 36-inches high. Extension sections shall be Rich Model 044, or equal, 12-inches high.

7-14 FIRE HYDRANTS

7-14.2 Materials

Replace the entire Section with the following:

The City of Omak accepts hydrants of the following manufacturers, providing the hydrants conform to the City's technical specifications for fire hydrants:

Mueller Centurion, Model No. A 423

~~Dresser M&H, Style 929 Reliant~~

All hydrants shall have a Main Valve Opening (MVO) of 5-1/4" and one port with a 4" Omak specification steamer port and two (2) 2-1/2" NST hose connections.

7-14.3(1) Setting Hydrants

Add the following:

The hydrant shall be set to the correct elevation on a concrete block base measuring 12" x 12" x 6" thick, which has been placed on undisturbed earth. Around the base of the hydrant the Contractor shall place 0.25 cubic yards of drain rock ranging in size from 3/4" to 1 1/2" to allow free drainage of the hydrant.

7-14.3(2) Hydrant Connections

Add the following:

Hydrants shall be connected to the main with 6-inch minimum diameter water main. Each hydrant lateral shall include an auxiliary gate valve and valve box.

7-14.3(2)A Hydrant Restraint

Add the following:

The Contractor shall securely shackle the hydrant to the water main as indicated on the Standard Detail.

7-15 SERVICE CONNECTIONS

7-15.1 General

This work shall consist of installing new 3/4" and 1" water services and connecting to the water main. New water service shall be installed in accordance with the detail on the Plans and shall consist of a new service saddle, new corporation stop, new service line, new compression couplings as required, new meter box, new meter setter, and new service meter.

The Contractor shall set the meter box to the finished grade of the area. The Contractor will be required to reset the meter box if it is not at finished grade at the completion of the project. The completed water service shall be tested at system operating pressure by the Contractor and must show no signs of leakage.

7-15.2 Materials

Section 7-15.2 of the Standard Specifications shall be revised as follows:

Service Saddle: Service saddles shall be Romac Industries Style 101N Nylon Saddle with Stainless Steel Strap, or approved equal for 3/4".

Corp Stop: Corporation stops shall be Mueller Co. Mark II Oriseal, or approved equal for 3/4".

Service Pipe: Service pipe for use on this project shall be copper tubing Type K in accordance with Section 9-30.6(3)A of the Standard Specifications.

Curb Stop: Curb stops shall be Mueller Co. Mark II Oriseal, or approved equal for 3/4" services.

Meter: Meters will be furnished by the City of Omak (Sensus "Touch Read").

5/8" x 3/4" Meter Installations: Meter boxes shall be Mueller/McCullough Thermal-Coil meter boxes, and shall be equipped as follows:

Box Style	-	Single meter
Box Diameter	-	15-inch diameter
Box Depth	-	48-inch depth
Meter Inlet Type	-	Locking angle meter stop
Meter Outlet Type	-	Dual check valve
Box Bottom Type	-	Less bottom. No bottom required.
Box Locking Device	-	Side locking
Insulating Pat	-	4-inch thick
Lid	-	15-inch diameter flat lid with side mounted key lock and ready for "touch read" meter register feature
Lid Frame	-	Lid frames (part number 700097) are to be furnished and installed by the Contractor in all installations in asphalt concrete, cement concrete, driveways, and/or concrete pavers.

1" Meter Installations: Meter boxes shall be Mueller/McCullough Thermal-Coil meter boxes, and shall be equipped as follows:

Box Style	-	Single meter
Box Diameter	-	18-inch diameter
Box Depth	-	48-inch depth
Meter Inlet Type	-	Locking angle meter stop
Meter Outlet Type	-	Dual check valve
Box Bottom Type	-	Less bottom. No bottom required.
Box Locking Device	-	Side locking
Insulating Pat	-	4-inch thick
Lid	-	18-inch diameter flat lid with side mounted key lock and ready for "touch read" meter register feature
Lid Frame	-	Lid frames (part number 700098) are to be furnished and installed by the Contractor in all installations in asphalt concrete, cement concrete, driveways, and/or concrete pavers.

7-15.3 Construction Requirements

Section 7-15.3 of the Standard Specifications shall be modified as follows:

Where directed by the Engineer, i.e., street crossing, trenches shall be backfilled for the full depth of the trench with imported pipe bedding/select backfill.

The City will inspect service installation work. The City inspector will inspect the water service pipe after the pipe has been laid in the trench, but prior to backfill. A leak test will be required to be run in the presence of the inspector. Provide 48 hours minimum notice prior to any required inspections.

Water and sewer service lines may not be laid in the same trench except as provided in Section 1008 of the Uniform Plumbing Code (UPC) and with written approval of the City of Omak Building Inspector.

Water services shall be laid with a minimum of 48 inches of cover, or as directed by the Public Works Director.

CHAPTER 6 - SANITARY SEWER SYSTEM IMPROVEMENTS

GENERAL REQUIREMENTS FOR SANITARY SEWER MAINS

All extensions to the sewer system shall conform to the design standards of the City of Omak and the Washington State Department of Ecology as follows:

All new lots and developments shall be served by a public sanitary sewer line adjacent to the lot or development site.

Sewer lines shall be extended by the Owner or Developer to the point where the adjoining property owner's responsibility for further extension begins. This typically requires an extension across the entire frontage of the property to the property line of the adjoining owner. In some cases, it will require dedication of an easement and a line extension across the property or extension across two or more side of the developing property. Extensions will be consistent with and implement the City's adopted Sewer Comprehensive Plan.

Sewer lines shall be located in streets to serve abutting properties. When necessary, sewer lines may be located within public easements. Lines located in streets will be offset from the street centerline and not located within a vehicle wheel path. Sewer lines located in easements shall generally be located in the center of the easement, but may, with the approval of the Director of Public Works, be offset to accommodate the installation of other utilities or to satisfy special circumstances.

The minimum size for public sewer mains is eight (8) inches in diameter. The developer's sewer system must provide capacity for the proposed development, but must also provide capacity for future extensions.

Sewer lines shall be terminated with a manhole. In special circumstances, a flush-end (clean-out) may be installed on the end of a sewer main extension, provided the end is no further than 150 feet from the last manhole and the sewer main line and grade will permit further extension.

Manholes shall be installed at intervals of no greater than 400 feet and at all vertical and horizontal angle points in the sewer main.

Each building containing sanitary sewer facilities shall be served by a separate private side sewer line. Branched side sewers serving multiple buildings and properties shall not be permitted. Side sewers serving multi-unit buildings are permitted.

Side sewers shall be installed in accordance with the Uniform Plumbing Code (UPC) and subject to review and approval by the City of Omak Building Inspector. Water and sewer lines shall not be laid in the same trench, except as provided in Section 1008 of the UPC and with written approval of the City of Omak Building Inspector.

Sewer lines shall be designed for gravity flow operation. Lift stations and force mains shall be limited to those locations and circumstances where they are consistent with the Comprehensive Sewer Plan and are the only viable solution to serve the proposed

development and other properties in the vicinity. Lift stations and force mains shall be designed by a Professional Engineer licensed in the State of Washington.

The design of sewer mains and appurtenances is subject to review and approval by the City of Omak Director of Public Works. The Director of Public Works may, at his discretion, adjust these Standards as necessary to facilitate installation of sewer lines and appurtenances for the health, safety, and protection of the general public.

SPECIAL PROVISIONS FOR SANITARY SEWER MAINS

The following sections of the Standard Specifications have been amended or supplemented as described below.

7-05 MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS

7-05.2 Materials

Add the following:

Manholes shall be gasketed and constructed of 48-inch diameter reinforced precast concrete manholes sections in conformance with the requirements of this Section. The base and first barrel section shall be precast monolithically with preformed channels.

Joints in the manhole sections shall be watertight and shall be a rubber ring compression joint complying with ASTM C443, a flexible, plastic gasket, or approved equal.

Manhole frames and covers shall be cast iron with a combined weight of not less than 400 pounds and have a clear opening of 24 inches. The frames and covers shall be the manufacturer's stock pattern capable of withstanding, with appropriate margin of safety, an H2O loading. Covers shall have a 1-inch hole only, unless otherwise noted, and the top shall be flat with a non-skid pattern. The contact surfaces of the frames and covers shall be machine finished to a common plane or have other adequate provision to prevent rocking.

7-05.3 Construction Requirements

Add the following

The design and construction of all manholes shall provide for a 0.10 foot vertical drop through the manhole

Manhole coupling adaptors may be precast in the manhole to accept PVC pipe, provided diameters match. No field grouting of pipe into manholes will be allowed. Pipe connections at manholes must be gasketed and must be flexible. "A-Lok" gasket system or approved equal may be used as an alternate to the manhole coupling adapter.

7-08 GENERAL PIPE INSTALLATION REQUIREMENTS

7-08.1 General

Add the following:

All construction work shall be inspected by the City of Omak prior to backfilling. At least 48 hours notice shall be given to the City Public Works Department prior to backfilling.

The Contractor shall notify the Utility Notification Center (One Call Center) at least 48 hours prior to start of excavation so that underground utilities may be marked. Telephone number is 1-800-424-5555.

7-08.3(1)C Bedding the Pipe

Add the following:

The imported pipe bedding and select backfill to be utilized for the trench backfill shall be crushed gravel, placed and compacted in layers as designated by the Director of Public Works. Crushed gravel shall conform to Section 9-03.9(3) Crushed Surfacing Top Course.

7-08.3(2)B Pipe Laying - General

Add the following:

All sewer pipe shall be provided with 6-inch wide magnetic marking tape as detailed in Standard Detail S-1.

7-08.3(3) Backfilling

Add the following:

Street crossing trenches shall be backfilled for the full depth of the trench with imported Select Backfill. The Director of Public Works may require the use of Controlled Density Fill (CDF) for trench backfill in certain circumstances. The requirements for CDF are set forth in Section 8-30 of these Special Provisions.

Water settling and/or mechanical compaction shall be required for all trenches. The density of the compacted materials shall be at least 95% of the maximum density as determined by ASTM D 698 Test (Standard Proctor).

7-17 SANITARY SEWERS

7-17.2 Materials

Sanitary Sewer Pipe approved for the City of Omak shall be:

PVC Sewer Pipe (Gravity): Polyvinyl Chloride Pipe with flexible gasketed joints shall conform with the requirements of Section 9-05.12 of the Standard Specifications (ASTM D3034, SDR 35). Pipe joint type for restrained gasket.

PVC fittings for PVC sewer pipe such as tees, wyes, elbows, plugs, caps, etc, shall be flexible gasket joint fittings acceptable for use and connection to PVC sewer pipe.

7-18 SIDE SEWERS

7-18.1 General

Add the following:

Side sewers shall be constructed with a minimum of 30 inches of cover. This provision may be waived by the Director of Public Works under special circumstances; however, under no circumstances shall the side sewer be laid with less than 18 inches of cover.

7-18.2 Materials

Add the following:

Side sewers shall be a minimum of 4-inches in diameter. Larger sizes, if required, will be approved by the Director of Public Works on a case by case basis.

CHAPTER 7 - STREET IMPROVEMENTS

GENERAL REQUIREMENTS FOR STREETS

All new street construction must conform to these design standards of the City of Omak and Chapter 17 of the Omak Municipal Code.

The maximum length of a cul-de-sac street shall be 600 feet measured along the street centerline from the nearest street intersection to the center of the cul-de-sac.

Cement concrete barrier curb shall be installed along all new streets. Rolled curb may be permitted along certain residential streets as determined by the City Public Works Director. If rolled curb is allowed, barrier curb must be installed around all new radii. New sidewalks behind rolled curb shall be a minimum of 6 inches thick.

Sidewalks shall be constructed on both sides of all new streets. If the Developer believes there are special circumstances whereby the construction of sidewalk on one side should be deferred, he may make written request to the City Public Works Director.

A street light shall be installed at each street intersection, at mid block, no more than three hundred (300) feet apart, and at ends of cul-de-sacs. Street lights shall meet the design and placement requirements of these Standards and the City Public Works Director.

New street lighting shall be designed to provide required levels of lighting based upon street classification and location as determined by the City of Omak. All electrical panels will be designed to City of Omak standards.

Traffic Studies

In order to provide sufficient information to assess a development's impact on the transportation system and level of service, the Director of Public Works may require a traffic study to be completed by the Developer at the Developer's expense. This decision will be based upon the size of the proposed development, existing roadway condition, traffic volumes, accident history, expressed community concern, and other factors relating to transportation.

Traffic studies shall be conducted under the direction of a traffic engineer or civil engineer licensed in the State of Washington and possessing special training and experience in traffic engineering.

The level of detail and scope of the traffic study may vary with the size, complexity, and location of the proposed development. A traffic study shall, at a minimum, be a thorough review of the immediate and long-range effects of the proposed development on the City's transportation system. Guidelines for the traffic study shall be reviewed by the Director of Public Works on a project basis.

SPECIAL PROVISIONS FOR STREETS

The following sections of the Standard Specifications have been amended or supplemented as described below.

1-10 TEMPORARY TRAFFIC CONTROL

1-10.2(2) Traffic Control Plans

Replace with the following:

The Contractor shall prepare a signing plan showing the necessary Class A construction signing and barricades required for all work within public right of way and submit the plan to the Director of Public Works no later than one week prior to beginning construction.

When Class B signing will be provided as detailed on one or more of the figures included in the Manual of Traffic Control Devices (MUTCD) or the WSDOT Standard Plans, the Contractor may reference the applicable figure at the appropriate location on the signing plan. When this procedure is used, variable distances such as the minimum length of taper must be specified by the Contractor.

The signing plan prepared by the Contractor shall provide for adequate warning within the limits of the project and on all streets, alleys, and driveways entering the project so that approaching traffic may turn onto existing undisturbed streets before reaching the project.

8-30 CONTROLLED DENSITY FILL (NEW SECTION)

The following new section shall be added to the Standard Specifications:

8-30.1 General

Controlled Density Fill (CDF) may be required for street crossings by the Public Works Director. It shall be a mixture of Portland Cement, fly ash, aggregate, water, and admixtures proportioned to provide a non-segregating, self-consolidating, free-flowing material which will result in a hardened, dense, non-settling fill.

8-30.2 Materials

Materials shall meet the requirements of the following Sections of the Standard Specifications:

Portland Cement (9-01)	Type II
Fly Ash	Class F or C
Aggregates	9-03.1
Water	9-25
Admixtures	9-23.6

8-30.3 Construction Requirements

8-30.3(1) Construction Materials

The CDF shall be a mixture of Portland Cement, fly ash, aggregate, water, and admixtures which has been batched and mixed in accordance with Section 6-02.3 of the Standard Specifications.

The following table provides a guideline for proportioning the Controlled Density Fill for this project. The final mix provided by the Contractor shall result in a material which is excavatable by machine with a maximum unconfined compressive strength of 300 psi.

Water	50 gals per cubic yard
Cement	50 lbs per cubic yard
Fly Ash	250 lbs per cubic yard
Aggregate	3,200 lbs per cubic yard

The above table provides a guideline for the CDF mixture. The weights shown are only an estimate of the amount to be used per cubic yard of CDF. Actual amounts may vary from those shown as approved by the Engineer or approved mix data from similar projects which provided proper strength, workability, consistency, and density.

8-30.3(7) Placing Controlled Density Fill

The floatable CDF shall be placed in the trench area where directed by the Engineer and brought up uniformly to the elevation directed. In the cases where existing concrete slabs have been undermined by excavation, the Contractor shall ensure that the CDF is flowed completely under the slab.

Mixing and placing may be started if weather conditions are favorable, when the temperature is at least 34° F and rising. At the time of placement, CDF must have a temperature of at least 40° F. Mixing and placing shall stop when the temperature is 38° F and falling. Each filling stage shall be as continuous an operation as practicable. CDF shall not be placed on frozen ground.

The trench section to be filled with CDF shall be contained at either end of trench section by bulkhead or earth fill.

CHAPTER 8 - STORM DRAINAGE

GENERAL REQUIREMENTS FOR STORM DRAINAGE IMPROVEMENTS

All extensions to the City of Omak's storm sewer system shall conform to the following design standards of the City:

Storm runoff occurring on all new lots and developments (private property) shall be retained and disposed of on-site. No storm runoff will be allowed to enter public property or public storm drainage system.

Storm runoff for new public streets shall be designed and constructed as required to the point where the adjoining property owner's responsibility for further extension begins. This typically requires an extension across the entire frontage of the property to the property line of the adjoining owner.

All storm sewer designs for new public streets shall be based upon an engineering analysis which takes into account total drainage areas, runoff rates, pipe and inlet capacities, and any other factors pertinent to the design

All new storm drainage facilities, public or private, shall be designed by a Professional Engineer licensed in the State of Washington. Complete storm water runoff and drainage facilities sizing calculations shall be submitted to the City of Omak for review and comment.

Storm sewer facilities and pipelines shall be designed to meet a minimum 10-year storm criteria. Small private developments may be designed to accommodate 1-inch of precipitation over the on-site impervious surfaces. Small developments are defined to be 20,000 SF or less of impervious surface area. Impervious surfaces must be clearly noted and shown on the project site plan.

All storm water facilities shall have oil and silt separation.

Inlet spacing shall be designed in accordance with the WSDOT Hydraulics Manual, Chapter 5. Generally, inlet spacing shall not exceed 300 feet. There shall be installed a manhole or Type II catch basin at the intersection of two collector storm sewers. A collector storm sewer is a sewer servicing more than one catch basin.

SPECIAL PROVISIONS FOR STORM SEWERS

The following Sections of the Standard Specifications have been amended or supplemented as described below:

7-02 CULVERTS

7-02.4 Materials

Add the following:

Culvert pipe approved for use on this project shall be as follows:

Corrugated Aluminum Alloy Culvert Pipe meeting the requirements of SECTION 9-05.5 of the Standard Specifications.

OR

Aluminized Corrugated Steel Culvert Pipe meeting the requirements of SECTION 9-05.4 of the Standard Specifications.

7-04 STORM SEWERS

7-04.2 Materials

Add the following:

The storm drain pipe approved for use on this project shall be as follows:

36-INCH AND LARGER PIPE

Corrugated Aluminum Alloy Storm Sewer Pipe: All corrugated aluminum alloy storm sewer pipe shall comply with the requirements specified in SECTION 9-05.11 of the Standard Specifications and shall be 16 gauge with helical corrugations. A protective coating shall not be required.

15-INCH THROUGH 36-INCH PIPE

Corrugated Aluminum Alloy Storm Sewer Pipe: All corrugated aluminum alloy storm sewer pipe shall comply with the requirements specified in SECTION 9-05.11 of the Standard Specifications and shall be 16 gauge with helical corrugations. A protective coating shall not be required. All corrugated metal pipe joints shall be flexible using rubber gasket joints. Gaskets shall be made of 3/8-inch thick by 12-inch minimum width closed cell synthetic sponge rubber, per ASTM D 1056, Grade SCE-43, fabricated in the form of a cylinder with a diameter of approximately 10 percent less than the nominal pipe size. The gasket shall be centered under the band and lapped an equal distance on the ends of the adjoining pipe sections. Coupling bands shall be used and shall conform to the provisions of SECTION 9-05.11(1) of the Standard Specifications. Coupling bands shall be made by the same manufacturer as the pipe and shall be made of the same base material as the pipe which it connects.

PE Pipe: Corrugated High Density Polyethylene (CPEP) pipe, couplings, and fittings shall comply with the requirements of SECTION 9-05.20 of the Standard Specifications.

12-INCH AND SMALLER PIPE

PVC Pipe: Polyvinyl chloride (PVC) pipe shall conform with requirements specified in SECTION 9-05.12 of the Standard Specifications (ASTM D 3034, SDR 35). The pipe joint type shall be restrained gasket.

OR

PE Pipe: Corrugated High Density Polyethylene (CPEP) pipe, couplings, and fittings shall comply with all the requirements of AASHTO M-252-85I. Joints shall be water-tight.

Pipe shall be as manufactured by Hancor, Advanced Drainage Systems, Inc., or approved equal.

The perforated storm drain pipe approved for use shall be as follows:

PE Pipe: Corrugated High Density Polyethylene (CPEP) pipe, couplings, and fittings shall comply with all the requirements of SECTIONS 9-05.1(6) or 9-05.1(7) of the Standard Specifications.

DRAIN ROCK: Drain rock for use as backfill for the perforated storm drain pipe shall be coarse concrete aggregate conforming to the requirements for "Grading No. 4" as specified in SECTION 9-03.1(3)C of the Standard Specifications.

7-04.3(1) Cleaning and Testing

7-04.3(1)A General

No infiltration or exfiltration test will be required for the storm drain pipe.

7-05 MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS

7-05.2 Materials

Section 7-05.2 of the Standard Specifications shall be revised as follows:

Gravel Backfill for Drywells: Gravel backfill for drywells shall be as specified in Section 9-03.12(5) of the Standard Specifications.

Manhole Metal Castings: All cast iron frames and covers shall be as specified in SECTION 9-05.15(1) of the Standard Specifications. All cast iron frames and covers to be used on this project shall be of the type, weight, and size approved by the City of Omak, and shall be furnished by the Contractor. Covers for sanitary sewer shall be stamped "SEWER." Covers for storm drain shall be stamped "STORM."

Precast Concrete Catch Basin: Catch basins shall be constructed as shown on the detail sheet of the Plans.

Catch basins shall be constructed of thirty (30) inch I.D. Washington State standard reinforced concrete culvert pipe using cast iron grating and frames as shown on the Plans.

Catch Basin Metal Castings: All frames and grates shall be capable of withstanding, with a reasonable margin of safety, a concentrated load of 20,000 pounds and shall be as specified in SECTION 9-05.15(2) of the Standard Specifications. The grate shall be ductile iron and "bicycle safe." The contact surfaces of the frame and grate shall be machine finished to a common plane and shall be so cast as to prevent rocking. Frames and grates shall be Inland Foundry Co., Inc., No. 433 Round Base, 20" x 24" or approved equal.

7-05.3(1) Adjusting Manholes and Catch Basins to Grade

Delete and replace with the following:

Manholes and similar structures shall not be adjusted until the pavement is completed, **at which time the center of each structure shall be relocated from references previously established by the Contractor.**

The asphalt concrete pavement shall be cut and removed to a neat circle, the diameter of which shall be equal to the outside diameter of frame plus 2 feet. The frame shall be placed on cement concrete blocks or adjustment rings and wedged up to the desired grade. The base materials shall be removed and Class 3000 cement concrete shall be placed within the entire volume of the excavation up to, but not to exceed, 1½ inches below the finished pavement surface.

On the following day, the concrete, the edges of the asphalt concrete pavement, and the outer edge of the casting shall be painted with hot asphalt cement. Class G asphalt concrete shall then be placed and compacted with hand tampers and a patching roller.

The completed patch shall match the existing paved surface for texture, density, and uniformity of grade. The joint between the patch and the existing pavement shall then be painted with hot asphalt cement or asphalt emulsion and shall be immediately covered with dry paving sand before the asphalt cement solidifies.

7-05.3(2) Abandon Existing Manholes

Replace the entire section with the following:

Where shown on the Plans, existing sanitary sewer manholes shall be abandoned in place after the new sanitary sewer collection system is in place and all side sewers have been transferred to the new sanitary sewer pipeline. The following new section shall be added to the Standard Specifications:

At least the top 3 feet of each manhole, or the top conical section in precast concrete manholes, shall be removed, including the cast iron ring and cover and concrete pad, if any. Debris resulting from breaking of the upper portion of the manhole may be mixed with backfill subject to the approval of the Engineer. Ring and cover will become property of the Contractor and all other surplus material shall be disposed of.

The existing pipe openings shall be plugged watertight with Class 3000 concrete and the manhole bottom slabs shall be broken to promote drainage. The remaining manhole structure shall be backfilled with granular material conforming to SECTION 9-03.9(3) CRUSHED SURFACING BASE COURSE. Place backfill in uniform layers and compact to 95% maximum dry density, as determined by ASTM D 1557 (Modified Proctor).

Excavations resulting from manhole abandonment shall be backfilled with suitable, job-excavated material to top of subgrade. Compact to 95% maximum dry density as determined by ASTM D 698 (Standard Proctor). Restore surface to the condition existing prior to excavation with native material, gravel surfacing, or asphalt concrete pavement as shown for trench repair on the plans.

APPENDIX A

TRANSFER OF OWNERSHIP OF UTILITY SYSTEM

(Individual)

_____, owner(s), do(es) hereby transfer(s), deliver(s) and relinquish(es) to the City of Omak, Washington, all right, title and interest in, and ownership of, the following described utility system:

The undersigned owner(s) agree (s) and understand(s) that this transfer of ownership of the above described Public Facilities to the City of Omak is subject to the conditions of the 2nd paragraph of **Section 1-05.12 Final Acceptance (APWA Only)** of the latest edition of the Standard Specifications for Road, Bridge, and Municipal Construction, Washington State Department of Transportation modified as follows:

"Final acceptance shall not constitute acceptance of any unauthorized or defective work or material. The City shall not be barred from requiring the Contractor to remove, replace, repair, or dispose of any unauthorized or defective work or material or from recovering damages for any such work or material."

This Transfer of Ownership of Utility System shall be effective only upon the City's final approval and acceptance of the utility system.

STATE OF WASHINGTON

Okanogan County

I certify that I know of have satisfactory evidence that _____ and _____ (is/are) the person(s) who personally appeared before me and that said person(s) acknowledged that (he/she/they) signed this instrument, and acknowledged it to be (his/her/their) free and voluntary act and for the uses and purposes mentioned in the instrument.

Dated: _____

Given under my hand and official seal the day and year last written.

Notary Public in and for the State of Washington

residing at _____

My Commission expires _____

TRANSFER OF OWNERSHIP OF UTILITY SYSTEM
(Corporate)

_____, owner(s), do(es) hereby transfer(s), deliver(s) and relinquish(es) to the City of Omak, Washington, all right, title and interest in, and ownership of, the following described utility system:

The undersigned owner(s) agree (s) and understand(s) that this transfer of ownership of the above described Public Facilities to the City of Omak is subject to the conditions of the 2nd paragraph of **Section 1-05.12 Final Acceptance (APWA Only)**, of the latest edition of the Standard Specifications for Road, Bridge, and Municipal Construction, Washington State Department of Transportation, modified as follows:

"Final acceptance shall not constitute acceptance of any unauthorized or defective work or material. The City shall not be barred from requiring the Contractor to remove, replace, repair, or dispose of any unauthorized or defective work or material or from recovering damages for any such work or material."

This Transfer of Ownership of Utility System shall be effective only upon the City's final approval and acceptance of the above described Public Facilities.

STATE OF WASHINGTON
Okanogan County

I certify that I know or have satisfactory evidence that _____ is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument, and acknowledged it as the _____ of _____, to be the free voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: _____

Given under my hand and official seal the day and year last written.

Notary Public in and for the State of Washington

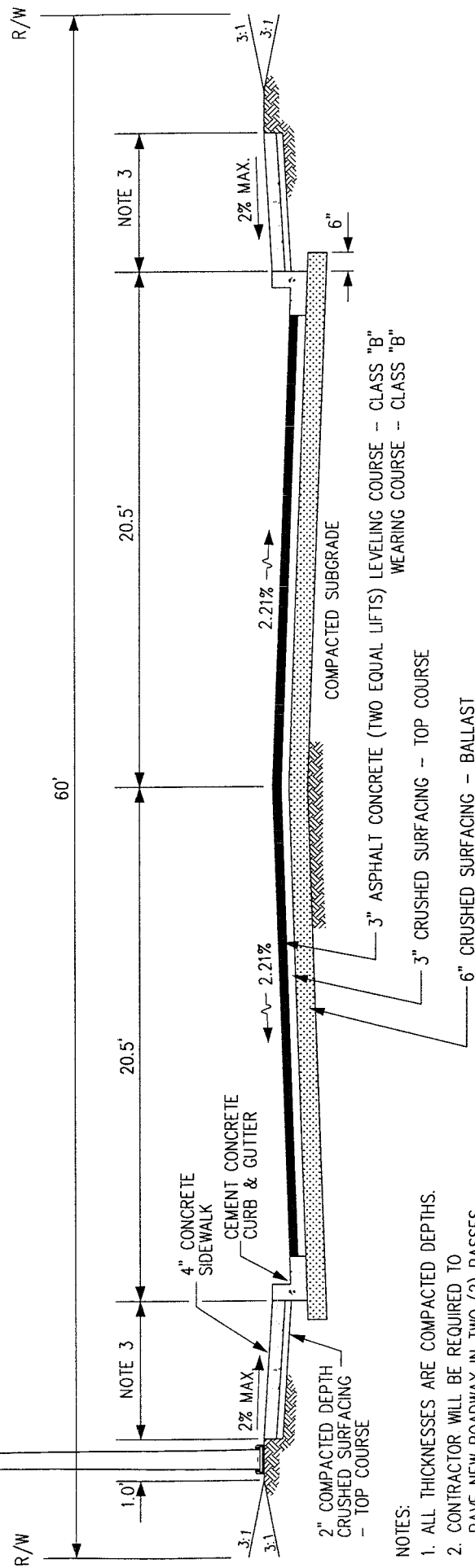
residing at _____

My Commission Expires _____

APPENDIX B



STREET LIGHT SPACING
TO CONFORM TO THE
STREET LIGHT DESIGN
PLAN FOR THE STREET
CLASSIFICATION



NOTES:

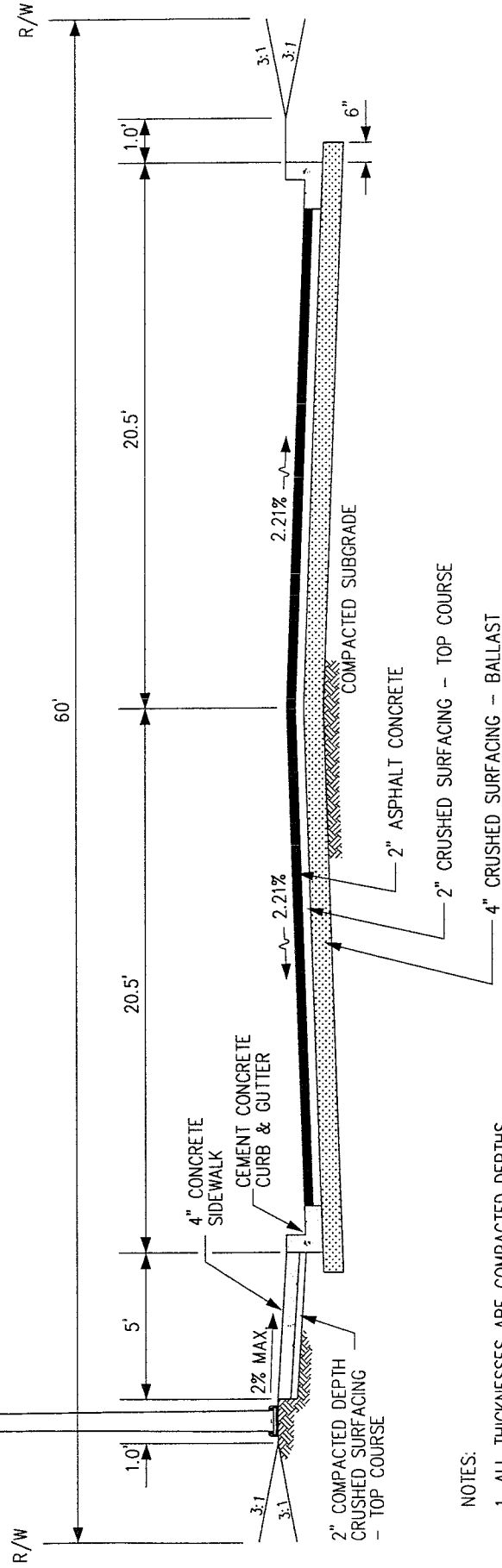
1. ALL THICKNESSES ARE COMPACTED DEPTHS.
2. CONTRACTOR WILL BE REQUIRED TO PAVE NEW ROADWAY IN TWO (2) PASSES.
3. MINIMUM WIDTH IS 7' FOR ARTERIAL STREETS, 12' FOR COMMERCIAL AREAS.

NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10-09-01	Date	Description	Appr
Revision				



STREET LIGHT AT EACH
INTERSECTION AND AT
MID BLOCK IF GREATER
THAN 500'



NOTES:
1. ALL THICKNESSES ARE COMPACTED DEPTHS.

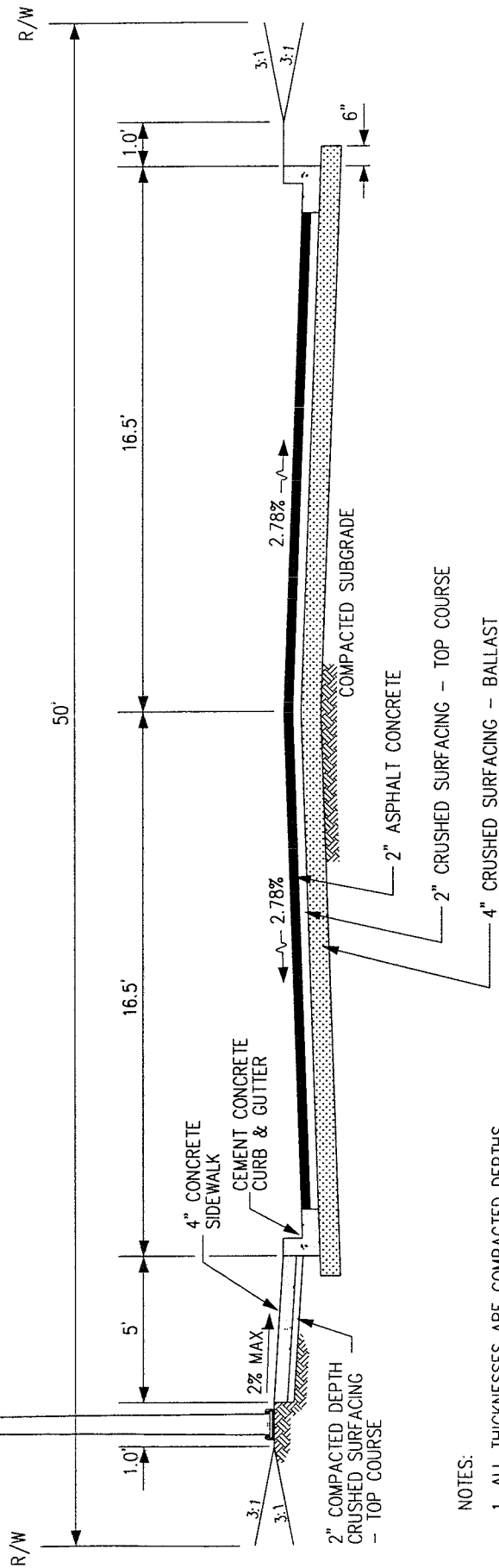
NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10-09-01		
Revision	Date	Description	Appr



NOTE:
THIS ROAD SECTION APPLIES
TO ROADS LESS THAN 500'
IN LENGTH WHICH CANNOT
BE EXTENDED.

STREET LIGHT AT EACH
INTERSECTION AND AT
MID BLOCK IF GREATER
THAN 500'.

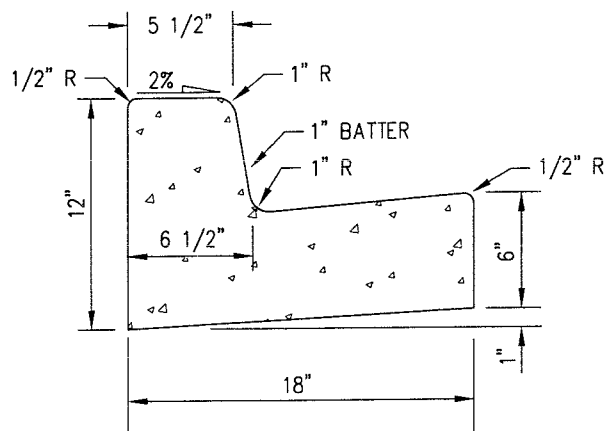


NOTES:
1. ALL THICKNESSES ARE COMPACTED DEPTHS.

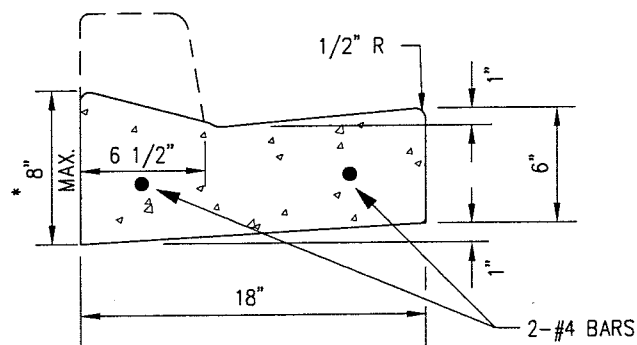
NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10-09-01			
Revision	Date		Description	Appr
CITY OF OMAHA - STANDARD DETAIL ST-4				

* AS DIRECTED BY ENGINEER. MAY VARY
DEPENDING UPON GRADE OF SIDEWALK AND
DRIVEWAY BEYOND CURB.



FULL HEIGHT — TYPE A



DEPRESSED — TYPE D

NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

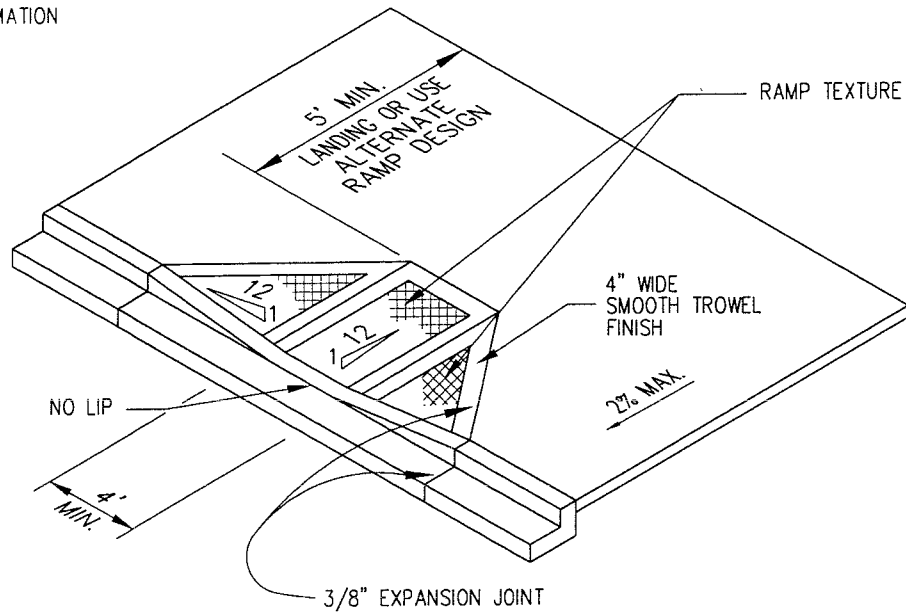
ORIG.	10-09-01		
Revision	Date	Description	Appr

CONCRETE CURB & GUTTER

CITY OF OMAK—STANDARD DETAIL

ST-5

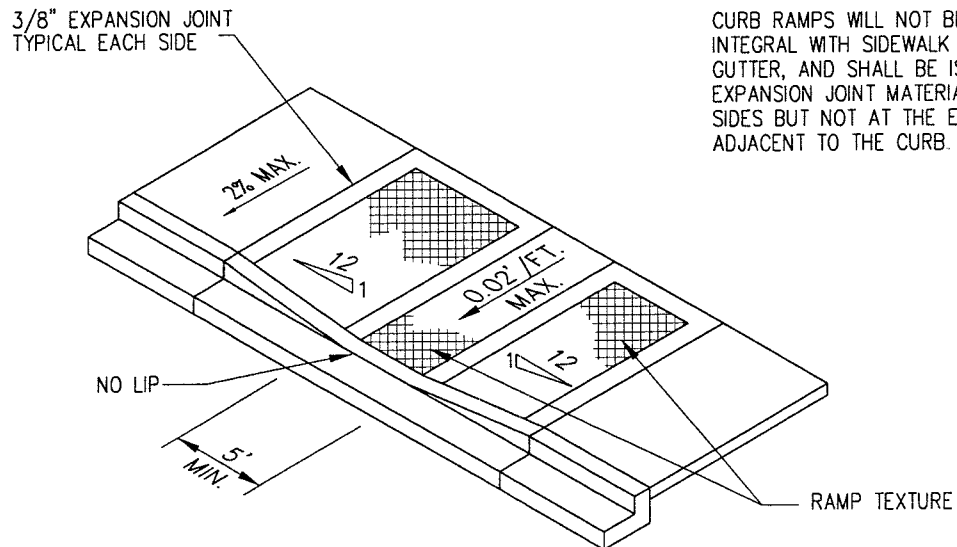
SEE WSDOT STANDARD PLAN F-3
FOR ADDITIONAL INFORMATION



STANDARD

NOTES:

CURB RAMP WILL NOT BE POURED
INTEGRAL WITH SIDEWALK OR CURB &
GUTTER, AND SHALL BE ISOLATED BY
EXPANSION JOINT MATERIAL ON ALL
SIDES BUT NOT AT THE END OF RAMP
ADJACENT TO THE CURB.



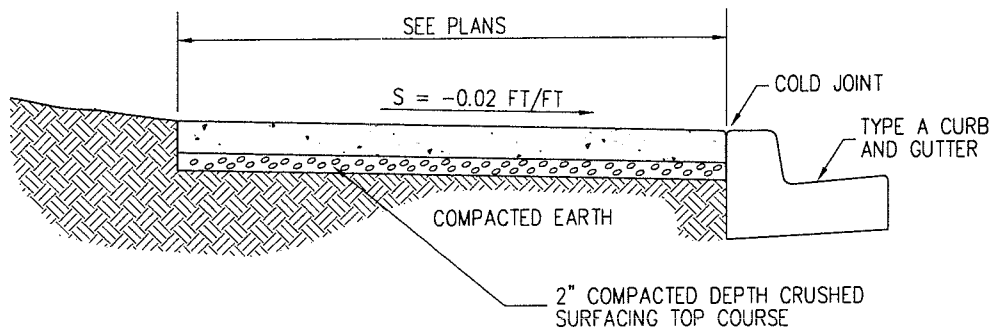
ALTERNATE

NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

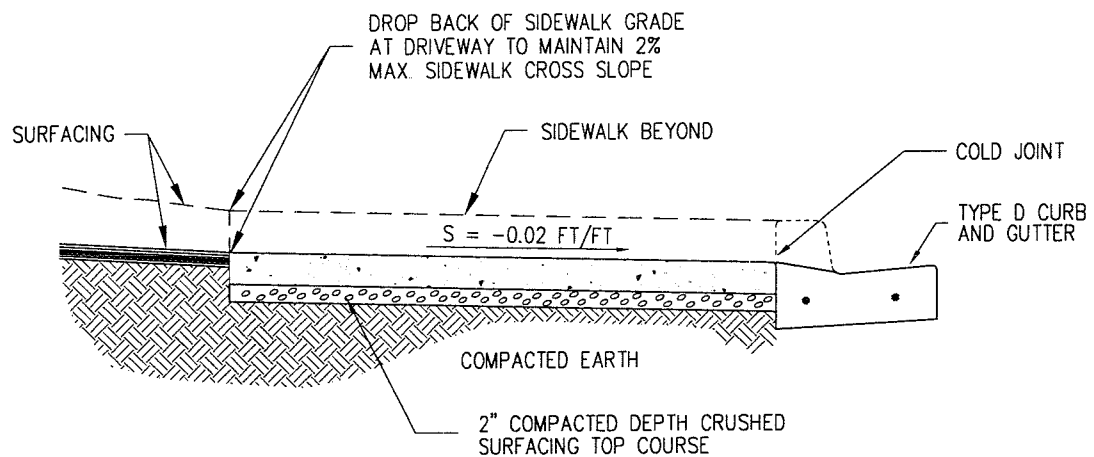
ORIG	10-09-01		
Revision	Date	Description	Appr

CURB RAMP

CITY OF OMAK-STANDARD DETAIL ST-6



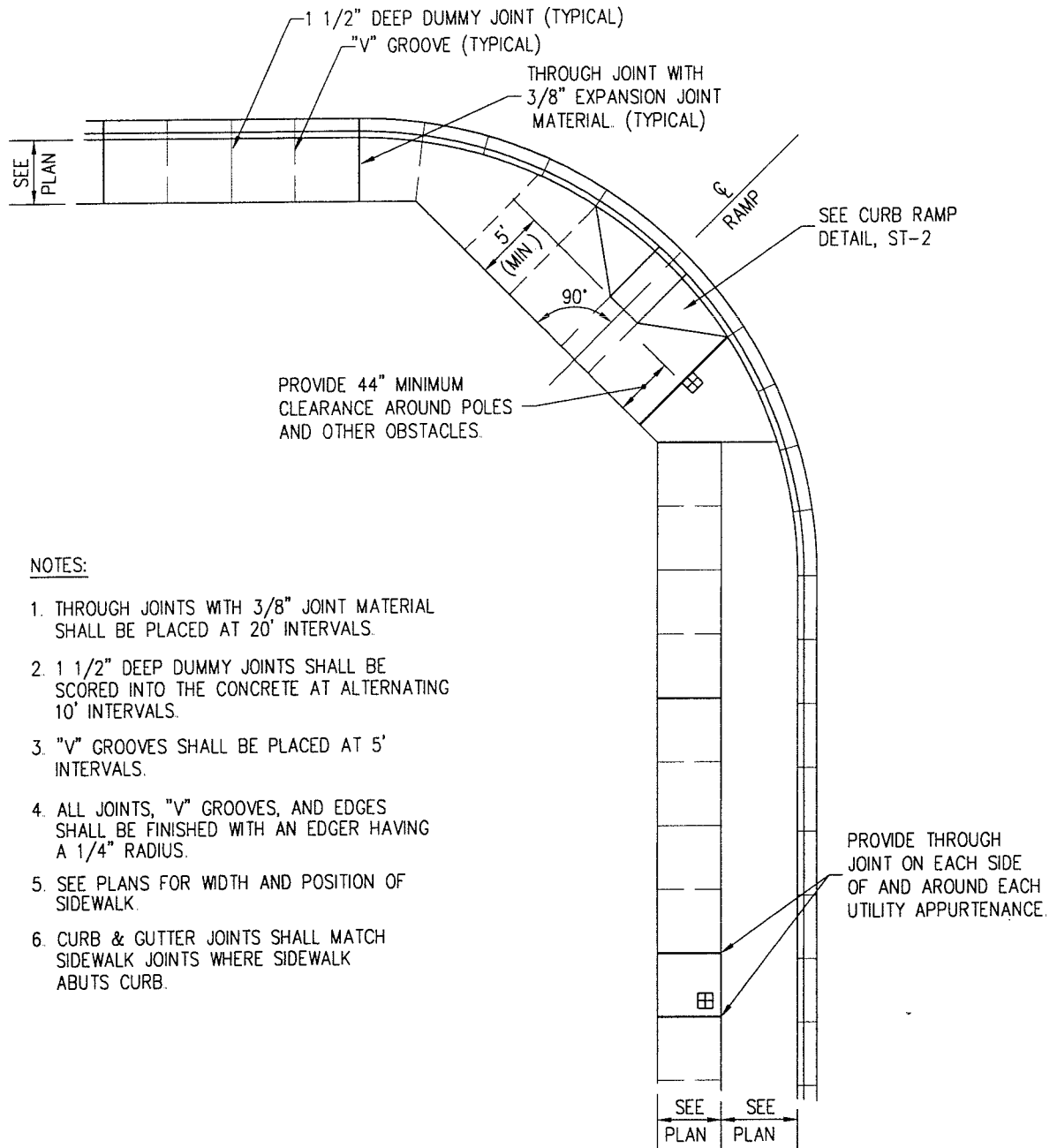
4" THICK SIDEWALK SECTION



6" THICK SIDEWALK SECTION AT DRIVEWAYS

NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10-09-01		
Revision	Date	Description	Appr

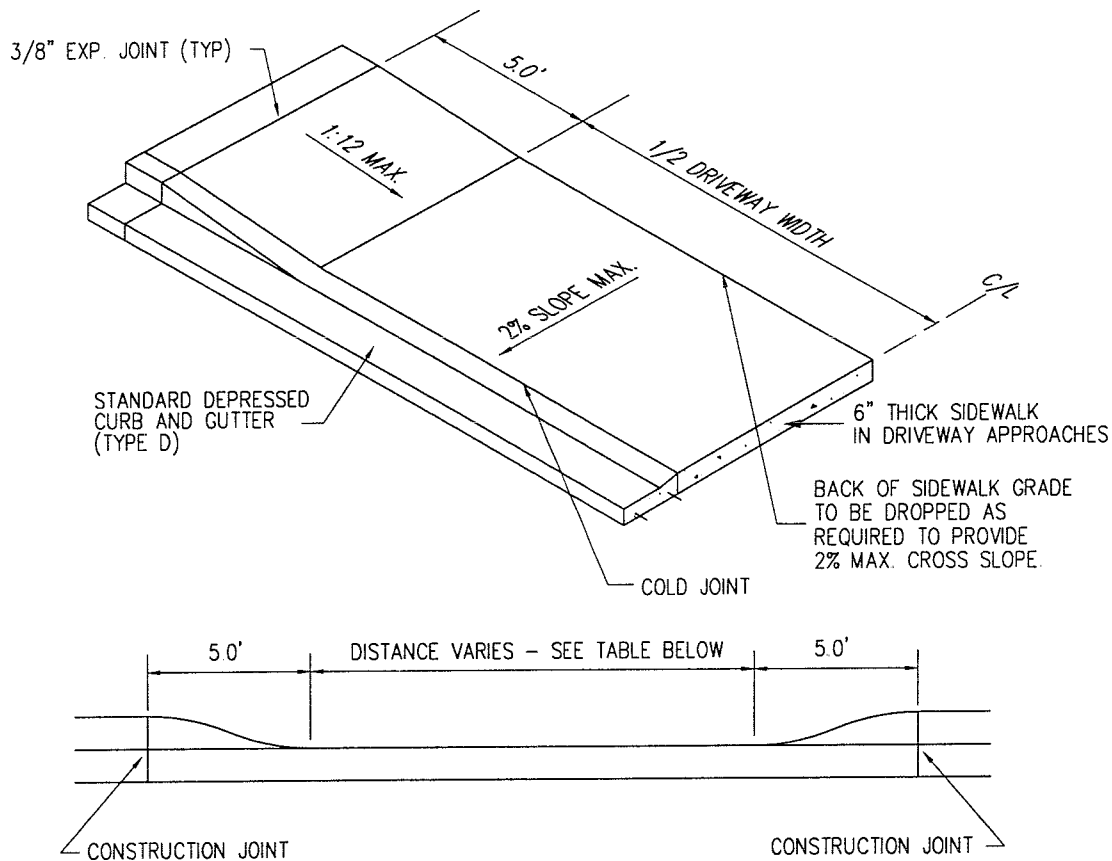


NOTES:

1. THROUGH JOINTS WITH 3/8" JOINT MATERIAL SHALL BE PLACED AT 20' INTERVALS.
2. 1 1/2" DEEP DUMMY JOINTS SHALL BE SCORED INTO THE CONCRETE AT ALTERNATING 10' INTERVALS.
3. "V" GROOVES SHALL BE PLACED AT 5' INTERVALS.
4. ALL JOINTS, "V" GROOVES, AND EDGES SHALL BE FINISHED WITH AN EDGER HAVING A 1/4" RADIUS.
5. SEE PLANS FOR WIDTH AND POSITION OF SIDEWALK.
6. CURB & GUTTER JOINTS SHALL MATCH SIDEWALK JOINTS WHERE SIDEWALK ABUTS CURB.

NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10-09-01		
Revision	Date	Description	Appr



REFER TO OMAK MUNICIPAL CODE CHAPTER 17.32

RESIDENTIAL DRIVEWAYS - 20' MIN.

COMMERCIAL APPROACHES WITH RADIUS CURB RETURNS SHALL BE REVIEWED AND APPROVED BY THE PUBLIC WORKS DIRECTOR ON A CASE BY CASE BASIS.

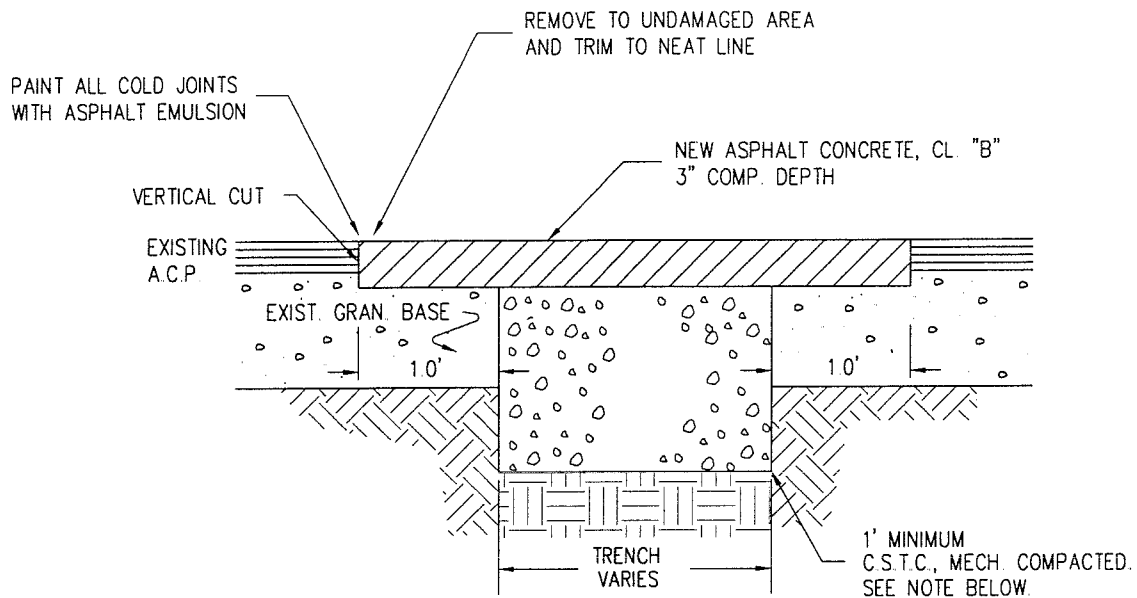
NOTE:
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THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG	10-09-01		
Revision	Date	Description	Appr

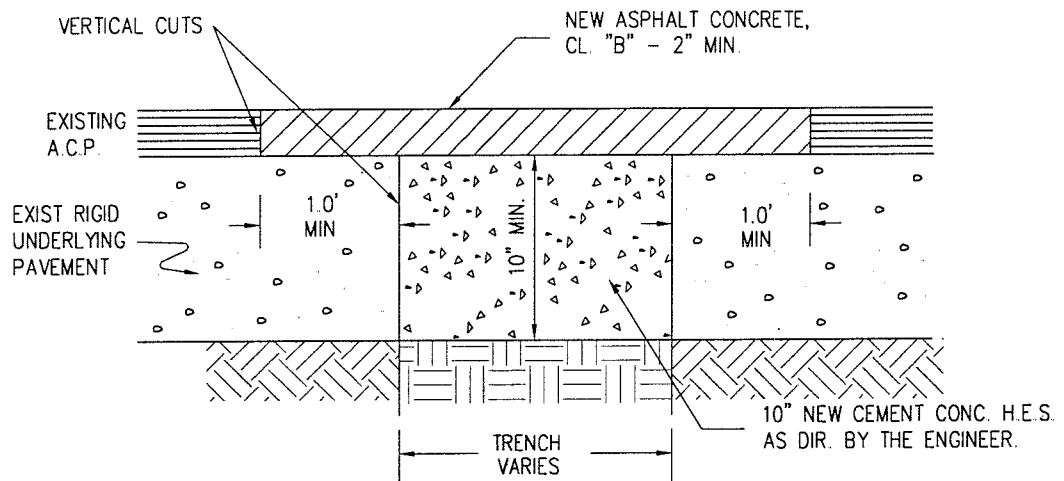
DRIVEWAY APPROACHES

CITY OF OMAK-STANDARD DETAIL

ST-9



FLEXIBLE PAVEMENT



A.C.P. SURFACED RIGID PAVEMENT

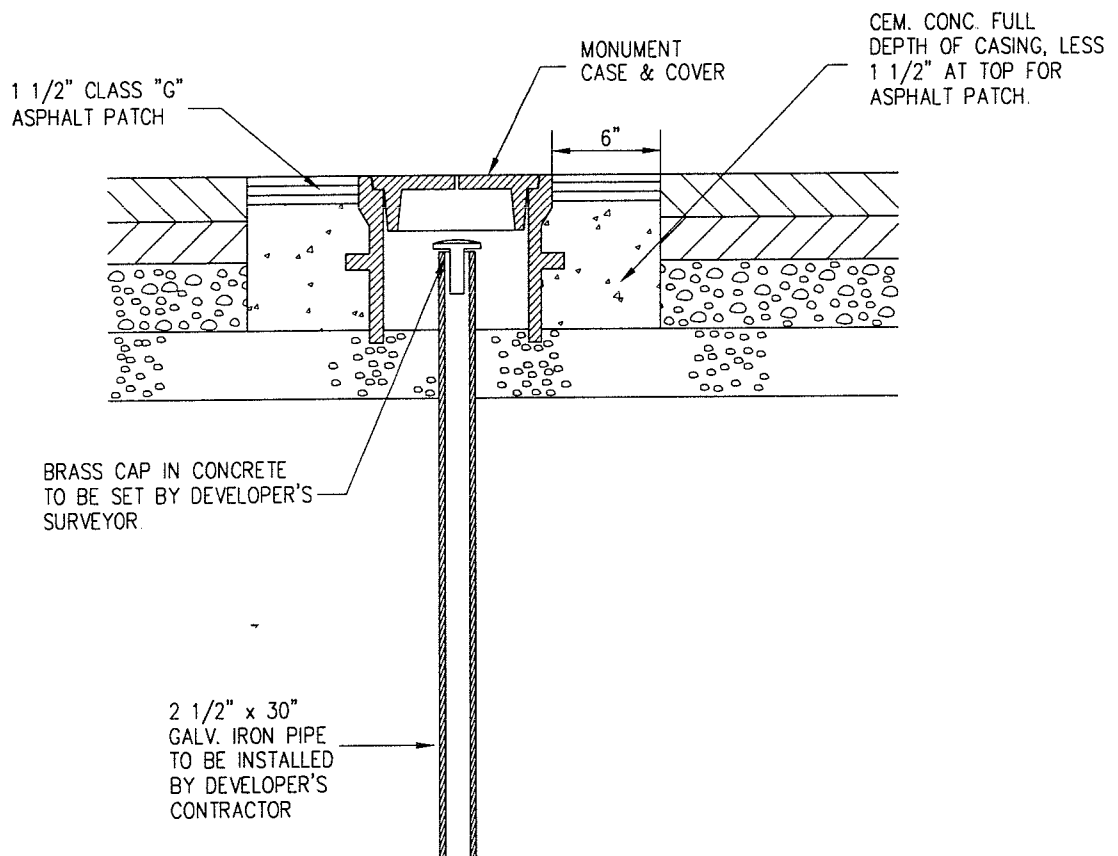
NOTE:
FOR STREET CROSSING EXCAVATIONS,
BACKFILL SHALL BE ENTIRELY
CRUSHED SURFACING TOP COURSE,
OR CONTROLLED DENSITY FILL AS
DIRECTED BY THE PUBLIC WORKS
DIRECTOR.

CONCRETE CLASS 3000 STANDARD SPECIFICATIONS

COMPACTION STANDARD SPECIFICATIONS
SECTION 7-17.3(3) - 95% MAXIMUM DENSITY
SECTION 7-10.3(11) - 95% MAXIMUM DENSITY
SECTION 2-03.3(14)D

NOTE:
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THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10-09-01		
Revision	Date	Description	Appr



NOTES:

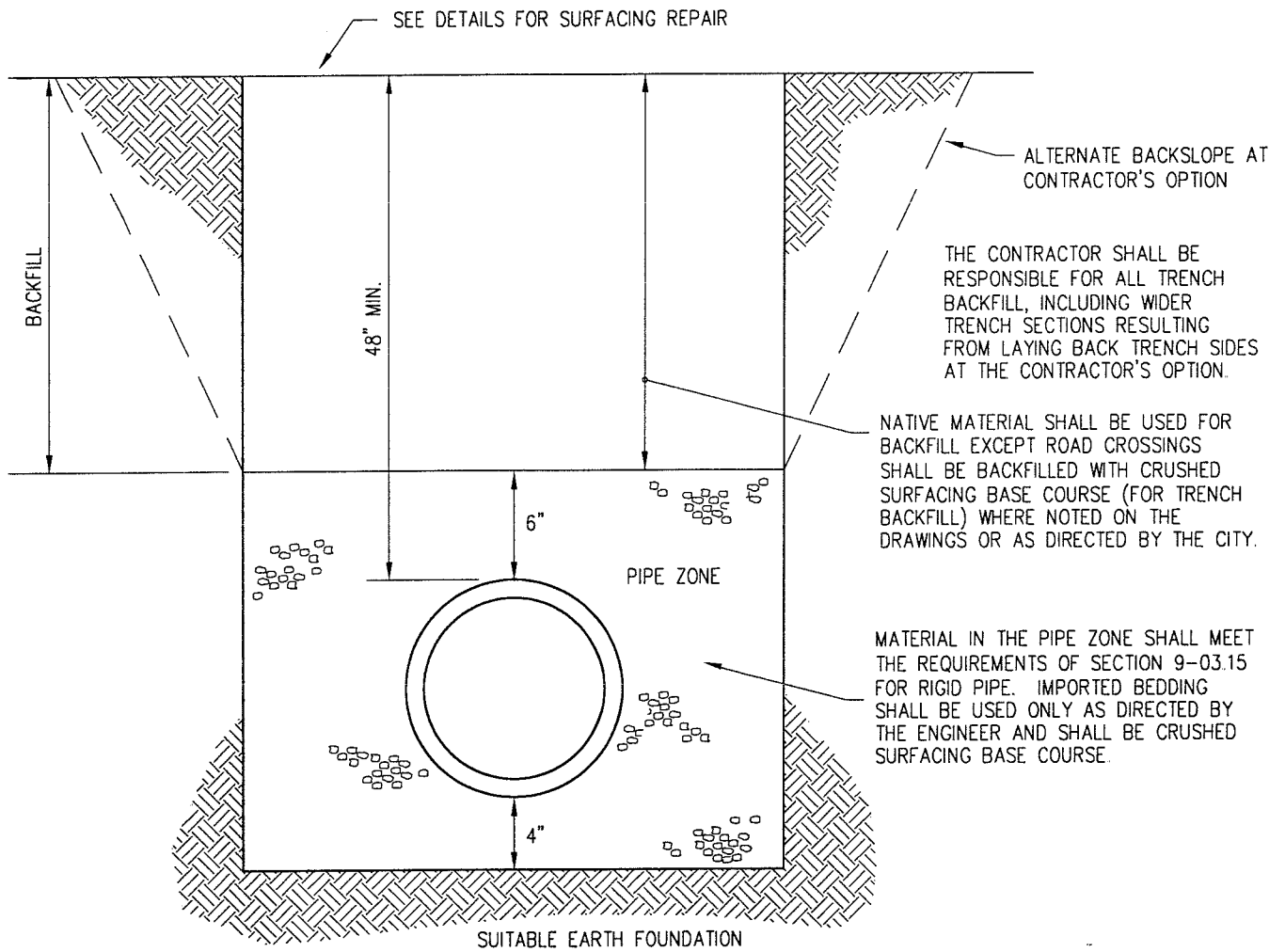
1. TOP OF MONUMENT SHALL BE BETWEEN 6" AND 12" BELOW FINISH GRADE
2. MONUMENT, MONUMENT CASE AND COVER TO BE PLACED AFTER FINAL LIFT OF ASPHALT.

NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	3-1-99		
Revision	Date	Description	Appr

MONUMENT

CITY OF OMAK-STANDARD DETAIL ST-11



NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

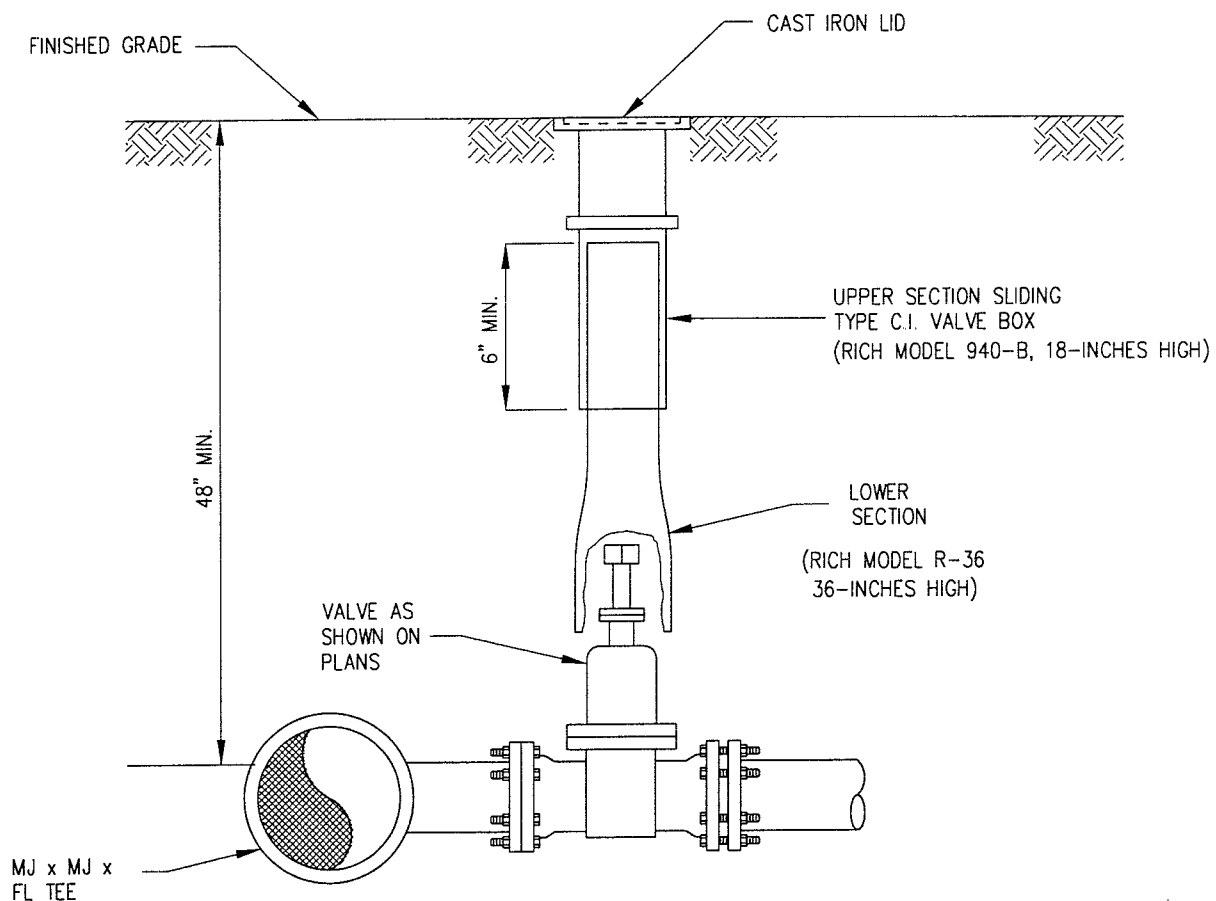
ORIG.	10-09-01		
Revision	Date	Description	Appr

WATERMAIN TRENCH SECTION

CITY OF OMAK-STANDARD DETAIL

W-1

NOTE: ADJUST EARS ON
VALVE BOX TO ALIGN WITH
PIPE.



NOTE: PROVIDE EXTENSION
PIECE WHERE REQUIRED
FOR VALVE BOX.
(RICH MODEL 044, 12-INCHES HIGH)

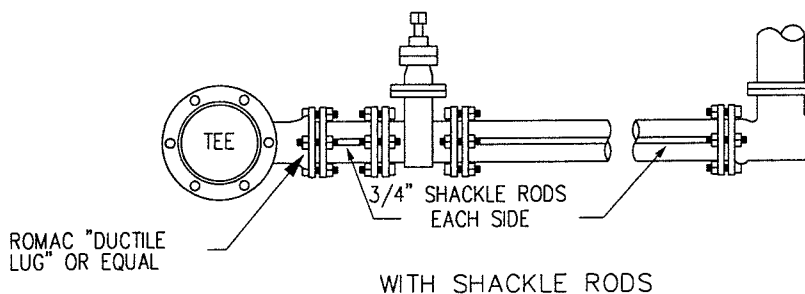
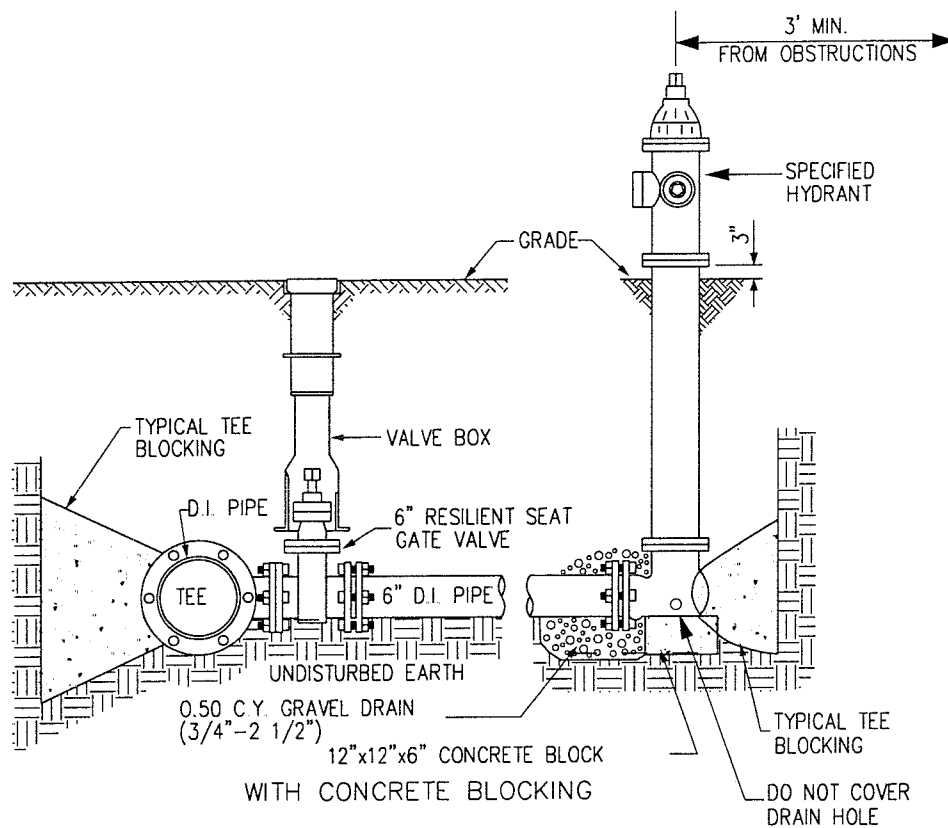
NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG	10-09-01		
Revision	Date	Description	Appr

VALVE AND VALVE BOX

CITY OF OMAK-STANDARD DETAIL

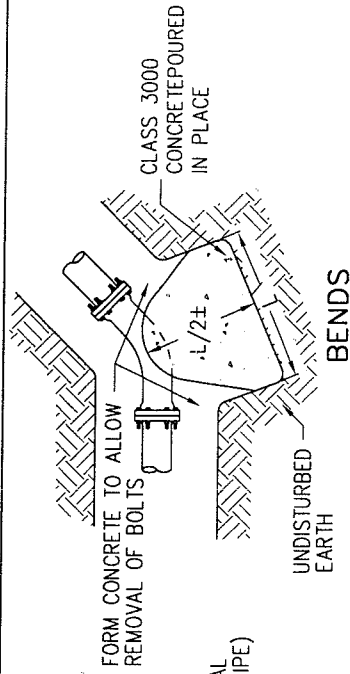
W-2



- NOTE: 1. SHACKLE RODS ARE TO BE USED ONLY WHERE POOR SOIL CONDITIONS PRECLUDE THE USE OF CONCRETE BLOCKING.
2. SHACKLE RODS ARE TO BE THREADED AT EACH END A LENGTH SUFFICIENT TO ALLOW THE USE OF DOUBLE NUTS ON EACH END TO REPLACE THE BOLTS NORMALLY USED IN MECHANICAL JOINT CONNECTIONS.
3. REMAINDER OF HYDRANT DETAIL IS TYPICAL OF BLOCKED HYDRANT.

NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10-09-01		
Revision	Date	Description	Appr



A diagram showing a bell-shaped foundation resting on a layer of 1000 concrete in place. The foundation is embedded into the concrete. The surrounding area is labeled as undisturbed earth. The diagram illustrates the geometry of the foundation and its connection to the concrete base.

THIS VIEW TYPICAL OF ALL BLOCKING

VERTICAL OVERBEND

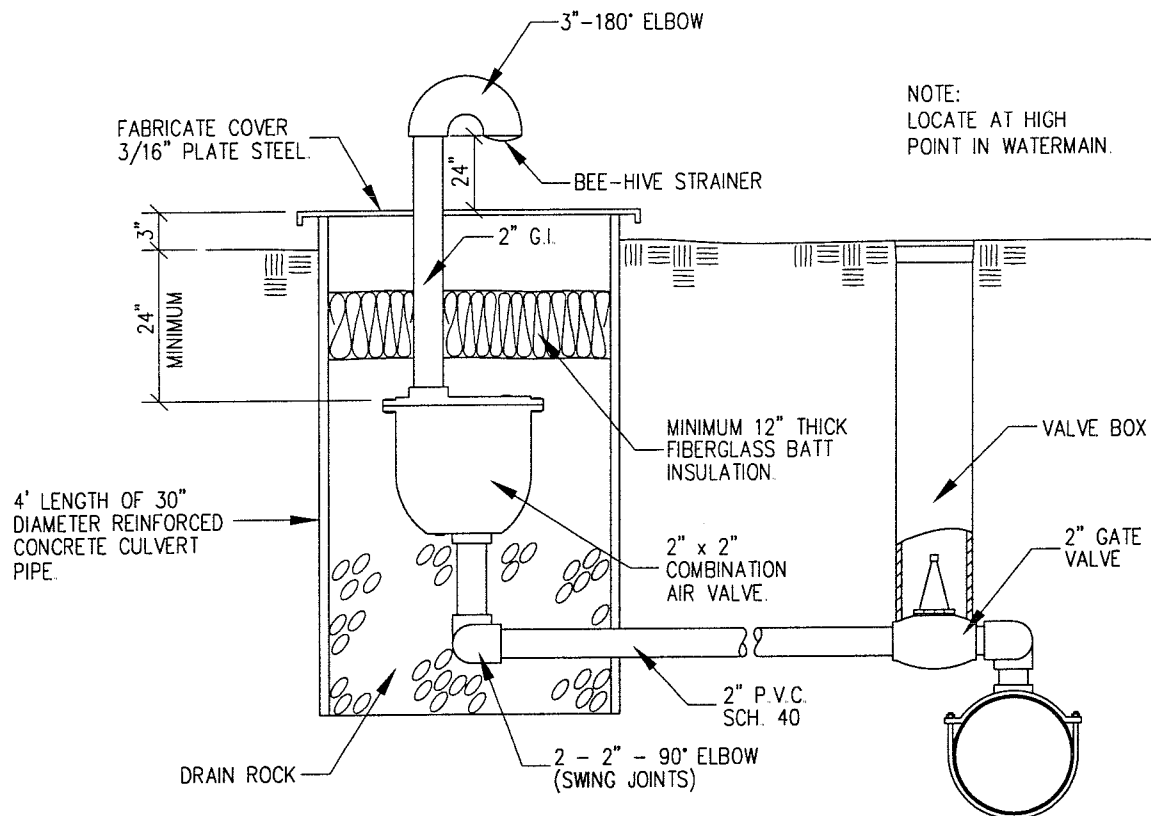
VERTICAL OVERBEND				
PIPE SIZE (D)	22 1/2" BEND	45" BEND	REBAR SIZE	L
6"	20 CU FT	39 CU FT	#5	2.0 FT
8"	34 CU FT	67 CU FT	#5	2.0 FT
10"	56 CU FT	110 CU FT	#5	2.0 FT
12"	79 CU FT	157 CU FT	#6	2.5 FT
14"	107 CU FT	212 CU FT	#7	3.0 FT
16"	139 CU FT	275 CU FT	#9	4.0 FT

NOTE: ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

NOTE:
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THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10-09-01			
Revision	Date	Description		Appr

TYPICAL THRUST BLOCKING	CITY OF OMAK-STANDARD DETAIL
	W-4



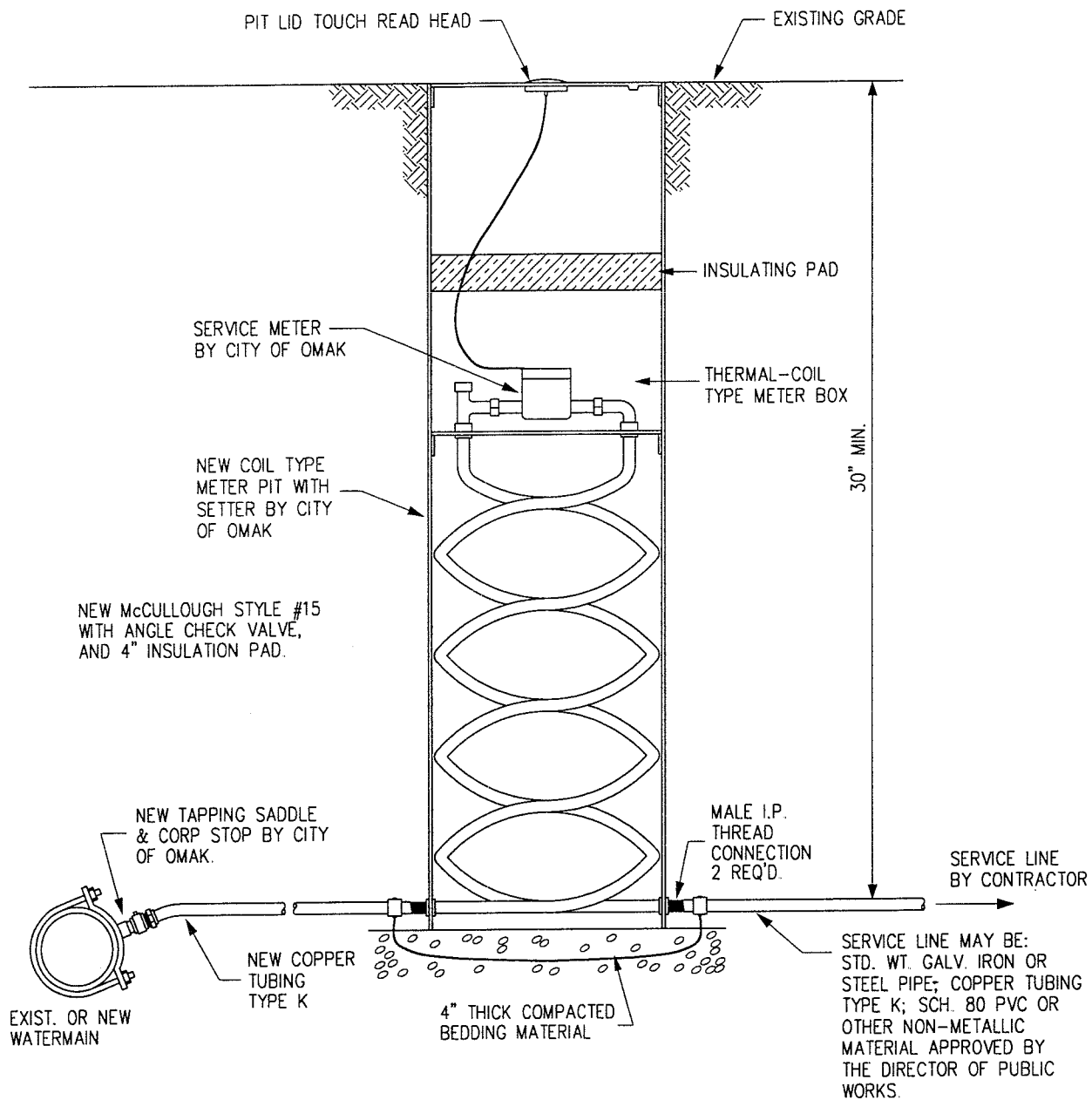
NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG	10-09-01		
Revision	Date	Description	Appr

AIR RELEASE VALVE DETAIL

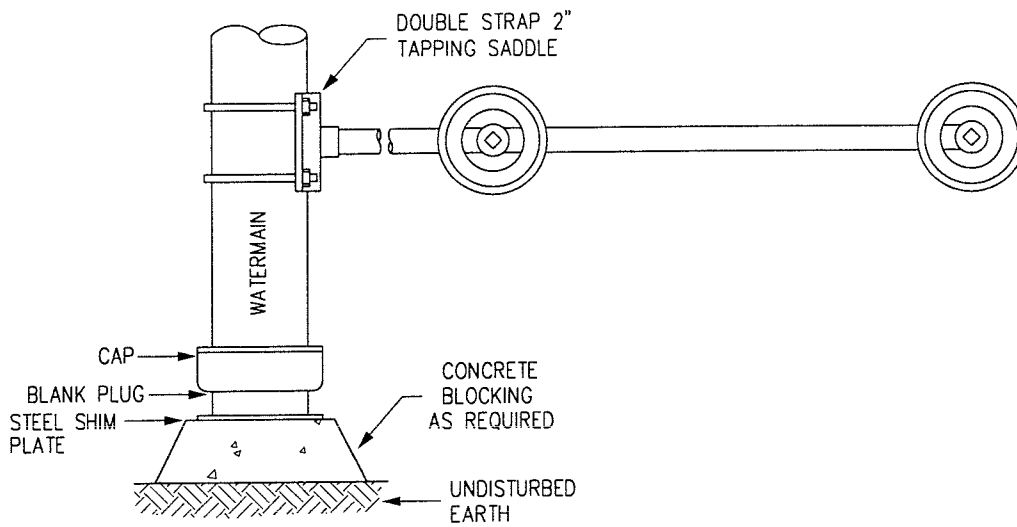
CITY OF OMAK-STANDARD DETAIL

W-5

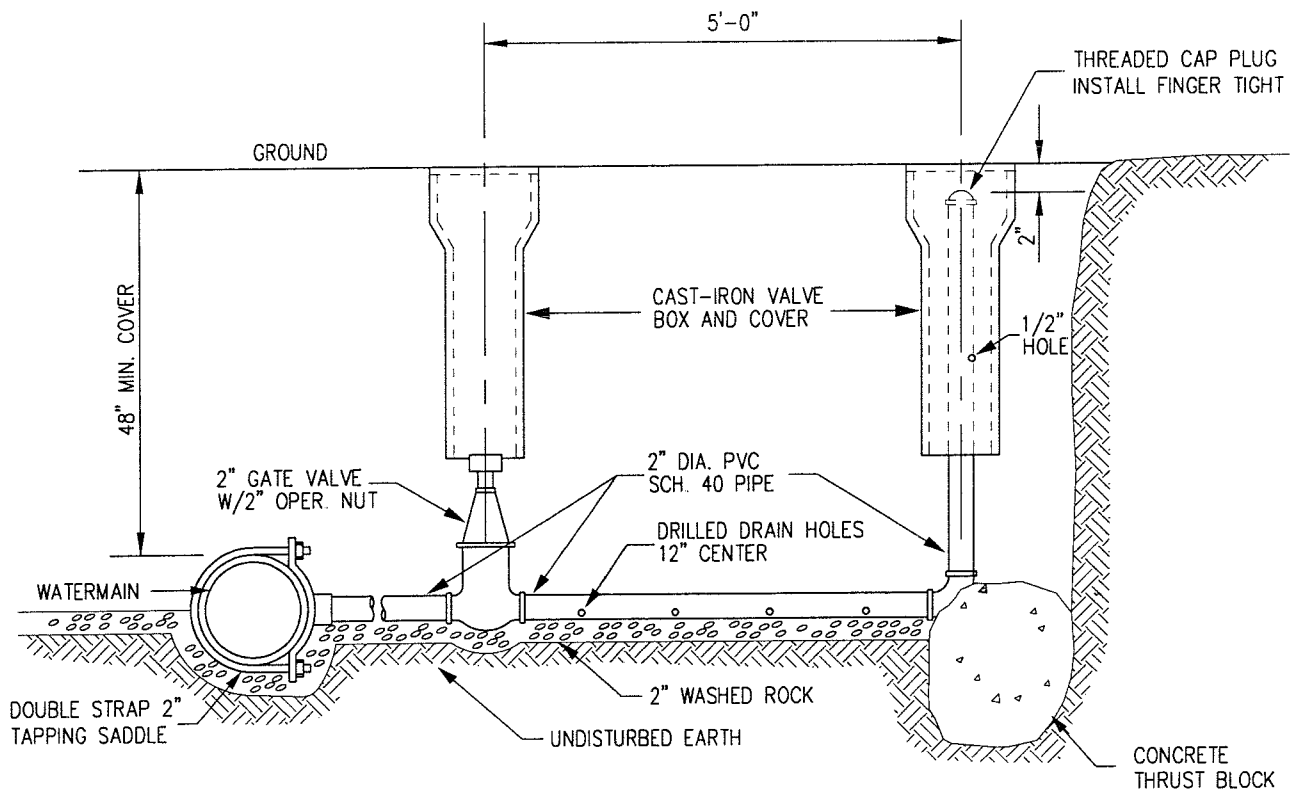


NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG	10-09-01		
Revision	Date	Description	Appr



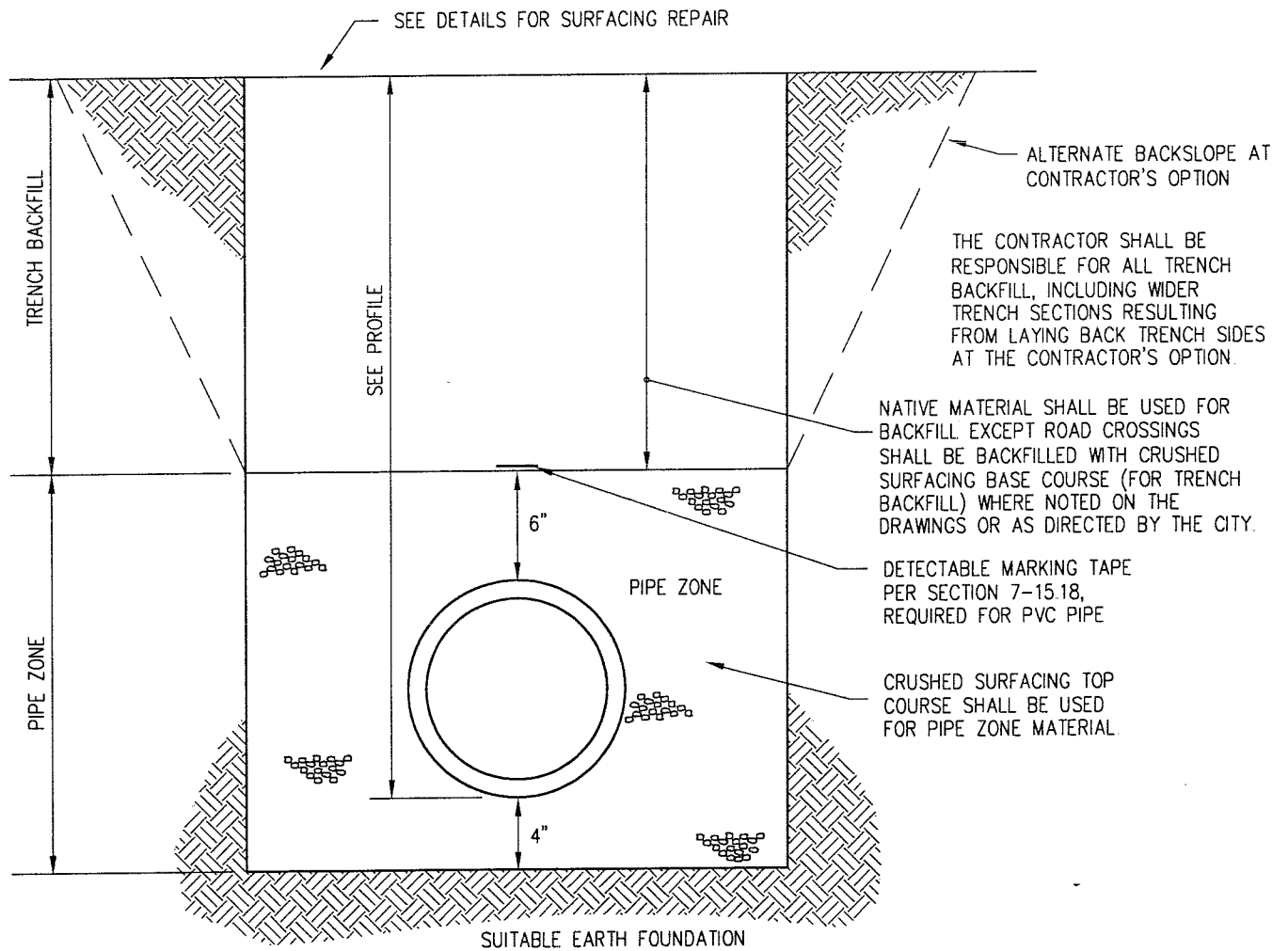
PLAN



ELEVATION

NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10-09-01		
Revision	Date	Description	Appr



NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

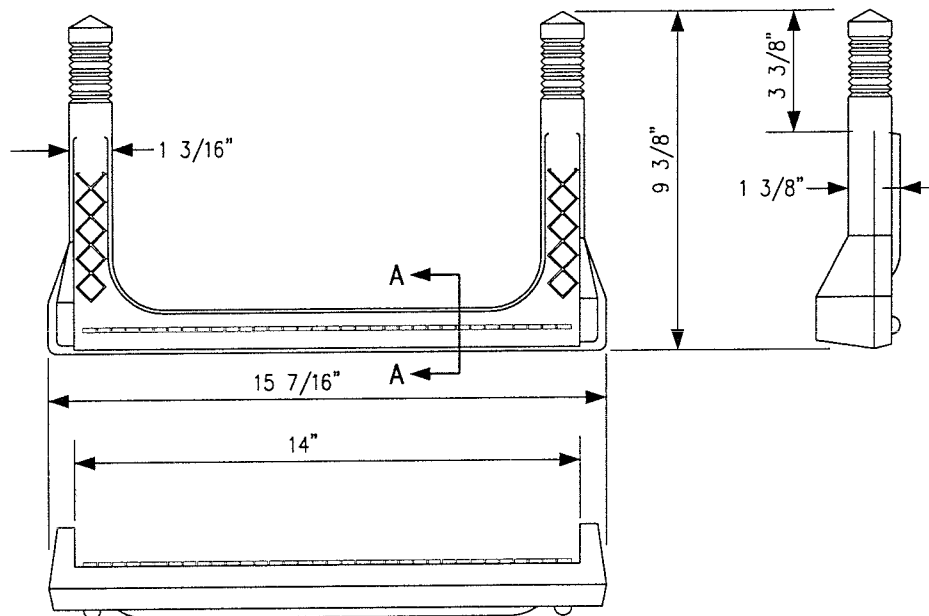
ORIG.	10-09-01		
Revision	Date	Description	Appr

PVC SEWER AND STORM DRAIN
TRENCH SECTION

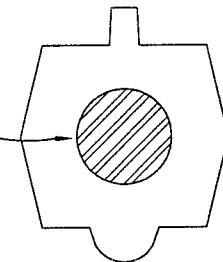
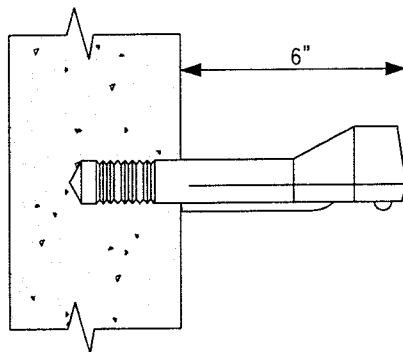
CITY OF OMAK-STANDARD DETAIL

S-1





COPOLYMER POLYPROPYLENE
PLASTIC COATED 1/2" GRADE
60 STEEL REINFORCEMENT



SECTION A-A

NOTE:

MANHOLE STEPS SHALL BE COPOLYMER
POLYPROPYLENE PLASTIC COATED 1/2"
GRADE 60 STEEL REINFORCEMENT, MODEL
PS2-PF, AS MANUFACTURED BY M.A.
INDUSTRIES INC, OR APPROVED EQUAL

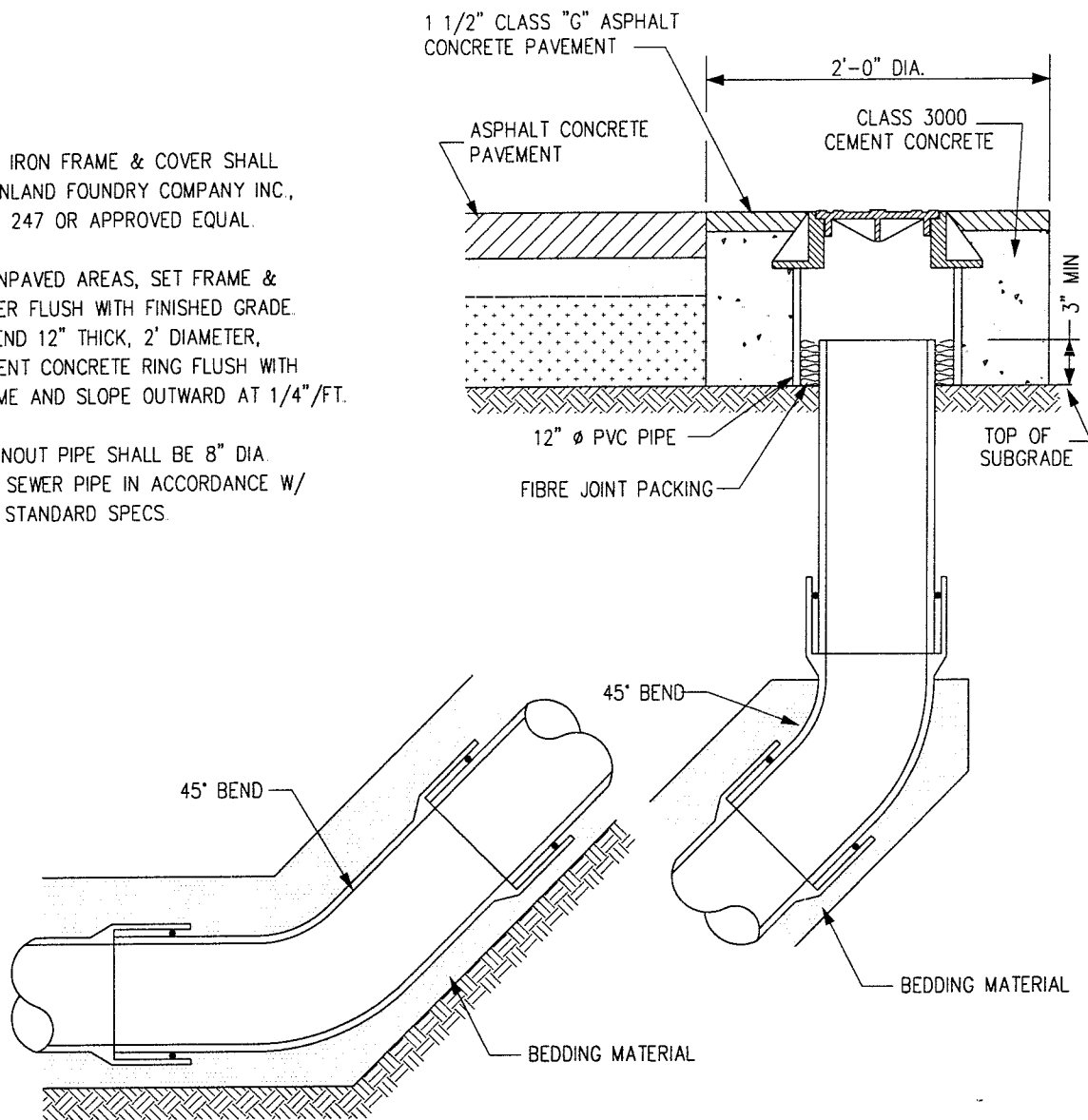
NOTE:

ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED

ORIG	10-09-01		
Revision	Date	Description	Appr

NOTES:

1. CAST IRON FRAME & COVER SHALL BE INLAND FOUNDRY COMPANY INC., UNIT 247 OR APPROVED EQUAL.
2. IN UNPAVED AREAS, SET FRAME & COVER FLUSH WITH FINISHED GRADE. EXTEND 12" THICK, 2' DIAMETER, CEMENT CONCRETE RING FLUSH WITH FRAME AND SLOPE OUTWARD AT 1/4"/FT.
3. CLEANOUT PIPE SHALL BE 8" DIA. PVC SEWER PIPE IN ACCORDANCE W/ THE STANDARD SPECS.



NOTE:

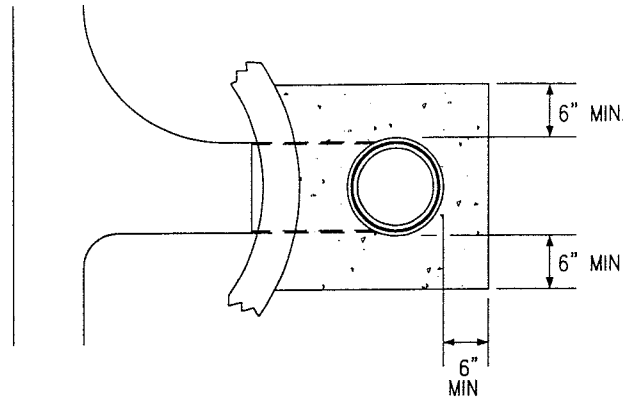
ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10-09-01		
Revision	Date	Description	Appr

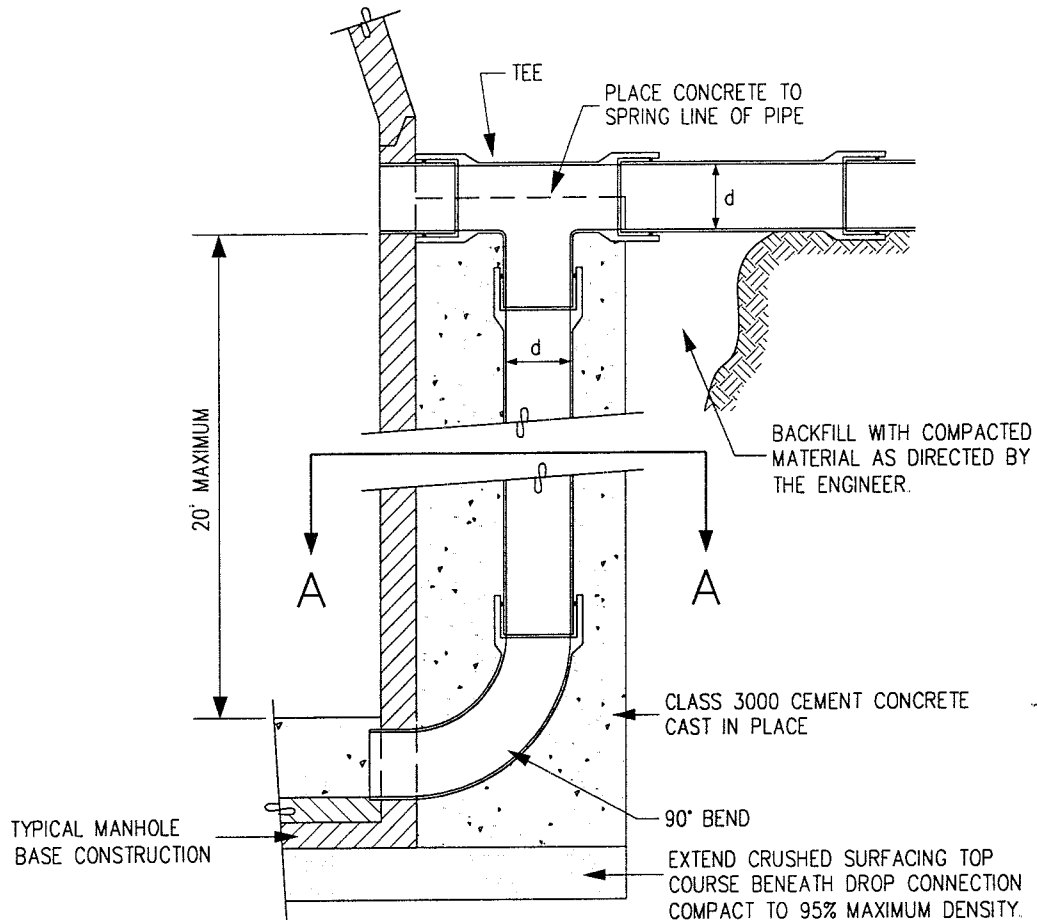
SANITARY SEWER CLEANOUT

CITY OF OMAK-STANDARD DETAIL

S-4



SECTION A-A



PROFILE VIEW

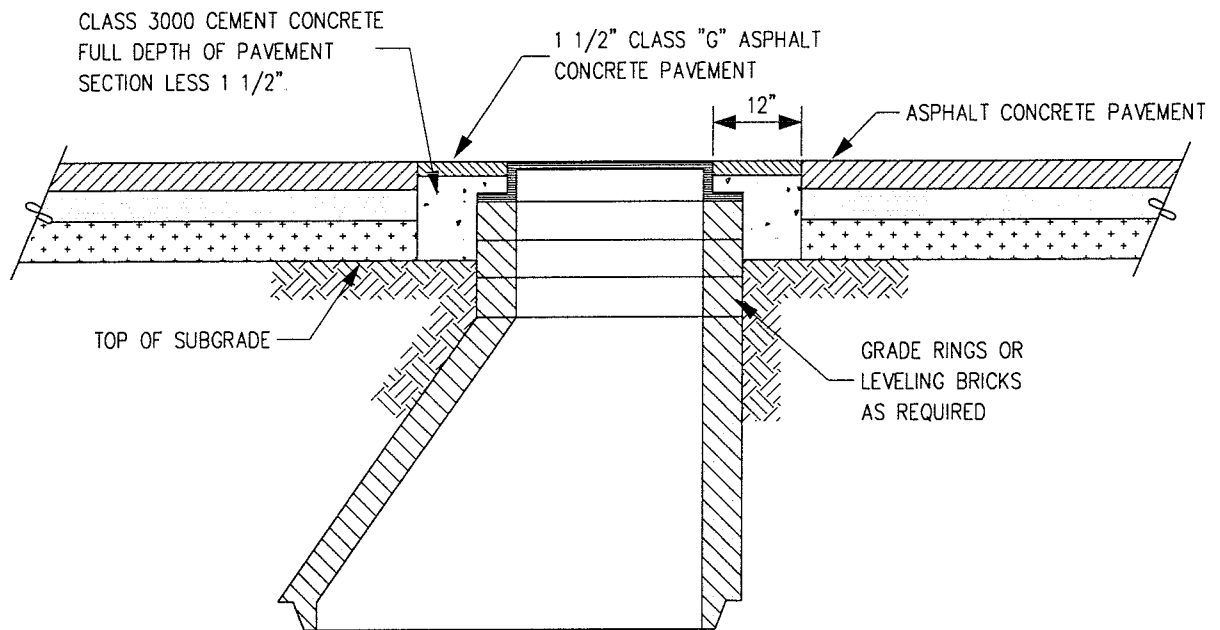
NOTE:
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THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED

ORIG	10-09-01		
Revision	Date	Description	Appr

DROP CONNECTION

CITY OF OMAK-STANDARD DETAIL

S-5



NOTES:

1. MANHOLES SHALL BE ADJUSTED TO FINISHED GRADE AFTER PLACEMENT OF ASPHALT CONCRETE PAVEMENT.
2. GRADE RINGS AND/OR LEVELING BRICKS SHALL BE GROUTED IN PLACE AND BE WATER TIGHT.
3. IN UNPAVED AREAS, PROVIDE 12" THICK, 5' DIA. CEMENT CONCRETE RING AROUND TOP OF MANHOLE. SET MANHOLE FRAME FLUSH W/ FINISHED GRADE AND SLOPE CONCRETE OUTWARD AT 1/4"/FT.

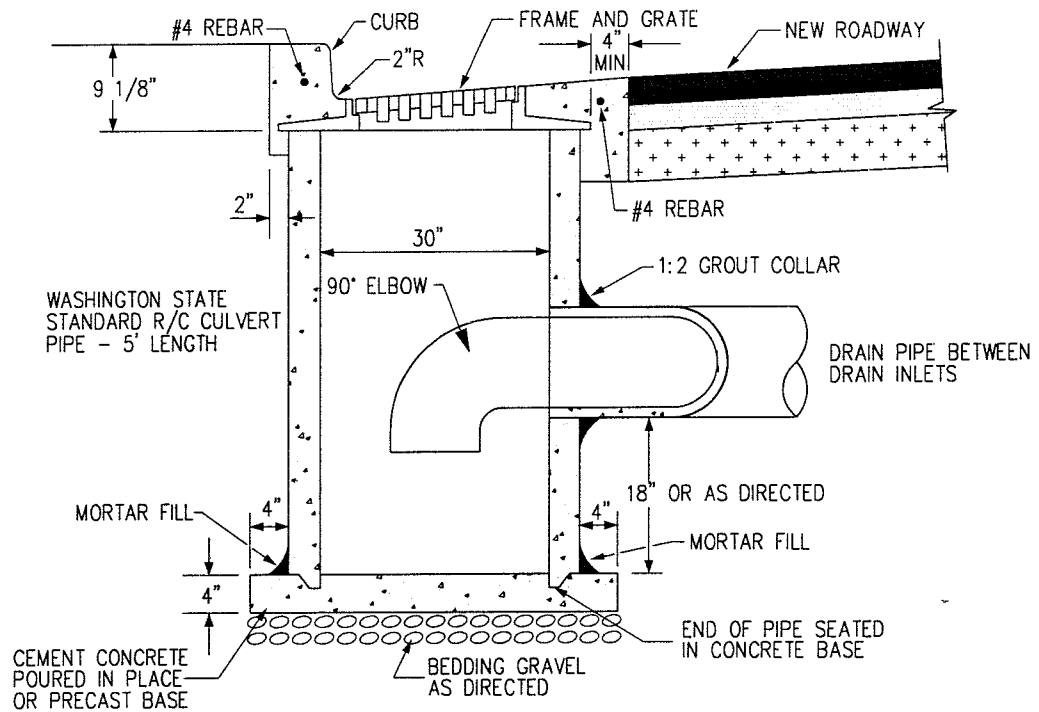
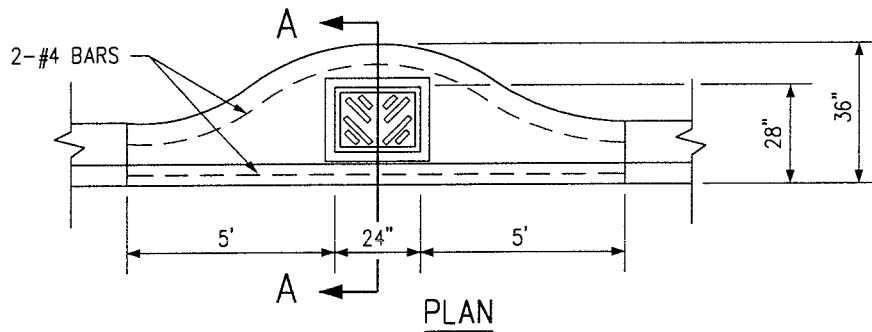
NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED

ORIG.	10-09-01		
Revision	Date	Description	Appr

MANHOLE ADJUSTMENT DETAIL

CITY OF OMAK-STANDARD DETAIL

S-6



SECTION A - A

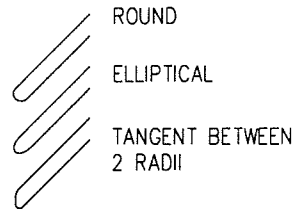
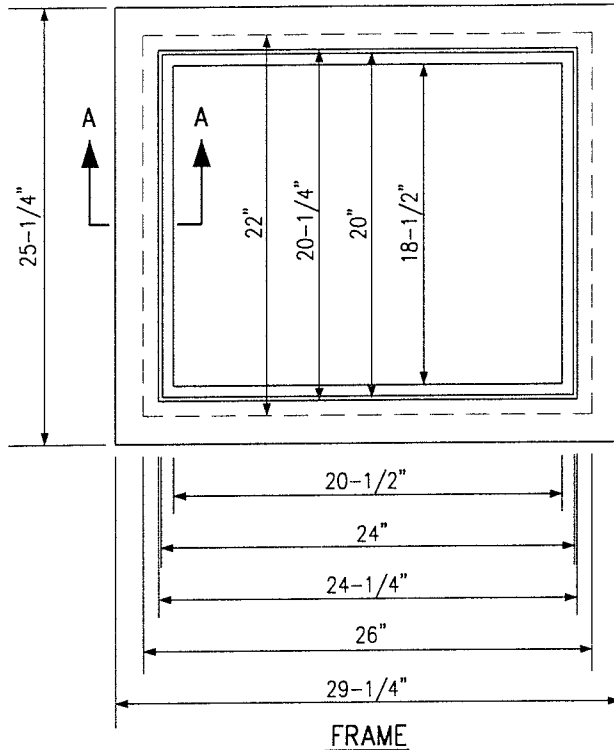
NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

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Revision	Date	Description	Appr

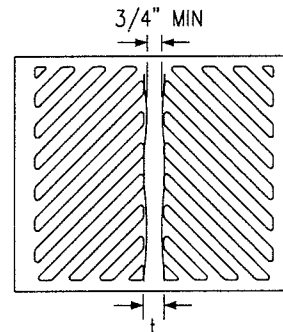
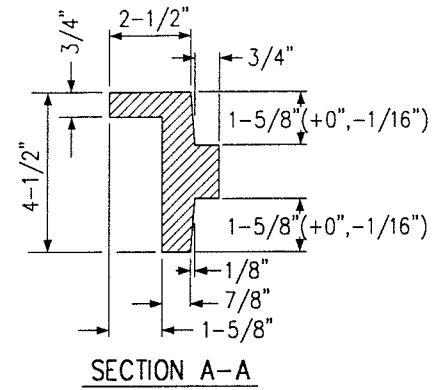
30" DIA. CATCH BASIN

CITY OF OMAK-STANDARD DETAIL

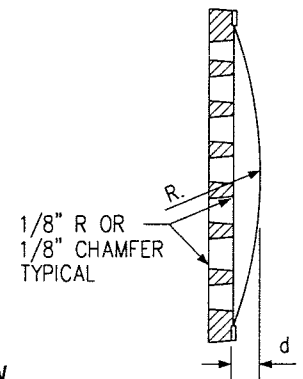
D-1



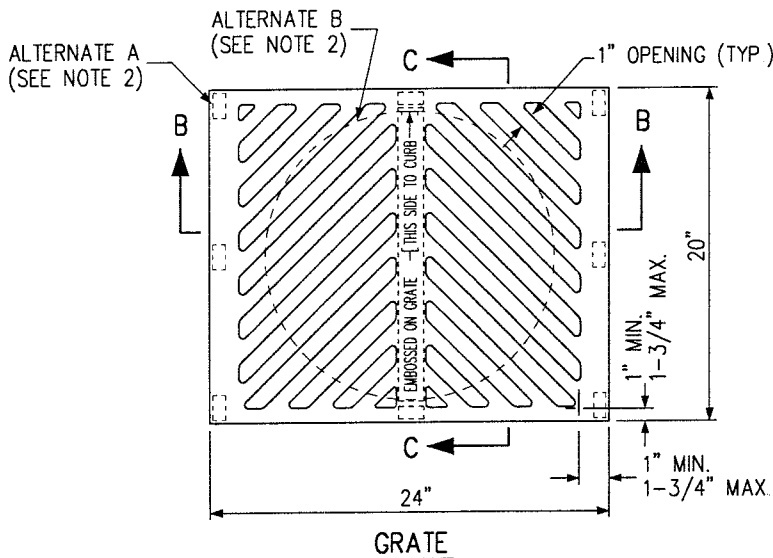
OPTIONAL DESIGN FOR
GRATE OPENING ENDS



OPTIONAL RIB-BOTTOM VIEW



SECTION C-C

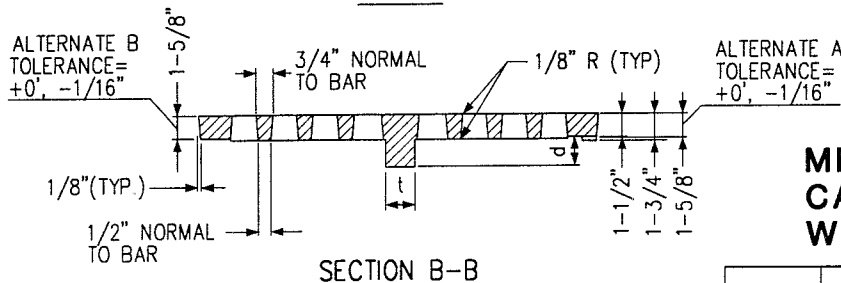


DIMENSIONS	t	R	d
STANDARD GRATE	1-3/4"	26"	1-5/8"
GRATE WITH OPTIONAL RIB	1-1/2"	21"	2-3/4"

WEIGHT	
FRAME	158 LBS ± 5%
GRATE	118 LBS ± 5%

NOTES:

- 3" to 5" DRAFT PERMITTED AS NEEDED.
- SEATING OF GRATE SHALL BE ACCOMPLISHED BY ONE OF THE FOLLOWING: ALTERNATE A SHALL BE EIGHT PADS 1-1/2" x 3/4" x 1/8" TO 1/4" INTEGRALLY CAST WITH THE GRATE. ALTERNATE B SHALL BE A MACHINED SURFACE OUTSIDE A 17" CIRCLE, BOTTOM ONLY. (SEE SECTION B-B).
- TOLERANCE ON ALL DIMENSIONS SHALL BE ±1/16" UNLESS OTHERWISE NOTED.



NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED

**METAL FRAME AND GRATE FOR
CATCH BASIN AND INLET
WSDOT STANDARD PLAN B-2a**

ORIG	10-09-01		
Revision	Date	Description	Appr

CHAPTER 8

CAPITAL IMPROVEMENT PROGRAM

Various improvement projects were identified in Chapter 3. A brief description of each project selected for the 10-year and 20-year planning horizons is presented in this chapter. A map showing the location of projects included in the 10-year planning horizon is presented on Figure 8-1. Detailed cost estimates are provided in Appendix N. A schedule for implementing the 10-year planned improvements is provided in Table 8-1 at the end of this chapter. Approaches to financing the improvements planned for the next 10 years are discussed in Chapter 9.

WATER RIGHTS

The City plans to file change applications with the Washington State Department of Ecology to consolidate its existing water rights to give the City greater flexibility in managing its water resources.

The City includes areas within the boundaries of the Confederated Tribes of the Colville Reservation (CTCR). The City plans to work with the CTCR to review and coordinate water rights applications as deemed beneficial to preserve, enhance and support predictable growth within this area of joint planning jurisdiction.

SOURCE PROTECTION

The City plans to pursue protective covenants for all City wells.

TELEMETRY

There are no telemetry system improvements identified for the 10- and 20-year planning periods.

SOURCE IMPROVEMENTS

The City has identified the following source improvements for its 10-year improvement schedule:

- 1. Julia Maley Park Well Equipping** – Equip Julia Maley Park Well with vertical turbine pump and VFD motor, well house, gas chlorination, piping, electrical, telemetry, instrumentation and trailer-mounted generator.
- 2. Eastside Well Pump No. 4** – Rebuild Eastside Well pump.

3. **Well Improvements** – Install automatic transfer switches at OWP No. 2 and Eastside wells, and reconfigure transfer switch at NE Omak well to accommodate trailer-mounted generator to be purchased for the Julia Maley Park well.
4. **Okoma Well Inspection** – Provide downhole video inspection and report to investigate possible well rehabilitation.
5. **Okoma Well Rehabilitation** – Rehabilitate Okoma Well in accordance with the findings and recommendations of the well inspection and feasibility study (20-year plan).
6. **New Well** – Drill and equip a new well to increase source reliability with the City's water system (20-year plan).

TREATMENT

The City has identified the following treatment improvements for its 10-year improvement schedule:

7. **Arsenic Treatment Pilot Study** – Pilot study to investigate alternatives make recommendations for arsenic treatment at the Julia Maley Park well if further sampling and testing at the well demonstrate arsenic levels in excess of the maximum contaminant level.
8. **Arsenic Treatment Facility** – Construct an arsenic treatment facility for the Julia Maley Park in accordance with recommendations of the arsenic treatment pilot study, if required.

STORAGE

The City has identified the following storage improvements for its 10- and 20-year improvement schedules:

9. **South Hill Reservoir Altitude Valve** – Repair non-operational altitude valve.
10. **Ross Canyon Reservoirs Inspection and Repair** – Perform reservoir cleaning, inspection, and repairs to correct reservoir weeping issues.
11. **Reservoir Cleaning and Inspection** – Cleaning and inspection of Riverside, South Hill, and Coleman Butte reservoirs.
12. **Coleman Butte Reservoir Mixing** – Installation of mixing system to reduce risk of water stagnation and icing.

DISTRIBUTION

The City has identified the following distribution system improvements for its 10- and 20-year improvement schedules:

13. **Hospital Water Main Loop** – Developer installation of 8-inch water line to Hospital to provide for fire flow.
14. **Riverside Reservoir Transmission Line Valve Replacement** – Replacement leaking and non-operational valves.
15. **Ash Street Booster Pump Station Improvements** – Replacement of booster pump station pumps, valves, piping, and appurtenances and installation of a variable speed drive.
16. **Columbia Street Water Main** – Construct new 12-inch water main on Columbia Street from Omak Avenue to 5th Avenue.
17. **Jackson Street Water Upsize** – Upsize water main on Jackson Street from 4th Avenue to 5th Avenue and on 5th Avenue from Jackson to east to 8-inch.
18. **Granite Street Water Main** – Upsize water main on Granite Street from 5th Avenue to 6th Avenue.
19. **7th Avenue Water Main Improvements** – Upsize water main on 7th Avenue from Edmonds to Jackson Street with 12-inch water main and on Jackson Street from 7th Avenue to just north of 6th Avenue. This improvement includes the jack and bore installation of 24-inch steel casing pipe crossing the Cascade & Columbia River Railroad track on 7th Avenue.
20. **Garfield Street Water Main** – Construct new 8-inch water line on Garfield Street from Omak Avenue to 5th Avenue to provide looping and install hydrants for fire flow.
21. **Hanford Street Alley Water Main** – Construct new 8-inch water line in alley west of Hanford Street from Omak Avenue to 5th Avenue to provide looping and install hydrants for fire flow.
22. **Skyview Drive/Skyview Circle Water Main Upsize** – Upsize water main on Skyview Drive from Grape Avenue to Locust Street and on Skyview Circle to 8-inch.

23. **Hydrant Installation** – Install and connect new fire hydrants to larger water mains in areas where parallel water lines are active and fire flows in existing hydrants are insufficient.
24. **Elberta Avenue Water Main Loop** – Construct 8-inch water main on Elberta Avenue from Ash Street to Ironwood Street.
25. **Hale Avenue Water Main Loop Improvements** – Construct 8-inch water main on Hale Avenue between Ironwood and Kenwood Streets and on Juniper and Jack Pine Streets from Hale Avenue to Jonathan Avenue.
26. **Birch Street Water Main Loop** – Construct 8-inch water main on Birch Street from Elberta to Grape Avenues and on Grape Avenue from Ash Street to just west of Birch Street.
27. **Fig Avenue Water Main Upsize** – Install 8-inch water main on Fig Avenue from Ironwood to Locust Avenues.
28. **Dewberry Avenue Loop** – Construct 8-inch water main on Dewberry Avenue from Locust to Kenwood Streets, north in alley and east to Locust Street.
29. **Pine Street Upsize** – Upsize two dead-end hydrant lines on Pine Street and east of Pine Street just south of Riverside Drive to 8-inch (20-year plan).
30. **Sunrise Drive/Ironwood Street Water Main Upsize** – Upsize water main on Sunrise Drive from valve cluster to Ironwood Street north to end to 8-inch (20-year plan).
31. **Pan Vista Drive/Vista Place Water Main Upsize** – Upsize water mains on Pan Vista Drive and Vista Place from Lime Street north to 8-inch (20-year plan).
32. **Apple Avenue Water Main Upsize** – Upsize water main on Apple Avenue between Cedar and Ash Streets to 8-inch (20-year plan).
33. **Canyon Court Drive Water Main Upsize** – Upsize water main on Canyon Court Drive to 8-inch (20-year plan).
34. **Dewberry Avenue/Riverside Drive Water Main Upsize** – Upsize water main on Dewberry Avenue from Kenwood to Locust Streets and from Ash to Main Streets and on Riverside Drive from Dewberry to Cherry Avenues to 8-inch (20-year plan).
35. **Grainger Avenue Water Main Upsize** – Upsize water main on Grainger Avenue between Locust and Maple Streets to 8-inch (20-year plan).

36. **Riverside Drive Water Main Upsize** – Upsize water main on Riverside Drive from Grape Avenue to just west of Locust Street to 8-inch (20-year plan).
37. **Hillcrest Circle Water Main Upsize** – Upsize water main on Hill Crest Circle and Hill Crest Place to 8-inch (20-year plan).
38. **Hale Avenue Cul-de-Sac Water Main Upsize** – Upsize water main on Hale Avenue from last valve cluster west to cul-de-sac to 8-inch (20-year plan).
39. **Omak River Road Water Main Upsize** – Upsize water main on Omak River Road to 8-inch (20-year plan).
40. **Edmonds Street/4th Avenue Loop** – Construct 8-inch water main on Edmonds Street from 3rd to 4th Avenues and on 4th Avenue from Edmonds Street to Dayton Street (20-year plan).

OPERATIONS AND MAINTENANCE

41. **Eastside Park Metering** – Install meters in Eastside Park.
42. **Water Valve Replacement** – Install valves in downtown Omak for isolation control.
43. **AMR Meter Reading Upgrade** – Replace standard residential meters throughout the City with radio-read meters.

SCHEDULE

A schedule for the City's planned capital improvements is provided in Table 8-1.

TABLE 8-1

Capital Improvement Plan

PROJECT	MAY 2017 COST ⁽¹⁾	YEAR PLANNED										
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	>2026
MISCELLANEOUS												
Water Rights Consolidation	\$10,000		X									
Source Protective Covenants	-----	X										
SOURCE												
1. Julia Maley Park Well Equipping	\$1,400,000	X										
2. Eastside Well Pump No. 4	\$35,000 ⁽²⁾	X										
3. Well Improvements	\$183,000				X							
4. Okoma Well Inspection	\$67,000				X							
5. Okoma Well Rehabilitation												X
6. New Well												X
TREATMENT												
7. Arsenic Treatment Pilot Study	\$30,000		X									
8. Arsenic Treatment Facility	\$1,385,000			X								
STORAGE												
9. South Hill Reservoir Altitude Valve	\$30,000 ⁽²⁾	X										
10. Ross Canyon Reservoirs Inspect./Repair	\$30,000				X							
11. Reservoir Cleaning and Inspection	\$60,000				X							
12. Coleman Butte Reservoir Mixing	\$60,000				X							

TABLE 8-1 (con't)

Capital Improvement Plan

PROJECT	MAY 2017 COST ⁽¹⁾	YEAR PLANNED										
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	>2026
DISTRIBUTION												
13. Hospital Water Main Loop	N/A ⁽³⁾	X										
14. Riverside Res. Transmission Line Valve Repl.	\$120,000				X							
15. Ash Street Booster Pump Station Improvements	\$716,000		X									
16. Columbia Street Water Main	\$445,000						X					
17. Jackson Street Water Main Upsize	\$206,000						X					
18. Granite Street Water Main	\$214,000					X						
19. 7 th Avenue Water Main Improvements	\$832,000							X				
20. Garfield Street Water Main	\$158,000								X			
21. Hanford Street Alley Water Main	\$128,000								X			
22. Skyview Drive/Skyview Circle Water Main Upsize	\$208,000									X		
23. Hydrant Installation	\$40,000		X									
24. Elberta Avenue Water Main Loop	\$163,000									X		
25. Hale Avenue Water Main Loop Impr.	\$354,000									X		
26. Birch Street Water Main	\$237,000										X	
27. Fig Avenue Water Main Upsize	\$244,000										X	
28. Dewberry Avenue Loop	\$405,000										X	

TABLE 8-1 (con't)

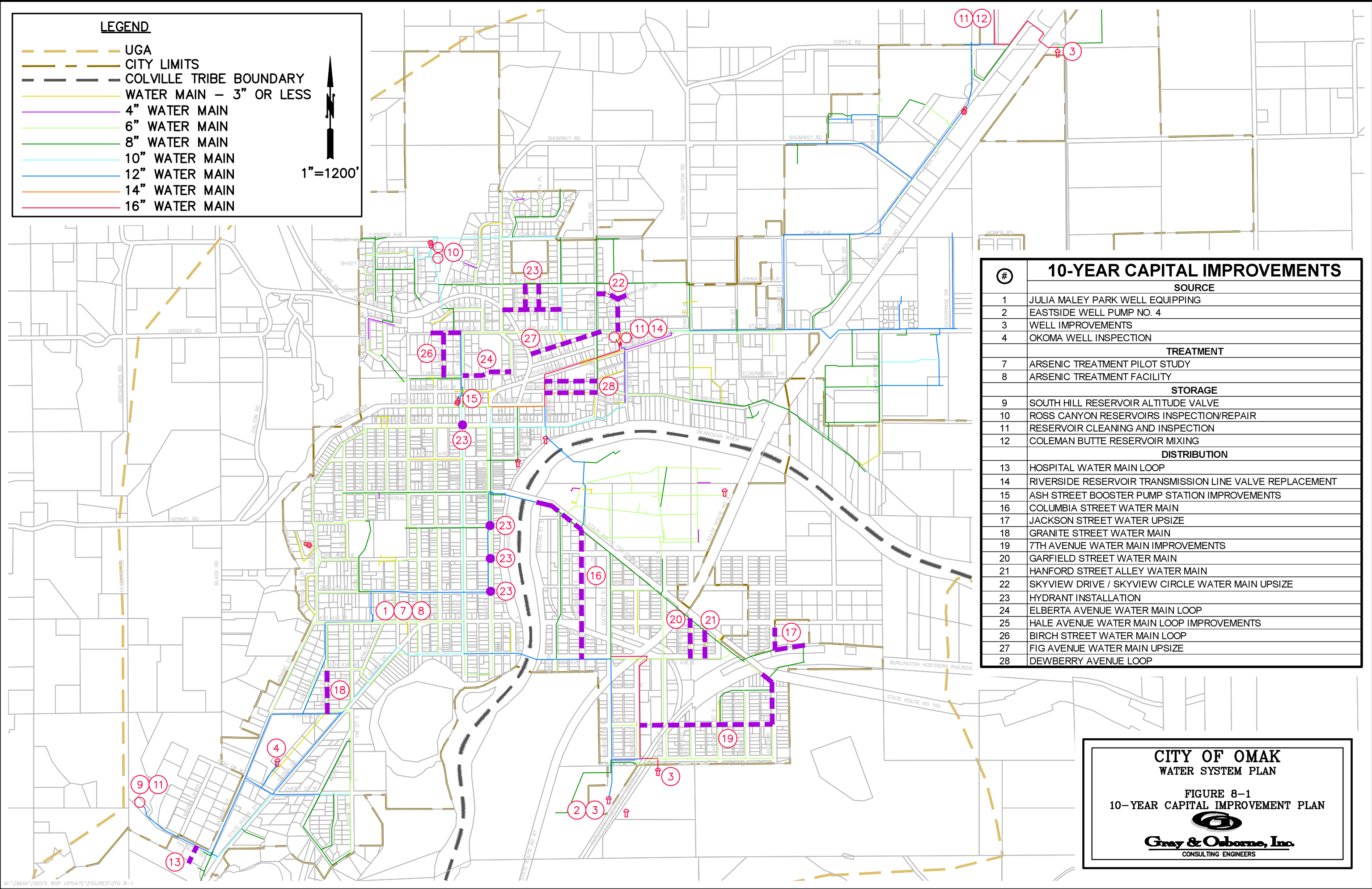
Capital Improvement Plan

PROJECT	MAY 2017 COST ⁽¹⁾	YEAR PLANNED										
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	>2026
DISTRIBUTION CON'T												
29. Pine Street Upsize												X
30. Sunrise Drive/Ironwood Street Water Main Upsize												X
31. Pan Vista Drive/Vista Place Water Main Upsize												X
32. Apple Avenue Water Main Upsize												X
33. Canyon Court Drive Water Main Upsize												X
34. Dewberry Avenue/Riverside Drive Water Main Upsize												X
35. Grainger Avenue Water Main Upsize												X
36. Riverside Drive Water Main Upsize												X
37. Hillcrest Circle Water Main Upsize												X
38. Hale Avenue Cul-de-Sac Water Main Upsize												X
39. Omak River Road Water Main Upsize												X
40. Edmonds Street/4 th Avenue Loop												X
OPERATIONS AND MAINTENANCE												
41. Eastside Park Metering	\$275,000 ⁽²⁾	X										
42. Water Valve Replacement	\$66,000 ⁽²⁾	X										
43. AMR Meter Reading Upgrade	\$300,000 ⁽²⁾	X										

(1) 10-year capital improvement only; construction costs for 20-year capital improvements not included.

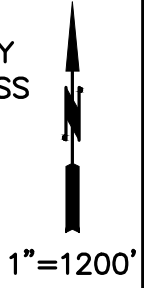
(2) From City's 2017 final budget request.

(3) Water system improvement to be performed by developer.



LEGEND

- UGA
- CITY LIMITS
- COLVILLE TRIBE BOUNDARY
- WATER MAIN – 3" OR LESS
- 4" WATER MAIN
- 6" WATER MAIN
- 8" WATER MAIN
- 10" WATER MAIN
- 12" WATER MAIN
- 14" WATER MAIN
- 16" WATER MAIN



10-YEAR CAPITAL IMPROVEMENTS	
#	SOURCE
1	JULIA MALEY PARK WELL EQUIPPING
2	EASTSIDE WELL PUMP NO. 4
3	WELL IMPROVEMENTS
4	OKOMA WELL INSPECTION
TREATMENT	
7	ARSENIC TREATMENT PILOT STUDY
8	ARSENIC TREATMENT FACILITY
STORAGE	
9	SOUTH HILL RESERVOIR ALTITUDE VALVE
10	ROSS CANYON RESERVOIRS INSPECTION/REPAIR
11	RESERVOIR CLEANING AND INSPECTION
12	COLEMAN BUTTE RESERVOIR MIXING
DISTRIBUTION	
13	HOSPITAL WATER MAIN LOOP
14	RIVERSIDE RESERVOIR TRANSMISSION LINE VALVE REPLACEMENT
15	ASH STREET BOOSTER PUMP STATION IMPROVEMENTS
16	COLUMBIA STREET WATER MAIN
17	JACKSON STREET WATER UPSIZE
18	GRANITE STREET WATER MAIN
19	7TH AVENUE WATER MAIN IMPROVEMENTS
20	GARFIELD STREET WATER MAIN
21	HANFORD STREET ALLEY WATER MAIN
22	SKYVIEW DRIVE / SKYVIEW CIRCLE WATER MAIN UPSIZE
23	HYDRANT INSTALLATION
24	ELBERTA AVENUE WATER MAIN LOOP
25	HALE AVENUE WATER MAIN LOOP IMPROVEMENTS
26	BIRCH STREET WATER MAIN LOOP
27	FIG AVENUE WATER MAIN UPSIZE
28	DEWBERRY AVENUE LOOP

CITY OF OMAK
WATER SYSTEM PLAN

FIGURE 8-1
10-YEAR CAPITAL IMPROVEMENT PLAN

Gray & Osborne, Inc.
CONSULTING ENGINEERS

CHAPTER 9

CAPITAL IMPROVEMENT FINANCING

EXISTING RATES AND CHARGES

The City of Omak's water service rates are established by resolution. Manual-read meters are read monthly April through September while radio-read meters are read every month. Customers are billed on a monthly basis according to the rate schedule shown in Table 9-1. As indicated in the table, the City charges a base meter rate that varies with meter size and includes the first 1,000 cubic feet of water usage. Each 100 cubic feet of water usage above the first 1,000 cubic feet is billed at a uniform rate of \$0.66.

TABLE 9-1

2017 Water Service Rates ⁽¹⁾

Residential or Commercial Service	Minimum Charge Base Rate (Inside City Limits)	Minimum Charge Base Rate⁽³⁾ (Outside City Limits)	Cubic Feet Minimum⁽²⁾ (\$0.66/100 cf over min.)
5/8 x 3/4 inch	\$30.82	\$61.64	1,000
3/4 inch straight	\$33.98	\$67.96	1,000
1 inch	\$36.10	\$72.20	1,000
1 1/2 inch	\$50.37	\$100.74	1,000
2 inch	\$71.61	\$143.22	1,000
3 inch	\$77.86	\$155.72	1,000
4 inch	\$84.28	\$168.56	1,000
6 inch or larger	\$114.38	\$228.76	1,000

(1) Source: Resolution 80-2016.

(2) 1,000 cubic feet is provided with the minimum charge. For usage in excess of the minimum, a volume charge of \$0.66 per 100 cubic feet is charged.

(3) Service charges for metered water connections to the City's system located outside city limits are double the amount of those located inside city limits.

Service Connection Fees

Residential, commercial and industrial service connection fees are addressed in Section 9.04.150(a) of the City's Municipal Code. The fee for all new service connections to the City's water system is based on the total actual cost of the installation plus twenty percent overhead.

System Development Fees

System development fees are addressed in Section 9.04.160 of the City's Municipal Code. System development fees are charged for all new connections to the City's water system based on the size of the meter installed as shown in Table 9-2.

TABLE 9-2
Water System Development Fees ⁽¹⁾

Size of Service	System Development Fee for Inside City Limits	System Development Fee for Outside City Limits
5/8" x 3/4" Meter	\$1,000.00	\$2,000.00
3/4" Meter	\$1,250.00	\$2,500.00
1" Meter	\$1,500.00	\$3,000.00
1-1/2" Meter	\$2,000.00	\$4,000.00
2" Meter	\$3,000.00	\$6,000.00
3" Meter	\$5,000.00	\$10,000.00
4" Meter	\$7,500.00	\$15,000.00
6" Meter	\$10,000.00	\$20,000.00

(1) These water system development fees are in addition to any fees or charges imposed under the provisions of Section 9.04.510 and Chapter 9.20. If a service is replaced with a larger meter size, the owner will pay the difference between the current system development fee for the meter being installed and the one being replaced.

HISTORICAL FINANCIAL STATUS

Revenues and expenditures are shown over the past six year period ending December 2016. The historical financial information provided for this table is from the City's 2011-2016 auditors' reports.

TABLE 9-3
Historical Water Utility Revenues and Expenditures

	2011	2012	2013	2014	2015	2016
Beginning Cash and Investments						
30810 Reserved	\$72,315.00	\$72,315.00	\$72,315.00	\$71,925.00	\$71,925.00	\$0.00
30880 Unreserved	\$963,003.45	\$853,856.18	\$777,242.68	\$920,996.42	\$1,080,727.36	\$1,457,059.32
Operating Revenues						
340 Charges for Goods and Services	\$926,390.62	\$1,085,111.14	\$1,143,454.62	\$1,175,205.33	\$1,257,907.01	\$1,284,002.42
360 Miscellaneous	\$2,276.51	\$2,569.80	\$1,886.16	\$4,002.00	\$4,044.75	\$7,151.17
Total Operating Revenues	\$928,667.13	\$1,087,680.94	\$1,145,340.78	\$1,179,207.33	\$1,261,951.76	\$1,291,153.59
Operating Expenditures						
510 General Government	\$96,224.46	\$109,662.97	\$97,855.46	\$99,531.62	\$97,662.52	\$100,215.94
530 Physical Environment/Utilities	\$456,601.71	\$603,576.95	\$587,930.24	\$635,553.43	\$632,965.84	\$641,813.96
Total Operating Expenditures	\$552,826.17	\$713,239.92	\$685,785.70	\$735,085.05	\$730,628.36	\$742,029.90
Net Operating Increase (Decrease)	\$375,840.96	\$374,441.02	\$459,555.08	\$444,122.28	\$531,323.40	\$549,123.69
Non-operating Revenues						
370, 380, 395, 398 Other Financing Sources	\$0.00	\$0.00	\$633.32	\$0.00	\$0.00	\$0.00
391-393 Debt Proceeds	\$0.00	\$0.00	\$0.00	\$0.00	\$41,564.51	\$439,726.05
Total Non-operating Revenues	\$0.00	\$0.00	\$633.32	\$0.00	\$41,564.51	\$439,726.05
Non-operating Expenditures						
591-593 Debt Service	\$26,258.32	\$21,909.73	\$282,603.68	\$198,154.69	\$198,213.94	\$154,457.95
580 Non-expenditures (except 584)	\$260,220.04	\$265,220.04	\$0.00	\$0.00	\$0.00	\$0.00
594-595 Capital Outlay	\$198,509.87	\$163,924.75	\$34,220.98	\$86,236.65	\$70,267.03	\$555,179.98
Total Non-operating Expenditures	\$484,988.23	\$451,054.52	\$316,824.66	\$284,391.34	\$268,480.97	\$709,637.93
Increase (Decrease) in Cash and Investments	(\$109,147.27)	(\$76,613.50)	\$143,363.74	\$159,730.94	\$304,406.94	\$279,211.81
Ending Cash and Investments						
50810 End Fund Balance - Reserved	\$72,315.00	\$72,315.00	\$71,925.00	\$71,925.00	\$0.00	\$0.00
50880 End Fund Balance - Unreserved	\$853,856.18	\$777,242.68	\$920,996.42	\$1,080,727.36	\$1,457,059.30	\$1,736,271.13

FUNDING SOURCES

The following section describes the several funding sources available to the City without reference to any specific project. The selected funding sources will depend on the status of the City's existing financial commitments, capital and cash flow requirements, funding source availability, and the impact on the service rates and connections charges. Potential funding sources are summarized in Table 9-4.

The following is a discussion of the most likely funding sources for the water capital improvement projects.

City Funded – The City had approximately \$1,700,000 in reserves at the end of 2016. The City had expressed a desire to keep approximately \$750,000 - 1,000,000 in reserves for unforeseen expenses, leaving up to approximately \$1,000,000 that could be utilized to fund small capital projects.

Public Works Trust Fund - The state has not funded this program for several years and the future of this funding source is unknown. This plan will assume that this funding source is not available.

Community Development Block Grant (CDBG) - The City is eligible for the CDBG General Purpose Grant program. For the 2017 program year CDBG has \$9,000,000 available in General Purpose Grant funds with maximum grant amounts of \$750,000 for design/construction.

Drinking Water State Revolving Fund (DWSRF) - DWSRF will provide loan funding for water system projects. Health and safety projects will receive the highest rankings and receive funding. Water main projects, even those projects that improve fire flow typically do not receive a ranking high enough to receive funding.

USDA Rural Development - Rural Development will provide grant and loan financing for most of the projects that are on the ten-year capital improvement plan. Rural Development will provide loans from 20 to 40 years in duration. It is best to use Rural Development for large capital projects or combine several capital projects into a large project because of the requirements of Rural Development.

Revenue Bonds - Can be utilized to fund any water system improvement. However the interest rates for revenue bonds are typically higher than other funding options.

The ten-year financing plan is shown in Table 9-5.

TABLE 9-4
Grant and Loan Programs

Agency	Program	Maximum Amount	Program Uses/General Information	Application Cycle
Community Development Block Grant	General Purpose Grant – Planning Only	\$24,000	Planning documents and studies.	June 2017
	General Purpose Grant	\$750,000	Planning documents and studies; final design and construction.	June 2017
Washington State Department of Health	DWSRF – Pre-Construction Grant	\$30,000	Planning documents; studies; design; historic, cultural, and environmental review.	May 31, 2018
	DWSRF – Consolidation Grant	\$30,000	Planning documents and feasibility studies for consolidation of Group A water systems.	May 31, 2018
	DWSRF – Preconstruction Loan	\$300,000	1.5% interest rate; 1% loan fee; 6-year repayment period	June 30, 2017
	DWSRF – Construction Loan	\$3,000,000	1.0 - 1.5% interest rate; 1% loan origination fee; 20-year term.	November 30, 2017
	Source Water Protection Grant	\$30,000	Studies to identify solutions to source water protection problems.	Year-round
Washington State Department of Ecology	State Water Pollution Control Revolving Fund – Centennial Clean Water Fund	Subject to funding availability	Loan rates TBD; 50% forgivable principal loan and 50% loan for distressed communities.	October 2017
USDA Rural Development	RUS Water and Waste Disposal Direct Loans and Grants	Subject to funding availability	Design and construction; 2.0-3.375% interest rate; up to 40-year term.	Year-round

TABLE 9-5

10-Year Financing Plan

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Beginning Cash and Investments										
30880 Unreserved	\$1,736,271.13	\$1,246,911.66	\$634,552.19	\$847,715.27	\$537,878.36	\$548,041.45	\$788,622.37	\$953,991.27	\$1,085,309.40	\$1,144,340.87
Operating Revenues										
340 Charges for Goods and Services ⁽¹⁾	\$1,250,000	\$1,313,000	\$1,379,000	\$1,448,000	\$1,462,000	\$1,477,000	\$1,492,000	\$1,507,000	\$1,522,000	\$1,537,000
360 Miscellaneous	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Total Operating Revenues	\$1,255,000	\$1,318,000	\$1,384,000	\$1,453,000	\$1,467,000	\$1,482,000	\$1,497,000	\$1,512,000	\$1,527,000	\$1,542,000
Operating Expenditures ⁽²⁾										
510 General Government	\$105,000	\$108,000	\$111,000	\$114,000	\$117,000	\$121,000	\$125,000	\$129,000	\$133,000	\$137,000
530 Physical Environment/Utilities	\$650,000	\$670,000	\$690,000	\$711,000	\$732,000	\$754,000	\$777,000	\$800,000	\$824,000	\$849,000
Total Operating Expenditures	\$755,000	\$778,000	\$801,000	\$825,000	\$849,000	\$875,000	\$902,000	\$929,000	\$957,000	\$986,000
Net Operating Increase (Decrease)	\$500,000	\$540,000	\$583,000	\$628,000	\$618,000	\$607,000	\$595,000	\$583,000	\$570,000	\$556,000
Non-operating Revenues										
391-393 Debt Proceeds	\$1,400,000 ⁽³⁾	\$0	\$1,470,000 ⁽³⁾	\$0	\$0	\$755,000 ⁽⁴⁾	\$993,000 ⁽⁴⁾	\$351,000 ⁽⁴⁾	\$918,000 ⁽⁴⁾	\$1,156,000 ⁽⁴⁾
Non-operating Expenditures										
591-593 Debt Service	\$283,359	\$332,359	\$369,837	\$367,837	\$366,837	\$366,419	\$429,631	\$451,682	\$510,969	\$512,885
594-595 Capital Outlay ⁽⁵⁾	\$2,106,000	\$820,000	\$1,470,000	\$570,000	\$241,000	\$755,000	\$993,000	\$351,000	\$918,000	\$1,156,000
Total Non-operating Expenditures	\$2,389,359.47	\$1,152,359.47	\$1,839,836.91	\$937,836.91	\$607,836.91	\$1,121,419.07	\$1,422,631.10	\$802,681.88	\$1,428,968.53	\$1,668,885.05
Increase (Decrease) in Cash and Investments	(\$489,359.47)	(\$612,359.47)	\$213,163.09	(\$309,836.91)	\$10,163.09	\$240,580.93	\$165,368.90	\$131,318.12	\$59,031.47	\$43,114.95
Ending Cash and Investments										
50880 End Fund Balance - Unreserved	\$1,246,911.66	\$634,552.19	\$847,715.27	\$537,878.36	\$548,041.45	\$788,622.37	\$953,991.27	\$1,085,309.40	\$1,144,340.87	\$1,187,455.83

(1) Assumes 5 percent year over year increase in revenues through increased rates and charges for the first three years then 1 percent year over year increases thereafter.

(2) Assumes 3 percent increase in operating expenditures to account for inflation.

(3) Assumed DWSRF loan at 1.5 percent interest rate, 20 years, with 1 percent loan origination fee. Projects include Julia Maley Park Well Equipping and Arsenic Treatment Facility, all in accordance with the schedule shown in Table 8-1.

(4) Assumed USDA Rural Development loan at 2.75 percent interest rate, 20 years. Projects include Columbia Street Water Main, Jackson Street Water Main Upsize, 7th Avenue Water Main Improvements, Garfield Street Water Main, Hanford Street Water Main, Skyview Drive/Skyview Circle Water Main Upsize, Elberta Avenue Water Main Loop, Hale Avenue Water Main Loop Improvements, Birch Street Water Main, Fig Avenue Water Main Upsize, and Dewberry Avenue Loop, all in accordance with the schedule shown in Table 8-1.

(5) Capital outlays include all capital improvement projects. All projects not previously identified as being funded through DWSRF, USDA Rural Development or developer funded are assumed to be funded with City funds.

APPENDIX A
ANNUAL OPERATING PERMIT

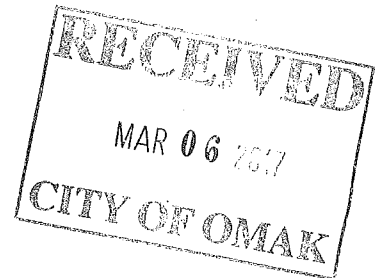
STATE OF WASHINGTON
Public Water System
Operating Permit

The Department of Health Office of Drinking Water issues a permit to operate:

OMAK, CITY OF (ID# 63750 K)

to owner: OMAK, CITY OF County: OKANOGAN

OMAK, CITY OF
PO Box 72
Omak, WA 98841



This Permit is valid through: May 2018

PERMIT CATEGORY: **** Green ****

The permit category may be modified or the permit revoked subject to water system compliance with applicable State of Washington drinking water rules and regulations and the following statements.

The system operating permit color category is based on information on file with the Department at the time this permit was printed.

System is substantially in compliance with applicable drinking water requirements.



APPENDIX B

WATER FACILITIES INVENTORY



WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter: 1

Updated: 04/03/2018

Printed: 4/3/2018

WFI Printed For: On-Demand

Submission Reason: Pop/Connect
Update

RETURN TO: Central Services - WFI, PO Box 47822, Olympia, WA, 98504-7822

1. SYSTEM ID NO. 63750 K	2. SYSTEM NAME OMAK CITY OF	3. COUNTY OKANOGAN	4. GROUP A	5. TYPE Comm
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6. PRIMARY CONTACT NAME & MAILING ADDRESS COREY D. WILDER [CHIEF OPERATOR] PO BOX 72 OMAK, WA 98841	7. OWNER NAME & MAILING ADDRESS OMAK, CITY OF COREY D. WILDER PO BOX 72 OMAK, WA 98841	8. OWNER NUMBER: 004270 CHIEF OPERATOR
STREET ADDRESS IF DIFFERENT FROM ABOVE ATTN ADDRESS 2 N ASH STREET CITY OMAK STATE WA ZIP 98841	STREET ADDRESS IF DIFFERENT FROM ABOVE ATTN ADDRESS 2 N ASH CITY OMAK STATE WA ZIP 98841	

9. 24 HOUR PRIMARY CONTACT INFORMATION	10. OWNER CONTACT INFORMATION
Primary Contact Daytime Phone: (509) 826-1170	Owner Daytime Phone: (509) 826-1170
Primary Contact Mobile/Cell Phone: (509) 322-4047	Owner Mobile/Cell Phone: (509) 322-4047
Primary Contact Evening Phone: (509) 322-0844	Owner Evening Phone: (509) 322-4042
Fax:	E-mail: water@omakcity.com
Fax: (509) 826-6531	E-mail: water@omakcity.com

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)	
<input checked="" type="checkbox"/> Not applicable (Skip to #12)	
<input type="checkbox"/> Owned and Managed	SMA NAME: _____ SMA Number: _____
<input type="checkbox"/> Managed Only	
<input type="checkbox"/> Owned Only	

12. WATER SYSTEM CHARACTERISTICS (mark all that apply)		
<input type="checkbox"/> Agricultural	<input checked="" type="checkbox"/> Hospital/Clinic	<input checked="" type="checkbox"/> Residential
<input checked="" type="checkbox"/> Commercial / Business	<input type="checkbox"/> Industrial	<input checked="" type="checkbox"/> School
<input checked="" type="checkbox"/> Day Care	<input checked="" type="checkbox"/> Licensed Residential Facility	<input type="checkbox"/> Temporary Farm Worker
<input checked="" type="checkbox"/> Food Service/Food Permit	<input checked="" type="checkbox"/> Lodging	<input checked="" type="checkbox"/> Other (church, fire station, etc.): _____
<input checked="" type="checkbox"/> 1,000 or more person event for 2 or more days per year	<input checked="" type="checkbox"/> Recreational / RV Park	

13. WATER SYSTEM OWNERSHIP (mark only one)	14. STORAGE CAPACITY (gallons)
<input type="checkbox"/> Association	2,865,000
<input checked="" type="checkbox"/> City / Town	
<input type="checkbox"/> County	
<input type="checkbox"/> Investor	
<input type="checkbox"/> Private	
<input type="checkbox"/> Special District	
<input type="checkbox"/> State	

- SEE NEXT PAGE FOR A COMPLETE LIST OF SOURCES -

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO. 63750 K	2. SYSTEM NAME OMAK CITY OF	3. COUNTY OKANOGAN	4. GROUP A	5. TYPE Comm
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15	16 SOURCE NAME	17 INTERTIE	18 SOURCE CATEGORY										19 USE	20	21 TREATMENT					22 DEPTH	23	24 SOURCE LOCATION					
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	Eastside Well - AGJ179		X									X			Y		X					30	2800	SW NE	35	34N	26E
S02	Apple Well		X											X	Y		X					20	300	NW NW	35	34N	26E
S03	Kenwood		X											X	Y		X					30	350	SW SE	26	34N	26E
S04	Okoma Well - ABR843		X											X	Y		X					90	300	NE SE	34	34N	26E
S06	InAct 10/15/2009 Park Well - AGJ178		X											X	Y		X					44	250	SW SW	25	34N	26E
S07	OWP Well - AAR993		X									X			Y		X					70	2300	SW NE	35	34N	26E
S08	NE Omak Well - AEC887		X									X			Y		X					268	120	SE SE	24	34N	26E
S09	Pre-Active 07/13/2017 Julia Maley Pa		X									X			Y		X					375	800	SW NW	35	34N	26E

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO. 63750 K	2. SYSTEM NAME OMAK CITY OF	3. COUNTY OKANOGAN	4. GROUP A	5. TYPE Comm
------------------------------------	---------------------------------------	------------------------------	----------------------	------------------------

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)		2159	Unspecified
A. Full Time Single Family Residences (Occupied 180 days or more per year)	1478		
B. Part Time Single Family Residences (Occupied less than 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	103		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	681		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied less than 180 days/year	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	312	312	
28. TOTAL SERVICE CONNECTIONS		2471	

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or more days per year? 4925

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
* Requirement is exception from WAC 246-290	6	6	6	6	6	6	6	6	6	6	6	6

34. NITRATE SCHEDULE (One Sample per source by time period)	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS

35. Reason for Submitting WFI:

☐ Update - Change
 ☐ Update - No Change
 ☐ Inactivate
 ☐ Re-Activate
 ☐ Name Change
 ☐ New System
 ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ **DATE:** _____
PRINT NAME: _____ **TITLE:** _____



Washington State Department of

HealthEnvironmental Health Programs
Division of Drinking Water**WATER FACILITIES INVENTORY (WFI) FORM**

RETURN TO: Central Services - WFI, PO Box 47822, Olympia, WA 98504-7822

1. SYSTEM ID NO.	2. SYSTEM NAME <i>City of Omak</i>	3. COUNTY <i>OKANOGAN</i>	4. GROUP	5. TYPE
------------------	---------------------------------------	------------------------------	----------	---------

6. PRIMARY CONTACT NAME & MAILING ADDRESS <i>Corey Wilder</i> TITLE: <i>System Operator</i> <i>PO Box 72</i> <i>Omak WA 98841</i>		7. OWNER NAME & MAILING ADDRESS <i>City of Omak</i> <i>Corey Wilder</i> TITLE: <i>operator</i> <i>PO Box 72</i> <i>Omak WA 98841</i>		8. Owner Number:
STREET ADDRESS IF DIFFERENT FROM ABOVE		STREET ADDRESS IF DIFFERENT FROM ABOVE		
ATTN <i>Corey Wilder</i>		ATTN <i>Corey Wilder</i>		
ADDRESS <i>2 N Ash St.</i>		ADDRESS <i>2 N Ash St.</i>		
CITY <i>Omak</i>	STATE <i>WA</i>	CITY <i>Omak</i>	STATE <i>WA</i>	ZIP <i>98841</i>

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: <i>509-826-1170</i>		Owner Daytime Phone: <i>509-826-1170</i>	
Primary Contact Mobile/Cell Phone <i>509-322-4047</i>		Owner Mobile/Cell Phone <i>509-322-4047</i>	
Primary Contact Evening Phone		Owner Evening Phone	
Fax: <i>509-826-6531</i> E-mail: <i>water@omakcity.com</i>		Fax: <i>509-826-6531</i> E-Mail: <i>water@omakcity.com</i>	

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)	
<input checked="" type="checkbox"/> Not applicable (Skip to #12) <input type="checkbox"/> Owned and Managed <input type="checkbox"/> Managed Only <input type="checkbox"/> Owned Only	
SMA NAME: _____	SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)		
<input type="checkbox"/> Agricultural <input checked="" type="checkbox"/> Commercial / Business <input type="checkbox"/> Day Care <input type="checkbox"/> Food Service/Food Permit <input type="checkbox"/> 1,000 or more person event for 2 or more days per year	<input type="checkbox"/> Hospital/Clinic <input type="checkbox"/> Industrial <input type="checkbox"/> Licensed Residential Facility <input type="checkbox"/> Lodging <input type="checkbox"/> Recreational / RV Park	<input type="checkbox"/> Residential <input type="checkbox"/> School <input type="checkbox"/> Temporary Farm Worker <input type="checkbox"/> Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)				14. STORAGE CAPACITY (gallons)
<input type="checkbox"/> Association	<input type="checkbox"/> County	<input type="checkbox"/> Investor	<input type="checkbox"/> Special District	
<input checked="" type="checkbox"/> City / Town	<input type="checkbox"/> Federal	<input type="checkbox"/> Private	<input type="checkbox"/> State	

15.	16. SOURCE NAME	17. INTERTIE	18. SOURCE CATEGORY										19. USE	20.	21. TREATMENT					22. DEPTH	23.	24. SOURCE LOCATION						
SOURCE NUMBER	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELLFIELD	SPRING	SPRING FIELD	SPRING IN SPRING FIELD	SEA WATER	SURFACE WATER	RAINFALL / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
	<i>AIR PORT Domestic</i>		<input checked="" type="checkbox"/>										<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>						<i>95'</i>	<i>10</i>	<i>SE, NE</i>	<i>11</i>	<i>34</i>	<i>26E</i>

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	<u>0</u>		
A. Full Time Single Family Residences (Occupied 180 days or more per year)	<u>0</u>		
B. Part Time Single Family Residences (Occupied less than 180 days per year)	<u>0</u>		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	<u>0</u>		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	<u>0</u>		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied less than 180 days/year	<u>0</u>		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV Sites, hotel/motel/overnight units)	<u>0</u>		
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	<u>1</u>		
28. TOTAL SERVICE CONNECTIONS			

29. FULL-TIME RESIDENTIAL POPULATION
A. How many residents are served by this system 180 or more days per year? <u>0</u>

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
B. How many days per month are they present?	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible by the public?	<u>All</u>	<u>All</u>	<u>All</u>	<u>All</u>	<u>All</u>	<u>All</u>	<u>All</u>	<u>All</u>	<u>All</u>	<u>All</u>	<u>All</u>	<u>All</u>

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students, daycare children and/or employees are present each month?	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>
B. How many days per month are they present?	<u>All</u>	<u>All</u>	<u>All</u>	<u>All</u>	<u>All</u>	<u>All</u>	<u>All</u>	<u>All</u>	<u>All</u>	<u>All</u>	<u>All</u>	<u>All</u>

33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

34. NITRATE SCHEDULE	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS

35. Reason for Submitting WFI:
<input checked="" type="checkbox"/> Update-Change <input type="checkbox"/> Update-No Change <input type="checkbox"/> Inactivate <input type="checkbox"/> Re-Activate <input type="checkbox"/> Name change <input type="checkbox"/> New System <input type="checkbox"/> Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.	
SIGNATURE: <u>Cory Wilder</u>	DATE: <u>1-12-18</u>
PRINT NAME: <u>Cory Wilder</u>	TITLE: <u>WDM OPERATOR</u>

APPENDIX C
WATER QUALITY MONITORING

Coliform Monitoring Plan for: OMAK

A. System Information

Plan Date: 1-16-2018

Water System Name <u>City of OMAK</u>	County <u>OKANOGAN</u>	System I.D. Number <u>63750K</u>
Name of Plan Preparer <u>Corey Wilder</u>	Position <u>Operator</u>	Daytime Phone <u>509-826-1170</u>
Sources: DOH Source Number, Source Name, Well Depth, Pumping Capacity	<u>See Attached DATA sheet</u>	
Storage: List and Describe	_____ " " " "	
Treatment: Source Number & Process	_____ " " " "	
Pressure Zones: Number and name	_____ " " " "	
Population by Pressure Zone	_____	
Number of Routine Samples Required Monthly by Regulation:	<u>6</u>	
Number of Sample Sites Needed to Represent the Distribution System:	<u>6</u>	
*Request DOH Approval of Triggered Source Monitoring Plan?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

*If approval is requested a fee will be charged for the review.

B. Laboratory Information

Laboratory Name <u>OKANOGAN County Public Health</u>	Office Phone <u>509-422-7140</u>
Address <u>1234 S. Second.</u> <u>OKANOGAN WA 98840</u>	After Hours Phone <u>MON-Thurs. 7:30-4:30</u>
	Cell Phone <u>- -</u>
	Email <u>Jbellinger@co.okanogan.wa.us</u> <u>422-7154</u>
Hours of Operation <u>Mon-Thurs. 7:30 am - 4:30 pm</u>	
Contact Name <u>JJ. Bellinger</u>	
Emergency Laboratory Name	Office Phone <u>- -</u>
	After Hours Phone <u>- -</u>
Address	Cell Phone <u>- -</u>
	Email <u>_____</u>
Hours of Operation	
Contact Name	

City of Omak

Coliform Monitoring Plan System information

System I.D. 6375ok

DOH Sources

Source #	Name	Status	Depth	Capacity GPM	Treatment
S01	Eastside Well	Permanent	30'	2930	Cl2 gas
S02	Apple Well	Emergency	20'	375	NaClo available
S03	Kenwood Well	Emergency	30'	500	NaClo available
S04	Okoma Well	Emergency	90'	600	NaClo available
S07	OWP	Permanent	70'	5000	Cl2 gas
S08	N.E. Well	Permanent	305	110	Cl2 gas

Pressure Zone 1 (lower)

Storage capacity, 1,565,00 gal. Reservoirs, South Hill, Riverside round concrete, Riverside Rectangular concrete

Pressure Zone 2 (middle)

Storage capacity, 800,000 gal. Reservoirs, Ross Canyon, two round concrete

Pressure booster located within pressure zone 2 (Wildwood pressure booster station)

Pressure zone 3 (upper)

Storage capacity, 550,000 gal. Reservoir, Coleman Butte, Round steel

Total Population Served, 4925 per 2017 census

Total Service Connections, 2471 per 2017 WFI

Revised 01/17/2018

C. Wholesaling of Groundwater

	Yes	No
We are a consecutive system and purchase groundwater from another water system.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If yes, Water System Name: Contact Name: Telephone Numbers Office - - After Hours - -		
We sell groundwater to other public water systems.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If yes, Water System Name: Contact Name: Telephone Numbers Office - - After Hours - -		
If yes, Water System Name: Contact Name: Telephone Numbers Office - - After Hours - -		
If yes, Water System Name: Contact Name: Telephone Numbers Office - - After Hours - -		
If yes, Water System Name: Contact Name: Telephone Numbers Office - - After Hours - -		
If yes, Water System Name: Contact Name: Telephone Numbers Office - - After Hours - -		

Routine, Repeat, and Triggered Source Sample Locations

Routine sample sites Address/location	Repeat Sample Sites Address/Location	Groundwater Sources Triggered Sample Sites
X1. 635 S. Fir, Sewer Treatment Plant	1-1. 635 S Fir, STP 1-2. 607 Okoma, Omak Auto Plaza 1-3. 620 W.Ridge Dr., 1 st Babtist Church	S01 S07
X2. Wildwood Booster Station, Cypress Ave.	2-1. Wildwood Booster 2-2. 802 Quassia ST. 2-3. 5 W. Jonathon Ave.	S01 S07
X3. 220 Columbia, Break room	3-1. 220 Columbia, Break room 3-2. 202 Columbia 3-3. 230 Columbia, City Shop	S01 S07
X4. N.E. Well, Highway 97	4-1. N.E. Well, Highway 97 4-2. 1105 Koala, Pecha's 4-3. 126 Sandflat RD. Co. Shop	S08
X5. 501 Riverside Dr., Riverside Booster Station	5-1. Riverside Booster 5-2. 415 E. Grape 5-3. 523 Riverside Dr.	S01 S07
X6. 16 N. Ash, Fire Dept.	6-1. 16 N Ash 6-2. 2 N. Ash, City Hall 6-3. 25 N. Ash, WVC	S01 S07

When repeat samples are collected every ground water source that was in use when original routine sample was collected must be sampled.

Distribution System *E. coli* Response Checklist

Potential Public Notice Delivery Methods	Yes	No	N/A	To Do List
It is feasible to deliver a notice going door-to-door.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We have a list of all of our customers' addresses.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We have a list of customer telephone numbers or access to a Reverse 9-1-1 system.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We have a list of customer email addresses.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We encourage our customers to remain in contact with us using social media.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We have an active website we can quickly update to include important messages.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our customers drive by a single location where we could post an advisory and expect everyone to see it.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We need a news release to supplement our public notification process.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Distribution System *E. coli* Response Plan

If we have *E. coli* in our distribution system we will immediately:

1. Call DOH.
2. Collect repeat and triggered source samples per Part D. Collect additional investigative samples as necessary.
3. Identify / Isolate Contaminant _____
4. Disinfect Affected Portion of Dist. system _____
5. Make Repairs, Disinfect, Resample _____
6. Deliver Health Advisory through Radio, website & Door to Door _____
7. Discuss with DOH whether to issue a Health Advisory based on the findings of steps 3-6.

***E. coli*-Present Triggered Source Sample Response Checklist –
All Sources**

Background Information	Yes	No	N/A	To Do List
We review our sanitary survey results and respond to any recommendations affecting the microbial quality of our water supply.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We address any significant deficiencies identified during a sanitary survey.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There are contaminant sources within our Wellhead Protection Area that could affect the microbial quality of our source water, and If yes, we can eliminate them.	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
We routinely inspect our well site(s).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We have a good raw water sample tap installed at each source.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After we complete work on a source, we disinfect the source, flush, and collect an investigative sample.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public Notice	Yes	No	N/A	To Do List
We discussed the requirement for immediate public notice of an <i>E. coli</i> -present source sample result with our water system's governing body (board of directors or commissioners) and received direction from them on our response plan.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We discussed the requirement for immediate public notice of an <i>E. coli</i> -present source sample result with our wholesale customers and encouraged them to develop a response plan.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
We have prepared templates and a communications plan that will help us quickly distribute our messages.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

E. coli-Present Triggered Source Sample Response Checklist – Source S__*				
Alternate Sources	Yes	No	N/A	To Do List
We can stop using this source and still provide reliable water service to our customers.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for several months).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We can provide bottled water to all or part of the distribution system for an indefinite period.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We can quickly replace our existing source of supply with a more protected new source.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temporary Treatment	Yes	No	N/A	To Do List
This source is continuously chlorinated, and our existing facilities can provide 4-log virus treatment (CT = 6) before the first customer. If yes, at what concentration? _____ mg/L	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We can reduce the production capacity of our pumps or alter the configuration of our storage quantities (operational storage) to increase the amount of time the water stays in the system before the first customer to achieve CT = 6.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We can alter the demand for drinking water (maximum day or peak hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus treatment with chlorine.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*NOTE: If your system has multiple sources, you may want to complete a separate checklist for each source.

E. coli-Present Triggered Source Sample Response Plan – Source S__	
<p>If we have E. coli in Source S__ water we will immediately:</p> <p>1. Call DOH.</p> <p>2. <u>Isolate Source</u></p> <p>3. <u>Chlorinate Source</u></p> <p>4. <u>Remove Contaminant</u></p> <p>5. <u>Sample Source before Returning To service</u></p>	

E. Reduced Triggered Source Monitoring Justification (add sheets as needed):

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F. Routine Sample Rotation Schedule

Month	Routine Site(s)	Month	Routine Site(s)
January	All	July	All
February	All	August	All
March	All	September	All
April	All	October	All
May	All	November	All
June	All	December	All

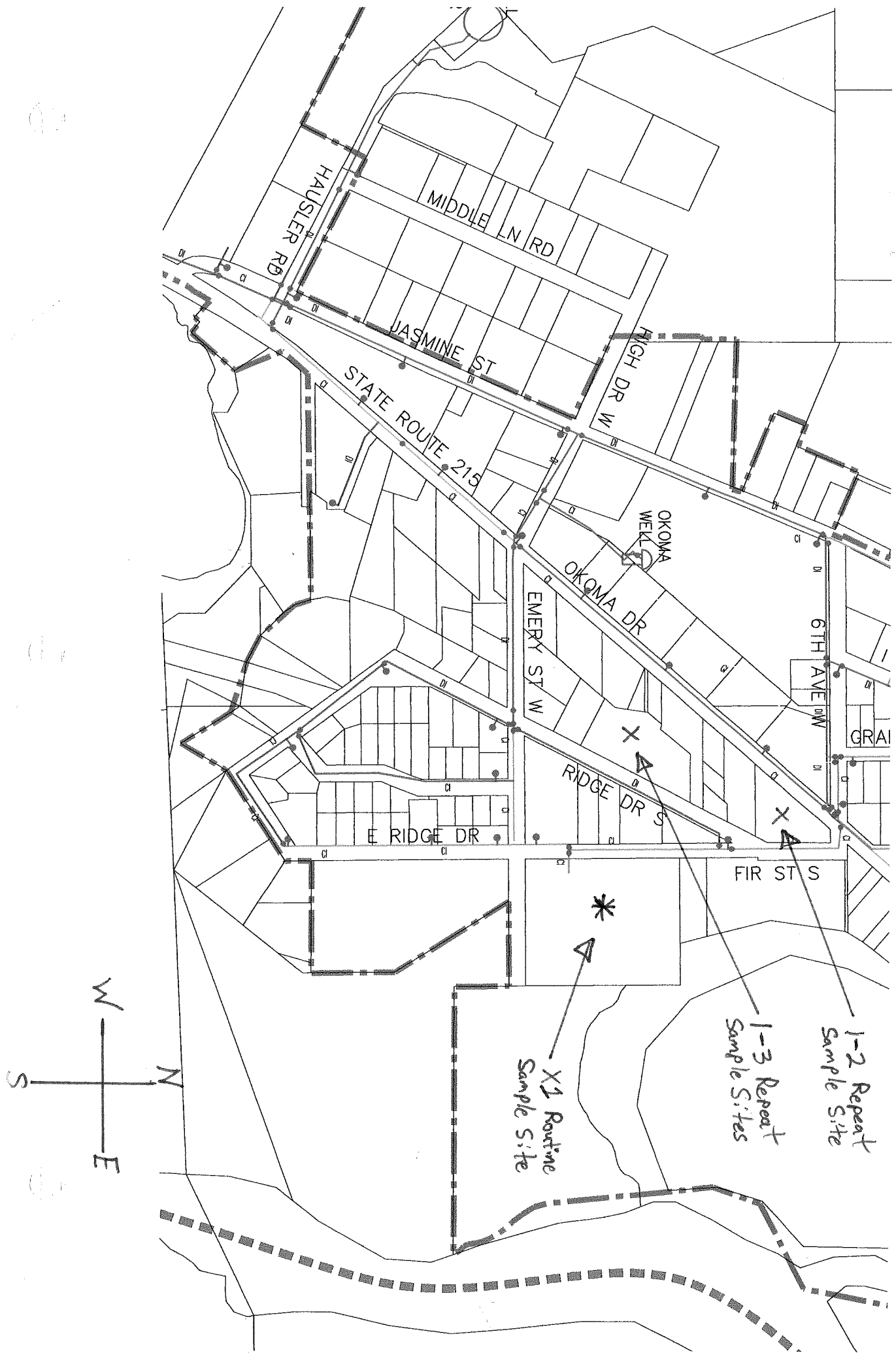
G. Level 1 and Level 2 Assessment Contact Information

Name Corey Wilder Address 1344 Highway 7 Oroville WA 98844	Office Phone -509 826-1170 After Hours Phone 509-322-4047 Email water@omakcity.com
Name Corey Wilder Address 1344 Highway 7 Oroville WA 98844	Office Phone -509 826-1170 After Hours Phone 509-322-4047 Email water@omakcity.com

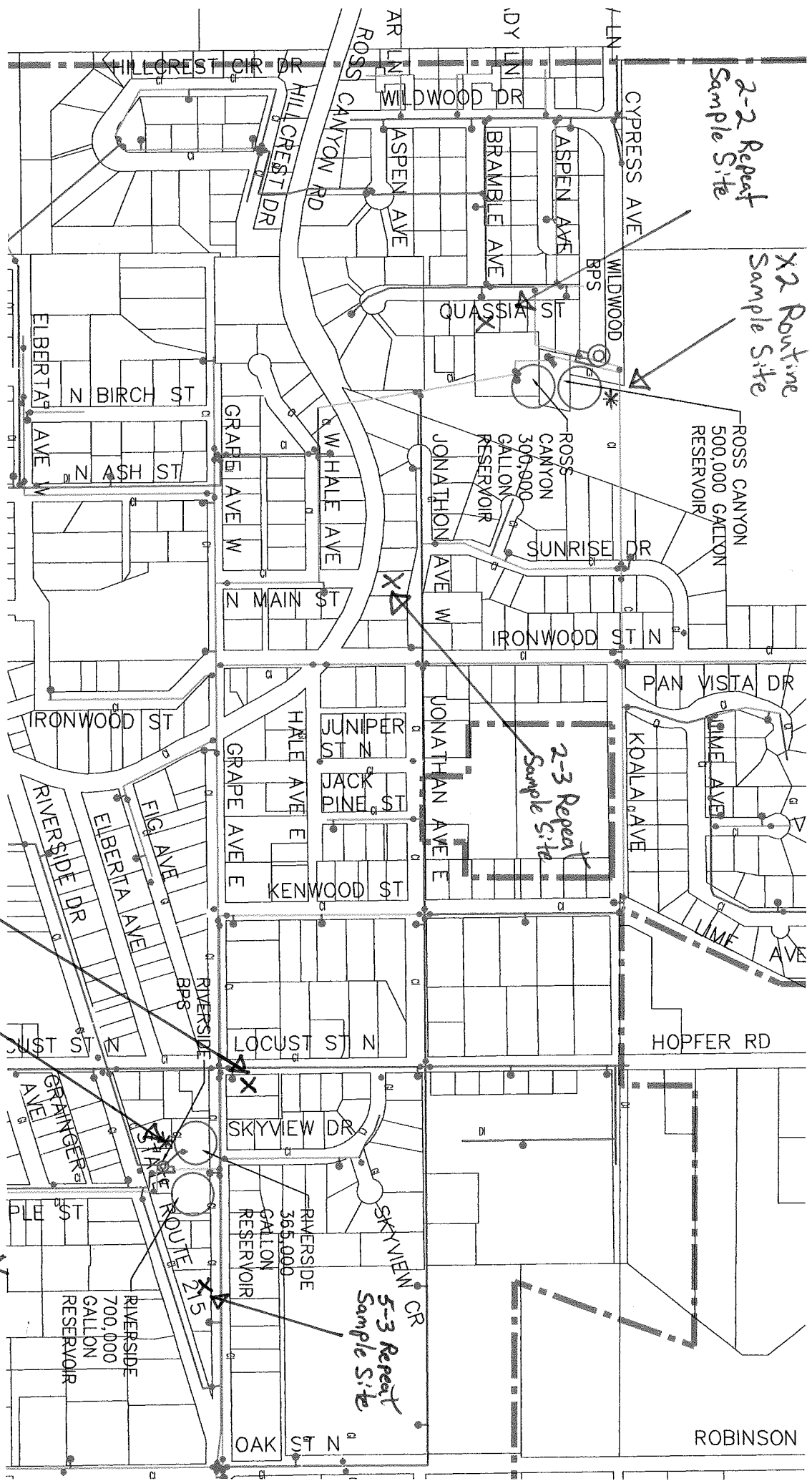
H. *E. coli*-Present Sample Response

Distribution System <i>E. coli</i> Response Checklist				
Background Information	Yes	No	N/A	To Do List
We inform staff members about activities within the distribution system that could affect water quality.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We document all water main breaks, construction & repair activities, and low pressure and outage incidents.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We can easily access and review documentation on water main breaks, construction & repair activities, and low pressure and outage incidents.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our Cross-Connection Control Program is up-to-date.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We test all cross-connection control devices annually as required, with easy access to the proper documentation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We routinely inspect all treatment facilities for proper operation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
We identified one or more qualified individuals who are able to conduct a Level 2 assessment of our water system.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We have procedures in place for disinfecting and flushing the water system if it becomes necessary.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We can activate an emergency intertie with an adjacent water system in an emergency.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We have a map of our service area boundaries.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We have consumers who may not have access to bottled or boiled water.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is a sufficient supply of bottled water immediately available to our customers who are unable to boil their water.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We have identified the contact person at each day care, school, medical facility, food service, and other customers who may have difficulty responding to a Health Advisory.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
We have messages prepared and translated into different languages to ensure our consumers will understand them.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
We have the capacity to print and distribute the required number of notices in a short time period.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy Direction	Yes	No	N/A	To Do List
We have discussed the issue of <i>E. coli</i> -present sample results with our policy makers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If we find <i>E. coli</i> in a routine distribution sample, the policy makers want to wait until repeat test results are available before issuing advice to water system customers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(Cont.)				

Zone 1 Coliform Sample Sites X1



Zone 2 Coliform Sample Sites X2 & X5



2-2 Repeat
Sample Site

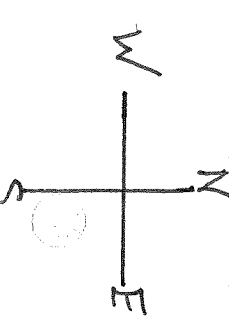
X2 Routine
Sample Site

2-3 Repeat
Sample Site

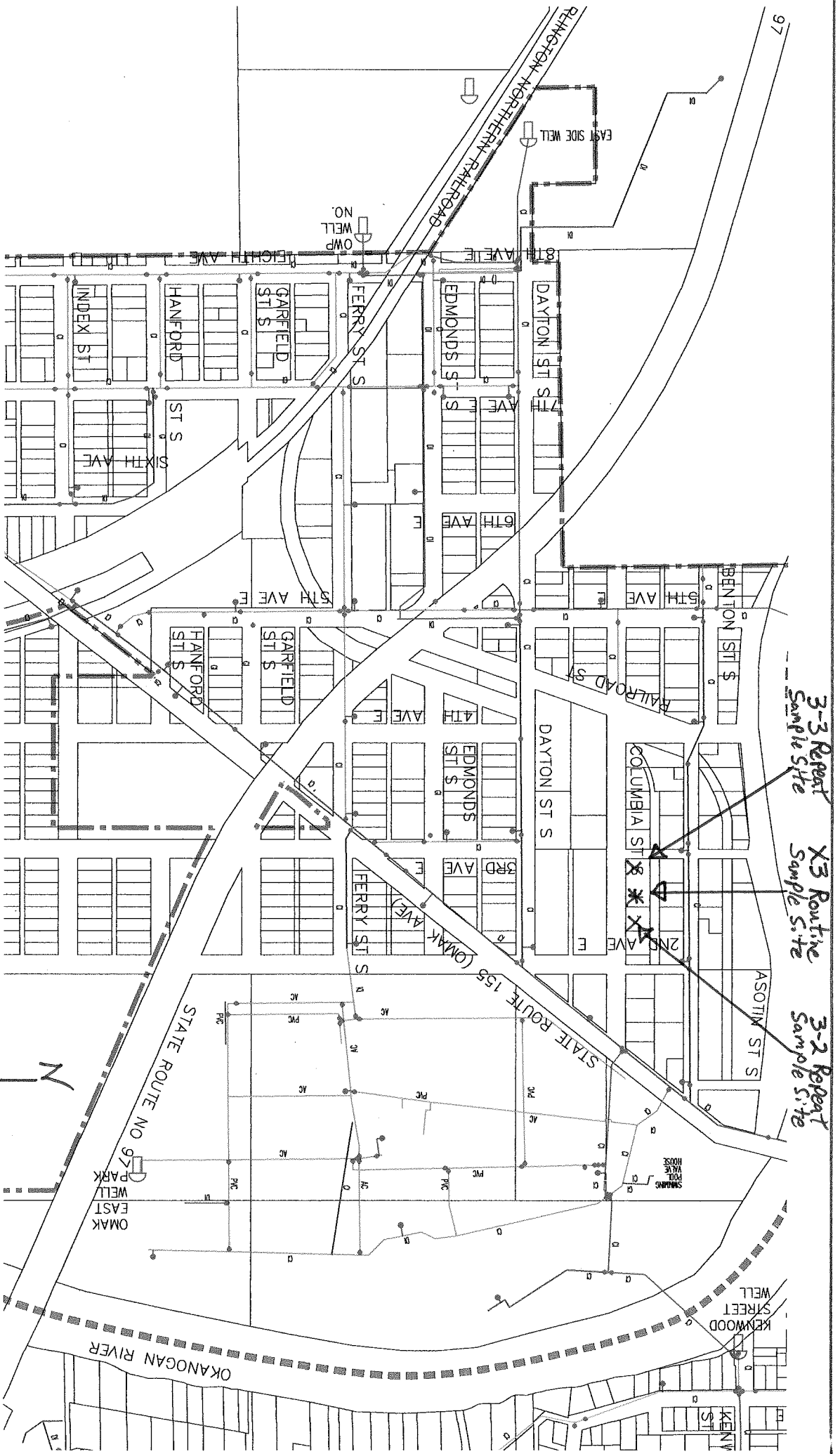
5-3 Repeat
Sample Site

5-2 Repeat
Sample Site

X5 Routine
Sample Site

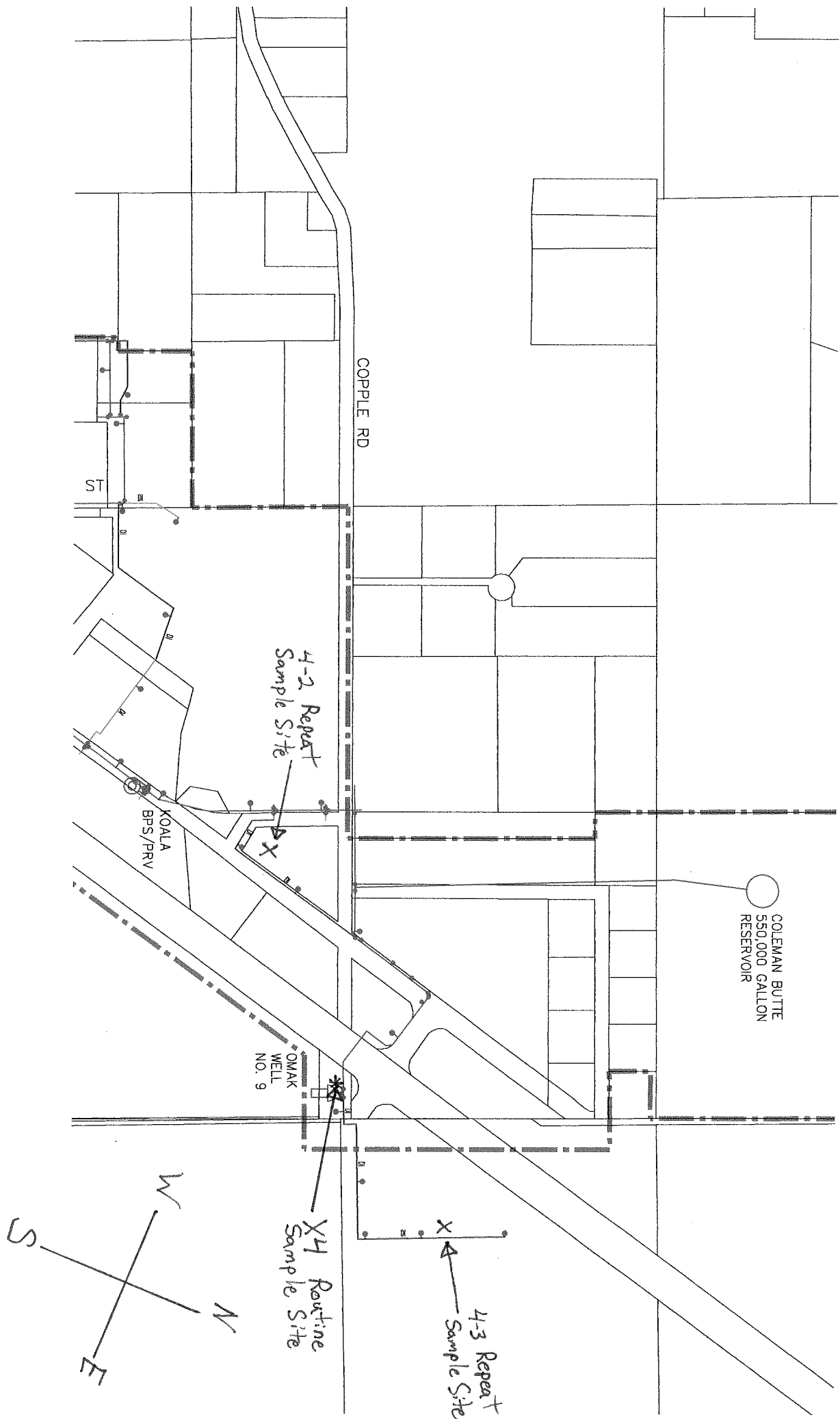


Zone 1 Coliform Sample Sites X3



Zone 3 Coliform Sample Sites X4

Source # 509





Water Quality Monitoring Schedule

System: OMAK, CITY OF
Contact: Corey D Wilder

PWS ID: 63750 K
Group: A - Comm

Region: EASTERN
County: OKANOGAN

NOTE: To receive credit for compliance samples, you must fill out laboratory and sample paperwork completely, send your samples to a laboratory accredited by Washington State to conduct the analyses, AND ensure the results are submitted to DOH Office of Drinking Water. There is often a lag time between when you collect your sample, when we credit your system with meeting the monitoring requirement, and when we generate the new monitoring requirement.

Coliform Monitoring Requirements

	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Coliform Monitoring Population	4845	4845	4845	4845	4845	4845	4845	4845	4845	4845	4845	4845
Number of Routine Samples Required	5	5	5	5	5	5	5	5	5	5	5	5

- Collect samples from representative points throughout the distribution system.
- Collect required repeat samples following an unsatisfactory sample. In addition, collect a sample from each operating groundwater source.
- For systems that chlorinate, record chlorine residual (measured when the coliform sample is collected) on the coliform lab slip.

Chemical Monitoring Requirements

Distribution Monitoring

<u>Test Panel/Analyte</u>	<u># Samples Required</u>	<u>Compliance Period</u>	<u>Frequency</u>	<u>Last Sample Date</u>	<u>Next Sample Due</u>	
Lead and Copper	20	Jan 2017 - Dec 2019	standard - 3 year	09/20/2016	Sep 2019	
Asbestos	0	Jan 2011 - Dec 2019	waiver - 9 year			
Total Trihalomethane (THM)	1	Jan 2017 - Dec 2017	reduced - 1 year	08/08/2016	Aug 2017	
Halo-Acetic Acids (HAA5)	1	Jan 2017 - Dec 2017	reduced - 1 year	08/08/2016	Aug 2017	

Water Quality Monitoring Schedule

Notes on Distribution System Chemical Monitoring

- For *Lead and Copper*:
- Collect samples from the COLD WATER side of a KITCHEN or BATHROOM faucet that is used daily.
 - Before sampling, make sure the water has sat unused in the pipes for at least 6 hours, but no more than 12 hours (e.g. overnight).
 - If you are sampling from a faucet that has hot water, make sure cold water is the last water to run through the faucet before it sits overnight.
 - If your sampling frequency is annual or every 3 years, collect samples between June 1 and September 30.

For *Asbestos*: Collect the sample from one of your routine coliform sampling sites in an area of your distribution system that has asbestos concrete pipe.

For *Disinfection Byproducts (HAA5 and THM)*: Collect the samples at the locations identified in your Disinfection Byproducts (DBP) monitoring plan.

Source Monitoring

- Collect 'source' chemical monitoring samples from a tap after all treatment (if any), but before entering the distribution system.
- Washington State grants monitoring waivers for various test panels /analytes. Please note that we may require some monitoring as a condition of some waivers. We have granted complete waivers for dioxin, endothal, glyphosate, diquat, and insecticides.
- Nitrate, arsenic, iron, and other individual inorganics are included as part of a Complete Inorganic (IOC) analysis when it is collected.

Source S01	Eastside Well - AGJ179	Well	Use - Permanent	Susceptibility - High	
<u>Test Panel/Analyte</u>	<u># Samples Required</u>	<u>Compliance Period</u>	<u>Frequency</u>	<u>Last Sample Date</u>	<u>Next Sample Due</u>
Nitrate	1	Jan 2017 - Dec 2017	standard - 1 year	08/08/2016	Aug 2017
Complete Inorganic (IOC)	1	Jan 2011 - Dec 2019	waiver - 9 year	07/28/2011	
Arsenic	1	Jan 2017 - Dec 2019	standard - 3 year	05/07/2015	May 2019
Volatile Organics (VOC)	1	Jan 2014 - Dec 2019	waiver - 6 year	09/21/2015	
Herbicides	1	Jan 2014 - Dec 2022	waiver - 9 year	10/08/2009	Oct 2018
Pesticides	1	Jan 2014 - Dec 2022	waiver - 9 year	10/08/2009	Oct 2018
Soil Fumigants	0	Jan 2017 - Dec 2019	waiver - 3 year	07/09/2001	
Gross Alpha	1	Jan 2014 - Dec 2019	standard - 6 year	09/20/2016	
Radium 228	1	Jan 2014 - Dec 2019	standard - 6 year	09/20/2016	

Source S07	OWP Well - AAR993	Well	Use - Permanent	Susceptibility - High	
<u>Test Panel/Analyte</u>	<u># Samples Required</u>	<u>Compliance Period</u>	<u>Frequency</u>	<u>Last Sample Date</u>	<u>Next Sample Due</u>
Nitrate	1	Jan 2017 - Dec 2017	standard - 1 year	08/08/2016	Aug 2017
Complete Inorganic (IOC)	1	Jan 2011 - Dec 2019	waiver - 9 year	07/06/2016	
Arsenic	1	Jan 2017 - Dec 2019	standard - 3 year	07/06/2016	Jun 2019

Water Quality Monitoring Schedule

Source Monitoring

- Collect 'source' chemical monitoring samples from a tap after all treatment (if any), but before entering the distribution system.
- Washington State grants monitoring waivers for various test panels /analytes. Please note that we may require some monitoring as a condition of some waivers. We have granted complete waivers for dioxin, endothal, glyphosate, diquat, and insecticides.
- Nitrate, arsenic, iron, and other individual inorganics are included as part of a Complete Inorganic (IOC) analysis when it is collected.

Source S07	OWP Well - AAR993	Well	Use - Permanent	Susceptibility - High		
<u>Test Panel/Analyte</u>	<u># Samples Required</u>	<u>Compliance Period</u>	<u>Frequency</u>	<u>Last Sample Date</u>	<u>Next Sample Due</u>	
Volatile Organics (VOC)	1	Jan 2014 - Dec 2019	waiver - 6 year	09/23/2013	Sep 2019	
Herbicides	1	Jan 2014 - Dec 2022	waiver - 9 year	10/28/2009	Oct 2018	
Pesticides	1	Jan 2014 - Dec 2022	waiver - 9 year	10/28/2009	Oct 2018	
Soil Fumigants	0	Jan 2017 - Dec 2019	waiver - 3 year	07/09/2001		
Gross Alpha	1	Jan 2014 - Dec 2019	standard - 6 year	09/29/2015		
Radium 228	1	Jan 2014 - Dec 2019	standard - 6 year	11/30/2015		

Source S08	NE Omak Well - AEC887	Well	Use - Permanent	Susceptibility - Low		
<u>Test Panel/Analyte</u>	<u># Samples Required</u>	<u>Compliance Period</u>	<u>Frequency</u>	<u>Last Sample Date</u>	<u>Next Sample Due</u>	
Nitrate	1	Jan 2017 - Dec 2017	standard - 1 year	08/08/2016	Aug 2017	
Complete Inorganic (IOC)	1	Jan 2011 - Dec 2019	waiver - 9 year	07/06/2016		
Iron	1	Jan 2017 - Dec 2019	standard - 3 year	07/06/2016	Jun 2019	
Manganese	1	Jan 2017 - Dec 2019	standard - 3 year	07/06/2016	Jul 2019	
Volatile Organics (VOC)	1	Jan 2014 - Dec 2019	waiver - 6 year	09/10/2013	Sep 2019	
Herbicides	1	Jan 2014 - Dec 2022	waiver - 9 year	06/26/2012	Jun 2021	
Pesticides	1	Jan 2014 - Dec 2022	waiver - 9 year	06/26/2012	Jun 2021	
Soil Fumigants	0	Jan 2017 - Dec 2019	waiver - 3 year			
Radium 226 + 228	1	Jan 2014 - Dec 2022	Baseline - 9 year	09/23/2010	Sep 2019	
Gross Alpha	1	Jan 2014 - Dec 2019	standard - 6 year	06/26/2012	Jun 2018	



Water Quality Monitoring Schedule

Other Information

Other Reporting Schedules	Due Date
Measure chlorine residuals and submit monthly reports if your system uses continuous chlorination:	monthly
Submit Consumer Confidence Report (CCR) to customers and ODW (Community systems only):	07/01/2017
Submit CCR certification form to ODW (Community systems only):	10/01/2017
Submit Water Use Efficiency report online to ODW and to customers (Community and other municipal water systems only):	07/01/2017
Send notices of lead and copper sample results to the customers sampled:	30 days after you receive the laboratory results
Submit Certification of customer notification of lead and copper results to ODW:	90 days after you notify customers

Special Notes

None

Eastern Regional Water Quality Monitoring Contacts

For questions regarding chemical monitoring:	Stan Hoffman: (509) 329-2132: or Stan.Hoffman@doh.wa.gov
For questions regarding DBPs:	Stan Hoffman: (509) 329-2132 or Stan.Hoffman@doh.wa.gov
For questions regarding coliform bacteria and microbial issues:	Joseph Perkins: (509) 329-2134 or Joseph.Perkins@doh.wa.gov

Additional Notes

The information on this monitoring schedule is valid as of the date in the upper left corner on the first page. However, the information may change with subsequent updates in our water quality monitoring database as we receive new data or revise monitoring schedules. There is often a lag time between when you collect your sample and when we credit your system with meeting the monitoring requirement.

We have not designed this monitoring schedule to display all compliance requirements. The purpose of this schedule is to assist water systems with planning for most water quality monitoring, and to allow systems to compare their records with DOH ODW records. Please be aware that this monitoring schedule does not include constituents that require a special monitoring frequency, such as monitoring affiliated with treatment.

Any inaccuracies on this schedule will not relieve the water system owner and operator of the requirement to comply with applicable regulations.

If you have any questions about your monitoring requirements, please contact the regional office staff listed above.

APPENDIX D

SANITARY SURVEY



STATE OF WASHINGTON
DEPARTMENT OF HEALTH
EASTERN DRINKING WATER REGIONAL OPERATIONS
16201 E Indiana Avenue, Suite 1500, Spokane Valley, Washington 99216-2830
TDD Relay 1-800-833-6388

August 17, 2016

Corey D. Wilder, Chief Operator
City of Omak
PO Box 72
Omak, WA 98841



Subject: Omak, City of; PWS # 63750; Okanogan County.
Routine Sanitary Survey Inspection Report
Survey Date – August 8, 2016

Dear Mr. Wilder:

Thank you for your time and attention given to me during your recent sanitary survey. This letter documents the information collected during this survey. I listed defects in your water system facilities or operations that need your immediate attention below as *significant deficiencies* or *significant findings*.

Significant Deficiencies (Corrective Action needed within 45 days)

Significant deficiencies, if left unaddressed, have the potential of causing an immediate or potential risk to the health of the water system customers. The following were identified as significant deficiencies:

1. Ross Canyon Reservoir, South Tower: Seal the float gage conduit (where it passes thru the roof) to prevent contaminants from entering the reservoir. Refer to Figure 1 in the attached pictures.
2. Ross Canyon Reservoir, South Tower: Verify that the vertical pipes that pass thru the roof are sealed and do not allow contaminants to enter the reservoir. Refer to Figure 2 in the attached pictures.
3. Colman Butte Reservoir Overflow: Remove the dirt from around the overflow flap gate so the gate can seal tightly. Refer to Figure 3 in the attached pictures.

You must complete the correction action associated with each significant deficiency listed above within forty-five (45) days of the date on this letter. After completing these actions, please email verification of completion, including photographs and supporting narrative to ero.sanitarysurveys@doh.wa.gov or mail it to the above address. In your transmittal, please reference your water system's name, identification number, and the date when you corrected the items.

Ensuring your utility completes each corrective action is a high priority for the Office of Drinking Water (ODW). Failure to complete each of these corrections within the designated time may result in enforcement action. If you need additional time to correct any defect, call me at 509-329-2117. You will be asked to justify your request for additional time.

Corey D. Wilder
August 17, 2016
Page 2 of 3

Prior to this survey, you inspected your reservoirs to confirm that the roofs, access hatches, and vents were properly sealed or screened to prevent the entry of contaminants. Your inspection identified Significant Deficiencies #1 and #2 above. You also emailed me pictures documenting your findings.

During your survey, I inspected your three permanent wells (Source 01, 07, and 08) and the reservoirs overflows. We also discussed the following items:

Water Facilities Inventory (WFI) Form

We reviewed your WFI form and updated your cell phone and evening phone numbers.

Water Quality Monitoring

We reviewed your Water Quality Monitoring Schedule (WQMS) and you are current with your monitoring requirements. The WQMS represents the "real time" status of your monitoring requirements and lists the "Last Sample Date" and "Next Sample Due" for each analyte. You should periodically check the WQMS to verify that you are getting credit for your monitoring. The WQMS is available on our Sentry Internet website at <https://fortress.wa.gov/doh/eh/portal/odw/si/Intro.aspx>.

Revised Total Coliform Rule (RTCR)

The federal RTCR became effective on April 1, 2016. The RTCR replaced the "Total Coliform Rule". Important items to note in the new rule are:

- Routine Monitoring. You will continue to collect the same number of routine samples and at the same frequency as you do now (as shown on your WQMS and WFI form).
- Repeat Samples. You will also continue to collect three samples for every total coliform-positive routine sample.
- Groundwater Rule. The RTCR does not allow you to use a source sample as both a repeat sample and a groundwater source sample. The RTCR requires you to collect a raw water sample from each groundwater source that was in use on the day you collected your routine sample.
- The month after a total coliform-present routine sample. The RTCR requires water systems to collect their normal number of routine samples the month after a total coliform-present routine sample.

During the survey, I left with you two documents (H₂Ops article and DOH publication #331-556) explaining the new RTCR. In addition to coliform sampling changes, there are also new treatment technique trigger assessments, correction action requirements, treatment technique violations, and public notification requirements. You will need to update your written coliform monitoring plan (CMP) to include the new RTCR requirements. A CMP template is available on our website at <http://www.doh.wa.gov/Portals/1/Documents/Pubs/331-036.pdf>. Your revised CMP should be included in your new water system plan that the City is currently preparing.

Lead and Copper Issues

We did not discuss this topic, but lead and copper has become a hot topic because of the problems in Flint, Michigan. I want to remind you that the Lead and Copper Rule Short-Term Revisions (LCR-STR)

Corey D. Wilder
August 17, 2016
Page 3 of 3

went into effect in October 2011. A summary of changes that were instituted through the LCR-SRT are available on our website at:

<http://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/Contaminants/LeadandCopperRule>.

The City is planning to develop the Julia Maley Park well as a new source. LCR-STR requires you to evaluate the potential impacts that a new source will have on the corrosivity of the water and distribution system. This evaluation must be submitted for our review as part of the source approval process.

Recommendations


The overflow for the Riverside reservoirs discharges into an open tray located inside the adjacent pipe gallery building. Although screened and protected inside the building, I recommend that you place a cover over the tray to prevent contaminants from falling into the overflow pipe.

By completing this sanitary survey, your water system met the requirements in WAC 246-290-416. We will notify you of your next sanitary survey in three to five years. Please note that satisfying the requirements of the sanitary survey should not be construed as meeting other applicable federal, state or local statutes, ordinances and regulations. Similarly, other DOH requirements should be addressed separately from the sanitary survey.

As provided by WAC 246-290-990(3)(c), a fee is charged to help recover the cost of conducting a sanitary survey. The Department of Health's total cost to complete this sanitary survey is \$1,248.33. The Office of Drinking Water has used state and federal funds to pay \$559.83 of this amount. An invoice showing the remaining amount due of \$688.50 is enclosed.

Please contact me at (509) 329-2117 if you have any questions regarding this letter.

Sincerely,


Michael D. Wilson, PE
Regional Engineer
Office of Drinking Water
Division of Environmental Public Health

Enclosure: Invoice
Sanitary Survey pictures

cc: Okanogan Public Health
Scott Mallery, Eastern Assistant Regional Manager
Alyssa Gersdorf, Water Facilities Inventory Program Administrator

Water Department

From: Wilson, Michael /EH (DOH) <Michael.Wilson@DOH.WA.GOV>
Sent: Tuesday, August 30, 2016 8:44 AM
To: Gersdorf, Alyssa A (DOH)
Cc: Water Department; Mallery, Scott (DOH)
Subject: Omak, City of; ID# 63750; Sanitary Survey
Attachments: Omak SS2016 Deficiency Repairs.docx

Alyssa,

The City of Omak sent me pictures documenting that the deficiencies identified in their 2016 sanitary survey have been addressed. I copied the pictures to the attached word document and will put a copy in their file.

Please note in the sanitary survey database that all of the have been addressed.

Thanks.

Michael D. Wilson, PE
Regional Engineer
Office of Drinking Water
Washington State Department of Health
16201 E. Indiana Avenue, Suite 1500
Spokane Valley, WA 99216
phone: (509) 329-2117 ~ fax: (509) 329-2104
michael.wilson@doh.wa.gov

Public Health - Always Working for a Safer and Healthier Washington

Visit our web site at www.doh.wa.gov/ehp/dw

File Note: (8/29/16)

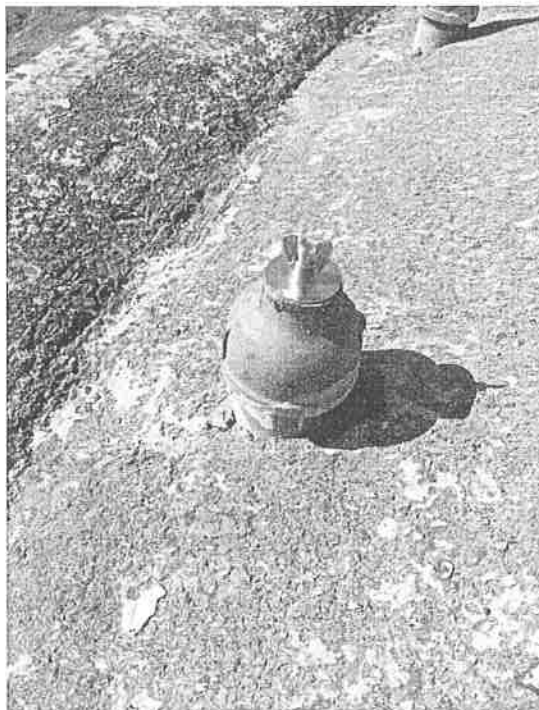
From: Michael Wilson

Pictures sent from City of Omak showing that the deficiencies identified in August 8, 2016 sanitary survey have been addressed. (Pictures received from Corey Wilder on August 29, 2016)

Significant Deficiency #1: Float gage conduit sealed on Ross Canyon Reservoir, South Tower.



Significant Deficiency #2: Vertical pipes on Ross Canyon Reservoir, South Tower are sealed.



Significant Deficiency #3: Dirt removed from around flap gate on Colman Butte Reservoir overflow.

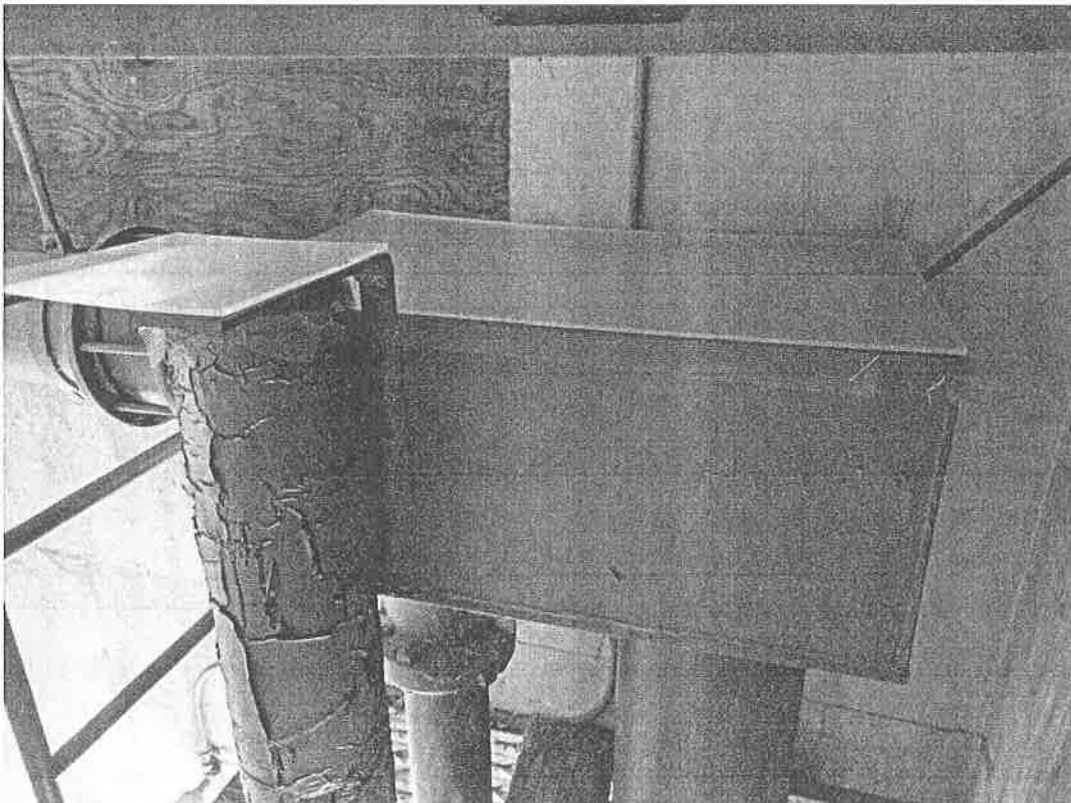
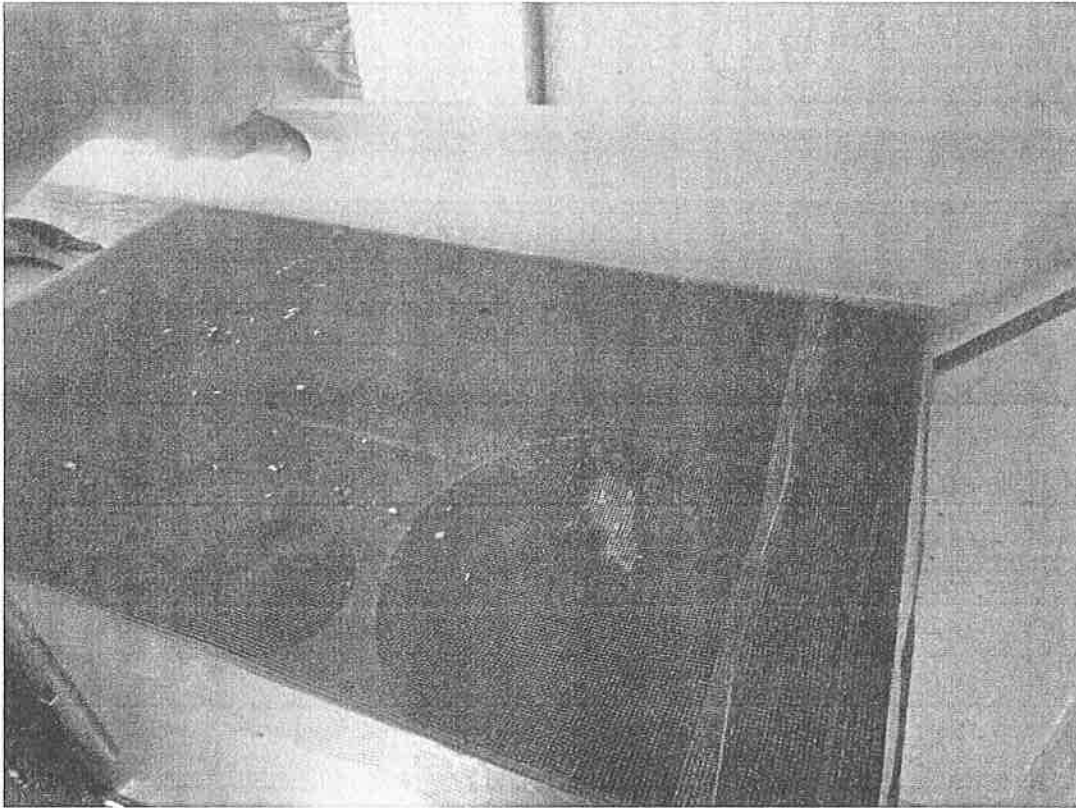


This picture shows a screen on the overflow, in addition to the flap gate.



Recommendation:

A cover is placed over the Riverside reservoir overflow tray.



SANITARY SURVEY FEE WORKSHEET

Department of Health Office of Drinking Water Sanitary Survey Time Tracking		PWS ID # 63750K	
System Name Omak, City of County Okanogan County Surveyor Michael Wilson		Date:	
System over 10,000 Connections?		NO	
Department of Health Paid Costs			
Survey program RO Coordination	1 \$	102	\$ 102.00
Survey Program Administrative Support	1 \$	102	\$ 102.00
Travel expenses (Mileage)	148	(# Miles) x (\$.337/Mile)	\$ 49.83
Technical Assistance	0 \$	102	\$ -
Travel Time <10,000	3	102	\$ 306.00
Total Department of Health Costs to Perform All Surveys			\$ 559.83
Water System Paid Costs			
Scheduling, research, prep	2 \$	102	\$ 204.00
Survey Field Work	3.25 \$	102	\$ 331.50
Survey documentation -- preparation of survey report to the purveyor	1.5 \$	102	\$ 153.00
Additional Water System Paid Costs for systems serving 10,000 or more connections			
Hours		0	\$ -
NOTES:			
Total Cost of Survey		\$	1,248.33
Costs Covered by DOH		\$	559.83
Invoice amount due (Less than 10,000 Connections)		\$	688.50



Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 1 of 24

Administrative Data

WS Id:	63750 K
WS Name:	OMAK, CITY OF
DOH Region:	Eastern
County:	OKANOGAN
Group:	A
Type:	Community
Group Active Date:	01/01/1970
Delivery Address:	
Attention:	
Address:	
City:	
State:	
Zip:	



Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 2 of 24

Primary Contact

Name: Corey D. Wilder

Mailing Address:

Attention:

Address: PO Box 72

City: Omak

State: WA

Zip: 98841

Day / Office Phone: (509) 826-1170

Mobile / Pager: (509) 322-4047

Evening / Weekend: (xxx) xxx-xxxx

Fax:

Alternate Day / Office:

Alternate Evening / Wk: (xxx)-xxx-xxxx

24 Hour / Emergency Number

Name:

Day / Office Phone:

Mobile / Pager:

Evening / Weekend:

Fax:

Alternate Day / Office:

Alternate Evening / Wk:

Sanitary Survey Notes

Comment Focus

Comment Date

Author

General

05/14/2002

DWAIN Conversion

CvtDWPRO - UNSPECIFIED # APPRVD. SERV. PER DS

Planning

Last Plan Date:

Next Plan Due Date:

Type of Plan:

Operator Certification

Number of Mandatory Positions for the WS Id: 6

Operator Compliance Status: In Compliance

	Pos.	Operator Name (Last, First, MI)	Min. Cert. Req'd	Certification Held	Operator Number	Evening / Weekend Phone Number	Has CCS
Yes	1	Wilder, Corey D	WDM 2	WDM 2	012503	(xxx)-xxx-xxxx	Yes
No		Beetchenow, Wayne R			013411	(xxx)-xxx-xxxx	
No		Verstegen, Jordan C			013976	(xxx)-xxx-xxxx	
No		Mears, Kenneth W			009720	(xxx)-xxx-xxxx	
No		McDaniel, Todd W			009820	(xxx)-xxx-xxxx	Yes
No		Short, Chad G			010414	(xxx)-xxx-xxxx	



Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 3 of 24

Compliance

<u>Action</u>	<u>Status</u>	<u>IssueDate</u>	<u>Penalty</u>
Violation Letter	Completed	02/27/2008	No

CompActionComments: HQ issued M/R - jta.

<u>Milestones Description:</u>	<u>Comply By Date</u>	<u>Completed Date</u>
--------------------------------	-----------------------	-----------------------

<u>Action</u>	<u>Status</u>	<u>IssueDate</u>	<u>Penalty</u>
Violation Letter	Completed	05/27/2008	No

CompActionComments: TTHM HAA5 reduced monitoring violation JW. PN provided in 2008 CCR.

<u>Milestones Description:</u>	<u>Comply By Date</u>	<u>Completed Date</u>
--------------------------------	-----------------------	-----------------------

<u>Action</u>	<u>Status</u>	<u>IssueDate</u>	<u>Penalty</u>
Directive	Completed	03/24/2009	No

CompActionComments: FTR-Contact DOH re: compliance options. Michael Ervin #007034.

<u>Milestones Description:</u>	<u>Comply By Date</u>	<u>Completed Date</u>
--------------------------------	-----------------------	-----------------------

<u>Action</u>	<u>Status</u>	<u>IssueDate</u>	<u>Penalty</u>
Directive	Completed	07/01/2011	No

CompActionComments: 06/28/2011: SS by Mike Wilson PE
08/12/2011: Recd ltr confirming all deficiencies have been corrected.

<u>Milestones Description:</u>	<u>Comply By Date</u>	<u>Completed Date</u>
--------------------------------	-----------------------	-----------------------

<u>Action</u>	<u>Status</u>	<u>IssueDate</u>	<u>Penalty</u>
Directive	Completed	08/17/2016	No

CompActionComments: 8/8/16: SS by ERO
8/30/16: Photos received

<u>Milestones Description:</u>	<u>Comply By Date</u>	<u>Completed Date</u>
--------------------------------	-----------------------	-----------------------

Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 4 of 24

Source Information

Source Inventory

Src Num	Source Name	Status	Type	Use	Depth to First Open Interval	Capacity (GPM)	Source Metered	Well Tag ID
01	Eastside Well - AGJ179	Act	Well	P	30	2,800.0	Yes	AGJ179
02	Apple Well	Act	Well	E	20	300.0	Yes	
03	Kenwood	Act	Well	E	30	350.0	Yes	
04	Okoma Well - ABR843	Act	Well	E	90	300.0	Yes	ABR843
06	Park Well - AGJ178	InAct	Well	E	44	250.0	Yes	AGJ178
07	OWP Well - AAR993	Act	Well	P	70	2,300.0	Yes	AAR993
08	NE Omak Well - AEC887	Act	Well	P	268	120.0	Yes	AEC887

Source Location

Src Num	Source Name	Qtr / Qtr	Sect	Township	Range	Lat / Long	SWTR
01	Eastside Well - AGJ179	SWNE	35	34	26E	48.399040 / -119.521890	Does Not Apply
02	Apple Well	NWNW	35	34	26E	48.409160 / -119.535000	Does Not Apply
03	Kenwood	SWSE	26	34	26E	48.411630 / -119.524000	Does Not Apply
04	Okoma Well - ABR843	NESE	34	34	26E	48.400830 / -119.540870	Does Not Apply
06	Park Well - AGJ178	SWSW	25	34	26E	48.410710 / -119.515250	Does Not Apply
07	OWP Well - AAR993	SWNE	35	34	26E	48.400100 / -119.519180	Does Not Apply
08	NE Omak Well - AEC887	SESE	24	34	26E	48.427725 / -119.495238	

Source Ratings

Src Num	Source Name	Susceptibility	IOC Vuln	VOC Vuln	SOC Vuln	Micro Vuln	RAD Vuln
01	Eastside Well - AGJ179	High	Moderate	Moderate	Moderate	Unknown	Low
02	Apple Well	High			Moderate		Unknown
03	Kenwood	High			Moderate		Unknown
04	Okoma Well - ABR843	Moderate	Moderate	Moderate	Moderate	Unknown	Moderate
06	Park Well - AGJ178	Unknown	Moderate	Unknown	Unknown	Unknown	Unknown
07	OWP Well - AAR993	High	Moderate	Moderate	Moderate	Unknown	Low
08	NE Omak Well - AEC887	Low	Moderate	Low	Moderate	Unknown	Moderate

Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 5 of 24

Source Treatment

Source 01 Eastside Well - AGJ179

Source Type: Well

Source Status: Act

Source Use: P

Purpose	A	B	C	D	E	F	G	H	I	J
CHLORINATION, GASEOUS	X									

Source 02 Apple Well

Source Type: Well

Source Status: Act

Source Use: E

Purpose	A	B	C	D	E	F	G	H	I	J
CHLORINATION, GASEOUS	X									

Source 03 Kenwood

Source Type: Well

Source Status: Act

Source Use: E

Purpose	A	B	C	D	E	F	G	H	I	J
CHLORINATION, GASEOUS	X									

Source 04 Okoma Well - ABR843

Source Type: Well

Source Status: Act

Source Use: E

Purpose	A	B	C	D	E	F	G	H	I	J
CHLORINATION, GASEOUS	X									

Source 07 OWP Well - AAR993

Source Type: Well

Source Status: Act

Source Use: P

Purpose	A	B	C	D	E	F	G	H	I	J
CHLORINATION, GASEOUS	X									

Source 08 NE Omak Well - AEC887

Source Type: Well

Source Status: Act

Source Use: P

Purpose	A	B	C	D	E	F	G	H	I	J
CHLORINATION, GASEOUS	X									

A = DISINFECTION

B = PARTICULATE (TURBIDITY) REMOVAL

C = SOFTENING (HARDNESS REMOVAL)

D = IRON & MANGANESE REMOVAL

E = ORGANICS AND COLOR REMOVAL

F = TASTE/ODOR CONTROL & DECHLORINATION

G = DISINFECTON BYPRODUCTS CONTROL

H = INORGANICS REMOVAL/TREATMENT

I = CORROSION CONTROL

J = DENTAL HEALTH

Water Treatment Plant



Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 6 of 24

Source Treatment

Water Treatment Plant Id: 63750001

Water Treatment Plant Name: Eastside Well

<u>Source Number</u>	<u>SrcName</u>	<u>SrcType</u>	<u>Source Status</u>	<u>Source Use</u>
01	Eastside Well - AGJ179	Well	Act	Permanent
<u>Treatment Purpose</u>	<u>Treatment Type</u>	<u>Applicable Rule</u>	<u>Approval Status</u>	
DISINFECTION	CHLORINATION, GASEOUS	Purveyor Option	UnAppv	

Water Treatment Plant Id: 63750002

Water Treatment Plant Name: Okoma Well

<u>Source Number</u>	<u>SrcName</u>	<u>SrcType</u>	<u>Source Status</u>	<u>Source Use</u>
04	Okoma Well - ABR843	Well	Act	Emergency
<u>Treatment Purpose</u>	<u>Treatment Type</u>	<u>Applicable Rule</u>	<u>Approval Status</u>	
DISINFECTION	CHLORINATION, GASEOUS	Purveyor Option	UnAppv	

Water Treatment Plant Id: 63750003

Water Treatment Plant Name: OWP Well

<u>Source Number</u>	<u>SrcName</u>	<u>SrcType</u>	<u>Source Status</u>	<u>Source Use</u>
07	OWP Well - AAR993	Well	Act	Permanent
<u>Treatment Purpose</u>	<u>Treatment Type</u>	<u>Applicable Rule</u>	<u>Approval Status</u>	
DISINFECTION	CHLORINATION, GASEOUS	Purveyor Option	UnAppv	

Water Treatment Plant Id: 63750004

Water Treatment Plant Name: Well 9

<u>Source Number</u>	<u>SrcName</u>	<u>SrcType</u>	<u>Source Status</u>	<u>Source Use</u>
08	NE Omak Well - AEC887	Well	Act	Permanent
<u>Treatment Purpose</u>	<u>Treatment Type</u>	<u>Applicable Rule</u>	<u>Approval Status</u>	
DISINFECTION	CHLORINATION, GASEOUS	Purveyor Option	UnAppv	



Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 7 of 24

Water Treatment Plant Id: 63750005

Water Treatment Plant Name: Apple Well

<u>Source Number</u>	<u>SrcName</u>	<u>SrcType</u>	<u>Source Status</u>	<u>Source Use</u>
02	Apple Well	Well	Act	Emergency
<u>Treatment Purpose</u>	<u>Treatment Type</u>	<u>Applicable Rule</u>	<u>Approval Status</u>	
DISINFECTION	CHLORINATION, GASEOUS		UnAppv	

Water Treatment Plant Id: 63750006

Water Treatment Plant Name: Kenwood

<u>Source Number</u>	<u>SrcName</u>	<u>SrcType</u>	<u>Source Status</u>	<u>Source Use</u>
03	Kenwood	Well	Act	Emergency
<u>Treatment Purpose</u>	<u>Treatment Type</u>	<u>Applicable Rule</u>	<u>Approval Status</u>	
DISINFECTION	CHLORINATION, GASEOUS		UnAppv	

Water Treatment Plant Id: 63750007

Water Treatment Plant Name: Park Well

<u>Source Number</u>	<u>SrcName</u>	<u>SrcType</u>	<u>Source Status</u>	<u>Source Use</u>
06	Park Well - AGJ178	Well	InAct	Emergency
<u>Treatment Purpose</u>	<u>Treatment Type</u>	<u>Applicable Rule</u>	<u>Approval Status</u>	
DISINFECTION	CHLORINATION, HYPOCHLORITE		UnAppv	

Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 9 of 24

INORGANIC CHEMICALS (IOC)

History - IOC - Analyte Group

<u>Src Num</u>	<u>Source Name</u>	<u>Source Type</u>	<u>Source Status</u>	<u>Source Use</u>	<u>Lab / Sample Num</u>	<u>Collect Date</u>	<u>Test Panel</u>	<u>Analytes Tested</u>
01	Eastside Well - AGJ179	W	Act	P	105 11771	5/7/2015	AR	1 of 1
01	Eastside Well - AGJ179	W	Act	P	105 14428	7/28/2011	IOC	31 of 43
01	Eastside Well - AGJ179	W	Act	P	105 18886	9/29/2008	IOC	31 of 43
02	Apple Well	W	Act	E	105 23344	11/9/2010	IOC	31 of 43
03	Kenwood	W	Act	E	105 26217	12/28/2010	AR	1 of 1
03	Kenwood	W	Act	E	105 23345	11/9/2010	IOC	31 of 43
04	Okoma Well - ABR843	W	Act	E	105 11772	5/7/2015	IOC_SHOR	2 of 8
04	Okoma Well - ABR843	W	Act	E	105 14433	7/28/2011	AR	1 of 1
04	Okoma Well - ABR843	W	Act	E	105 19679	9/23/2010	IOC	31 of 43
04	Okoma Well - ABR843	W	Act	E	105 13054	7/30/2007	IOC	31 of 43
07	OWP Well - AAR993	W	Act	P	105 18623	7/6/2016	IOC	31 of 43
07	OWP Well - AAR993	W	Act	P	105 20714	8/19/2014	AR	1 of 1
07	OWP Well - AAR993	W	Act	P	105 29019	12/9/2013	AR	1 of 1
07	OWP Well - AAR993	W	Act	P	105 21797	9/10/2013	AR	1 of 1
07	OWP Well - AAR993	W	Act	P	105 13916	6/26/2013	AR	1 of 1
07	OWP Well - AAR993	W	Act	P	105 05432	3/26/2013	AR	1 of 1
07	OWP Well - AAR993	W	Act	P	105 27834	12/20/2012	AR	1 of 1
07	OWP Well - AAR993	W	Act	P	105 20300	9/17/2012	AR	1 of 1
07	OWP Well - AAR993	W	Act	P	105 12151	6/26/2012	AR	1 of 1
07	OWP Well - AAR993	W	Act	P	105 05087	3/29/2012	AR	1 of 1
07	OWP Well - AAR993	W	Act	P	105 01139	1/19/2012	AR	1 of 1
07	OWP Well - AAR993	W	Act	P	105 26944	12/29/2011	AR	1 of 1
07	OWP Well - AAR993	W	Act	P	105 13055	7/30/2007	IOC	31 of 43
08	NE Omak Well - AEC887	W	Act	P	105 18624	7/6/2016	IOC	31 of 43
08	NE Omak Well - AEC887	W	Act	P	105 11773	5/7/2015	IOC_SHOR	2 of 8
08	NE Omak Well - AEC887	W	Act	P	105 19680	9/23/2010	IOC_SHOR	2 of 8
08	NE Omak Well - AEC887	W	Act	P	105 13056	7/30/2007	IOC	31 of 43

Detail - IOC

Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 10 of 24

Source 01

Source Status	Source Type	Test Panel	Lab Number	Sample Number	Collect Date	Sample Location			
Act	Well	IOC	105	14428	07/28/2011	s01			
Analyte DOH #	Analyte Name	Result Range	Units	SRL	Result Qty	Trigger Ind	Trigger Value	MCL Ind	MCL Value
0004	ARSENIC	LT	mg/L	0.0010	0.0020	N	0.0103	N	0.0104
0005	BARIUM	EQ	mg/L	0.4000	0.0820	N	1.9999	N	2.0000
0006	CADMIUM	LT	mg/L	0.0020	0.0003	N	0.0049	N	0.0050
0007	CHROMIUM	LT	mg/L	0.0200	0.0047	N	0.0999	N	0.1000
0011	MERCURY	LT	mg/L	0.0004	0.0003	N	0.0019	N	0.0020
0012	SELENIUM	LT	mg/L	0.0100	0.0050	N	0.0499	N	0.0500
0110	BERYLLIUM	LT	mg/L	0.0008	0.0002	N	0.0039	N	0.0040
0111	NICKEL	LT	mg/L	0.1000	0.0100	N	0.0999	N	0.1000
0112	ANTIMONY	LT	mg/L	0.0060	0.0050	N	0.0059	N	0.0060
0113	THALLIUM	LT	mg/L	0.0020	0.0010	N	0.0019	N	0.0020
0116	CYANIDE	LT	mg/L	0.0100	0.0100	N	0.1999	N	0.2000
0019	FLUORIDE	EQ	mg/L	0.2000	0.6400	N	1.9999	N	4.0000
0114	NITRITE-N	LT	mg/L	0.2000	0.0700	N	0.4999	N	1.0000
0020	NITRATE-N	EQ	mg/L	0.2000	0.3500	N	4.9990	N	10.0000
0161	TOTAL NITRATE/NITRITE	EQ	mg/L	0.5000	0.3500	N		N	
0008	IRON	LT	mg/L	0.1000	0.0097	N		N	
0010	MANGANESE	LT	mg/L	0.0100	0.0020	N		N	
0013	SILVER	LT	mg/L	0.1000	0.0047	N		N	
0021	CHLORIDE	EQ	mg/L	20.0000	13.9000	N		N	
0022	SULFATE	EQ	mg/L	50.0000	100.0000	N		N	
0024	ZINC	LT	mg/L	0.2000	0.0050	N		N	
0014	SODIUM	EQ	mg/L	5.0000	22.1000	N		N	
0015	HARDNESS	EQ	mg/L	10.0000	286.0000	N		N	
0016	CONDUCTIVITY	EQ	Umhos/c	70.0000	630.0000	N		N	
0017	TURBIDITY	LT	NTU	0.1000	0.1000	N		N	
0018	COLOR	LT	CU	15.0000	4.0000	N		N	
0026	TDS-TOTAL DISSOLVED	EQ	mg/L	100.0000	358.0000	N		N	
0009	LEAD	LT	mg/L	0.0010	0.0005	N	9999.0000	N	
0023	COPPER	LT	mg/L	0.0200	0.0020	N	9999.0000	N	
0171	ORTHOPHOSPHATE	NA	mg/L	0.1000		N		N	
0172	SILICA	NA	mg/L	1.0000		N		N	
0402	ALUMINUM	NA	mg/L	0.0500		N		N	
0403	ALKALINITY-LAB	NA	mg/L	5.0000		N		N	
0404	MAGNESIUM	EQ	mg/L	0.1000	30.8000	N		N	
0405	CALCIUM	EQ	mg/L	0.0500	63.7000	N		N	
0406	AMMONIA	NA	mg/L	1.0000		N		N	
0407	CHLORINE DIOXIDE	NA	mg/L	0.8000		N		N	
0408	OZONE	NA	mg/L	0.2000		N		N	
0409	PH	NA	PH			N		N	
0410	CHLORAMINES	NA	mg/L			N		N	
0099	INACTIVATION RATIO	NA	None			N		N	
0100	RESIDUAL CHLORINE	NA	mg/L	0.2000		N		N	
0115	ASBESTOS	NA	MFL	0.2000		N	6.9990	N	7.0000

Result Range:

EQ - Equal To

LT - Less Than

GT - Greater Than

NA - Not Analyzed

ND - No Detect



Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 11 of 24

Source 02

Source Status	Source Type	Test Panel	Lab Number	Sample Number	Collect Date	Sample Location				
Act	Well	IOC	105	23344	11/09/2010	s02				
Analyte DOH #	Analyte Name	Result Range	Units	SRL	Result Qty	Trigger Ind	Trigger Value	MCL Ind	MCL Value	
0004	ARSENIC	EQ	mg/L	0.0010	0.0088	N	0.0103	N	0.0104	
0005	BARIUM	EQ	mg/L	0.4000	0.0760	N	1.9999	N	2.0000	
0006	CADMIUM	LT	mg/L	0.0020	0.0003	N	0.0049	N	0.0050	
0007	CHROMIUM	LT	mg/L	0.0200	0.0047	N	0.0999	N	0.1000	
0011	MERCURY	LT	mg/L	0.0004	0.0003	N	0.0019	N	0.0020	
0012	SELENIUM	LT	mg/L	0.0100	0.0050	N	0.0499	N	0.0500	
0110	BERYLLIUM	LT	mg/L	0.0008	0.0002	N	0.0039	N	0.0040	
0111	NICKEL	LT	mg/L	0.1000	0.0100	N	0.0999	N	0.1000	
0112	ANTIMONY	LT	mg/L	0.0060	0.0050	N	0.0059	N	0.0060	
0113	THALLIUM	LT	mg/L	0.0020	0.0010	N	0.0019	N	0.0020	
0116	CYANIDE	LT	mg/L	0.0100	0.0100	N	0.1999	N	0.2000	
0019	FLUORIDE	EQ	mg/L	0.2000	0.4600	N	1.9999	N	4.0000	
0114	NITRITE-N	LT	mg/L	0.2000	0.0700	N	0.4999	N	1.0000	
0020	NITRATE-N	EQ	mg/L	0.2000	1.9100	N	4.9990	N	10.0000	
0161	TOTAL NITRATE/NITRITE	EQ	mg/L	0.5000	1.9100	N		N		
0008	IRON	LT	mg/L	0.1000	0.0097	N		N		
0010	MANGANESE	EQ	mg/L	0.0100	0.0026	N		N		
0013	SILVER	LT	mg/L	0.1000	0.0047	N		N		
0021	CHLORIDE	EQ	mg/L	20.0000	26.7000	N		N		
0022	SULFATE	EQ	mg/L	50.0000	72.5000	N		N		
0024	ZINC	EQ	mg/L	0.2000	0.0249	N		N		
0014	SODIUM	EQ	mg/L	5.0000	18.7000	N		N		
0015	HARDNESS	EQ	mg/L	10.0000	263.0000	N		N		
0016	CONDUCTIVITY	EQ	Umhos/c	70.0000	600.0000	N		N		
0017	TURBIDITY	EQ	NTU	0.1000	0.1900	N		N		
0018	COLOR	LT	CU	15.0000	4.0000	N		N		
0026	TDS-TOTAL DISSOLVED	EQ	mg/L	100.0000	352.0000	N		N		
0009	LEAD	LT	mg/L	0.0010	0.0005	N	9999.0000	N		
0023	COPPER	EQ	mg/L	0.0200	0.0023	N	9999.0000	N		
0171	ORTHOPHOSPHATE	NA	mg/L	0.1000		N		N		
0172	SILICA	NA	mg/L	1.0000		N		N		
0402	ALUMINUM	NA	mg/L	0.0500		N		N		
0403	ALKALINITY-LAB	NA	mg/L	5.0000		N		N		
0404	MAGNESIUM	EQ	mg/L	0.1000	28.4000	N		N		
0405	CALCIUM	EQ	mg/L	0.0500	58.4000	N		N		
0406	AMMONIA	NA	mg/L	1.0000		N		N		
0407	CHLORINE DIOXIDE	NA	mg/L	0.8000		N		N		
0408	OZONE	NA	mg/L	0.2000		N		N		
0409	PH	NA	PH			N		N		
0410	CHLORAMINES	NA	mg/L			N		N		
0099	INACTIVATION RATIO	NA	None			N		N		
0100	RESIDUAL CHLORINE	NA	mg/L	0.2000		N		N		
0115	ASBESTOS	NA	MFL	0.2000		N	6.9990	N	7.0000	

Result Range:

EQ - Equal To

LT - Less Than

GT - Greater Than

NA - Not Analyzed

ND - No Detect



Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 12 of 24

Source 03

Source Status	Source Type	Test Panel	Lab Number	Sample Number	Collect Date	Sample Location				
Act	Well	IOC	105	23345	11/09/2010	s03				
Analyte DOH #	Analyte Name	Result Range	Units	SRL	Result Qty	Trigger Ind	Trigger Value	MCL Ind	MCL Value	
0004	ARSENIC	EQ	mg/L	0.0010	0.0106	Y	0.0103	1	0.0104	
0005	BARIUM	EQ	mg/L	0.4000	0.0700	N	1.9999	N	2.0000	
0006	CADMIUM	LT	mg/L	0.0020	0.0003	N	0.0049	N	0.0050	
0007	CHROMIUM	LT	mg/L	0.0200	0.0047	N	0.0999	N	0.1000	
0011	MERCURY	LT	mg/L	0.0004	0.0003	N	0.0019	N	0.0020	
0012	SELENIUM	LT	mg/L	0.0100	0.0050	N	0.0499	N	0.0500	
0110	BERYLLIUM	LT	mg/L	0.0008	0.0002	N	0.0039	N	0.0040	
0111	NICKEL	LT	mg/L	0.1000	0.0100	N	0.0999	N	0.1000	
0112	ANTIMONY	LT	mg/L	0.0060	0.0050	N	0.0059	N	0.0060	
0113	THALLIUM	LT	mg/L	0.0020	0.0010	N	0.0019	N	0.0020	
0116	CYANIDE	LT	mg/L	0.0100	0.0100	N	0.1999	N	0.2000	
0019	FLUORIDE	EQ	mg/L	0.2000	0.4500	N	1.9999	N	4.0000	
0114	NITRITE-N	LT	mg/L	0.2000	0.0700	N	0.4999	N	1.0000	
0020	NITRATE-N	EQ	mg/L	0.2000	1.6200	N	4.9990	N	10.0000	
0161	TOTAL NITRATE/NITRITE	EQ	mg/L	0.5000	1.6200	N		N		
0008	IRON	LT	mg/L	0.1000	0.0097	N		N		
0010	MANGANESE	LT	mg/L	0.0100	0.0020	N		N		
0013	SILVER	LT	mg/L	0.1000	0.0047	N		N		
0021	CHLORIDE	EQ	mg/L	20.0000	14.2000	N		N		
0022	SULFATE	EQ	mg/L	50.0000	79.1000	N		N		
0024	ZINC	LT	mg/L	0.2000	0.0050	N		N		
0014	SODIUM	EQ	mg/L	5.0000	14.9000	N		N		
0015	HARDNESS	EQ	mg/L	10.0000	258.0000	N		N		
0016	CONDUCTIVITY	EQ	Umhos/c	70.0000	581.0000	N		N		
0017	TURBIDITY	EQ	NTU	0.1000	0.1200	N		N		
0018	COLOR	LT	CU	15.0000	4.0000	N		N		
0026	TDS-TOTAL DISSOLVED	EQ	mg/L	100.0000	332.0000	N		N		
0009	LEAD	LT	mg/L	0.0010	0.0005	N	9999.0000	N		
0023	COPPER	EQ	mg/L	0.0200	0.0043	N	9999.0000	N		
0171	ORTHOPHOSPHATE	NA	mg/L	0.1000		N		N		
0172	SILICA	NA	mg/L	1.0000		N		N		
0402	ALUMINUM	NA	mg/L	0.0500		N		N		
0403	ALKALINITY-LAB	NA	mg/L	5.0000		N		N		
0404	MAGNESIUM	EQ	mg/L	0.1000	29.0000	N		N		
0405	CALCIUM	EQ	mg/L	0.0500	55.3000	N		N		
0406	AMMONIA	NA	mg/L	1.0000		N		N		
0407	CHLORINE DIOXIDE	NA	mg/L	0.8000		N		N		
0408	OZONE	NA	mg/L	0.2000		N		N		
0409	PH	NA	PH			N		N		
0410	CHLORAMINES	NA	mg/L			N		N		
0099	INACTIVATION RATIO	NA	None			N		N		
0100	RESIDUAL CHLORINE	NA	mg/L	0.2000		N		N		
0115	ASBESTOS	NA	MFL	0.2000		N	6.9990	N	7.0000	

Result Range:

EQ - Equal To

LT - Less Than

GT - Greater Than

NA - Not Analyzed

ND - No Detect



Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 13 of 24

Source 04

Source Status	Source Type	Test Panel	Lab Number	Sample Number	Collect Date	Sample Location				
Act	Well	IOC	105	19679	09/23/2010	s04				
Analyte DOH #	Analyte Name	Result Range	Units	SRL	Result Qty	Trigger Ind	Trigger Value	MCL Ind	MCL Value	
0004	ARSENIC	EQ	mg/L	0.0010	0.0101	N	0.0103	N	0.0104	
0005	BARIUM	EQ	mg/L	0.4000	0.0490	N	1.9999	N	2.0000	
0006	CADMIUM	LT	mg/L	0.0020	0.0003	N	0.0049	N	0.0050	
0007	CHROMIUM	LT	mg/L	0.0200	0.0047	N	0.0999	N	0.1000	
0011	MERCURY	LT	mg/L	0.0004	0.0003	N	0.0019	N	0.0020	
0012	SELENIUM	LT	mg/L	0.0100	0.0050	N	0.0499	N	0.0500	
0110	BERYLLIUM	LT	mg/L	0.0008	0.0002	N	0.0039	N	0.0040	
0111	NICKEL	LT	mg/L	0.1000	0.0100	N	0.0999	N	0.1000	
0112	ANTIMONY	LT	mg/L	0.0060	0.0050	N	0.0059	N	0.0060	
0113	THALLIUM	LT	mg/L	0.0020	0.0010	N	0.0019	N	0.0020	
0116	CYANIDE	LT	mg/L	0.0100	0.0100	N	0.1999	N	0.2000	
0019	FLUORIDE	EQ	mg/L	0.2000	0.6600	N	1.9999	N	4.0000	
0114	NITRITE-N	LT	mg/L	0.2000	0.0700	N	0.4999	N	1.0000	
0020	NITRATE-N	EQ	mg/L	0.2000	0.7100	N	4.9990	N	10.0000	
0161	TOTAL NITRATE/NITRITE	EQ	mg/L	0.5000	0.7100	N		N		
0008	IRON	LT	mg/L	0.1000	0.0097	N		N		
0010	MANGANESE	LT	mg/L	0.0100	0.0020	N		N		
0013	SILVER	LT	mg/L	0.1000	0.0047	N		N		
0021	CHLORIDE	EQ	mg/L	20.0000	10.7000	N		N		
0022	SULFATE	EQ	mg/L	50.0000	154.0000	N		N		
0024	ZINC	EQ	mg/L	0.2000	0.0107	N		N		
0014	SODIUM	EQ	mg/L	5.0000	27.1000	N		N		
0015	HARDNESS	EQ	mg/L	10.0000	397.0000	N		N		
0016	CONDUCTIVITY	EQ	Umhos/c	70.0000	833.0000	N		N		
0017	TURBIDITY	LT	NTU	0.1000	0.1000	N		N		
0018	COLOR	LT	CU	15.0000	4.0000	N		N		
0026	TDS-TOTAL DISSOLVED	EQ	mg/L	100.0000	516.0000	N		N		
0009	LEAD	LT	mg/L	0.0010	0.0005	N	9999.0000	N		
0023	COPPER	EQ	mg/L	0.0200	0.0025	N	9999.0000	N		
0171	ORTHOPHOSPHATE	NA	mg/L	0.1000		N		N		
0172	SILICA	NA	mg/L	1.0000		N		N		
0402	ALUMINUM	NA	mg/L	0.0500		N		N		
0403	ALKALINITY-LAB	NA	mg/L	5.0000		N		N		
0404	MAGNESIUM	EQ	mg/L	0.1000	36.7000	N		N		
0405	CALCIUM	EQ	mg/L	0.0500	98.6000	N		N		
0406	AMMONIA	NA	mg/L	1.0000		N		N		
0407	CHLORINE DIOXIDE	NA	mg/L	0.8000		N		N		
0408	OZONE	NA	mg/L	0.2000		N		N		
0409	PH	NA	PH			N		N		
0410	CHLORAMINES	NA	mg/L			N		N		
0099	INACTIVATION RATIO	NA	None			N		N		
0100	RESIDUAL CHLORINE	NA	mg/L	0.2000		N		N		
0115	ASBESTOS	NA	MFL	0.2000		N	6.9990	N	7.0000	

Result Range:

EQ - Equal To

LT - Less Than

GT - Greater Than

NA - Not Analyzed

ND - No Detect



Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 14 of 24

Source 07

Source Status	Source Type	Test Panel	Lab Number	Sample Number	Collect Date	Sample Location				
Act	Well	IOC	105	18623	07/06/2016	s07				
Analyte DOH #	Analyte Name	Result Range	Units	SRL	Result Qty	Trigger Ind	Trigger Value	MCL Ind	MCL Value	
0004	ARSENIC	EQ	mg/L	0.0010	0.0083	N	0.0103	N	0.0104	
0005	BARIUM	EQ	mg/L	0.4000	0.0790	N	1.9999	N	2.0000	
0006	CADMIUM	LT	mg/L	0.0020	0.0001	N	0.0049	N	0.0050	
0007	CHROMIUM	EQ	mg/L	0.0200	0.0013	N	0.0999	N	0.1000	
0011	MERCURY	LT	mg/L	0.0004	0.0002	N	0.0019	N	0.0020	
0012	SELENIUM	LT	mg/L	0.0100	0.0005	N	0.0499	N	0.0500	
0110	BERYLLIUM	LT	mg/L	0.0008	0.0001	N	0.0039	N	0.0040	
0111	NICKEL	LT	mg/L	0.1000	0.0001	N	0.0999	N	0.1000	
0112	ANTIMONY	LT	mg/L	0.0060	0.0001	N	0.0059	N	0.0060	
0113	THALLIUM	EQ	mg/L	0.0020	0.0003	N	0.0019	N	0.0020	
0116	CYANIDE	LT	mg/L	0.0100	0.0100	N	0.1999	N	0.2000	
0019	FLUORIDE	EQ	mg/L	0.2000	0.5700	N	1.9999	N	4.0000	
0114	NITRITE-N	LT	mg/L	0.2000	0.0700	N	0.4999	N	1.0000	
0020	NITRATE-N	EQ	mg/L	0.2000	0.3800	N	4.9990	N	10.0000	
0161	TOTAL NITRATE/NITRITE	EQ	mg/L	0.5000	0.3800	N		N		
0008	IRON	LT	mg/L	0.1000	0.0097	N		N		
0010	MANGANESE	LT	mg/L	0.0100	0.0001	N		N		
0013	SILVER	LT	mg/L	0.1000	0.0001	N		N		
0021	CHLORIDE	EQ	mg/L	20.0000	14.2000	N		N		
0022	SULFATE	EQ	mg/L	50.0000	111.0000	N		N		
0024	ZINC	EQ	mg/L	0.2000	0.0010	N		N		
0014	SODIUM	EQ	mg/L	5.0000	21.7000	N		N		
0015	HARDNESS	EQ	mg/L	10.0000	289.0000	N		N		
0016	CONDUCTIVITY	EQ	Umhos/c	70.0000	659.0000	N		N		
0017	TURBIDITY	EQ	NTU	0.1000	0.1100	N		N		
0018	COLOR	LT	CU	15.0000	4.0000	N		N		
0026	TDS-TOTAL DISSOLVED	EQ	mg/L	100.0000	394.0000	N		N		
0009	LEAD	EQ	mg/L	0.0010	0.0003	N	9999.0000	N		
0023	COPPER	EQ	mg/L	0.0200	0.0025	N	9999.0000	N		
0171	ORTHOPHOSPHATE	NA	mg/L	0.1000		N		N		
0172	SILICA	NA	mg/L	1.0000		N		N		
0402	ALUMINUM	NA	mg/L	0.0500		N		N		
0403	ALKALINITY-LAB	NA	mg/L	5.0000		N		N		
0404	MAGNESIUM	EQ	mg/L	0.1000	32.7000	N		N		
0405	CALCIUM	EQ	mg/L	0.0500	62.0000	N		N		
0406	AMMONIA	NA	mg/L	1.0000		N		N		
0407	CHLORINE DIOXIDE	NA	mg/L	0.8000		N		N		
0408	OZONE	NA	mg/L	0.2000		N		N		
0409	PH	NA	PH			N		N		
0410	CHLORAMINES	NA	mg/L			N		N		
0099	INACTIVATION RATIO	NA	None			N		N		
0100	RESIDUAL CHLORINE	NA	mg/L	0.2000		N		N		
0115	ASBESTOS	NA	MFL	0.2000		N	6.9990	N	7.0000	

Result Range:

EQ - Equal To

LT - Less Than

GT - Greater Than

NA - Not Analyzed

ND - No Detect

Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 15 of 24

Source 08

Source Status	Source Type	Test Panel	Lab Number	Sample Number	Collect Date	Sample Location				
Act	Well	IOC	105	18624	07/06/2016	s08				
Analyte DOH #	Analyte Name	Result Range	Units	SRL	Result Qty	Trigger Ind	Trigger Value	MCL Ind	MCL Value	
0004	ARSENIC	EQ	mg/L	0.0010	0.0019	N	0.0103	N	0.0104	
0005	BARIUM	EQ	mg/L	0.4000	0.0558	N	1.9999	N	2.0000	
0006	CADMIUM	LT	mg/L	0.0020	0.0001	N	0.0049	N	0.0050	
0007	CHROMIUM	EQ	mg/L	0.0200	0.0015	N	0.0999	N	0.1000	
0011	MERCURY	LT	mg/L	0.0004	0.0002	N	0.0019	N	0.0020	
0012	SELENIUM	LT	mg/L	0.0100	0.0005	N	0.0499	N	0.0500	
0110	BERYLLIUM	LT	mg/L	0.0008	0.0001	N	0.0039	N	0.0040	
0111	NICKEL	LT	mg/L	0.1000	0.0001	N	0.0999	N	0.1000	
0112	ANTIMONY	LT	mg/L	0.0060	0.0001	N	0.0059	N	0.0060	
0113	THALLIUM	EQ	mg/L	0.0020	0.0004	N	0.0019	N	0.0020	
0116	CYANIDE	LT	mg/L	0.0100	0.0100	N	0.1999	N	0.2000	
0019	FLUORIDE	EQ	mg/L	0.2000	0.4700	N	1.9999	N	4.0000	
0114	NITRITE-N	LT	mg/L	0.2000	0.0700	N	0.4999	N	1.0000	
0020	NITRATE-N	LT	mg/L	0.2000	0.0700	N	4.9990	N	10.0000	
0161	TOTAL NITRATE/NITRITE	LT	mg/L	0.5000	0.5000	N		N		
0008	IRON	EQ	mg/L	0.1000	0.2990	N		N		
0010	MANGANESE	EQ	mg/L	0.0100	0.0485	N		N		
0013	SILVER	LT	mg/L	0.1000	0.0001	N		N		
0021	CHLORIDE	EQ	mg/L	20.0000	8.1000	N		N		
0022	SULFATE	EQ	mg/L	50.0000	107.0000	N		N		
0024	ZINC	EQ	mg/L	0.2000	0.0118	N		N		
0014	SODIUM	EQ	mg/L	5.0000	13.6000	N		N		
0015	HARDNESS	EQ	mg/L	10.0000	295.0000	N		N		
0016	CONDUCTIVITY	EQ	Umhos/c	70.0000	617.0000	N		N		
0017	TURBIDITY	EQ	NTU	0.1000	0.2600	N		N		
0018	COLOR	EQ	CU	15.0000	5.0000	N		N		
0026	TDS-TOTAL DISSOLVED	EQ	mg/L	100.0000	390.0000	N		N		
0009	LEAD	EQ	mg/L	0.0010	0.0001	N	9999.0000	N		
0023	COPPER	EQ	mg/L	0.0200	0.0013	N	9999.0000	N		
0171	ORTHOPHOSPHATE	NA	mg/L	0.1000		N		N		
0172	SILICA	NA	mg/L	1.0000		N		N		
0402	ALUMINUM	NA	mg/L	0.0500		N		N		
0403	ALKALINITY-LAB	NA	mg/L	5.0000		N		N		
0404	MAGNESIUM	EQ	mg/L	0.1000	27.3000	N		N		
0405	CALCIUM	EQ	mg/L	0.0500	73.3000	N		N		
0406	AMMONIA	NA	mg/L	1.0000		N		N		
0407	CHLORINE DIOXIDE	NA	mg/L	0.8000		N		N		
0408	OZONE	NA	mg/L	0.2000		N		N		
0409	PH	NA	PH			N		N		
0410	CHLORAMINES	NA	mg/L			N		N		
0099	INACTIVATION RATIO	NA	None			N		N		
0100	RESIDUAL CHLORINE	NA	mg/L	0.2000		N		N		
0115	ASBESTOS	NA	MFL	0.2000		N	6.9990	N	7.0000	

Result Range:

EQ - Equal To

LT - Less Than

GT - Greater Than

NA - Not Analyzed

ND - No Detect

Detail - NIT

Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 16 of 24

Source 01

Source Status - Act

Source Type - Well

<u>Lab/Sample Number</u>	<u>Sample Collect Date</u>	<u>Analyte DOH #</u>	<u>Analyte Name</u>	<u>Result Range</u>	<u>Units</u>	<u>SRL</u>	<u>Result Qty</u>	<u>Trigger Ind</u>	<u>Trigger Value</u>	<u>MCL Ind</u>	<u>MCL Value</u>
105 22982	08/08/2016	0020	NITRATE-N	EQ	mg/L	0.20000	3.24000	N	4.99900	N	10.00000
105 24487	08/18/2015	0020	NITRATE-N	EQ	mg/L	0.20000	0.89000	N	4.99900	N	10.00000
105 20715	08/19/2014	0020	NITRATE-N	EQ	mg/L	0.20000	0.95000	N	4.99900	N	10.00000
105 21816	09/10/2013	0020	NITRATE-N	EQ	mg/L	0.20000	1.18000	N	4.99900	N	10.00000
105 12136	06/26/2012	0020	NITRATE-N	EQ	mg/L	0.20000	0.44000	N	4.99900	N	10.00000
105 14428	07/28/2011	0020	NITRATE-N	EQ	mg/L	0.20000	0.35000	N	4.99900	N	10.00000
105 19677	09/23/2010	0020	NITRATE-N	EQ	mg/L	0.20000	0.27000	N	4.99900	N	10.00000
105 20034	10/08/2009	0020	NITRATE-N	EQ	mg/L	0.20000	0.31000	N	4.99900	N	10.00000
105 18886	09/29/2008	0020	NITRATE-N	EQ	mg/L	0.20000	0.52000	N	4.99900	N	10.00000

Source 02

Source Status - Act

Source Type - Well

<u>Lab/Sample Number</u>	<u>Sample Collect Date</u>	<u>Analyte DOH #</u>	<u>Analyte Name</u>	<u>Result Range</u>	<u>Units</u>	<u>SRL</u>	<u>Result Qty</u>	<u>Trigger Ind</u>	<u>Trigger Value</u>	<u>MCL Ind</u>	<u>MCL Value</u>
093 00114	07/13/2011	0020	NITRATE-N	LT	mg/L	0.20000	0.20000	N	4.99900	N	10.00000
105 23344	11/09/2010	0020	NITRATE-N	EQ	mg/L	0.20000	1.91000	N	4.99900	N	10.00000

Source 03

Source Status - Act

Source Type - Well

<u>Lab/Sample Number</u>	<u>Sample Collect Date</u>	<u>Analyte DOH #</u>	<u>Analyte Name</u>	<u>Result Range</u>	<u>Units</u>	<u>SRL</u>	<u>Result Qty</u>	<u>Trigger Ind</u>	<u>Trigger Value</u>	<u>MCL Ind</u>	<u>MCL Value</u>
093 00113	07/13/2011	0020	NITRATE-N	LT	mg/L	0.20000	0.20000	N	4.99900	N	10.00000
105 23345	11/09/2010	0020	NITRATE-N	EQ	mg/L	0.20000	1.62000	N	4.99900	N	10.00000

Source 04

Source Status - Act

Source Type - Well

<u>Lab/Sample Number</u>	<u>Sample Collect Date</u>	<u>Analyte DOH #</u>	<u>Analyte Name</u>	<u>Result Range</u>	<u>Units</u>	<u>SRL</u>	<u>Result Qty</u>	<u>Trigger Ind</u>	<u>Trigger Value</u>	<u>MCL Ind</u>	<u>MCL Value</u>
105 24488	08/18/2015	0020	NITRATE-N	EQ	mg/L	0.20000	0.53000	N	4.99900	N	10.00000
105 20716	08/19/2014	0020	NITRATE-N	EQ	mg/L	0.20000	0.58000	N	4.99900	N	10.00000
105 21817	09/10/2013	0020	NITRATE-N	EQ	mg/L	0.20000	0.85000	N	4.99900	N	10.00000
105 12137	06/26/2012	0020	NITRATE-N	EQ	mg/L	0.20000	0.76000	N	4.99900	N	10.00000
093 00040	04/19/2011	0020	NITRATE-N	EQ	mg/L	0.20000	0.77000	N	4.99900	N	10.00000
105 19679	09/23/2010	0020	NITRATE-N	EQ	mg/L	0.20000	0.71000	N	4.99900	N	10.00000
093 00119	08/02/2010	0020	NITRATE-N	EQ	mg/L	0.20000	0.45000	N	4.99900	N	10.00000
105 21381	10/29/2009	0020	NITRATE-N	EQ	mg/L	0.20000	0.52000	N	4.99900	N	10.00000
105 18883	09/29/2008	0020	NITRATE-N	EQ	mg/L	0.20000	0.49000	N	4.99900	N	10.00000
105 13054	07/30/2007	0020	NITRATE-N	EQ	mg/L	0.20000	0.48000	N	4.99900	N	10.00000

Source 07

Source Status - Act

Source Type - Well

<u>Lab/Sample Number</u>	<u>Sample Collect Date</u>	<u>Analyte DOH #</u>	<u>Analyte Name</u>	<u>Result Range</u>	<u>Units</u>	<u>SRL</u>	<u>Result Qty</u>	<u>Trigger Ind</u>	<u>Trigger Value</u>	<u>MCL Ind</u>	<u>MCL Value</u>
105 22983	08/08/2016	0020	NITRATE-N	EQ	mg/L	0.20000	0.40000	N	4.99900	N	10.00000
105 18623	07/06/2016	0020	NITRATE-N	EQ	mg/L	0.20000	0.38000	N	4.99900	N	10.00000
105 24489	08/18/2015	0020	NITRATE-N	EQ	mg/L	0.20000	0.27000	N	4.99900	N	10.00000
105 20717	08/19/2014	0020	NITRATE-N	EQ	mg/L	0.20000	0.29000	N	4.99900	N	10.00000
105 21818	09/10/2013	0020	NITRATE-N	EQ	mg/L	0.20000	0.26000	N	4.99900	N	10.00000
105 12138	06/26/2012	0020	NITRATE-N	EQ	mg/L	0.20000	0.25000	N	4.99900	N	10.00000
105 26943	12/29/2011	0020	NITRATE-N	EQ	mg/L	0.20000	0.31000	N	4.99900	N	10.00000
105 21903	10/28/2009	0020	NITRATE-N	EQ	mg/L	0.20000	0.26000	N	4.99900	N	10.00000
105 18884	09/29/2008	0020	NITRATE-N	EQ	mg/L	0.20000	0.24000	N	4.99900	N	10.00000



Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 17 of 24

105 13055	07/30/2007	0020	NITRATE-N	EQ	mg/L	0.20000	0.34000	N	4.99900	N	10.00000
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Source 08

Source Status - Act

Source Type - Well

<u>Lab/Sample Number</u>	<u>Sample Collect Date</u>	<u>Analyte DOH #</u>	<u>Analyte Name</u>	<u>Result Range</u>	<u>Units</u>	<u>SRL</u>	<u>Result Qty</u>	<u>Trigger Ind</u>	<u>Trigger Value</u>	<u>MCL Ind</u>	<u>MCL Value</u>
105 22984	08/08/2016	0020	NITRATE-N	LT	mg/L	0.20000	0.07000	N	4.99900	N	10.00000
105 18624	07/06/2016	0020	NITRATE-N	LT	mg/L	0.20000	0.07000	N	4.99900	N	10.00000
105 24490	08/18/2015	0020	NITRATE-N	LT	mg/L	0.20000	0.07000	N	4.99900	N	10.00000
105 20718	08/19/2014	0020	NITRATE-N	LT	mg/L	0.20000	0.07000	N	4.99900	N	10.00000
105 21819	09/10/2013	0020	NITRATE-N	EQ	mg/L	0.20000	0.09000	N	4.99900	N	10.00000
105 12139	06/26/2012	0020	NITRATE-N	LT	mg/L	0.20000	0.07000	N	4.99900	N	10.00000
105 14427	07/28/2011	0020	NITRATE-N	LT	mg/L	0.20000	0.07000	N	4.99900	N	10.00000
105 25420	12/13/2010	0020	NITRATE-N	LT	mg/L	0.20000	0.07000	N	4.99900	N	10.00000
105 21304	10/28/2009	0020	NITRATE-N	LT	mg/L	0.20000	0.07000	N	4.99900	N	10.00000
105 18885	09/29/2008	0020	NITRATE-N	LT	mg/L	0.20000	0.07000	N	4.99900	N	10.00000
105 13056	07/30/2007	0020	NITRATE-N	LT	mg/L	0.20000	0.07000	N	4.99900	N	10.00000

Result Range:

EQ - Equal To

LT - Less Than

GT - Greater Than

NA - Not Analyzed

ND - No Detect

Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 18 of 24

ARSENIC

Detail - Arsenic

Source 01

Source Status - Act

Source Type - Well

<u>Lab/Sample</u> <u>Number</u>	<u>Sample</u> <u>Collect Date</u>	<u>Analyte</u> <u>DOH #</u>	<u>Analyte</u> <u>Name</u>	<u>Result</u> <u>Range</u>	<u>Units</u>	<u>SRL</u>	<u>Result</u> <u>Qty</u>	<u>Trigger</u> <u>Ind</u>	<u>Trigger</u> <u>Value</u>	<u>MCL</u> <u>Ind</u>	<u>MCL</u> <u>Value</u>
105 11771	05/07/2015	0004	ARSENIC	EQ	mg/L	0.00100	0.00790	N	0.01030	N	0.01040

No Samples with Arsenic being Analyzed were found.

Source 02

Source Status - Act

Source Type - Well

<u>Lab/Sample</u> <u>Number</u>	<u>Sample</u> <u>Collect Date</u>	<u>Analyte</u> <u>DOH #</u>	<u>Analyte</u> <u>Name</u>	<u>Result</u> <u>Range</u>	<u>Units</u>	<u>SRL</u>	<u>Result</u> <u>Qty</u>	<u>Trigger</u> <u>Ind</u>	<u>Trigger</u> <u>Value</u>	<u>MCL</u> <u>Ind</u>	<u>MCL</u> <u>Value</u>
105 23344	11/09/2010	0004	ARSENIC	EQ	mg/L	0.00100	0.00880	N	0.01030	N	0.01040

No Samples with Arsenic being Analyzed were found.

Source 03

Source Status - Act

Source Type - Well

<u>Lab/Sample</u> <u>Number</u>	<u>Sample</u> <u>Collect Date</u>	<u>Analyte</u> <u>DOH #</u>	<u>Analyte</u> <u>Name</u>	<u>Result</u> <u>Range</u>	<u>Units</u>	<u>SRL</u>	<u>Result</u> <u>Qty</u>	<u>Trigger</u> <u>Ind</u>	<u>Trigger</u> <u>Value</u>	<u>MCL</u> <u>Ind</u>	<u>MCL</u> <u>Value</u>
105 26217	12/28/2010	0004	ARSENIC	EQ	mg/L	0.00100	0.01040	Y	0.01030	N	0.01040

No Samples with Arsenic being Analyzed were found.

Source 04

Source Status - Act

Source Type - Well

<u>Lab/Sample</u> <u>Number</u>	<u>Sample</u> <u>Collect Date</u>	<u>Analyte</u> <u>DOH #</u>	<u>Analyte</u> <u>Name</u>	<u>Result</u> <u>Range</u>	<u>Units</u>	<u>SRL</u>	<u>Result</u> <u>Qty</u>	<u>Trigger</u> <u>Ind</u>	<u>Trigger</u> <u>Value</u>	<u>MCL</u> <u>Ind</u>	<u>MCL</u> <u>Value</u>
105 11772	05/07/2015	0004	ARSENIC	EQ	mg/L	0.00300	0.00973	N	0.01030	N	0.01040

No Samples with Arsenic being Analyzed were found.

Source 07

Source Status - Act

Source Type - Well

<u>Lab/Sample</u> <u>Number</u>	<u>Sample</u> <u>Collect Date</u>	<u>Analyte</u> <u>DOH #</u>	<u>Analyte</u> <u>Name</u>	<u>Result</u> <u>Range</u>	<u>Units</u>	<u>SRL</u>	<u>Result</u> <u>Qty</u>	<u>Trigger</u> <u>Ind</u>	<u>Trigger</u> <u>Value</u>	<u>MCL</u> <u>Ind</u>	<u>MCL</u> <u>Value</u>
105 18623	07/06/2016	0004	ARSENIC	EQ	mg/L	0.00100	0.00834	N	0.01030	N	0.01040

No Samples with Arsenic being Analyzed were found.

Source 08

Source Status - Act

Source Type - Well

<u>Lab/Sample</u> <u>Number</u>	<u>Sample</u> <u>Collect Date</u>	<u>Analyte</u> <u>DOH #</u>	<u>Analyte</u> <u>Name</u>	<u>Result</u> <u>Range</u>	<u>Units</u>	<u>SRL</u>	<u>Result</u> <u>Qty</u>	<u>Trigger</u> <u>Ind</u>	<u>Trigger</u> <u>Value</u>	<u>MCL</u> <u>Ind</u>	<u>MCL</u> <u>Value</u>
105 18624	07/06/2016	0004	ARSENIC	EQ	mg/L	0.00100	0.00192	N	0.01030	N	0.01040

No Samples with Arsenic being Analyzed were found.

Result Range:

EQ - Equal To

LT - Less Than

GT - Greater Than

NA - Not Analyzed

ND - No Detect

Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 19 of 24

VOLATILE ORGANIC CHEMICALS (VOC)

History - VOC - Analyte Group

<u>Src Num</u>	<u>Source Name</u>	<u>Source Type</u>	<u>Source Status</u>	<u>Source Use</u>	<u>Lab / Sample Num</u>	<u>Collect Date</u>	<u>Test Panel</u>	<u>Analytes Tested</u>
01	Eastside Well - AGJ179	W	Act	P	089 75531	09/21/2015	VOC1	46 of 64
01	Eastside Well - AGJ179	W	Act	P	089 78560	10/08/2009	VOC1	46 of 64
04	Okoma Well - ABR843	W	Act	E	089 70130	10/27/2010	VOC1	46 of 64
04	Okoma Well - ABR843	W	Act	E	089 75019	07/30/2007	VOC1	62 of 64
07	OWP Well - AAR993	W	Act	P	089 73014	09/23/2013	VOC1	46 of 64
07	OWP Well - AAR993	W	Act	P	089 75020	07/30/2007	VOC1	62 of 64
08	NE Omak Well - AEC887	W	Act	P	089 72970	09/10/2013	VOC1	46 of 64
08	NE Omak Well - AEC887	W	Act	P	089 75021	07/30/2007	VOC1	62 of 64

Detail - VOC

Distribution

Source Status	Source Type	Test Panel	Lab Number	Sample Number	Collect Date	Sample Location			
VOC1									
<u>Analyte</u>		<u>Result</u>			<u>Result</u>	<u>Trigger</u>	<u>Trigger</u>	<u>MCL</u>	<u>MCL</u>
<u>DOH #</u>	<u>Analyte Name</u>	<u>Range</u>	<u>Units</u>	<u>SRL</u>	<u>Qty</u>	<u>Ind</u>	<u>Value</u>	<u>Ind</u>	<u>Value</u>

Result Range:

EQ - Equal To

LT - Less Than

GT - Greater Than

NA - Not Analyzed

ND - No Detect

SYNTHETIC ORGANIC CHEMICALS (SOC)

History - SOC - Analyte Group

<u>Src Num</u>	<u>Source Name</u>	<u>Source Type</u>	<u>Source Status</u>	<u>Source Use</u>	<u>Lab / Sample Num</u>	<u>Collect Date</u>	<u>Test Panel</u>	<u>Analytes Tested</u>
01	Eastside Well - AGJ179	W	Act	P	089 88850	10/08/2009	HERB1	14 of 18
01	Eastside Well - AGJ179	W	Act	P	089 88850	10/08/2009	PEST1	31 of 66
04	Okoma Well - ABR843	W	Act	E	089 88923	10/29/2009	HERB1	14 of 18
04	Okoma Well - ABR843	W	Act	E	089 88923	10/29/2009	PEST1	31 of 66
07	OWP Well - AAR993	W	Act	P	089 88913	10/28/2009	HERB1	14 of 18
07	OWP Well - AAR993	W	Act	P	089 88913	10/28/2009	PEST1	31 of 66
08	NE Omak Well - AEC887	W	Act	P	089 81343	06/26/2012	HERB1	14 of 18
08	NE Omak Well - AEC887	W	Act	P	089 81343	06/26/2012	PEST1	31 of 66



Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 20 of 24

Detail - SOC

Distribution

Source Status	Source Type	Test Panel	Lab Number	Sample Number	Collect Date	Sample Location					
HERB1											
<u>Analyte</u>		<u>Result</u>			<u>Result</u>	<u>Trigger</u>		<u>Trigger</u>	<u>MCL</u>		<u>MCL</u>
<u>DOH #</u>	<u>Analyte Name</u>	<u>Range</u>	<u>Units</u>	<u>SRL</u>	<u>Qty</u>	<u>Ind</u>		<u>Value</u>	<u>Ind</u>		<u>Value</u>

Result Range:

EQ - Equal To

LT - Less Than

GT - Greater Than

NA - Not Analyzed

ND - No Detect

No Analytes Detected for Testpanel HERB1 where 10 analytes were tested.

No Analytes Detected for Testpanel PEST1 where 55 analytes were tested.

No Analytes Detected for Testpanel INSECT1 where 8 analytes were tested.

Halo Acetic Acids (HAA5)

History - DBP - Analyte Group

Src Num	Source Name	Source Type	Source Status	Source Use	Lab / Sample Num	Collect Date	Test Panel	Analytes Tested
Dist					089 85133	08/08/2016	HAA5	7 of 8
Dist					089 84487	08/18/2015	HAA5	7 of 8
Dist					089 83513	08/25/2014	HAA5	7 of 8
Dist					089 80750	08/23/2011	HAA5	7 of 8
Dist					089 80751	08/23/2011	HAA5	7 of 8
Dist					089 80752	08/23/2011	HAA5	7 of 8
Dist					089 80754	08/23/2011	HAA5	7 of 8
Dist					089 80755	08/23/2011	HAA5	7 of 8
Dist					089 87086	07/29/2008	HAA5	7 of 8
Dist					089 87087	07/29/2008	HAA5	7 of 8
Dist					089 87088	07/29/2008	HAA5	7 of 8
Dist					089 87089	07/29/2008	HAA5	7 of 8
Dist					089 87090	07/29/2008	HAA5	7 of 8

Halo Acetic Acids (HAA5)

No Analytes Detected for Testpanel HAA5

Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 21 of 24

Total Trihalomethane (THM)

History - DBP - Analyte Group

<u>Src</u> <u>Num</u>	<u>Source Name</u>	<u>Source</u> <u>Type</u>	<u>Source</u> <u>Status</u>	<u>Source</u> <u>Use</u>	<u>Lab / Sample</u> <u>Num</u>	<u>Collect</u> <u>Date</u>	<u>Test</u> <u>Panel</u>	<u>Analytes</u> <u>Tested</u>
Dist					089 76270	08/08/2016	THM	5 of 6
Dist					089 75348	08/18/2015	THM	5 of 6
Dist					089 74083	08/25/2014	THM	5 of 6
Dist					089 70872	08/23/2011	THM	5 of 6
Dist					089 70873	08/23/2011	THM	5 of 6
Dist					089 70874	08/23/2011	THM	5 of 6
Dist					089 70875	08/23/2011	THM	5 of 6
Dist					089 70876	08/23/2011	THM	5 of 6
Dist					089 76764	07/29/2008	THM	5 of 6
Dist					089 76765	07/29/2008	THM	5 of 6
Dist					089 76766	07/29/2008	THM	5 of 6
Dist					089 76767	07/29/2008	THM	5 of 6
Dist					089 76768	07/29/2008	THM	5 of 6

Total Trihalomethane (THM)

No Analytes Detected for Testpanel THM where 1 analytes were tested.

Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 22 of 24

RADIONUECLIDES (RAD)

History - RAD - Analyte Group

<u>Src</u> <u>Num</u>	<u>Source Name</u>	<u>Source</u> <u>Type</u>	<u>Source</u> <u>Status</u>	<u>Source</u> <u>Use</u>	<u>Lab / Sample</u> <u>Num</u>	<u>Collect</u> <u>Date</u>	<u>Test</u> <u>Panel</u>	<u>Analytes</u> <u>Tested</u>
01	Eastside Well - AGJ179	W	Act	P	028 52197	09/20/2016	RAD	2 of 13
01	Eastside Well - AGJ179	W	Act	P	028 42187	09/23/2010	RAD	3 of 13
04	Okoma Well - ABR843	W	Act	E	028 49629	05/07/2015	RAD	1 of 13
04	Okoma Well - ABR843	W	Act	E	028 43524	07/28/2011	RAD	4 of 13
04	Okoma Well - ABR843	W	Act	E	028 40633	10/29/2009	RAD	2 of 13
07	OWP Well - AAR993	W	Act	P	028 50740	11/30/2015	RAD	1 of 13
07	OWP Well - AAR993	W	Act	P	028 50416	09/29/2015	RAD	1 of 13
07	OWP Well - AAR993	W	Act	P	028 40619	10/28/2009	RAD	2 of 13
08	NE Omak Well - AEC887	W	Act	P	028 45237	06/26/2012	RAD	1 of 13
08	NE Omak Well - AEC887	W	Act	P	028 00187	09/23/2010	RAD	4 of 13
08	NE Omak Well - AEC887	W	Act	P	028 00619	10/28/2009	RAD	4 of 13
08	NE Omak Well - AEC887	W	Act	P	028 48911	06/10/2007	RAD	4 of 13



Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 23 of 24

Detail - RAD

Source 01

Source Status	Source Type	Test Panel	Lab Number	Sample Number	Collect Date	Sample Location				
Act	Well	RAD	028	52197	09/20/2016	8th & edmonds				
Analyte DOH #	Analyte Name	Result Range	Units	SRL	Result Qty	Trigger Ind	Trigger Value	MCL Ind	MCL Value	
0165	GROSS ALPHA	EQ	pCi/L	3.0000	1.6000	N	14.9999	N		

Result Range:

EQ - Equal To LT - Less Than GT - Greater Than NA - Not Analyzed ND -- No Detect

Source 04

Source Status	Source Type	Test Panel	Lab Number	Sample Number	Collect Date	Sample Location				
Act	Well	RAD	028	49629	05/07/2015	sample port wh				
Analyte DOH #	Analyte Name	Result Range	Units	SRL	Result Qty	Trigger Ind	Trigger Value	MCL Ind	MCL Value	
0165	GROSS ALPHA	EQ	pCi/L	3.0000	11.4000	N	14.9999	N		

Result Range:

EQ - Equal To LT - Less Than GT - Greater Than NA - Not Analyzed ND -- No Detect

Source 08

Source Status	Source Type	Test Panel	Lab Number	Sample Number	Collect Date	Sample Location				
Act	Well	RAD	028	45237	06/26/2012	s/t @ whd				
Analyte DOH #	Analyte Name	Result Range	Units	SRL	Result Qty	Trigger Ind	Trigger Value	MCL Ind	MCL Value	
0165	GROSS ALPHA	EQ	pCi/L	3.0000	5.3700	N	14.9999	N		

Result Range:

EQ - Equal To LT - Less Than GT - Greater Than NA - Not Analyzed ND -- No Detect

LEAD AND COPPER (LCR)

Monitoring Level	Start	End	Pb 90th	Pb Hi	Cu 90th	Cu Hi	Sam Req	Sam Taken	AL Pb Inc	AL Cu Inc	Mon Inc
Base3Y	01/2017	12/2019					20	0			
Base3Y	01/2014	12/2016	.0037	.0095	.3710	.6350	20	20			
Base3Y	01/2011	12/2013	.0027	.0032	.3500	.5380	20	20			
Base3Y	01/2008	12/2010	.0020	.0036	.4140	.8550	20	20			
Base3Y	01/2005	12/2007	.0035	.0040	.4460	.5350	20	20			
Base3Y	01/2002	12/2004	.0030	.0080	.5000	1.6000	20	33			
Base3Y	01/1999	12/2001	.0050	.0360	.4000	1.3000	20	21			
Base3Y	01/1996	12/1998	.0050	.0100	.4800	.7000	20	40			
First6Mo	07/1995	12/1995					20	20			
AnnualRed	01/1994	12/1994					20	23			
Second6Mo	07/1993	12/1993					20	23			
Second6Mo	01/1993	06/1993					20	19			
First6Mo	07/1992	12/1992					20	27			

Sanitary Survey Data Report / Packet

As Of: 5/18/2017

Page 24 of 24

***** End Of Report *****

APPENDIX E
CONSUMER CONFIDENCE REPORT

2015 Consumer Confidence Report

Spanish (Espanol)

Este informe contiene informacion muy importante sobre la calidad de su agua potable. Por favor lea este informe o comuniquese con alguien que pueda traducir la informacion.

Is my water safe?

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. The City of Omak's drinking water meets all standards set forth by federal and state regulatory agencies.

Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

Where does my water come from?

The City of Omak's drinking water is being supplied by four wells.

Source water assessment and its availability

The wellhead protection plan is available at City hall and provides information on our wellhead protection area, risk assessment and potential contaminants.

Why are there contaminants in my drinking water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity: microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming; pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

How can I get involved?

City council meetings are held on the first and third Monday of each month. Public participation is welcome.

Description of Water Treatment Process

Your water is treated with chlorine for disinfection. Disinfection involves the addition of chlorine to kill dangerous bacteria and microorganisms that may be in the water. Disinfection is considered to be one of the major public health advances of the 20th century.

Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit www.epa.gov/watersense for more information.

Cross Connection Control Survey

The purpose of this survey is to determine whether a cross-connection may exist at your home or business. A cross connection is an unprotected or improper connection to a public water distribution system that may cause contamination or pollution to enter the system. We are responsible for enforcing cross-connection control regulations and insuring that no contaminants can, under any flow conditions, enter the distribution system. If you have any of the devices listed below please contact us so that we can discuss the issue, and if needed, survey your connection and assist you in isolating it if that is necessary.

- Boiler/ Radiant heater (water heaters not included)
- Underground lawn sprinkler system
- Pool or hot tub (whirlpool tubs not included)
- Additional source(s) of water on the property
- Decorative pond
- Watering trough

Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.
- Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste - Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Additional Information for Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Omak is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Additional Information for Arsenic

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

<u>Contaminants</u>	<u>MCLG</u> or <u>MRDLG</u>	<u>MCL</u> , <u>TT</u> , or <u>MRDL</u>	<u>Your</u> <u>Water</u>	<u>Range</u> <u>Low</u> <u>High</u>		<u>Sample</u> <u>Date</u>	<u>Violation</u>	<u>Typical Source</u>
Disinfectants & Disinfectant By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
TTHMs [Total Trihalomethanes] (ppb)	NA	80	4.8	NA		2015	No	By-product of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	NA	60	ND	NA		2015	No	By-product of drinking water chlorination
Inorganic Contaminants								
Nitrate [measured as Nitrogen] (ppm)	10	10	0.89	0.07	0.89	2015	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Arsenic (ppb)	0	10	9.73	7.9	9.73	2015	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	0.082	0.049	0.082	2011	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Cadmium (ppb)	5	5	0.3	0.3	0.3	2011	No	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; runoff from waste batteries and paints
Chromium (ppb)	100	100	4.7	4.7	4.7	2011	No	Discharge from steel and pulp mills; Erosion of natural deposits
Mercury [Inorganic] (ppb)	2	2	0.3	0.3	0.3	2011	No	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland

Iron (mg/L)	NA	0.3	0.352	<0.1	0.352	2015	No	Erosion of natural deposits. Secondary MCL established for esthetic purposes, not health based
Manganese (mg/L)	NA	0.05	0.05	NA	NA	2015	NO	Erosion of natural deposits. Secondary MCL established for esthetic purposes, not health based
Selenium (ppb)	50	50	5	5	5	2011	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Beryllium (ppb)	4	4	0.2	0.2	0.2	2011	No	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries
Antimony (ppb)	6	6	5	5	5	2011	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; test addition.
Thallium (ppb)	0.5	2	1	1	1	2011	No	Discharge from electronics, glass, and Leaching from ore-processing sites; drug factories
Cyanide [as Free Cn] (ppb)	200	200	10	10	10	2011	No	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories
Fluoride (ppm)	4	4	0.66	0.64	0.66	2011	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrite [measured as Nitrogen] (ppm)	1	1	0.07	0.07	0.07	2011	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Radioactive Contaminants								
Radium (combined 226/228) (pCi/L)	0	5	ND	NA	NA	2011	No	Erosion of natural deposits
Radium 228 (pCi/L)	NA	NA	ND	NA	NA	2015	No	Erosion of natural deposits
Gross alpha (pCi/l	NA	15pCi/l	11.4pCi/l	NA	NA	2015	No	Erosion of natural deposits
<u>Contaminants</u>	<u>MCLG</u>	<u>AL</u>	<u>Your Water</u>	<u>Sample Date</u>	<u># Samples Exceeding AL</u>	<u>Exceeds AL</u>	<u>Typical Source</u>	
Inorganic Contaminants								
Lead - action level at consumer taps (ppb)	0	15	2.74	2013	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	

Copper - action level at consumer taps (ppm)	1.3	1.3	0.35	2013	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
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Unit Descriptions	
Term	Definition
ppm	ppm: parts per million, or milligrams per liter (mg/L)
Mg/L	mg/L milligrams per liter
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	Definition
MCLG	MCLG: Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MCL	MCL: Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MRDL	MRDL: Maximum residual disinfectant level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

For more information please contact:

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APPENDIX F

CROSS CONNECTION CONTROL PROGRAM

CrossConnection Control Program Plan for City of Omak Water System

A. Requirement for Program

City of Omak, **6375OK**, hereinafter referred to as “the Purveyor”, has the responsibility to protect the public water system from contamination due to cross connections. A cross connection may be defined as *“any actual or potential physical connection between a potable water line and any pipe, vessel, or machine that contains or has a probability of containing a non-potable gas or liquid, such that it is possible for a non-potable gas or liquid to enter the potable water system by backflow.”*

All public water systems are required to develop and implement cross-connection control (CCC) programs. The CCC requirements are contained in Washington Administrative Code (WAC) 246-290-490 of the Group A Drinking Water Regulations. The minimum required elements of a CCC program are:

1. Establishment of legal authority and program policies;
2. Evaluation of premises for cross-connection hazards;
3. Elimination and/or control of cross connections;
4. Provision of qualified personnel;
5. Inspection and testing of backflow preventers;
6. Quality control of testing process;
7. Response to backflow incidents;
8. Public education for consumers;
9. Record keeping for CCC program; and
10. Special requirements for reclaimed water use.

Other CCC program requirements include:

1. Coordination with the Local Administrative Authority (LAA), i.e., the local building or plumbing official regarding CCC activities;
2. Prohibition of the return of used water into the public water system (PWS) distribution system; and
3. Inclusion of a written CCC program in a Water System Plan (WSP) or a Small Water System Management Program (SWSMP).

Note: Throughout the example CCC program plan the term *customer* is used. *Customer* as used herein means the property owner and/or occupant of the premises served by the PWS (i.e., whoever interfaces with the PWS regarding water service). Also, unless otherwise defined, all CCC-related terms used in this example program have the same definitions as those contained in WAC 246-290-010 of the Washington State Drinking Water Regulations.

B. Program Objectives

The objectives of the CCC program are to:

1. Reasonably reduce the risk of contamination of the public water distribution system; and
2. Reasonably reduce the Purveyor's exposure to legal liability arising from the backflow of any contaminant originating from the customer's plumbing system and then supplied to other customers; and
3. *Cooperate with the LAA by joint operation of program administrative tasks.*

C. Summary of Program Decisions

The following table summarizes the major policy and program decisions adopted for the City of Omak water system. The items in the table represent CCC program areas that have more than one acceptable approach or option.

CCC Program Decision Summary Table for the City of Omak

Decision Item	Decision
1. Type of Program [General, WAC 246-290-490(2)(e)]	
a. Premises isolation only	X
b. Premises isolation and in-premises protection (combination program)	X
2. Extent of Coordination with LAA [WAC 246-290-490(2)(d)]	
a. Information exchange	X
b. Interaction	X
c. Joint program	
3. Relationship with Customer [Element 1]	
a. Signed service agreement or contract	
b. Ordinance/resolution; implied service agreement	X
4. Enforcement of Corrective Action [Element 1]	
a. Rely upon shut-off of water service	X
b. Rely upon purveyor-installed premises isolation	
5. Assessment and Re-assessment of Hazard [Element 2]	
a. By purveyor's staff or equivalent	X
b. By cross-connection control specialist (CCS) employed by customer; report reviewed by purveyor's CCS	
6. Location and Ownership of Premises Isolation Assembly [Element 3]	
a. On purveyor's service line or	X
b. On customer's service line before any branch in the line	X
7. CCS Option – Purveyor's Program Management [Element 4]	
a. Purveyor's staff member certified	X
b. Inter-agency agreement or use other agency's CCS	
c. Contract with consultant CCS	
8. Testing of Assemblies [Element 5]	
a. By purveyor's staff or purveyor-employed backflow assembly tester (BAT)	
b. By customer-employed (contractor) BAT	X
9. Cost Recovery [WAC 246-290-100(4)(h) and -105(4)(p)]	
a. Borne by all customers (general water rates)	
b. Assessed to specific class (commercial meters)	
c. Each customer directly bears cost	X

D. Required Elements of Program

The drinking water regulations for Group A public water systems in Washington, WAC 246-290, require CCC programs to include certain minimum elements. The elements are listed in WAC 246-290-490(3). This section describes how the water system intends to comply with each of the required program elements. Elements are numbered the same as they appear in the WAC.

Element 1: *Adoption of a written legal instrument authorizing the establishment and implementation of a CCC program.*

The **City of Omak** water system has adopted an ordinance (Ordinance No. 1282) reproduced as Exhibit __1__, which authorizes the Purveyor to implement a CCC program. The ordinance also authorizes the system to terminate water service to consumers who do not comply with the ordinance. However, the primary method for protection of the distribution system will be the installation of a backflow preventer by the customer, at the customer's expense. The attached service contract referred to in the resolution shall be the primary enforcement authority for all new customers.

For customers supplied prior to the adoption of the attached resolution, an implied service contract allows the Purveyor to protect the distribution system from contamination through a Purveyor-installed backflow preventer on a customer's service.

The written and implied contract terms are discussed further under Element 3.

Element 2: *Development and implementation of procedures and schedules for evaluating new and existing service connections to assess the degree of hazard.*

Initial Cross-Connection Hazard Surveys

The procedures for evaluating the backflow prevention requirements for new and existing customers are as follows:

1. For all **new non-residential services**, the Purveyor will require that the customer submit with the application for water service an evaluation (performed at customer's expense) by a DOH-certified cross-connection control specialist (CCS) of the hazard posed by the proposed plumbing system, with recommendations for the installation at the meter of either a double-check valve assembly (DCVA) or a reduced-pressure principle backflow assembly (RPBA) or commensurate in-premises protection. The Purveyor may accept the recommendations or submit the recommendations to a CCS employed by the PWS for peer review and concurrence, before acceptance.

As an alternative to the above requirement for a survey by a CCS, the customer may agree to install an approved air gap (AG) or RPBA for premises isolation as a condition of service.

2. For all ***new residential services***, the Purveyor will require that the customer submit with the application for water service a completed "Water Use Questionnaire" (copy shown on page 22) If the customer's questionnaire indicates special plumbing, such as a lawn sprinkler system, or hazardous water use on the premises, the customer shall submit to the Purveyor an evaluation by a DOH-certified CCS of the hazard posed by the proposed special plumbing system, with recommendations for the installation at the meter of either a DCVA or an RPBA. "*or commensurate in-premises protection.*"

As an alternative to the above requirement for a survey by a DOH-certified CCS, the Purveyor, at his/her discretion, may specify the backflow preventer required to be installed as a condition of service.

3. For all ***existing non-residential services***, the Purveyor will require the customer to submit to the Purveyor, within nine months of notification, an evaluation by a DOH-certified CCS, of the hazard posed by the plumbing system, with recommendations for the installation at the meter of either a DCVA or an RPBA. "*or commensurate in-premises backflow preventers.*" The Purveyor may accept the recommendations or submit the recommendations to a CCS employed by the Purveyor for peer review and concurrence, before acceptance.

As an alternative to the above requirement for a survey by a DOH-certified CCS, the customer may agree to install an AG or RPBA for premises isolation within 90 days of notification by the Purveyor or an alternate time period acceptable to the Purveyor.

4. For all ***existing residential services***, the Purveyor will require the customer to submit to the Purveyor, within four months of notification, a completed "Water Use Questionnaire." If the customer's reply indicates special plumbing or water use on the premises, the customer shall submit an evaluation by a DOH-certified CCS of the hazard posed to the water system by the customer's plumbing system, with recommendations for the installation at the meter of either a DCVA or an RPBA. "*or commensurate in-premises backflow preventers*".

As an alternative to the above requirement for a survey by a CCS, the Purveyor may specify the backflow preventer required to be installed as a condition of service. The Purveyor's CCS will provide guidance on the type of backflow preventer to be installed.

5. For all existing services, should the customer fail to supply the required information for a hazard assessment or fail to submit a completed "Water Use Questionnaire," the Purveyor may have the assessment made by a CCS employed by the Purveyor, require the installation of an RPBA for premises isolation, or take other such actions consistent with the previously stated policies and bill the customer for the associated costs.

Cross-Connection Hazard Survey Schedule for Initial Hazard Assessments

The schedule for initial hazard assessment is outlined in the following table. The schedule starts from the date the CCC program is established.

Initial Assessment Task	Schedule
Assessment of all new connections	At time of application for water service
Identification and assessment of high-hazard premises which are listed on Table 9 of Washington Administrative Code (WAC) 246-290-490	Within nine months
Identification and assessment of hazardous premises supplemental to Table 9 of WAC 246-290-490	Within 12 months
Identification of residential connections with special plumbing facilities and/or water use on the premises	Within 15 months

Cross-Connection Hazard Survey Schedule for Subsequent Hazard Re-Assessments

For subsequent cross-connection hazard surveys, procedures for evaluating the backflow prevention requirements are:

1. For **residential services**, the Purveyor will require the customer to submit to the Purveyor, within two months of purveyor notification, a completed "Water Use Questionnaire." The procedure used for evaluating the hazard re-assessment and the potential change in the required backflow prevention will be the same as used for the initial hazard assessment.
2. For all **non-residential services**, the Purveyor will require the customer to submit to the Purveyor, within two months of purveyor notification, a hazard re-assessment (at the customer's expense) by a DOH-certified CCS.

The frequency of hazard re-assessments will be as shown in the table below:

Type of Service	Frequency of Re-Evaluation
Any services with reduced-pressure principle backflow assembly (RPBA) installed for premises isolation	None required as long as the RPBA passes annual tests and inspections
Commercial services with double-check valve assembly (DCVA) installed for premises isolation	Every two years and upon change in use or ownership
<i>[Combination or Joint Program Alternative: Commercial services when purveyor relies upon in-premises protection]</i>	Every two years and upon change in use, ownership, or plumbing system
Residential services with special plumbing where the purveyor relies upon compliance with Uniform Plumbing Code (UPC)	Every 2-3 years (questionnaire)
Residential services with DCVA installed for premises isolation	Every 4-5 years (questionnaire)
Residential services with no known special plumbing or water use on the premises	Every 4-5 years and upon change in use, ownership,

	or plumbing system (questionnaire)
--	---------------------------------------

The Purveyor will inform the customer that the Purveyor's survey of a customer's premises (whether by a representative of the Purveyor or through the evaluation of a questionnaire completed by the customer) is for the sole purpose of establishing the Purveyor's minimum requirements for the protection of the public water supply system, and that the required backflow protection will be commensurate with the Purveyor's assessment of the degree of hazard.

The Purveyor will also inform the customer or any regulatory agencies that the Purveyor's survey, requirements for the installation of backflow prevention assemblies, lack of requirements for the installation of backflow prevention assemblies, or other actions by the purveyor's personnel or agent do not constitute an approval of the customer's plumbing system or an assurance to the customer or any regulatory agency of the absence of cross connections.

Element 3: *Development and implementation of procedures and schedules for elimination and/or control of cross-connections.*

Backflow Preventer Requirements

The following service policy shall apply to all new and existing customers:

1. The Purveyor will require that water service to all **non-residential customers** be isolated at the meter by a DOH-approved DCVA or RPBA acceptable to the Purveyor. All high-hazard connections of the type described in Table 9 of WAC 246-290-490 shall be isolated with an RPBA.

In lieu of isolation with a DCVA, other non-residential customers, with the concurrence of the Purveyor's CCS, may install in-premises protection commensurate with the degree of hazard, as determined by the Purveyor's CCS."]

2. The Purveyor will require all **residential customers** with facilities of the type described in Table 9 of WAC 246-290-490 to be isolated with an RPBA. All other residential customers with special plumbing or water use on the premises will be isolated with a DCVA. "Special plumbing" includes, but is not limited to, the following:

- a. A lawn irrigation system;
- b. A solar heating system;
- c. An auxiliary source of supply, e.g., a well or creek;
- d. Piping for livestock watering, hobby farming, etc.;
- e. Residential fire sprinkler system; and
- f. Property containing a small boat moorage.

3. ***Additional premises requiring premises isolation.*** *The Purveyor has chosen to supplement Table 9 of WAC 246-290-490(4) by identifying additional premises or premises types for which premises isolation is mandated. Such premises will include aircraft and automotive manufacturers, pulp and paper mills, military bases, tall buildings, premises with complex plumbing, premises with plumbing subject to frequent changes, plumbing with a repeat history of cross-connections being established or reestablished, premises with public swimming pools, and {Purveyor should add other premises or premises types}.*

4. **For all customers that have a written service contract with the Purveyor**, the required premises isolation DCVA or RPBA shall be:

- Purchased and installed by the customer (at the customer's expense) immediately downstream of the water meter in accordance with the Purveyor's standards described hereinafter; and
- Maintained, tested, and inspected in accordance with the Purveyor's standards described hereinafter.

For new customers, the Purveyor will not turn on water (except for testing purposes) at the meter until the customer complies with the above requirements.

The failure of the customer to comply with the Purveyor's installation and maintenance requirements shall constitute a breach of contract by the customer. The Purveyor may then proceed with corrective action provisions stipulated in the contract.

5. **Customers without written contracts** are considered to have an implied contract that requires the customer to bear all reasonable costs of service. The Purveyor will install the required DCVA or RPBA on the service, upstream of the meter, and charge the customer for the cost of the initial installation, and all future maintenance, testing, and repair, as set forth in the Purveyor's schedule of rates and charges. The failure of the customer to pay these costs shall constitute a breach of contract by the customer, and the Purveyor will proceed with the established delinquency of payment procedures. As an alternative, the customer may sign a service contract and install the required backflow preventer downstream of the meter in accordance with the Purveyor's installation standards described hereinafter.

6. **Approved Backflow Preventers and Installation**

All backflow preventers relied upon by the Purveyor to protect the public water system shall meet the definition of "approved backflow preventer" as contained in WAC 246-290-010. The Purveyor will obtain and maintain a current list of assemblies approved for installation in Washington State from the DOH Office of Drinking Water.

All backflow preventers will be installed in:

- The orientation for which they are approved;
- A manner and location that facilitates their proper operation, maintenance, and testing or inspection;
- A manner that will protect them from weather-related conditions such as flooding and freezing; and
- Compliance with applicable safety regulations.

Installation standards contained in the most recently published edition of the Pacific Northwest Section, American Water Works Association (PNWS-AWWA) *CCC Manual* or the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research (USCFCCCHR) *CCC Manual* shall be followed unless the manufacturer's requirements are more stringent.

The Purveyor has no regulatory responsibility or authority over the installation and operation of the customer's plumbing system. The customer is solely responsible for compliance with all applicable regulations and for prevention of contamination of his plumbing system from sources within his/her premises. Any action taken by the Purveyor to survey plumbing, inspect or test backflow prevention assemblies, or to require premises isolation (installation of DCVA or RPBA on service) is solely for the purposes of reducing the risk of contamination of the Purveyor's distribution system.

The Purveyor will inform the customer that any action taken by the Purveyor shall not be construed by the customer as guidance on the safety or reliability of the customer's plumbing system. The Purveyor will not provide advice to the customer on the design and installation of plumbing other than through the general public education program discussed in Element 8.

Except for easements containing the Purveyor's distribution system, the Purveyor will not undertake work on the customer's premises.

8. Schedule for Installation of Backflow Preventers

The following table shows the schedule that the Purveyor will follow for installation of backflow preventers when they are required (based on the hazard evaluation).

Type of Service	Schedule
New connections with cross-connection hazards	Before service is initiated
Existing connections with Table 9-type hazards and other high cross-connection hazards	Within 90 days after notification
Existing connections with other than Table 9 of WAC 246-290-490 or high cross-connection hazards	Within 180 days after notification
Existing fire protection systems using chemicals or supplied by unapproved auxiliary water source	Within 90 days after notification
Existing fire protection systems not using chemicals and supplied by purveyor's water	Within 1 year after notification

The Purveyor may consider granting an extension of time for installation of backflow preventer for an existing connection if requested by the premises owner.

Element 4: *Provision of qualified personnel, including at least one person certified as a CCS, to develop and implement the CCC program.*

1. **Program Administration:** The responsibility for administration of the CCC Program rests with the Purveyor. General policy direction and risk management decisions are established by the city council.
2. The Purveyor will employ or have on staff at least one person certified by DOH as a CCS to develop and implement the CCC program. As an alternative, or when no staff or employees are properly qualified, the Purveyor may retain a DOH-certified CCS on contract to provide the necessary expertise and services.
3. The following cross-connection related tasks will be performed by or under the direction of the Purveyor's certified CCS (on staff or under contract):
 - Preparation of and recommendations regarding changes to the CCC program;
 - Performance of and/or reviews of CCC hazard evaluations;
 - Recommendations on the type of backflow preventer to be installed;
 - Recommendations on schedules for retrofitting of backflow preventers;
 - Inspections of backflow preventers for proper application and installation;
 - Reviews of backflow preventer inspection and test reports;
 - Reviews of backflow testing quality control information;
 - Recommendations and/or the granting of exceptions to mandatory premises isolation;
 - Participation in or cooperation with other water utility staff in the investigation of backflow incidents and other water quality problems;
 - Completion of Backflow Incident Reports; and
 - Completion of CCC Activity and Program Summary Reports.
4. The Purveyor may delegate other CCC program activities to other personnel who are not certified CCSs, including clerical support staff. These activities include:
 - Administration of paperwork associated with service agreements;
 - Mailing, collecting, and initial screening of hazard evaluation/water use questionnaires;
 - Mailing of assembly testing notices;
 - Receiving and screening of assembly testing reports;
 - CCC program database administration and record keeping;
 - Dissemination of public education material; and
 - Assisting tasks associated with coordination with the LAA.

5. The following table identifies the current CCS employed or retained on contract by the Purveyor to manage the Purveyor's CCC program and/or act as the CCC technical resource for the Purveyor:

Name of CCS	Michael N. Ervin
Address	P.O. Box 1393
City, State, Zip	Omak, WA 98841
Telephone Number	(509) 826-1170
CCS Certification Number	7034

Element 5: *Development and implementation of procedures to ensure that approved backflow preventers are inspected and/or tested (as applicable).*

1. Inspection and Testing of Backflow Preventers

All backflow preventers that the Purveyor relies upon for protection of the water system will be subject to inspection and, if applicable, testing. *"This includes backflow preventers installed for in-premises protection that the Purveyor relies upon for protection of the water systems."*

Inspection and testing of backflow preventers will be as follows:

- The Purveyor's DOH-certified CCS will inspect backflow preventers for proper application (i.e., to ensure that the preventer installed is commensurate with the assessed degree of hazard).
- Either a DOH-certified CCS or backflow assembly tester (BAT) will perform inspections of backflow preventers for correct installation.
- A DOH-certified backflow assembly tester will test all assemblies relied upon by the Purveyor to protect the public water system.

2. Frequency of Inspection and Testing

Inspection and testing of backflow preventers will be conducted:

- At the time of installation;
- Annually after installation;
- After a backflow incident; and
- After repair, reinstallation, relocation, or re-plumbing.

The Purveyor may require a backflow preventer to be inspected and/or tested more frequently than once a year, when it protects against a high-health hazard or when it repeatedly fails tests or inspections.

3. Responsibility for Inspection and Testing

The Purveyor will be responsible for inspection and testing of all purveyor-owned backflow preventers.

The Purveyor will require the customer to be responsible for inspection and testing of backflow preventers owned by the customer. The customer shall employ, at customer expense, a DOH-certified BAT to conduct the inspection and test within the time period specified in the testing notice sent by the Purveyor. The test report shall be completed and signed by the BAT, then countersigned and returned by the customer to the Purveyor, before the due date specified by the Purveyor. The customer may request an extension of the due date for returning a test report by submitting a written request to the Purveyor. The Purveyor may grant one extension up to 90 days.

4. Approved Test Procedures

The Purveyor will require that all assemblies relied upon to protect the public water system be tested in accordance with DOH-approved test procedures as specified in WAC 246-290-490(7)(d). Any proposal to use alternate test procedures must be approved by the Purveyor's CCS.

5. Notification of Inspection and/or Testing

The Purveyor will notify in writing all customers who own backflow preventers that are relied upon to protect the public water system to have their backflow preventer(s) inspected and/or tested. Notices will be sent out not less than 30 days before the due date of the inspection and/or test. The notice will also specify the date (up to 30 days after the due date of the inspection and/or test date) by which the inspection/test report must be received by the Purveyor.

6. Enforcement

When a customer fails to send in the inspection/test report within 15 days after the due date specified, and the Purveyor has not approved an extension to the due date, the Purveyor will take the following enforcement action:

- The Purveyor will send a second notice giving the customer an additional 15 days to send in the inspection/test report.
- If the customer has not sent in the inspection/test report within 10 days of the due date given in the second notice, the Purveyor will send a third notice, by certified mail, *or by hand delivery*, giving the customer an additional 15 days to send in the report. The

- notice will also inform the customer that failure to satisfactorily respond to this notice will result in water service shut-off.
- The Purveyor will send copies of the third notice to the owner and occupants of the premises (if different from the customer) and to the LAA.
 - If the owner and/or occupants have not responded satisfactorily to the Purveyor within 10 days of the due date specified in the third notice, the Purveyor will implement water service shut-off procedures.

Element 6: *Development and implementation of a backflow prevention assembly testing quality assurance/quality control program.*

1.

The Purveyor will maintain a list of local, DOH-certified BATs that are pre-approved by the Purveyor to perform the following activities:

- *Backflow preventer inspection for proper installation; and*
- *Backflow assembly testing.*

The list will be revised annually or more frequently if necessary.

2.

BATs who wish to be included on the Purveyor's pre-approved list and/or provide testing in the Purveyor's service area must apply to the Purveyor and furnish the following information:

- Evidence of current DOH certification in good standing;
- Make and model of testing equipment (BAT listing only);
- Evidence of test equipment verification of accuracy and/or calibration within the past 12 months (BAT listing only);
- "Evidence showing possession of a license to operate a business in the City of Omak.

3. Quality Assurance

The Purveyor's CCS will review within 30 days of receipt the backflow preventer inspection/test report forms submitted by the customer. *The Purveyor's CCS may accept reports that are signed by a CCS or BAT not on the pre-approved CCS or BAT list provided that the same information as listed in "Pre-Approval Qualifications" is also submitted to the Purveyor.*

The Purveyor's CCS will provide follow up on test reports that are deficient in any way.

The Purveyor's CCS will report incidences of fraud or gross incompetence on the part of any BAT or CCS to DOH Operator Certification program staff.

Element 7: *Development and implementation (when appropriate) of procedures for responding to backflow incidents.*

1. Backflow Incident Response Plan

The Purveyor's CCS will participate in developing a backflow incident response plan that will be part of the water system's emergency response program as required by WAC 246-290-415(2). The incident response plan will include, but will not be limited to:

- Notification of affected population;
- Notification and coordination with other agencies, such as DOH, the LAA, and the local health jurisdiction;
- Identification of the source of contamination;
- Isolation of the source of contamination and the affected area(s);
- Cleaning, flushing, and other measures to mitigate and correct the problem; and
- Apply corrective action to prevent future backflow occurrences.

2. Technical Resources

The Purveyor will use the most recently published edition of the manual, *Backflow Incident Investigation Procedures*, published by the PNWS-AWWA as a supplement to the Backflow Incident Response Plan for the City of Omak.

Element 8: *Development and implementation of a cross-connection control public education program.*

1. Customer Education

The Purveyor will distribute with water bills or some other means, at regular intervals, public education brochures to system customers. For residential customers, such brochures will describe the cross-connection hazards in homes and the recommended assemblies or devices that should be installed by the homeowner to reduce the hazard to the public water system. The education program will emphasize the responsibility of the customer in preventing the contamination of the public water supply. The Purveyor's staff will produce the public education brochures or the Purveyor will obtain brochures from:

- PNWS-AWWA;
- Spokane Regional Cross-Connection Control Committee (SRC4);
- Western Washington Cross-Connection Prevention Professionals Group (The Group);
- USC FCCCHR;
- Other national backflow prevention associations, such as the American Backflow Prevention Association (ABPA); and/or
- Other water utilities.

The information distributed by the Purveyor will include, but not be limited to, the following subjects:

- Cross-connection hazards in general;
- Irrigation system hazards and corrective actions;
- Fire sprinkler cross-connection hazards;
- Importance of annual inspection and/or testing of backflow preventers; and
- Thermal expansion in hot water systems when backflow preventers are installed for premises isolation.

The Purveyor will distribute information brochures to all customers every two to three years, and to every new customer at the time the service agreement is signed.

Element 9: *Development and maintenance of cross-connection control records.*

1. Types of Records and Data to be Maintained

The Purveyor will maintain records of the following types of information required by WAC 246-290-490:

- Service connections/customer premises information including:
 - Assessed degree of hazard; and
 - Required backflow preventer to protect the public water system.
- Backflow preventer inventory and information including:
 - Air gap (AG) location, installation and inspection dates, inspection results and person conducting inspection;
 - Backflow assembly location, assembly description (type, manufacturer, make, model, size, and serial number), installation, inspection and test dates, test results and data, and person performing test; and
 - Information on atmospheric vacuum breakers used for irrigation system applications, including manufacturer, make, model, size, dates of installation and inspections, and person performing inspections.

The Purveyor will maintain records on all assemblies that protect the public water system from contamination. At a minimum, the Purveyor will maintain records on all premises isolation assemblies required to protect the public water system. *Where applicable, the above information will also be maintained for backflow preventers installed for in-premises protection that are relied upon by the Purveyor to protect the public water system.*

*By inter-agency agreement, the Purveyor will also maintain the above information for LAA required backflow preventers that are **not** relied upon by the Purveyor to protect the public water system.*

2. Reports to be Prepared and Submitted to DOH

The Purveyor will prepare the following reports required by WAC 246-290-490 including:

- Cross-connection control program activities report for the calendar year, to be sent to DOH when requested;
 - Cross-connection control program summary information, when required, or when there are significant policy changes;
 - Backflow incident reports to DOH (and voluntarily to the PNWS-AWWA CCC Committee); and
 - Documentation when exceptions to mandatory premises isolation are granted.
- At a minimum, the Purveyor's CCS will prepare and sign the exceptions reports.

The Purveyor's CCS will prepare and sign all CCC-related reports required by WAC 246-290-490.

Element 10: *Additional cross-connection control requirements for reclaimed water.*

At this time the City of Omak does not receive or distribute reclaimed water. In the event that reclaimed water use is proposed within the PWS's service area, the Purveyor will make all cross-connection control requirements mandated by the Permitting Authority in accordance with Chapter 90.46 RCW part of the written CCC program plan and comply with such additional requirements.

E. Other Provisions

1. Coordination with Local Administrative Authority

Both WAC 246-290-490 and the Uniform Plumbing Code amended for Washington require coordination between the water purveyor and the Local Administrative Authority (LAA) in all matters pertaining to cross-connection control.

The Purveyor will provide a copy of this CCC program to Craig Raymond via a copy of the Purveyor's water system plan or in a separate document. The Purveyor will inform the LAA of any changes in policy or procedure that may impact the LAA.

The Purveyor will provide information to the LAA in a timely manner regarding any:

- Requirement imposed on a residential customer for the installation of a DCVA or an RPBA on the service, with a description of the cross-connection hazard identified;
- Upgrade of the premises isolation backflow preventer, i.e., from a DCVA to an RPBA;

- Action taken to discontinue water service to a customer; and
- Backflow incident known by the Purveyor to have contaminated the public water system or a customer's plumbing system.

2.

The Purveyor will pursue development of a written agreement with the Local Administrative Authority regarding the details of the coordination on CCC issues between the two parties. The agreement will include, but not be limited to, the following items:

- *The purpose of the written agreement;*
- *Identification of the parties and other interested agencies;*
- *Delineation of responsibilities;*
- *Procedures regarding new service connections;*
- *Procedures regarding existing and changes to existing services;*
- *Special policies and procedures, such as for fire protection and irrigation services;*
- *Procedures regarding water service shut-offs, backflow incidents, and other events;*
- *Communications between parties; and*
- *Other contingencies.*

3. **Prohibition of Return of Used Water.** Used water is defined as water that has left the control of the Purveyor. This includes water used for heating and cooling purposes and water that may flow back into the distribution system from customers with multiple connections.

It is the policy of the City of Omak water system to:

- Prohibit the intentional return of used water to the distribution system by any customer served by the public water system; and
- Require that all customers with multiple connections, where the hydraulics permit the potential return of used water, to install a backflow preventer (DCVA or RPBA) commensurate with the degree of hazard at each point of connection.

5. : **“Unapproved Auxiliary Supplies.** *All water supplies other than those owned by the Purveyor are considered unapproved auxiliary supplies as defined in WAC 246-290-010. The Purveyor will require backflow protection for customers with auxiliary supplies on their premises as follows:*

- *Per Table 9 of WAC 246-290-490, the Purveyor will require the installation of an RPBA for premises isolation at the service connection to any customer having an unapproved auxiliary supply on the premises that is interconnected with the Purveyor's water system.*

6. **Tanker Trucks.** *The Purveyor may allow tanker trucks to obtain water from the Purveyor's water system under the following conditions:*

- *The tanker truck is equipped with an approved AG or an approved RPBA with a current satisfactory inspection or test report.*
7. **Temporary Water Connections.** *The Purveyor will not supply water through temporary connections, such as those used for construction projects or main disinfection, except through a backflow preventer arrangement approved by the Purveyor. The applicant for the temporary connection shall document that the backflow preventer is a DOH-approved model and has passed an inspection and/or test within the past 12 months and/or upon relocation, whichever is more recent.*
8. **Interties and Wholesale Water Customers.** *The Purveyor will require that interties with other public water systems or wholesale customers (such as mobile home parks) be isolated at the point of delivery by:*
- *A minimum of a DCVA; and*
 - *A minimum of an RPBA if the Purveyor considers the purchasing system or wholesale customer to pose a high-health hazard to the Purveyor's system.*

"The Purveyor may waive or reduce the level of protection at the intertie, if the purchasing public water system or wholesale customer:

- *Is a Group A public water system **not** exempt from DOH regulation as per WAC 246-290-020(2);*
- *Has a CCC program that complies with WAC 246-290-490 and which has been approved by DOH; and*
- *Implements the CCC program at a level satisfactory to the Purveyor."*

F. Relationship to Other Planning and Operations Program Requirements

The Purveyor will consider the requirements and consequences of the CCC program on the utility's planning and operations requirements. Such considerations include, but are not limited to ensuring:

- And promoting adequate communication between CCC program personnel and other water utility staff;
- That adequate training is provided to all staff to recognize potential cross-connection control problems;
- That cross-connection issues be considered in water quality investigations;
- That the design of the water distribution system makes adequate provisions for expected head losses incurred through the installation of experienced by backflow assemblies;
- That CCC program personnel be consulted in the design of water and wastewater treatment facilities and when proposals are made to receive or distribute reclaimed water;
- That operations under normal and abnormal conditions do not result in excessive pressure losses; and

- That adequate financial and administrative resources are available to carry out the CCC program.

Water Use Questionnaire

RESIDENTIAL CUSTOMERS

TO: _____

Date: _____

The attached brochure describes a "cross connection" and the potential for contamination of the public water system through unprotected cross connections. The purpose of this questionnaire is to help determine if you have any special plumbing or activities that may pose an increased risk of contamination to the water distribution system. Please respond by checking the appropriate box below:

Yes	No	Plumbing or Activity Present on Premises
		Underground Sprinkler System
		Water Treatment System (e.g. Water Softener)
		Solar Heating System
		Residential Fire Sprinkler System
		Other Water Supply (whether or not connected to plumbing system)
		Sewage Pumping Facilities or Grey Water System
		Boat Moorage with Water Supply
		Hobby Farms or Animal Watering Troughs
		Swimming Pool or Spa
		Greenhouse or Decorative Pond
		Photo Lab or Dark Room
		Home-Based Business. If Yes, Type: _____

BY: _____ Date: _____
Resident's signature

Please return the completed questionnaire to the address on the letterhead by {date} .

If you have checked "Yes" to any of the above, we will contact you to request further information. Your cooperation in completing this questionnaire is most appreciated.

If you have any questions, please contact the undersigned.

Name: _____ Telephone: _____

Water Department

From: Cross Connection Control <cccprogram@doh.wa.gov>
Sent: Tuesday, April 04, 2017 3:41 PM
To: Water Department; Public Works
Cc: Cross Connection Control
Subject: 63750K ASR Forms Package - CCC ASR Data Confirmation - Certified/ and Submitted to DOH

This email confirms that DOH has received Cross-Connection Control (CCC) Annual Summary Report (ASR) data for: 63750K OMAK, CITY OF Congratulations! Our records show you:

Certified and Submitted your ASR Forms Package to DOH. You may save (or print) copies of your system's final ASR forms for your water system files.

Please note, if you need to change one or more certified/submitted forms, click on the Unsubmit All ASR Forms on the New/Edit/Print screen.



Cross-Connection Control Activities (Blue) Annual Summary Report (ASR) for 2016

PWS ID: 63750K PWS Name: OMAK, CITY OF County: OKANOGAN

Part 1: Designated Cross-Connection Control Specialist (CCS) Information

CCS Name	Corey Dennis Wilder	CCS Phone	509-826-1170 ext- 114	CCS Cert. #	12503	BAT Cert. #	B6088
CCS is: PWS owner or employee							

Part 2: Status of Cross-Connection Control (CCC) Program at End of 2016

Provide information about the status of your CCC Program at the end of the reporting year.

PWS has:	A written CCC Program Plan ¹ <input checked="" type="radio"/> Yes <input type="radio"/> No	Program Plan Last Updated ³ 06/06/2011
	CCC implementation activities ² <input checked="" type="radio"/> Yes <input type="radio"/> No	

¹ Enter "Yes" if PWS has any type of written CCC Program Plan, policies, or procedures. Written CCC Program Plan must be part of a Water System Plan (WSP) or Small Water System Management Program (SWSMP).

² Enter "Yes" if PWS implemented any CCC Program activities during the reporting year, such as establishing legal authority, conducting hazard evaluations, requiring installation of backflow assemblies to protect the PWS, requiring assembly testing, maintaining CCC records, or enforcing the PWS's or CCC Program requirements.

³ PWS can update the CCC Program Plan at any time (independent of WSP or SWSMP update).

Provide information regarding PWS's specific CCC Program Elements

Program Element Number	Description of Element [See WAC 246-290-490(3)]	This Program Element is:	
		Included in Written Program Plan	Being Implemented or Is Completed
1	Legal Authority Established	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input checked="" type="radio"/> Yes <input type="radio"/> No
2	Hazard Evaluation Procedures and Schedules	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input checked="" type="radio"/> Yes <input type="radio"/> No
3	Procedures/Schedules for Ensuring Installation of Backflow Preventers	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input checked="" type="radio"/> Yes <input type="radio"/> No
4	Certified CCS Provided	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input checked="" type="radio"/> Yes <input type="radio"/> No
5	Backflow Preventer Inspection and Testing	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input checked="" type="radio"/> Yes <input type="radio"/> No
6	Assembly Testing Quality Assurance/Quality Control (QA/QC) Program	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input checked="" type="radio"/> Yes <input type="radio"/> No
7	Backflow Incident Response Procedures	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input checked="" type="radio"/> Yes <input type="radio"/> No
8	Public Education Program	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input checked="" type="radio"/> Yes <input type="radio"/> No
9	CCC Records	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input checked="" type="radio"/> Yes <input type="radio"/> No
10	Reclaimed Water Permit	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A

Part 3A: PWS Characteristics at End of 2016

Enter the number of connections (new and existing) served by the PWS by type.

Type of Service Connection	Number
Residential (As defined by PWS)	1509
All Other (include dedicated fire lines, dedicated irrigation lines, and PWS-owned facilities such as water and wastewater treatment plants and pumping stations, parks, piers, and docks)	556
Total Number of Connections	2065

Part 3B: Cross-Connection Control for Severe and High-Hazard Premises and High-Hazard Dedicated Lines Served by the PWS

Answer the following questions carefully. These answers control your access to pages 2 and 3 for data entry.

1. Does your PWS serve any severe or high-hazard premises or any high-hazard dedicated fire or irrigation lines? ☒ Yes ☐ No

2. Does PWS serve any high-hazard medical premises? ☒ Yes ☐ No

- If you answer Yes to both questions, you must enter data in at least one row on page 2 and one row on page 3.
- If you answer Yes to Question 1 and No to Question 2, you must enter data on page 2 only.
- If you answer No to both questions, pages 2 and 3 will be grayed out to prevent data entry.

- Count only premises PWS serves water to.
- Report data as accurately as possible. DOH currently bases CCC compliance actions on this information.

Type of Severe or High-Hazard Premises or Dedicated Lines <u>[WAC 246-290-490(4)(b)]</u>	Number of Connections at end of 2016			
	A. Being Served Water by PWS ¹	B. With Premises Isolation by AG/RP ²	C. With Column B AG Inspected or RP Tested ³	D. Granted Exception from Premises Isolation
Agricultural (farms and dairies)	0	0	0	0
Beverage bottling plants (including breweries)	0	0	0	0
Car washes	2	2	2	0
Chemical plants	0	0	0	0
Commercial laundries and dry cleaners	0	0	0	0
Both reclaimed water and potable water provided	0	0	0	0
Film processing facilities	0	0	0	0
Dedicated fire lines with chemical addition or using unapproved auxiliary supplies	0	0	0	0
Food processing plants (including canneries, slaughter houses, rendering plants)	2	2	2	0
Hospitals, medical centers, medical, dental and veterinary clinics, mortuaries, nursing homes, etc., reported on Part 3C page 3 (totals imported from page 3)	19	18	18	0
Dedicated irrigation systems using purveyor's water supply and chemical addition ⁴	0	0	0	0
Laboratories	1	1	1	0
Metal plating industries	0	0	0	0
Petroleum processing or storage plants	2	0	0	2
Piers and docks	0	0	0	0
Radioactive material processing plants or nuclear reactors	0	0	0	
Survey access denied or restricted	0	0	0	0
Wastewater lift/pump stations (non-residential only)	0	0	0	0
Wastewater treatment plants	1	1	1	
Unapproved auxiliary water supply interconnected with potable water supply	0	0	0	0
Totals	27	24	24	2

¹ Count multiple connections or parallel installations to the same premises as separate connections.

² Count only connections with premises isolation AGs or RPs. Don't include connections with in-premises preventers only or connections with DCVAs or DCDAs installed for premises isolation. The number in Column B can't be larger than the number in Column A in the same row.

³ Count only connections whose premises isolation preventers were inspected (AGs) or tested (RPs) during the reporting year.

⁴ For example, dedicated irrigation lines to parks, playgrounds, golf courses, cemeteries, estates, etc.

⁵ Premises with hazardous materials or processes (requiring isolation by AG or RP), such as aircraft and automotive manufacturers, pulp and paper mills, metal manufacturers, military bases, and wholesale customers that pose a high hazard to the PWS. May be grouped together in categories, for example: "Other manufacturing" or "Other commercial".

Page 2 PWSID: 63750K Year: 2016

Part 3C: Cross-Connection Control for High-Hazard Medical Premises Served by the PWS

- Count only medical premises PWS serves water to.
- Don't count the same premises more than once. If you serve different medical category premises through a single connection, count the connection under the medical category you consider to pose the highest hazard to PWS.
- Report data as accurately as possible. DOH currently bases CCC compliance actions on this information

Type of High-Hazard Medical Premises <u>[WAC 246-290-490(4)(b)]</u>	Number of Connections at end of 2016			
	A. Being Served Water by PWS ¹	B. With Premises Isolation by AG/RP ²	C. With Column B AG Inspected or RP Tested ³	D. Granted Exception from Premises Isolation
Hospitals				
Hospitals (include psychiatric hospitals and alcohol and drug treatment centers)	3	3	3	0
Facilities for Treatment and Care of Patients Not Located in Hospitals Counted Above				
Same day surgery centers	0	0	0	0
Out-patient clinics and offices	5	5	5	0
Alternative health out-patient clinics and offices	0	0	0	0
Psychiatric out-patient clinics and offices	0	0	0	0
Chiropractors with water-connected X-ray equipment	1	1	1	0
Hospice care centers	0	0	0	0
Childbirth centers	0	0	0	0
Kidney dialysis centers	1	1	1	0
Blood centers	0	0	0	0
Dental clinics and offices	5	5	5	0
Facilities for Housing Patients				
Nursing homes	1	1	1	0
Assisted Living Facilities (formerly Boarding Homes)	1	0	0	0
Residential treatment centers	0	0	0	0
Other Medical-Related Facilities				
Mortuaries with embalming equipment	0	0	0	0
Morgues and autopsy facilities (not in hospitals)	0	0	0	0
Veterinarian offices, clinics and hospitals	2	2	2	0
Totals	19	18	18	0

¹ Count multiple connections or parallel installations to the same premises as separate connections.

² Count only connections with premises isolation AGs or RPs. Don't include connections with in-premises preventers only or connections with DCVAs or DCDAs installed for premises isolation. The number in Column B can't be larger than the number in Column A in the same row.

³ Count only connections with premises isolation AGs or RPs. Don't include connections with in-premises backflow preventers only or connections with premises isolation DCVAs or DCDAs isolation.

Part 4A: Backflow Preventer Inventory and Testing Information for 2016

- Complete all fields. Enter **zero (0)**, if no backflow preventers in a specific category.
- Count only backflow preventers relied on to protect the PWS.
- Count AVBs on *irrigation systems only*. Select No to AVB question above Table 2 if PWS doesn't track AVBs.
- Count multiple tests (or failures) for the same backflow preventer as one test (or failure) for that backflow preventer.
- For multiple service connections or parallel installations, count each assembly separately.
- Count RPDAs and DCDAs as **single** assemblies. Count the tests of the mainline assembly and bypass assembly as **one test**. Count the failure of either the mainline or bypass assembly (or the failure of both) as **one failure**. Count an entire detector assembly taken out of service as **one assembly removed from service**.
- Count assemblies installed on dedicated fire or irrigation lines as **Premises Isolation Assemblies** in Table 1.

Backflow Preventer Category and Inspection/Testing Information		Air Gap	RPBA	RPDA	DCVA	DCDA	PVBA	SVBA	AVB
Table 1: Premises Isolation Preventers (Include preventers isolating PWS-owned facilities)									
Existing Premises Isolation Backflow Preventers									
1	In service at beginning of 2016	0	54	0	84	1			
2	Inspected and/or tested in 2016 ¹	0	54	0	84	1			
3	Failed inspection or test in 2016	0	6	0	3	0			
New Premises Isolation Backflow Preventers									
4	Installed in 2016 ²	0	1	0	1	0			
5	Inspected and/or tested in 2016 ¹	0	1	0	1	0			
6	Failed inspection or test in 2016	0	0	0	0	0			
Premises Isolation Backflow Preventers (existing or new)									
7	Removed from service in 2016 ³	0	0	0	0	0			
Total Premises Isolation Preventers at End of 2016									
		0	55	0	85	1	0	0	0
Does PWS track AVBs on irrigation systems? <input type="radio"/> Yes <input checked="" type="radio"/> No									
Table 2: In-Premises Preventers (Include preventers within PWS-owned facilities)									
Existing In-Premises Backflow Preventers									
8	In service at beginning of 2016	0	68	0	26	1	8	0	unk
9	Inspected and/or tested in 2016 ¹	0	68	0	26	1	8	0	unk
10	Failed inspection or test in 2016	0	3	0	2	0	0	0	unk
New In-Premises Backflow Preventers									
11	Installed in 2016 ²	0	4	0	7	0	0	0	unk
12	Inspected and/or tested in 2016 ¹	0	4	0	7	0	0	0	unk
13	Failed inspection or test in 2016	0	0	0	0	0	0	0	unk
In-Premises Backflow Preventers (existing or new)									
14	Removed from service in 2016 ³	0	0	0	0	0	0	0	unk
Total In-Premises Preventers at End of 2016⁴									
		0	72	0	33	1	8	0	0
Grand Totals at End of 2016									
		0	127	0	118	2	8	0	0

¹ Initial and/or routine annual inspection (for proper installation and approval status) and/or test (for testable assemblies only, using DOH-approved USC field test procedures).

² Includes preventers installed on connections where backflow prevention was not previously required and any preventers that replaced those in service at the beginning of the reporting year. Replacement preventers may be of a different type than the originals.

³ Existing or new preventers taken out of service, whether or not they were replaced by the same or a different type of preventer.

Part 4B: Other Implementation Activities in 2016

Complete all cells. Enter zero if not applicable.

Water Use Questionnaires	
Did your PWS send any water use questionnaires to customers during 2016?	<input type="radio"/> Yes <input checked="" type="radio"/> No

On-site Hazard Surveys			
Did your CCS conduct any on-site hazard surveys during 2016?			<input checked="" type="radio"/> Yes <input type="radio"/> No Number 1
	Service Connection Type		
	New	Existing	Total
1. Number of connections surveyed for cross-connection hazards to PWS.	1	1	2
2. Number of connections requiring backflow prevention to protect PWS. ^{1,2}	1	1	2

New Exceptions to Premises Isolation	
Did your CCS grant any new premises isolation exceptions in 2016 to high-hazard premises? ³	<input type="radio"/> Yes <input checked="" type="radio"/> No

CCC Enforcement Actions	
Did your PWS take any enforcement actions during 2016? ⁴	<input type="radio"/> Yes <input checked="" type="radio"/> No

¹ Include services where either premises isolation or in-premises preventers were required to protect the PWS.² Include existing services that need new, additional or higher level backflow prevention.³ Submit a completed DOH Exception Form (green) for each new exception granted in the reporting year.⁴ "Enforcement actions" means actions taken by the PWS (such as water shut-off, PWS installation or testing of backflow preventer, assessment of fines, etc.) when the customer fails to comply with the PWS's CCC requirements.**Part 5: Backflow Incidents and "Off-Normal" Events in 2016**

Backflow Incidents, Risk Factors, and Indicators during 2016		Number
Backflow Incidents during 2016		
1	Backflow incidents that contaminated the PWS ⁵ .	0
2	Backflow incidents that contaminated the customer's drinking water system <i>only</i> ⁵ .	0
Risk Factors for Backflow during 2016		
3	Distribution main breaks per 100 miles of pipe.	1.00
4	Low pressure events (<20 psi in PWS distribution system).	0
5	Water outage events.	0
Indicators of Possible Backflow during 2016		
6	Total health-related complaints received by PWS. ⁶	0
7	Received during BWA or PN events. ⁷	0
8	Received during low pressure or water outage events.	0
9	Total aesthetic complaints (color, taste, odor, air in lines, etc.).	2
10	Received during BWA or PN events. ⁷	0
11	Number of these complaints received during low pressure or water outage events.	0

⁵ Purveyors must submit a Backflow Incident Report form for each backflow incident known to have contaminated the public water system. DOH is also interested in receiving incident report forms for backflow incidents that contaminated the customer's drinking water system only.⁶ Such as stomach ache, headache, vomiting, diarrhea, skin rashes, etc.⁷ "BWA" means Boil Water Advisory and "PN" means Public Notification for water quality reasons.

Part 6: Comments and Clarifications

- Enter comments to:
 - Explain or clarify information in this report.
 - Describe challenges faced or accomplishments made in this reporting year.
 - Share your goals and objectives for the coming reporting year.
- Delete comments that are no longer valid.

Part No.	Date Added	Comments
Pt 5	04-04-2017	Water quality complaints: One complaint was due to installing fire hydrant resulting in temporary turbidity. One complaint was due to hard water deposits in fixtures.

Part 7: Report Certification and Contact Information

I, Corey Wilder , certify that the information in this form is true, complete and accurate to the best of my knowledge.

Last Saved	04/04/2017	All ASR Forms Certified/Submitted	04/04/2017
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Designated CCS/CCC Program Manager ¹					
Name	Corey Dennis Wilder	Title	PWS Manager/CCS	CCS Cert #	12503
Email Address	water@omakcity.com	Phone	509-826-1170	Phone Ext	114

PWS Manager ²					
Name	Corey Dennis Wilder	Title	PWS Manager/CCS	Operator Cert #	12503
Email Address	publicworks@omakcity.com	Phone	509-826-1170	Phone Ext	114

¹ The CCS responsible for developing and implementing the PWS's CCC program (CCC Program Manager).

² The person the designated CCS/CCC Program Manager reports to or other manager having direct oversight of the CCC Program.



Cross-Connection Control Program Summary (Cream) Annual Summary Report (ASR) for 2016

PWS ID: 63750K PWS Name: OMAK, CITY OF County: OKANOGAN

Describe the characteristics of the PWS's Cross-Connection Control (CCC) Program at the end of 2016.

Part 1: CCC Program Characteristics

A. Type of Program Implemented

Type of Program	Check One
Premises isolation only.	<input type="radio"/>
Combination program: reliance on both premises isolation and in-premises prevention.	<input checked="" type="radio"/>
In transition from a combination program to a premises isolation only program.	<input type="radio"/>

B. Coordination with Authority Having Jurisdiction (AHJ) on CCC Issues

Indicate the status of coordination with AHJs in your service area. The AHJ is the entity that enforces the Uniform Plumbing Code at the local level. The AHJ is usually your county or city building department. Don't list DOH as an AHJ.

AHJ #	Name of AHJ (City or County Building Department) ¹	PWS		AHJ Declined to Coordinate
		Coordinates with AHJ	Has Written Agreement with AHJ	
1	City of Omak Building Department	Yes <input checked="" type="radio"/> No <input type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>	Yes <input type="radio"/> No <input type="radio"/>
2	City of Omak Fire Department	Yes <input checked="" type="radio"/> No <input type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>	Yes <input type="radio"/> No <input type="radio"/>

¹ Do not enter an individual's name.

C. Corrective/Enforcement Actions Available to the Purveyor

Type of Corrective Action/Enforcement Action	Indicate Whether Available	Most Often Used (Check One)
Purveyor denies or discontinues water service.	Yes <input checked="" type="radio"/> No <input type="radio"/>	<input checked="" type="radio"/>
Purveyor installs backflow assembly and bills customer.	Yes <input type="radio"/> No <input checked="" type="radio"/>	<input type="radio"/>
Purveyor assesses fines (in addition to eliminating or controlling cross connection).	Yes <input checked="" type="radio"/> No <input type="radio"/>	<input type="radio"/>
Purveyor tests backflow assembly and bills customer.	Yes <input type="radio"/> No <input checked="" type="radio"/>	<input type="radio"/>

¹ Enter detailed description of other enforcement actions available to PWS. Don't enter "None", "Not Applicable", or "Not Available."

D. CCC Program Responsibilities

Do not include enforcement action related procedures or circumstances.

CCC Program Activity	Responsible Party (Check one per row)	
	Customer	Purveyor
Hazard Evaluation by DOH-certified CCS	<input type="radio"/>	<input checked="" type="radio"/>
Backflow preventer (BP) ownership	<input checked="" type="radio"/>	<input type="radio"/>
BP installation	<input checked="" type="radio"/>	<input type="radio"/>
BP <i>initial</i> inspection (for proper installation - all BPs)	<input type="radio"/>	<input checked="" type="radio"/>
BP <i>initial</i> test (for testable assemblies)	<input type="radio"/>	<input checked="" type="radio"/>
BP <i>annual</i> inspection (Air Gaps and AVBs)	<input checked="" type="radio"/>	<input type="radio"/>
BP <i>annual</i> test (for testable assemblies)	<input checked="" type="radio"/>	<input type="radio"/>
BP maintenance and repair	<input checked="" type="radio"/>	<input type="radio"/>

E. Backflow Prevention for Fire Protection Systems

Please remember to enter number of days allowed if you require retrofitting.

PWS coordinates with <i>AHJ</i> on CCC issues for fire sprinkler systems (FSSs)	Yes <input checked="" type="radio"/> No <input type="radio"/> N/A <input type="radio"/>
PWS coordinates with <i>local Fire Marshal</i> on CCC issues for FSSs.	Yes <input checked="" type="radio"/> No <input type="radio"/> N/A <input type="radio"/>
PWS ensures backflow prevention is installed before serving <i>new</i> connections with FSSs.	Yes <input checked="" type="radio"/> No <input type="radio"/>
PWS requires retrofits to <i>high</i> -hazard FSSs.	Yes <input checked="" type="radio"/> No. of days allowed: 30 No <input type="radio"/> N/A <input type="radio"/>
PWS requires retrofits to <i>low</i> -hazard FSSs.	Yes <input checked="" type="radio"/> No. of days allowed: 30 No <input type="radio"/> N/A <input type="radio"/>

F. Backflow Prevention for Irrigation Systems

Minimum level of backflow prevention required on irrigation systems <i>without</i> chemical addition.	Not Addressed <input type="radio"/> AVB <input type="radio"/> PV/SVBA <input type="radio"/> DCVA <input checked="" type="radio"/> RPBA <input type="radio"/>
PWS currently inspects AVBs upon <i>initial</i> installation.	Yes <input type="radio"/> No <input checked="" type="radio"/> N/A <input type="radio"/>
PWS currently inspects AVBs upon repair, reinstallation or relocation.	Yes <input type="radio"/> No <input checked="" type="radio"/> N/A <input type="radio"/>

G. Used Water

Does PWS prohibit, by ordinance, rules, policy, by-laws or agreement, the intentional return of used water (e.g. for heating or cooling) into the distribution system?	Yes <input checked="" type="radio"/> No <input type="radio"/>
If not prohibited at present, date plan to prohibit use.	N/A
Current number of service connections returning used water to distribution system.	0

H. Backflow Prevention for Unapproved Auxiliary Water Supplies¹ NOT Interconnected with PWSShow the **minimum** backflow preventer and type of protection required for service connections having unapproved auxiliary water supplies *when they are NOT interconnected to the PWS*.

Existing service connections.	None <input type="radio"/> DCVA <input type="radio"/> RPBA <input checked="" type="radio"/> AG <input type="radio"/>
Type of protection required.	N/A <input type="radio"/> In-premises prevention <input type="radio"/> Premises isolation <input checked="" type="radio"/>
New service connections.	None <input checked="" type="radio"/> DCVA <input type="radio"/> RPBA <input type="radio"/> AG <input type="radio"/>
Type of protection required.	N/A <input checked="" type="radio"/> In-premises prevention <input type="radio"/> Premises isolation <input type="radio"/>

¹ An auxiliary water supply is any water supply on or available to customer's premises in addition to the purveyor's potable water supply.

I. Backflow Prevention for Tanker Trucks and Temporary Water Connections

Minimum level of backflow prevention (installed on or associated with the truck) required for tanker trucks taking water from PWS.	AG <input type="radio"/> DCVA <input checked="" type="radio"/> RPBA <input type="radio"/> Not Specified <input type="radio"/> Tanker trucks not allowed <input type="radio"/>
PWS requires tanker trucks to obtain water at designated fill sites each equipped with permanently installed backflow preventer(s).	Yes <input type="radio"/> (Minimum preventer: DCVA <input type="radio"/> RPBA <input type="radio"/>) No <input checked="" type="radio"/> N/A <input type="radio"/> No sites provided <input type="radio"/>
PWS currently accepts tanker trucks approved by other PWSs without further inspection or testing.	Yes <input type="radio"/> No <input checked="" type="radio"/> N/A <input type="radio"/>
Minimum level of backflow prevention required for temporary water connections (e.g., for construction sites).	AG <input type="radio"/> DCVA <input checked="" type="radio"/> RPBA <input type="radio"/> Not specified <input type="radio"/> Temp. connections not allowed <input type="radio"/>
PWS provides approved backflow preventer for temporary connections.	Yes <input type="radio"/> No <input checked="" type="radio"/> N/A <input type="radio"/> (Temp. connections not allowed)
PWS requires testing each time the temporary connection backflow preventer is relocated.	Yes <input checked="" type="radio"/> No <input type="radio"/> N/A <input type="radio"/> (Temp. connections not allowed)

J. Backflow Prevention for Non-Residential Connections

For each category shown, indicate whether PWS has non-residential connections of that type and the **minimum** level of **premises isolation** backflow prevention required (whether or not PWS currently has that type of customer).

Type of Connection	PWS has Customers of this Type	Minimum Premises Isolation Backflow Prevention Required
Commercial	Yes <input checked="" type="radio"/> No <input type="radio"/>	Not Required <input type="radio"/> DCVA <input checked="" type="radio"/> RPBA <input type="radio"/>
Industrial	Yes <input type="radio"/> No <input checked="" type="radio"/>	Not Required <input type="radio"/> DCVA <input type="radio"/> RPBA <input checked="" type="radio"/>
Institutional	Yes <input checked="" type="radio"/> No <input type="radio"/>	Not Required <input type="radio"/> DCVA <input checked="" type="radio"/> RPBA <input type="radio"/>

K. Backflow Prevention for Wholesale Customers

Indicate whether the PWS requires backflow prevention at interties with wholesale customers (other PWSs).

Type of Intertie	PWS has Customers of this Type	Minimum Backflow Prevention Required (if prevention is required, indicate minimum level).	
Existing	Yes <input type="radio"/> No <input checked="" type="radio"/>	Not specified / Not required <input type="radio"/>	Minimum required (if applicable): DCVA <input checked="" type="radio"/> RPBA <input type="radio"/>
		Always required <input type="radio"/>	
		Required only if purchaser's CCC program is inadequate <input checked="" type="radio"/>	
New	Yes <input type="radio"/> No <input checked="" type="radio"/>	Not specified / Not required <input type="radio"/>	Minimum required (if applicable): DCVA <input checked="" type="radio"/> RPBA <input type="radio"/>
		Always required <input type="radio"/>	
		Required only if purchaser's CCC program is inadequate <input checked="" type="radio"/>	

L. Exceptions to Mandatory Premises Isolation

PWS's written CCC Program Plan <i>allows</i> system to grant exceptions to mandatory premises isolation per WAC 246-290-490(4)(b)(iii)	Yes <input checked="" type="radio"/> No <input type="radio"/> Doesn't Address <input type="radio"/>
PWS currently grants new Exceptions.	Yes <input checked="" type="radio"/> No <input type="radio"/>
PWS granted Exceptions in past reporting years.	Yes <input checked="" type="radio"/> No <input type="radio"/>

Part 2: CCC Program Record-Keeping Software

Indicate the type or name of computer software the PWS uses to track CCC records.

BPMS <input type="radio"/>	Cross-Track (BMI) <input checked="" type="radio"/>	Tokay <input type="radio"/>	XC2 <input type="radio"/>	Custom developed for or by PWS ¹ <input type="radio"/>
Other non-CCC software (e.g. Excel) <input type="radio"/>	Other commercial CCC software (specify) <input type="radio"/>	None Used <input type="radio"/>		

¹ Do not include commercial CCC software customized for PWS. If PWS uses customized commercial software, check the box for the appropriate commercial software name.**Part 3: Comments and Clarifications**

- Enter comments to:
 - Explain or clarify information in this report.
 - Describe accomplishments made in this reporting year.
 - Identify challenges faced in this reporting year.
 - Share your goals and objectives for the coming reporting year.
- Delete comments that are no longer valid.

No Comments

Part 4: Report Certification and Contact Information

I, Corey Wilder, certify that the information in this form is true, complete and accurate to the best of my knowledge.

Last Saved	04/04/2017	All ASR Forms Certified/Submitted	04/04/2017
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Designated CCS/CCC Program Manager ¹					
Name	Corey Dennis Wilder	Title	PWS Manager/CCS	CCS Cert #	12503
Email Address	water@omakcity.com	Phone	509-826-1170	Phone Ext	114

PWS Manager ²					
Name	Corey Dennis Wilder	Title	PWS Manager/CCS	Operator Cert #	12503
Email Address	publicworks@omakcity.com	Phone	509-826-1170	Phone Ext	114

¹ The CCS responsible for developing and implementing the PWS's CCC program (CCC Program Manager).² The person the designated CCS/CCC Program Manager reports to or other manager having direct oversight of the CCC Program.



Backflow Prevention for Severe Health Hazard Facilities (Gray) Annual Summary Report (ASR) for 2016

PWS ID: **63750K** PWS Name: **OMAK, CITY OF** County: **OKANOGAN**

Part 1: Backflow Prevention Status

- Describe the backflow prevention status at the end of the reporting year for each wastewater treatment plant and nuclear facility your system serves.
- If you serve more than one severe health hazard facility, click the "Add Facility" button to display another facility data entry box.
- If you serve more than one connection to the same facility, click the "Add Connection" button to display another connection row for that facility.
- You may add as many facilities and connections as needed.
- To update this form, you may delete facilities and connections which are no longer served.

Facility 1 of 1	
Facility Name	City of Omak WWTP
Physical Address	635 S/ Fir St.
City	Omak
Zip	98841
NPDES Permit#	WA0020940
Facility Type	Wastewater Treatment Plant (WWTP)
Facility Comments	Municipal wastewater treatment plant
Facility 1 Connection 1 of 1	
Connection Name	WWTP
Backflow Prevention Status	Premises Isolation RP but No In-Plant Air Gap
Connection Comments	2 inch domestic

Part 2: Report Certification and Contact Information

I, Corey Wilder, certify that the information in this form is true, complete and accurate to the best of my knowledge.

Last Saved	04/04/2017	All ASR Forms Certified/Submitted	04/04/2017
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Designated CCS/CCC Program Manager¹					
Name	Corey Dennis Wilder	Title	PWS Manager/CCS	CCS Cert #	12503
Email Address	water@omakcity.com	Phone	509-826-1170	Phone Ext	114

PWS Manager²					
Name	Corey Dennis Wilder	Title	PWS Manager/CCS	Operator Cert #	12503
Email Address	publicworks@omakcity.com	Phone	509-826-1170	Phone Ext	114

¹ The CCS responsible for developing and implementing the PWS's CCC program (CCC Program Manager).

² The person the designated CCS/CCC Program Manager reports to or other manager having direct oversight of the CCC Program.



**List of Exceptions to High-Hazard Premises Isolation Requirements
Annual Summary Report for (ASR) for 2016**

PWS ID: 63750K PWS Name: OMAK, CITY OF County: OKANOGAN

Designated Cross-Connection Control Specialist (CCS) Information

CCS Name	Corey Dennis Wilder	CCS Phone	509-826-1170	CCS Cert. #	12503
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Use the table below to:

- **Edit, Renew, or Cancel** a saved exception (depending on the buttons listed under Available Actions).
- **Print** any saved Exception form.
- Re-sort the Exceptions List by any column heading (except Available Actions). Click once to sort from A to Z. Click a second time to sort from Z to A.

Important Reminder! You must **Renew** or **Cancel** all **expired** exceptions to submit your ASR Forms Package.

#	Premises Name	Premises Type	Status	Expiration Date	Last Saved
6	Whitly Fuel	Petroleum processing or storage plants	Renewed	08/10/2017	04/04/2017 3:04 PM
7	Coleman oil	Petroleum processing or storage plants	Renewed	08/10/2017	04/04/2017 3:04 PM

APPENDIX G
EMERGENCY RESPONSE PLAN

APPENDIX G

EMERGENCY RESPONSE PLAN

The following section describes means and methods for the City to respond to emergency situations affecting its water utility. It includes a list of important telephone numbers for emergencies, some general considerations that should be kept in mind by City staff during an emergency, and specific emergency response plans.

TABLE G-1
Emergency Contacts

Person or Agency	Phone Number
City Personnel	
Cindy Gagne, Mayor	(509) 826-1170 (Office)
Ken Mears, Public Works Director	(509) 846-5964 (Cell) (509) 826-1390 (Office)
Corey Wilder, Chief Operator of the Water Department	(509) 429-7300 (Cell) (509) 486-1187 (Office)
Todd McDaniel, City Administrator	(509) 826-1170 (Office)
Local, State, and Federal Agencies	
Omak Police Department	911 or (509) 826-0383
Omak Fire Department	911 or (509) 826-0760
Washington State Department of Health, Spokane Mike Wilson, P.E., Engineer	(509) 329-2100 (509) 329-2117
Washington State Dept. of Ecology (DOE), Yakima	(509) 575-2490
Department of Health Emergency Hotline	(877) 481-4901
Okanogan County Department of Emergency Management	(509) 422-7207
Okanogan County Public Works	(509) 422-7300
Okanogan County Sheriff	(509) 422-7200
Okanogan County Health Department	(509) 422-7140
State Division of Emergency Management	(800) 258-5990
U.S. Environmental Protection Agency	(206) 553-1200
Utilities	
Okanogan County Public Utility District (Emergency Outages)	(509) 422-3310
CenturyTel	(800) 201-4099
One-Call Locates	(800) 424-5555
Suppliers, Contractors	
HD Fowler – East Wenatchee	(509) 886-8804
Consolidated Supply - Wenatchee	(509) 662-7128
HD Supply – Spokane	(800) 456-0531
Tollefson Construction – Omak	(509) 826-2000

TABLE G-1 con't
Emergency Contacts

City Engineer	
Gray & Osborne	(509) 453-4833
Priority Customers	
Omak School District	(509) 826-0320
Mid-Valley Hospital	(509) 826-1760
Omak Dialysis	(509) 826-8680
Mid-Valley Medical Group	(509) 826-1600
Rose Garden Estates	(509) 826-4628
Omak Clinic	(509) 826-1800
Apple Springs	(509) 826-3590
Gary Bramer DDS	(509) 826-2744
Merlin Ekvall DDS	(509) 826-4831
Grillo DDS	(509) 826-4050
Craig Webster DDS	(509) 826-1260
Joey Chen DDS	(509) 826-1630
A.E. Watkins	(509) 826-1614

EMERGENCY PROCEDURES

Although it is not possible to anticipate all potential disasters affecting the City's water system, formulating procedures to manage and remedy several common emergencies is appropriate.

BACTERIOLOGICAL DETECTION

The persistent detection of coliforms in the water supply, particularly E. coli or fecal bacteria, may require issuing a public boil water notice to ensure the health and safety of the City's water customers. In addition, emergencies such as floods, earthquakes, or other disasters can affect water quality as a result of damage to water system facilities. WAC 246-290-320 requires water utilities to follow specific procedures in the event coliform bacteria are detected in the water system. The City's Coliform Monitoring Plan in Appendix C summarizes increased sampling requirements in the month following coliform detection.

FIRES

The availability of adequate water supplies and pressure is an integral part of the City's ability to fight fires within its service area. When fires occur in the City's service area, the local fire authority will contact the City so that the water system components can be managed in such a way as to maximize the flow and pressure to the affected area.

It is the City's policy that fire hydrants that provide less than 500 gpm discharge are to be painted black to facilitate emergency services via color-coded hydrants.

OTHER CONSIDERATIONS

In addition to water quality notification, some water customers require immediate notification should their water service be interrupted for any reason. These customers include facilities such as nursing homes, elder care facilities, and kidney dialysis patients. It is recommended that the City maintain a list of all these customers so that in the event the City's water supply is to be interrupted because of an emergency situation these customers can be notified.

VULNERABILITY ANALYSIS

Identification of system facilities that may be adversely affected during an emergency situation is important in determining areas where redundant facilities may be needed. Types of emergencies include loss of power, severe weather, flooding, earthquake, major equipment failure, and vandalism.

Loss of Power

The DOH *Water System Design Manual* identifies minimum criteria for consideration of the reduced need for alternative power at the source when the power grid is capable of providing service. These criteria include the occurrence of less than three outages per year in the previous three years and less than six outages in any given year. Also, the duration of the outages must have averaged less than four hours over the previous three years.

TABLE G-2
Power Outage Vulnerability Assessment

Telemetry	<i>Low Risk</i>	The telemetry system requires electrical power supplied by Okanogan County PUD and communications via the local telephone service provider.
	<i>Prevention</i>	None.
	<i>Mitigation</i>	As the telemetry system is not functional during a power outage, the water levels in the reservoirs must be manually controlled. During a telephone outage, the well pumps must be operated manually depending on the water levels in the reservoirs.
Source	<i>Low Risk</i>	Power outages have not historically been an issue. The City has sufficient standby storage to supply water during minor outages.
	<i>Prevention</i>	Wells and booster stations could be equipped with manual transfer switches to accept a generator or equipped with alternative power sources.
	<i>Mitigation</i>	City has sufficient standby storage to supply water during minor outages.
Storage	<i>No Risk</i>	The City's reservoirs are not vulnerable to power outages.
Distribution	<i>No Risk</i>	The City's distribution system is not vulnerable to power outages.

Severe Weather

Types of severe weather, which may create problems for the water system, are wind storms, freezing rain, cold temperatures, and snow storms.

TABLE G-3
Severe Weather Vulnerability Assessment

Telemetry	<i>Moderate Risk</i>	The telephone lines that carry the communications signals for the telemetry system and the power source that powers the telemetry system have a moderate vulnerability to high winds and freezing rain.
	<i>Prevention</i>	Maintain telemetry equipment.
	<i>Mitigation</i>	Manual operation of the system may be needed to mitigate the effects of severe weather. Report telephone line and power outages immediately to utility companies when system is impacted.
Source	<i>No Risk</i>	The City's sources are not susceptible to severe weather.
Storage	<i>Moderate Risk</i>	Extreme cold weather could cause ice formations on the water level sensors inhibiting telemetry.
	<i>Prevention</i>	During extreme cold weather, check sensors and clean them temporarily if ice formation is a concern.
	<i>Mitigation</i>	Run system manually if sensors freeze. If necessary, use the other reservoir while repairs are made.
Distribution	<i>No Risk</i>	The City's distribution system is not vulnerable to severe weather.

Earthquake

An earthquake could damage water system components and infrastructure. The City's service area is located in the Uniform Building Code Seismic Zone 2B. This zone contains a moderately low risk to earthquakes.

TABLE G-4
Earthquake Vulnerability Assessment

Telemetry	<i>Low Risk</i>	There is a low risk of structural failure.
	<i>Prevention</i>	Perform emergency planning.
	<i>Mitigation</i>	Rely on manual operation of system components until the system can be repaired.
Source	<i>Low Risk</i>	There is a low risk that structural failure and aquifer shift would cause failure of all of the City's wells.
	<i>Prevention</i>	Perform emergency planning.
	<i>Mitigation</i>	Rely on other wells or provide trucked in water until the City's wells can be repaired, or new wells can be drilled.
Storage	<i>Low Risk</i>	There is a low risk of structural failure during an earthquake. The transmission main connecting to the reservoirs may be at risk.
	<i>Prevention</i>	Perform emergency planning. Prepare a plan to operate the system as a closed system.
	<i>Mitigation</i>	Rely on remaining reservoirs. Provide trucked in water until additional storage can be constructed or closed system can be set up.
Distribution	<i>Low Risk</i>	The distribution system is at low risk for failure that would result in leaks and possible contamination.
	<i>Prevention</i>	Perform emergency planning. Install valves for main isolation.
	<i>Mitigation</i>	Depending on the severity of the damage, provide trucked in water until repairs can be made.

Vandalism

Vandalism is a concern because the quality of the water supply as well as the facility operation may be affected.

TABLE G-5
Vandalism Vulnerability Assessment

Telemetry	<i>Low Risk</i>	The telemetry equipment is mostly enclosed in buildings and considered to be safe.
	<i>Prevention</i>	The City checks facilities frequently to see that access is secure.
	<i>Mitigation</i>	Operate disabled components manually until repairs can be made.
Source	<i>Low Risk</i>	There is a low risk of damage to the wells. All wells are located in locked well houses or are behind fences.
	<i>Prevention</i>	The City checks facilities daily to see that access is secure.
	<i>Mitigation</i>	Use alternative sources until repairs are made and testing indicates water is potable.
Storage	<i>Low Risk</i>	The City has experienced with minor problems with exterior tank vandalism. The City restricts access to the roof of the reservoirs with difficult to reach ladders, locked hatches, and screened vents.
	<i>Prevention</i>	Consider fencing the reservoir sites to restrict site access.
	<i>Mitigation</i>	If a reservoir is suspected of contamination, isolate, drain and clean according to AWWA guidelines.
Distribution	<i>Low Risk</i>	The distribution system is at low risk for failure that would result in leaks and possible contamination.
	<i>Prevention</i>	Perform emergency planning. Install valves for main isolation.
	<i>Mitigation</i>	Depending on the severity of the damage, provide trucked in water until repairs can be made.

APPENDIX H
CONSISTENCY STATEMENTS

Local Government Consistency Determination Form

Water System Name: City of Omak Water System PWS ID: 63750

Planning/Engineering Document Title: Water System Plan Plan Date: January 20, 2017

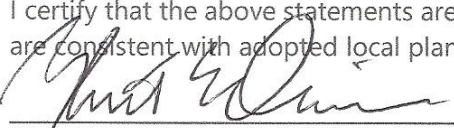
Local Government with Jurisdiction Conducting Review: City of Omak Planning

Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

By signing this form, the local government reviewer confirms the document under review is consistent with applicable local plans and regulations. If the local government reviewer identifies an inconsistency, he or she should include the citation from the applicable comprehensive plan or development regulation and explain how to resolve the inconsistency, or confirm that the inconsistency is not applicable by marking N/A. See more instructions on reverse.

Local Government Consistency Statement	For use by water system	For use by local government
	Identify the page(s) in submittal	Yes or Not Applicable
a) The water system service area is consistent with the adopted <u>land use and zoning</u> within the service area.	Fig. 1-3	yes
b) The <u>growth projection</u> used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	2-12	yes
c) For <u>cities and towns that provide water service</u> : All water service area policies of the city or town described in the plan conform to all relevant <u>utility service extension ordinances</u> .	1-13	yes
d) <u>Service area policies</u> for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	1-13	yes
e) <u>Other relevant elements</u> related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.		

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with adopted local plans and development regulations.


Signature
Kurt E. Danison, Planner, Omak
Printed Name, Title, & Jurisdiction

6/1/17
Date



Local Government Consistency Determination Form

Water System Name: City of Omak Water System PWS ID: 63750

Planning/Engineering Document Title: Water System Plan Plan Date: January 20, 2017

Local Government with Jurisdiction Conducting Review: Okanogan County Planning

Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

By signing this form, the local government reviewer confirms the document under review is consistent with applicable local plans and regulations. If the local government reviewer identifies an inconsistency, he or she should include the citation from the applicable comprehensive plan or development regulation and explain how to resolve the inconsistency, or confirm that the inconsistency is not applicable by marking N/A. See more instructions on reverse.

Local Government Consistency Statement	For use by water system	For use by local government
	Identify the page(s) in submittal	Yes or Not Applicable
a) The water system service area is consistent with the adopted <u>land use and zoning</u> within the service area.	Fig. 1-3	<u>yes</u>
b) The <u>growth projection</u> used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	2-12	<u>yes</u>
c) For <u>cities and towns that provide water service</u> : All water service area policies of the city or town described in the plan conform to all relevant <u>utility service extension ordinances</u> .	1-13	<u>yes</u>
d) <u>Service area policies</u> for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	1-13	<u>yes</u>
e) <u>Other relevant elements</u> related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.		<u>yes</u>

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with adopted local plans and development regulations.

Perry D. Huston

Signature

Perry D. Huston Director of Planning Okanogan Co
Printed Name, Title, & Jurisdiction

5-31-17

Date

Consistency Review Guidance

For Use by Local Governments and Municipal Water Suppliers

This checklist may be used to meet the requirements of WAC 246-290-108. When using an alternative format, it must describe all of the elements; 1a), b), c), d), and e), when they apply.

For **water system plans (WSP)**, a consistency review is required for the service area and any additional areas where a municipal water supplier wants to expand its water right's place of use.

For **small water system management programs**, a consistency review is only required for areas where a municipal water supplier wants to expand its water right's place-of-use. If no water right place-of-use expansion is requested, a consistency review is not required.

For **engineering documents**, a consistency review is required for areas where a municipal water supplier wants to expand its water right's place-of-use (water system plan amendment is required). For noncommunity water systems, a consistency review is required when requesting a place-of-use expansion. All engineering documents must be submitted with a service area map (WAC 246-290-110(4)(b)(ii)).

A) Documenting Consistency: The planning or engineering document must include the following when applicable.

- a) A copy of the adopted **land use/zoning** map corresponding to the service area. The uses provided in the WSP should be consistent with the adopted land use/zoning map. Include any other portions of comprehensive plans or development regulations that relate to water supply planning.
- b) A copy of the **growth projections** that correspond to the service area. If the local population growth projections are not used, explain in detail why the chosen projections more accurately describe the expected growth rate. Explain how it is consistent with the adopted land use.
- c) Include water service area policies and show that they are consistent with the **utility service extension ordinances** within the city or town boundaries. *This applies to cities and towns only.*
- d) All **service area policies** for how new water service will be provided to new customers.
- e) **Other relevant elements** the Department of Health determines are related to water supply planning. See Local Government Consistency – Other Relevant Elements, Policy B.07, September 2009.

B) Documenting an Inconsistency: Please document the inconsistency, include the citation from the comprehensive plan or development regulation, and explain how to resolve the inconsistency.

C) Documenting a Lack of Local Review for Consistency: Where the local government with jurisdiction did not provide a consistency review, document efforts made and the amount of time provided to the local government for review. Please include: name of contact, date, and efforts made (letters, phone calls, and emails). To self-certify, please contact the DOH Planner.

The Department of Health is an equal opportunity agency. For persons with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TTY 1-800-833-6388).

APPENDIX I
SEPA CHECKLIST

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals: [\[help\]](#)

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the [SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS \(part D\)](#). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background

1. Name of proposed project, if applicable: *Water System Plan*
2. Name of applicant: *City of Omak, Washington*
3. Address and phone number of applicant and contact person:

*City of Omak
2 North Ash Street
Omak, WA 98841
(509) 826-1170
Ken Mears, Public Works Director*

4. Date checklist prepared: *May 2017*
5. Agency requesting checklist: *City of Omak*
6. Proposed timing or schedule (including phasing, if applicable):

The Water System Plan (Plan) is in the process of review and approval by the City. Projects identified in the Plan are prioritized and will be constructed pending availability of funds.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

It is anticipated that the Plan will be updated in the future and that additional water system needs may be identified at that time.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Site specific reports will be prepared for individual projects identified in the Plan in critical areas.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None known.

10. List any government approvals or permits that will be needed for your proposal, if known.

Approval of the Plan by the Washington State Department of Health is required.

Permits required for construction of the improvements identified in the CIP may include City building permits, Department of Transportation right-of-way permits, shoreline substantial development permits, construction stormwater general permits, EPA construction stormwater

general permits, and various permits from the Confederated Tribes of the Colville Reservation, including land use permit, natural resource permit, pollution discharge permit, and solid waste disposal permit.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The plan is organized into the following chapters:

Chapter 1 – Description of Water System, presents information on ownership and management of the water system, system background data, an inventory of existing system facilities, related planning documents, existing and future service areas and characteristics, and service area agreements and policies.

Chapter 2 – Basic Planning Data, presents the basic planning data used to estimate Omak's future water demands. Water demand projections are used in Chapter 3 to evaluate the adequacy of the City's existing water system.

Chapter 3 – Water System Analysis, evaluates the ability of the City's existing water system to meet current and future water quality and system demand requirements.

Chapter 4 – Water Use Efficiency, includes water use data collection, program development and implementation, recommended measures and level of implementation, conservation programs, and the City's water use efficiency program.

Chapter 5 – Source Water Protection, presents the Wellhead Protection Program for the City.

Chapter 6 – Operation and Maintenance, presents the City's Operation and Maintenance program, including water system personnel, equipment settings, and safety procedures.

Chapter 7 – Construction Standards, includes water system construction standards and details required for development.

Chapter 8 – Capital Improvement Program, provides a description of the City's proposed 10- and 20-year water system capital improvements. Specifically:

Water Rights

The City plans to file change applications with the Washington State Department of Ecology to consolidate its existing water rights to give the City greater flexibility in managing its water resources.

The City includes areas within the boundaries of the Confederated Tribes of the Colville Reservation (CTCR). The City plans to work with the CTCR to review and coordinate water rights applications as deemed beneficial to preserve, enhance and support predictable growth within this area of joint planning jurisdiction.

Source Protection

The City plans to pursue protective covenants for all City wells.

Telemetry

There are no telemetry system improvements identified for the 10- and 20-year planning periods.

Source Improvements

The City has identified the following source improvements for its 10-year improvement schedule:

- 1. Julia Maley Park Well Equipping – Equip Julia Maley Park Well with vertical turbine pump and VFD motor, well house, gas chlorination, piping, electrical, telemetry, instrumentation and trailer-mounted generator.*
- 2. Eastside Well Pump No. 4 – Rebuild Eastside Well pump.*
- 3. Well Improvements – Install automatic transfer switches at OWP No. 2, Eastside, and NE Omak wells to accommodate trailer-mounted generator to be purchased for the Julia Maley Park well.*
- 4. Okoma Well Inspection – Provide downhole video inspection and report to investigate possible well rehabilitation.*
- 5. Okoma Well Rehabilitation – Rehabilitate Okoma Well in accordance with the findings and recommendations of the well inspection and feasibility study (20-year plan).*
- 6. New Well – Drill and equip a new well to increase source reliability with the City's water system (20-year plan).*

Treatment

The City has identified the following treatment improvements for its 10-year improvement schedule:

- 7. Arsenic Treatment Pilot Study –Pilot study to investigate alternatives make recommendations for arsenic treatment at the Julia Maley Park well if further sampling and testing at the well demonstrate arsenic levels in excess of the maximum contaminant level.*
- 8. Arsenic Treatment Facility – Construct an arsenic treatment facility for the Julia Maley Park in accordance with recommendations of the arsenic treatment pilot study, if required.*

Storage

The City has identified the following storage improvements for its 10- and 20-year improvement schedules:

9. *South Hill Reservoir Altitude Valve – Repair non-operational altitude valve.*
10. *Ross Canyon Reservoirs Inspection and Repair – Perform reservoir cleaning, inspection, and repairs to correct reservoir weeping issues.*
11. *Reservoir Cleaning and Inspection – Cleaning and inspection of Riverside, South Hill, and Coleman Butte reservoirs.*
12. *Coleman Butte Reservoir Mixing – Installation of mixing system to reduce risk of water stagnation and icing.*

Distribution

The City has identified the following distribution system improvements for its 10- and 20-year improvement schedules:

13. *Hospital Water Main Loop – Developer installation of 8-inch water line to Hospital to provide for fire flow.*
14. *Riverside Reservoir Transmission Line Valve Replacement – Replacement leaking and non-operational valves.*
15. *Ash Street Booster Pump Station Improvements – Replacement of booster pump station pumps, valves, piping, and appurtenances and installation of a variable speed drive.*
16. *Columbia Street Water Main – Construct new 12-inch water main on Columbia Street from Omak Avenue to 5th Avenue.*
17. *Jackson Street Water Upsize – Upsize water main on Jackson Street from 4th Avenue to 5th Avenue and on 5th Avenue from Jackson to east to 8-inch.*
18. *Granite Street Water Main – Upsize water main on Granite Street from 5th Avenue to 6th Avenue.*
19. *7th Avenue Water Main Improvements – Upsize water main on 7th Avenue from Edmonds to Jackson Street with 12-inch water main and on Jackson Street from 7th Avenue to just north of 6th Avenue. This improvement includes the jack and bore installation of 24-inch steel casing pipe crossing the Cascade & Columbia River Railroad track on 7th Avenue.*
20. *Garfield Street Water Main – Construct new 8-inch water line on Garfield Street from Omak Avenue to 5th Avenue to provide looping and install hydrants for fire flow.*
21. *Hanford Street Alley Water Main – Construct new 8-inch water line in alley west of Hanford Street from Omak Avenue to 5th Avenue to provide looping and install hydrants for fire flow.*
22. *Skyview Drive/Skyview Circle Water Main Upsize – Upsize water main on Skyview Drive from Grape Avenue to Locust Street and on Skyview Circle to 8-inch.*
23. *Hydrant Installation – Install and connect new fire hydrants to larger water mains in areas where parallel water lines are active and fire flows in existing hydrants are insufficient.*

24. *Elberta Avenue Water Main Loop – Construct 8-inch water main on Elberta Avenue from Ash Street to Ironwood Street.*
25. *Hale Avenue Water Main Loop Improvements – Construct 8-inch water main on Hale Avenue between Ironwood and Kenwood Streets and on Juniper and Jack Pine Streets from Hale Avenue to Jonathan Avenue.*
26. *Birch Street Water Main Loop – Construct 8-inch water main on Birch Street from Elberta to Grape Avenues and on Grape Avenue from Ash Street to just west of Birch Street.*
27. *Fig Avenue Water Main Upsize – Install 8-inch water main on Fig Avenue from Ironwood to Locust Avenues.*
28. *Dewberry Avenue Loop – Construct 8-inch water main on Dewberry Avenue from Locust to Kenwood Streets, north in alley and east to Locust Street.*
29. *Pine Street Upsize – Upsize two dead-end hydrant lines on Pine Street and east of Pine Street just south of Riverside Drive to 8-inch (20-year plan).*
30. *Sunrise Drive/Ironwood Street Water Main Upsize – Upsize water main on Sunrise Drive from valve cluster to Ironwood Street north to end to 8-inch (20-year plan).*
31. *Pan Vista Drive/Vista Place Water Main Upsize – Upsize water mains on Pan Vista Drive and Vista Place from Lime Street north to 8-inch (20-year plan).*
32. *Apple Avenue Water Main Upsize – Upsize water main on Apple Avenue between Cedar and Ash Streets to 8-inch (20-year plan).*
33. *Canyon Court Drive Water Main Upsize – Upsize water main on Canyon Court Drive to 8-inch (20-year plan).*
34. *Dewberry Avenue/Riverside Drive Water Main Upsize – Upsize water main on Dewberry Avenue from Kenwood to Locust Streets and from Ash to Main Streets and on Riverside Drive from Dewberry to Cherry Avenues to 8-inch (20-year plan).*
35. *Grainger Avenue Water Main Upsize – Upsize water main on Grainger Avenue between Locust and Maple Streets to 8-inch (20-year plan).*
36. *Riverside Drive Water Main Upsize – Upsize water main on Riverside Drive from Grape Avenue to just west of Locust Street to 8-inch (20-year plan).*
37. *Hillcrest Circle Water Main Upsize – Upsize water main on Hill Crest Circle and Hill Crest Place to 8-inch (20-year plan).*
38. *Hale Avenue Cul-de-Sac Water Main Upsize – Upsize water main on Hale Avenue from last valve cluster west to cul-de-sac to 8-inch (20-year plan).*
39. *Omak River Road Water Main Upsize – Upsize water main on Omak River Road to 8-inch (20-year plan).*
40. *Edmonds Street/4th Avenue Loop – Construct 8-inch water main on Edmonds Street from 3rd to 4th Avenues and on 4th Avenue from Edmonds Street to Dayton Street (20-year plan).*

Operations and Maintenance

41. *Eastside Park Metering – Install meters in Eastside Park.*

42. *Water Valve Replacement – Install valves in downtown Omak for isolation control.*

43. *AMR Meter Reading Upgrade – Replace standard residential meters throughout the City with radio-read meters.*

Chapter 9 – Capital Improvement Financing, analyzes past revenue and expenses and revenue and cash flow to fund the CIP.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

Capital improvement projects identified in the Plan are located throughout the City of Omak within the City's Urban Growth Area, all within Township 34N, Range 26 EWM, Sections 25, 26, 27, 34, 35, and 36. Mapping of the specific locations of each project are shown in the Plan.

B. ENVIRONMENTAL ELEMENTS

This is a nonproject action, therefore a number of the environmental elements will not apply. A general answer will be provided where appropriate.

1. Earth

a. General description of the site:

(circle one): Flat, rolling, hilly, steep slopes, mountainous, other:

Omak is located in north central Washington, sitting on a narrow river plain with steeply rising side slopes and straddles the Okanogan River. That part of the City located east of the river is located on lands within the boundaries of the Confederated Tribes of the Colville Reservation. Elevations within the City range from approximately 900 feet to 1,200 feet above mean sea level.

b. What is the steepest slope on the site (approximate percent slope)?

The steepest slope within the City is over 60%.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Generally glacial till with flood plain alluvial fan consisting of Pogue-Cashmont-Cashmere association (loam and sandy gravel).

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

None known.

- e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

Excavation and backfill for pipeline improvements will occur in locations shown on the map provided in the Plan. No significant site excavation will occur.

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Yes, erosion could occur during construction of the improvements identified in the Plan. Appropriate mitigation measures will be determined on a project-specific basis.

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Most projects include surface restoration to the same condition as existing. Some projects may include new impervious surfaces.

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Proposed measures to reduce or control erosion will be determined on a project-specific basis. Generally, construction activities will require temporary erosion control best management practices consistent with regulatory agency requirements.

2. Air

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Minor dust and exhaust from construction equipment during project construction.

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

None known.

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Sprinkling will be used as needed during construction to control fugitive dust.

3. Water

a. Surface Water:

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Jasmine Creek has its confluence with the Okanogan River within the City; the Okanogan River flows southward into the Columbia River Approximately 28 miles to the south.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes, some of the improvements identified in the Plan will require work adjacent to the Okanogan River. Plans will be developed prior to construction of the proposed improvements.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

No fill or dredge material is anticipated to be place in or removed from surface waters or wetlands.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

It is not anticipated that projects identified in the Plan will require surface water withdrawals or diversions.

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

None of the proposed projects identified in the Plan are located within the 100-year floodplain.

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

Dewatering of excavations during construction of projects identified in the Plan may require discharge of groundwater to the City's stormwater collection system which ultimately discharges to the Okanogan River. Groundwater discharges volumes, if any, will be determined on a project-by-project basis.

b. Ground Water:

- 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

Groundwater may be withdrawn from excavations using sump pumps should dewatering be necessary during construction activities. No water will be discharged to groundwater during construction of the improvements identified in the Plan.

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

No waste material will be discharged into the ground during construction of the improvements identified in the Plan.

c. Water runoff (including stormwater):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Stormwater and snow melt runoff throughout the City is generally collected by roadside ditches or gutters and conveyed through catch basins to the City's stormwater collection system which discharges into the Okanogan River.

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

Not as a result of projects identified in the Plan using proper erosion control measures.

- 3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

Measures to reduce and control surface, ground, and runoff water during construction of the projects identified in the Plan will comply with stormwater design standards.

4. Plants

a. Check the types of vegetation found on the site:

- ☒ deciduous tree: alder, maple, aspen, other
- ☒ evergreen tree: fir, cedar, pine, other
- ☒ shrubs
- ☒ grass
- ☒ pasture
- ☒ crop or grain
- ☒ Orchards, vineyards or other permanent crops.
- ☒ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other

- ☒ water plants: water lily, eelgrass, milfoil, other
☒ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Generally none as most of the projects identified in the Plan will be constructed within roadway rights-of-way with minimal impact to vegetation.

c. List threatened and endangered species known to be on or near the site.

None known.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

None.

e. List all noxious weeds and invasive species known to be on or near the site.

None know.

5. Animals

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Examples include:

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

Hawk, heron, eagle, songbirds, deer, elk, beaver, bass, salmon, trout, steelhead, and shellfish have all been observed within the greater Omak area.

b. List any threatened and endangered species known to be on or near the site.

Threatened and endangered species within Okanogan County include the yellow-billed cuckoo, bull trout, Canada lynx, gray wolf, north American wolverine (proposed threatened), Oregon spotted frog, northern spotted owl, marbled murrelet, upper Columbia River spring chinook salmon and steelhead.

c. Is the site part of a migration route? If so, explain.

The Okanogan Valley lies within a principal route of the Pacific Flyway for migratory birds, mostly ducks and geese.

d. Proposed measures to preserve or enhance wildlife, if any:

No special measures proposed.

- e. List any invasive animal species known to be on or near the site.

None known.

6. Energy and Natural Resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Electricity will be used for pumping equipment required for water system operation.

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

The Plan includes a water use efficiency program which is intended to minimize water use and therefore reduce pumping energy costs.

7. Environmental Health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

No.

- 1) Describe any known or possible contamination at the site from present or past uses.

None known.

- 2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

None known.

- 3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

None known.

- 4) Describe special emergency services that might be required.

None.

- 5) Proposed measures to reduce or control environmental health hazards, if any:

No special measures.

b. Noise

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None.

- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Noise will be created during construction by heavy equipment during daylight hours. No long-term noise sources will be created.

- 3) Proposed measures to reduce or control noise impacts, if any:

Construction of the improvements identified in the Plan will adhere to the City's noise ordinance.

8. Land and Shoreline Use [\[help\]](#)

- a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The City of Omak is zoned primarily residential with some commercial and light industrial areas. All construction projects identified in the Plan will be located within public rights-of-way and easements.

- b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

A significant portion of the UGA has historically been working farmland and orchards. None of the projects identified in the Plan will convert existing agricultural or forest land to other uses.

- 1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

No.

- c. Describe any structures on the site.

There are residential homes, commercial and retail business, and industrial facilities located within the vicinity of the projects identified in the Plan.

- d. Will any structures be demolished? If so, what?

No structures will be demolished during construction of the projects identified in the Plan.

e. What is the current zoning classification of the site?

The proposed distribution projects identified in the Plan are predominantly located within City rights-of-way in residential and commercial zoned areas.

f. What is the current comprehensive plan designation of the site?

Same as current zoning classification.

g. If applicable, what is the current shoreline master program designation of the site?

Not applicable.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

None known.

i. Approximately how many people would reside or work in the completed project?

Does not apply.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

No measures are proposed.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Implementation of improvements identified in the Plan would be subject to local planning review for compliance with land use compatibility.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

Does not apply.

9. Housing [\[help\]](#)

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. [\[help\]](#)

None.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. [\[help\]](#)

None.

c. Proposed measures to reduce or control housing impacts, if any: [\[help\]](#)

No measures are proposed.

10. Aesthetics [\[help\]](#)

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? [\[help\]](#)

Approximately 15 feet for the arsenic treatment facility proposed in the Plan.

- b. What views in the immediate vicinity would be altered or obstructed? [\[help\]](#)

None.

- c. Proposed measures to reduce or control aesthetic impacts, if any: [\[help\]](#)

Arsenic treatment facility will likely have a muted color to blend into the park.

11. Light and Glare [\[help\]](#)

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur? [\[help\]](#)

Security lighting will may be installed at facilities.

- b. Could light or glare from the finished project be a safety hazard or interfere with views? [\[help\]](#)

No.

- c. What existing off-site sources of light or glare may affect your proposal? [\[help\]](#)

None.

- d. Proposed measures to reduce or control light and glare impacts, if any: [\[help\]](#)

Generally any lighting will be occupancy based. In residential areas area lighting will be directed away from homes.

12. Recreation [\[help\]](#)

- a. What designated and informal recreational opportunities are in the immediate vicinity? [\[help\]](#)

Parks.

- b. Would the proposed project displace any existing recreational uses? If so, describe. [\[help\]](#)

The arsenic treatment facility identified in the Plan will be located north of Julia Maley Park Well in the Julia Maley Park.

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: [\[help\]](#)

None.

13. Historic and cultural preservation [\[help\]](#)

- a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe. [\[help\]](#)

Yes, there are several known and listed structures and sites within the City and near proposed work sites.

- b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources. [\[help\]](#)

Yes, there are several known areas exhibiting evidence of Indian use near the proposed projects identified in the Plan.

- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc. [\[help\]](#)

Proposed projects identified in the Plan will include consultation with local Tribes as well as the Department of Archaeology and Historic Preservation.

- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required. [\[help\]](#)

Proposed projects identified in the Plan will include an unanticipated discovery plan such that during construction, if any locations are found to contain objects of suspected historical or cultural interest, work will cease immediately and appropriate State or tribal authorities will be contacted. Areas that are suspect to findings will include a cultural resource survey at the design stage to ensure the best course of action.

14. Transportation [\[help\]](#)

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any. [\[help\]](#)

The various sites of proposed work identified in the Plan are served by State Routes 97 and 215 and a network of public and private roads. Several figures in the Plan show these roadways.

- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop? [\[help\]](#)

Yes, the Okanogan County Transit Authority has several stops within the City.

- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? [\[help\]](#)

None.

- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). [\[help\]](#)

No.

- e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. [\[help\]](#)

No.

- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates? [\[help\]](#)

None.

- g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe. [\[help\]](#)

Some projects identified in the Plan will on street used to transport agricultural and forest products. Traffic control plans will require alternate routes and signage to minimize traffic impacts.

- h. Proposed measures to reduce or control transportation impacts, if any: [\[help\]](#)

Traffic control plans will be required during construction of improvements identified in the Plan to minimize traffic impacts.

15. Public Services [\[help\]](#)

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe. [\[help\]](#)

No.

- b. Proposed measures to reduce or control direct impacts on public services, if any. [\[help\]](#)

None.

16. Utilities [\[help\]](#)

- a. Circle utilities currently available at the site: [\[help\]](#)
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system,
other fiber.

- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed. [\[help\]](#)

All projects listed in the Plan are water utilities, which is provided by the City of Omak. General construction activities that may be needed include excavation, piping, paving, electrical, concrete forming, rock excavation, and backfill.

C. Signature [\[help\]](#)

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____

Name of signee _____

Position and Agency/Organization _____

Date Submitted: _____

D. supplemental sheet for nonproject actions [\[help\]](#)

(IT IS NOT NECESSARY to use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

The City of Omak's Water System Plan recommends capital improvement projects related to the City's water system, including improvements to water sources, storage, and transmission and distribution system components. All proposed projects will be constructed in compliance with all state and federal regulations and City and County ordinances. During construction of the proposed improvements, noise typical of construction activities will be generated and the operation of construction equipment will result in engine exhaust emissions.

Proposed measures to avoid or reduce such increases are:

Project construction specifications will include adherence to state and federal regulations regarding potential discharges to water, emissions to air, spill prevention, and construction noise.

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

It is not anticipated that construction of the proposed improvements will affect plants, animals, fish or marine life since all projects are located within road rights-of-way and City-owned properties.

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

Project construction specifications will include adherence to state and federal regulations regarding environmental protection, as needed.

3. How would the proposal be likely to deplete energy or natural resources?

It is not anticipated that construction of the proposed improvements will deplete energy, other than the use of fossil fuels used by heavy construction vehicles, or other natural resources.

Proposed measures to protect or conserve energy and natural resources are:

Construction specifications will include adherence to state and federal regulations regarding protection of the environment.

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

While most construction projects identified in the Plan will not likely use or affect environmentally sensitive areas, some projects, such as the Julia Maley Park Well project, will impact parks. This project is also located in a location where cultural resources may have been found in the past.

Proposed measures to protect such resources or to avoid or reduce impacts are:

Project specifications will include adherence to state, federal and tribal regulations regarding environmental, historical, and cultural protections. Specifications will also include an unanticipated discovery plan in the event that historical or cultural resources are uncovered during construction activities.

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

It is not anticipated that projects identified in the Plan will change or negatively affect land and shoreline use, with the exception of the Julia Maley Park Well project, which will affect the existing park in which the well will be located.

Proposed measures to avoid or reduce shoreline and land use impacts are:

The Julia Maley Park Well project will attempt to mitigate park impacts by minimizing the well footprint area and provide fencing that will secure the facility and still provide use of the remaining park area.

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

Proposed projects identified in the Plan will not likely increase demands on transportation, public services or utilities.

Proposed measures to reduce or respond to such demand(s) are:

None needed.

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

There are no known conflicts with the proposed projects identified in the Plan and local, state or federal laws or requirements for protection of the environment.

DETERMINATION OF NONSIGNIFICANCE

Description of proposal: *City Of Omak Water System Plan*

Proponent: *City of Omak*

Location of proposal, including street address, if any: *Capital improvement projects identified in the Plan are located throughout the City of Omak within the City's Urban Growth Area, all within Township 34N, Range 26 EWM, Sections 25, 26, 27, 34, and 36. Mapping of the specific locations of each project are shown in the Plan.*

Lead agency: *City of Omak*

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030 (2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 21 days from the date below.

Comments must be submitted by 3:00 PM October 4, 2017.

Responsible official: *Jake Dalton*

Position/title: *Building Official*Permit Administrator*

Phone: *(509) 826-1170*

Address: *2 North Ash St. P.O. Box 72, Omak, WA. 98841*



Signature: *Jake Dalton CBO*

Date: *September 13, 2017*

APPENDIX J
NESTING APPROVAL LETTER



Omak Volunteer Fire Department

Phone (509) 826-0760
Fax (509) 826-6057

16 N. Ash St.
P.O. Box 72

Kevin Bowling, Fire Chief

Omak, Wash. 98841

June 19, 2017

Dear Mayor Gagne,

It is my understanding that in order to obtain approval from the Washington State Department of Health for the City's 2017 Water System Plan, the City must provide a letter from the Fire Chief indicating concurrence with the assumptions used to determine the requirements for the City's emergency water supplies. After reviewing the City's approach, I have the following comments:

Concerning storage volumes to be provided in the City's water system, it is my understanding that per WAC 246-290-235(4), standby and fire suppression storage volumes may be nested with the larger of the two volumes being the minimum available, provided the local fire protection authority does not require them to be additive.

As Fire Chief for the City of Omak, I agree that the City may "nest" the smaller of these two volumes within the larger volume.

We believe that this decision is valid for the water system plan's 10-year planning period but should be reevaluated during the development of the next water system plan.

Sincerely,

Kevin Bowling
Omak Fire Chief

APPENDIX K
SOURCE PROTECTION



COPY

Contaminant Notification Letter

Date: August 28, 2017

Subject: OMAK WELLHEAD PROTECTION PROGRAM

Dear Owner; Sunrise RV Sales 1004 Koala Drive, Omak WA. 98841

In Omak, we rely on ground water as our only source for drinking water. We take a proactive approach to ensure a safe and secure source of quality water for our community. To do so, we have developed a Wellhead Protection Plan in accordance with State guidelines. A copy of this document is located at City Hall.

As part of our Wellhead Protection Plan, we mapped the areas overlying the most sensitive areas around each of our wells, designated as protection zones. These protection zones represent the time it can take for water to travel from the edge of the zone to the well. Following the mapping of the wellhead protection zones, an inventory of potential sources of groundwater contamination was conducted. Your business, residence or property was found to lay within one of the wellhead protection zones. As such, it has been identified to be a potential contamination source for our wellhead protection plan following a review of such source in the DOE database. The presence of your business, residence or property within the City's wellhead protection zone means that activities in these areas can have the potential to affect the City's drinking water supplies.

We have notified the State of the existence of your business, residence or property within the City's wellhead protection zone. The State can assist you with technical information to help you manage activities within the wellhead protection zone in a way that will best prevent groundwater contamination. Additionally, we will include guidelines in our water statements on how to protect our water supply.

We realize you are already careful to protect the environment in and around your property. Our hope is that informing you that your business, residence or property is within our wellhead protection zone will reinforce the need to be ever diligent in the day to day activities to help ensure we keep a safe and secure source of quality water for our community.

Sincerely,

Ken Mears

Public Works Director

Accnt.	Type	Address	Customer Name.	Mailing Address	City	ST	ZIP	Septic Systems
1166	Residential	22 WRiverRd	Norman Robison	22A W River Rd.	Omak	WA	98841	Septic County
	Residential	741 Riverside Dr	Alpine Vet Clinic	POBox232	Omak	WA	98841	Septic County
	Residential	29 WRiverRd	Alvin Egbert-Inactive	3967 Hillcrest Rd	Wayzata	MN	55391	Septic County
none	Residential	22 Middle Lane	Jill Gardinier	PO Box 3882	Omak	WA	98841	Septic County
1400	Residential	411 Omak River.Rd	Billy Lamb	408 Hillcrest circle	Omak	WA	98841	Septic County
1736	Residential	19 WRiverRd	Clarence Lyon, estate	19WRiverRd	Omak	WA	98841	Septic County
3354	Residential	699 Riverside Dr	Steven Reid	609 Quince St.	Omak	WA	98841	Septic County
none	Residential	26 Middle lane	Darrel Moore	POBox476	Manson	WA	98831	Septic County
2469	Residential	28 WRiverRd	Daniel Downey	28 WRiverRd	Omak	WA	98841	Septic County
none	Residential	726 Jasmine	Joan Goujon	PO Box 1130	Omak	WA	98841	Septic County
none	Residential	83B Columbia River RD	David Grooms	59 Columbia River Rd.	Omak	WA	98841	Septic Colville Reservation
none	Residential	32 UtkeLane	Larry Manuel	POBox932	Gresham	OR	97030	Septic County
none	Residential	34 Brooks Tract RD	Dean Miller	34 Brooks Tract Rd	Omak	WA	98841	Septic Colville Reservation
2559	Residential	732 W Ridge Dr	Dennis Carlton	PO Box 874	Omak	WA	98841	septic City
1174	Residential	7 WRiverRd	Don Bleakney	POBox365	Omak	WA	98841	Septic County
2263	Residential	720WRidgeDr	Edith Crofoot	PO Box 1057	Omak	WA	98841	septic City
1413	Residential	412 Omak River Rd	Edwin Thiele	412 Omak River Rd	Omak	WA	98841	Septic County
1615	Residential	610 Jasmine	Fred Burke	POBox4495	Omak	WA	98841	septic City
none	Residential	712 Jasmine	Fred Hayner	729 w Ridge Dr.	Omak	WA	98841	Septic County
2781	Residential	21 WRiverRd	Roy Wadkins	23 WRiverRd	Omak	WA	98841	Septic County
2822	Residential	746 E Ridge Dr	George Wilson	PO Box 777	Goldendale	WA	98620	septic City
3741	Residential	410 Omak River Rd	Justin Adams	410 Omak River Rd	Omak	WA	98841	Septic County
1266	Residential	15 WRiverRd	Jame Kalberer	PO Box 1085	Omak	WA	98841	Septic County
none	Residential	700 Jasmine	James Fenison	PO Box 1684	Omak	WA	98841	Septic County
none	Residential	37 Brooks Tract RD	James Gee	37 Brooks Tract Rd	Omak	WA	98841	Septic Colville Reservation
2147	Residential	530 Jasmine	JeffHarmon	530 Jasmine	Omak	WA	98841	septic City
none	Residential	11 Middle Ln.	Jered Mills	11 MiddleLn	Omak	WA	98841	Septic County
none	Residential	724 Jasmine	Jerry Peterson	869 S. 2nd Ave.	okanogan	WA	98840	Septic County
none	Residential	722Jasmine	Lena Maples	722 Jasmine	Omak	WA	98841	Septic County
none	Residential	37 Middle Lane	Nancy Garder	37 MiddleLn	Omak	WA	98841	Septic County
none	Residential	25 Middle Ln.	Karen Mills	25 MiddleLn	Omak	WA	98841	Septic County
none	Residential	21 Middle Lane	Jennie Wilson	21 MiddleLn	Omak	WA	98841	Septic County
2488	Residential	675 Riverside Dr	Kevin Smith	2203 I08th St SE	Everett	WA	98208	Septic County
2201	Residential	700 Emery Road	KOMW	PO Box 151	Omak	WA	98841	septic City
none	Residential	2 Haussler Road	Krystal Nissen	POBox419	Omak	WA	98841	Septic County
1584	Residential	40 UtkeLane	Larry Manuel	POBox932	Gresham	OR	97030	Septic County
1454	Residential	1 WRiverRd	Larry Neely	1 WRiverRd	Omak	WA	98841	Septic County
3045	Residential	3 WRiverRd	Larry Neely	1 WRiverRd	Omak	WA	98841	Septic County
none	Residential	741 E Ridge Dr	Randal Crowder	741 ERidgeDr	Omak	WA	98841	septic City
2612	Residential	808 Dayton	Marty Dobson	General Delivery	Omak	WA	98841	septic City
none	Residential	26 Brooks Tract	Lucinda Reyes	26 Brooks Tract	Omak	WA	98841	Septic Colville Reservation
1387	Residential	612 Jasmine	Michael Demers	612 Jasmine St	Omak	WA	98841	septic City
1784	Residential	642 W Ridge Dr	Michael Verellen	PO Box 1466	Omak	WA	98841	septic City
1044	Residential	616 Jasmine	Mike Foth	616 Jasmine St.	Omak	WA	98841	septic City
none	Residential	13 Middle Lane	Paul Yarnell	13 MiddleLn	Omak	WA	98841	Septic County
none	Residential	16 Haussler RD	Peter Colomb	16 Haussler Rd	Omak	WA	98841	Septic County
2287	Residential	26B W River Rd	TRLT	POBox4199	Omak	WA	98841	Septic County
1642	Residential	14 WRiverRd	Randy Morrison	14 WRiverRd	Omak	WA	98841	Septic County
1092	Residential	731 Jonathan Lane	Rich Lange	PO Box 68	Omak	WA	98841	Septic County
none	Residential	18 Middle lane	Richard Woody	7401 VandermarkRd	Sumner	WA	98390	Septic County
2250	Residential	6 WRiverRd	Mathew Kramer	6WRiverRd	Omak	WA	98841	Septic County
none	Residential	24 Middle Lane	Robert Chiles	PO Box 1112	Okanogan	WA	98840	Septic County
none	Residential	745 E Ridge Dr	Robert Dillard	PO Box 1329	Okanogan	WA	98840	Septic County
none	Residential	24 Haussler RD	Roy Abshire	14C Haussler Rd	Omak	WA	98841	Septic County
1977	Residential	716 W Ridge Dr	Roy Schilke	716 W Ridge Dr	Omak	WA	98841	septic City
1065	Residential	23 WRiverRd	Roy Wadkins	23 WRiverRd	Omak	WA	98841	Septic County
2524	Residential	730 W Ridge Dr	Sarah Spence	1922 Barrel Springs Rd	Bellingham	WA	98229	septic City
none	Residential	27 Haussler RD	Scott Geise	25 Haussler Rd	Omak	WA	98841	Septic County
none	Residential	32 Middle Lane	Shawn Ingraham	PO Box 187	Okanogan	WA	98840	Septic County
none	Residential	825 Omak Ave	Stogie Shop	POBox3997	Omak	WA	98841	Septic County Colville Res.

2695	Residential	1124 E Fifth	Sun Opta Fruit Inc.	1124 E Fifth Ave	Omak	WA	98841	septic City
none	Residential	28 Middle Lane	Enrique Martinez	28 Middle Ln.	Omak	WA	98841	Septic County
2287.7	Residential	39 Utke Lane	TRLT	POBox4199	Omak	WA	98841	Septic County
none	Residential	24 WRiverRd	TRLT	POBox4199	Omak	WA	98841	Septic County
2809	Residential	26A W River Rd	TRLT	POBox4199	Omak	WA	98841	Septic County
2287.4	Residential	26C W River Rd	TRLT	PO Box 4199	Omak	WA	98841	Septic County
1561	Residential	30 WRiverRd	Vickie Scholla	30 W River Rd.	Omak	WA	98841	Septic County
2184	Residential	638 Jasmine	WDFW	POBox43160	Olmnia	WA	98501	Seotic County

**Wellhead Notification
Mailing List**

Up dated 12/19/16

none	Residential	25 Hiussler RD . -	William Giese	25 Haussler Rd	Omak	WA	98841	Septic County
1928	Residential	580 Jasmine	Zeke Wilkins	POBox4401	Omak	WA	98841	Septic County

Wellhead Notification Mailing List

Updated 12/19/16

[illegible]

Wellhead Notification
Mailing List
31 mailed 06.16.2011

Up dated 12/19/16

Acct.	Type	Address	Customer Name	Mailing Address	City	ST	ZIP	Septic Systems
1166	Residential	22 W River Rd	Norman Robison	22A W River Rd.	Omak	WA	98841	Septic County
	Residential	741 Riverside Dr	Alpine Vet Clinic	PO Box 232	Omak	WA	98841	Septic County
	Residential	29 W River Rd	Alvin Egbert-Inactive	3967 Hillcrest Rd	Wayzata	MN	55391	Septic County
none	Residential	22 Middle Lane	Jill Gardinier	PO Box 3882	Omak	WA	98841	Septic County
1400	Residential	411 Omak River Rd	Billy Lamb	408 Hillcrest circle	Omak	WA	98841	Septic County
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none	Residential	26 Middle lane	Darrel Moore	PO Box 476	Manson	WA	98831	Septic County
2469	Residential	28 W River Rd	Daniel Downey	28 W River Rd	Omak	WA	98841	Septic County
none	Residential	726 Jasmine	Joan Goujon	PO Box 1130	Omak	WA	98841	Septic County
none	Residential	83B Columbia River RD	David Grooms	59 Columbia River Rd.	Omak	WA	98841	Septic Colville Reservation
none	Residential	32 Utke Lane	Larry Manuel	PO Box 932	Gresham	OR	97030	Septic County
none	Residential	34 Brooks Tract RD	Dean Miller	34 Brooks Tract Rd	Omak	WA	98841	Septic Colville Reservation
2559	Residential	732 W Ridge Dr	Dennis Carlton	PO Box 874	Omak	WA	98841	septic City
1174	Residential	7 W River Rd	Don Bleakney	PO Box 365	Omak	WA	98841	Septic County
2263	Residential	720 W Ridge Dr	Edith Crofoot	PO Box 1057	Omak	WA	98841	septic City
1413	Residential	412 Omak River Rd	Edwin Thiele	412 Omak River Rd	Omak	WA	98841	Septic County
1615	Residential	610 Jasmine	Fred Burke	PO Box 4495	Omak	WA	98841	septic City
none	Residential	712 Jasmine	Fred Hayner	729 w Ridge Dr.	Omak	WA	98841	Septic County
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1584	Residential	40 Utke Lane	Larry Manuel	PO Box 932	Gresham	OR	97030	Septic County
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1387	Residential	612 Jasmine	Michael Demers	612 Jasmine St	Omak	WA	98841	septic City
1784	Residential	642 W Ridge Dr	Michael Verellen	PO Box 1466	Omak	WA	98841	septic City
1044	Residential	616 Jasmine	Mike Foth	616 Jasmine St.	Omak	WA	98841	septic City
none	Residential	13 Middle Lane	Paul Yarnell	13 Middle Ln	Omak	WA	98841	Septic County
none	Residential	16 Haussler RD	Peter Colomb	16 Haussler Rd	Omak	WA	98841	Septic County
2287	Residential	26B W River Rd	TRLT	PO Box 4199	Omak	WA	98841	Septic County
1642	Residential	14 W River Rd	Randy Morrison	14 W River Rd	Omak	WA	98841	Septic County
1092	Residential	731 Jonathan Lane	Rich Lange	PO Box 68	Omak	WA	98841	Septic County
none	Residential	18 Middle lane	Richard Woody	7401 Vandermark Rd	Sumner	WA	98390	Septic County
2250	Residential	6 W River Rd	Mathew Kramer	6 W River Rd	Omak	WA	98841	Septic County
none	Residential	24 Middle Lane	Robert Chiles	PO Box 1112	Okanogan	WA	98840	Septic County
none	Residential	745 E Ridge Dr	Robert Dillard	PO Box 1329	Okanogan	WA	98840	Septic County
none	Residential	24 Haussler RD	Roy Abshire	14C Haussler Rd	Omak	WA	98841	Septic County
1977	Residential	716 W Ridge Dr	Roy Schwilke	716 W Ridge Dr	Omak	WA	98841	septic City
1065	Residential	23 W River Rd	Roy Wadkins	23 W River Rd	Omak	WA	98841	Septic County
2524	Residential	730 W Ridge Dr	Sarah Spence	1922 Barrel Springs Rd	Bellingham	WA	98229	septic City
none	Residential	27 Haussler RD	Scott Geise	25 Haussler Rd	Omak	WA	98841	Septic County
none	Residential	32 Middle Lane	Shawn Ingraham	PO Box 187	Okanogan	WA	98840	Septic County
none	Residential	825 Omak Ave	Stogie Shop	PO Box 3997	Omak	WA	98841	Septic County Colville Res.
2695	Residential	1124 E Fifth	Sun Opta Fruit Inc.	1124 E Fifth Ave	Omak	WA	98841	septic City
none	Residential	28 Middle Lane	Enrique Martinez	28 Middle Ln.	Omak	WA	98841	Septic County
2287.7	Residential	39 Utke Lane	TRLT	PO Box 4199	Omak	WA	98841	Septic County
none	Residential	24 W River Rd	TRLT	PO Box 4199	Omak	WA	98841	Septic County
2809	Residential	26A W River Rd	TRLT	PO Box 4199	Omak	WA	98841	Septic County
2287.4	Residential	26C W River Rd	TRLT	PO Box 4199	Omak	WA	98841	Septic County
1561	Residential	30 W River Rd	Vickie Scholla	30 W River Rd.	Omak	WA	98841	Septic County
2184	Residential	638 Jasmine	WDFW	PO Box 43160	Olympia	WA	98501	Septic County

**Wellhead Notification
Mailing List
31 mailed 06.16.2011**

Up dated 12/19/16

none	Residential	25 Haussler RD	William Giese	25 Haussler Rd	Omak	WA	98841	Septic County
1928	Residential	580 Jasmine	Zeke Wilkins	PO Box 4401	Omak	WA	98841	Septic County

**Wellhead Notification
Mailing List
31 mailed 06.16.2011**

Updated 12/19/16

[illegible]

APPENDIX L
AGREEMENTS

RESOLUTION NO. 29-2016

**A RESOLUTION OF THE OMAK CITY COUNCIL APPROVING AN
AGREEMENT WITH THE 12 TRIBES RESORT AND CASINO FOR WATER
AND SEWER UTILITIES.**

WHEREAS, the 12 Tribes Resort and Casino requested connection to the City of Omak's Water and Sewer utilities in August of 2013; and

WHEREAS, all connection fees for water and sewer connections were paid in January 22, 2015, and

WHEREAS, construction was completed in June of 2015 and utilities were activated, and

WHEREAS, in absence of an agreement all fees and charges have been in accordance with Title 9 of the Omak Municipal Code and adopted fee schedules, and

WHEREAS, this agreement affirms the roles and responsibilities of the City of Omak and the 12 Tribes Resort and Casino.

NOW, THEREFORE BE IT RESOLVED by the Omak City Council that the agreement with the 12 Tribes Resort and Casino, a copy of which is attached as **Exhibit "A"** is approved. The Mayor is hereby authorized to execute the Agreement, as attached to this resolution, and the City Clerk is directed to attest her signature.

PASSED AND APPROVED this 18th day of April, 2016.

SIGNED:

Andy Gagne
Cindy Gagné, Mayor

ATTEST:

Connie J. Thomas
Connie J. Thomas

APPROVED AS TO FORM:

Michael Howe
Michael Howe, City Attorney

EXHIBIT A

12 Tribes Resort & Casino
Water and Sewer Utility Agreement
April, 2016
Page 1 of 7

12 Tribes Resort and Casino Water and Sewer Utility Agreement

This Water and Sewer Utility Agreement (the "Agreement") is made by and between the City of Omak, (the "City") a municipal corporation of the State of Washington with its offices located at 2 North Ash Street (P. O. Box 72) Omak, WA 98841, and Colville Gaming LLC (the "Customer"), a Limited Liability Company licensed to do business in the State of Washington with a business address of 28968 Hwy 97, Omak, WA 98841 and a mailing address of 729 Jackson Street, Omak, WA 98841, collectively known as "Parties".

RECITALS

WHEREAS, Customer intends to operate a resort and casino located proximate to the City of Omak, Washington; and

WHEREAS, the City owns and operates a water utility providing domestic water service to residents within the corporate boundaries of the City; and

WHEREAS, the City owns and operates a sanitary sewer collection and treatment system that serves properties within the corporate boundaries of the City; and

WHEREAS, the Washington State Department of Health regulates the City's water distribution system including approval of service area boundaries; and

WHEREAS, the Washington State Department of Ecology regulates the City's sewer collection system, including approval of service area boundaries; and

WHEREAS, the City draws significant amounts of its domestic water from sources within the exterior boundaries of the Colville Reservation; and

WHEREAS, with the water production capacity from the points of withdrawal on the Reservation, the City has adequate water rights and production capacity to serve the demand requirements of the proposed 12 Tribes Resort and Casino in addition to its current customers in its water service area; and

WHEREAS, Customer has determined that is in their best interest to secure potable water from the municipal water system operated by the City; and

WHEREAS, the City has begun the process of amending its Water Comprehensive Plan and its Sewer Comprehensive Plan to encompass the 12 Tribes Resort and Casino project within those respective service boundaries; and

WHEREAS, Customer has further determined that it is in their best interest to convey the effluent from their sanitary sewer pre-treatment facility to the City's collection system at an agreed upon location within the City for conveyance to the City's Publicly Owned Wastewater Treatment Plant for treatment; and

WHEREAS, the City has designed and began construction of a lift station which will increase the flow capacity of the collection system to accommodate the proposed flows from the project, and provide additional capacity to serve additional connections in East Omak; and

WHEREAS, City has a published rate schedule in both the Water Utility and the Sewer Utility Commercial Rate Schedule under which the City is willing to provide potable water, and accept sewage effluent; and

WHEREAS, the City has established connection fees for new customers connecting to the City's water and sewer systems to reimburse the existing system customers for commitment of system capacities, which connection fees have been paid by the Customer.

NOW, THEREFORE, for and inconsideration of the terms, conditions and obligations set forth in this Agreement, the adequacy and sufficiency of which is hereby acknowledged, the Parties agree as follows:

SECTION ONE **PURPOSE**

The purpose of this Agreement is to specify in writing the business relationship that will exist between the City of Omak and Customer. Both parties acknowledge that the recitals are an integral component of this Agreement and shall be fully incorporated in this Agreement in order to accurately articulate the intent of each party.

SECTION TWO **TERM**

This Agreement shall remain in full force and effect for ten (10) years (the "Term") from the date the date of execution by both parties. This Agreement shall automatically renew at the end of each Term unless either party terminates this Agreement in accordance with the termination provisions contained herein.

SECTION THREE **RATES, PAYMENTS AND COSTS**

The utility rates pertaining to water provided, and sewerage effluent received and processed will be as specified in the City of Omak Fee Schedule for Commercial/Business customers which is in effect at the time of service, and which is adjusted from time to time by action of the Omak City Council.

The Parties further acknowledge and agree that the City of Omak Water Utility and City of Omak Sewer Utility are separate and independent funds and operations within the City, and are subject to Business and Operations.

SECTION FOUR **OWNERSHIP AND MAINTENANCE OF EQUIPMENT**

WATER The City of Omak will allow a commercial water connection to its water system. Said connection will be within the City Limits of the City of Omak, which connection shall consist of a meter and backflow prevention / premise isolation valve of sufficient size to supply the necessary volume of water required to meet domestic and fire flow requirements for the Customer, which is approximately 3,000 gallons per minute for the combined maximum fire flow and domestic requirements to be delivered to this connection.

The City and the Customer acknowledge and agree that the Omak Municipal Code does not apply to the operation of the that portion of the water system that is outside of the Omak City Limits and that the water system supplying potable water from the connection point to the Customer's points of use will be regulated by the US Environmental Protection Agency. The Customer acknowledges that the provision of water to their system by the City will be subject to the provisions of OMC 9.04 Water Service Regulations.

The service piping from the connection point on the City's municipal water system to the point of use will be installed by, and remain the property of and maintenance responsibility of the Customer or the Water System created to provide services to the 12 Tribes Casino project.

The City warrants that it will provide water to the connection point that meets the requirements of the Washington State Department of Health with regard to the requirements for municipal potable water.

The Customer is responsible for transmission of this water to the point of use, and maintenance and testing of their system in a manner that complies with the requirements imposed by the EPA.

Sewer The Customer has designed and constructed a sewage pre-treatment facility which is intended to remove all solid components of the waste stream, and then convey the pre-treated effluent to the City's sanitary sewer system through a conveyance system which does not meet the normal standards of design and construction for sanitary sewer collection systems in the City. Customer agrees that it is wholly responsible for the operation and conveyance of the sewage effluent from the pre-treatment facility proximate to the Casino to the point of connection with the City's system at MH No. E-59.

It is acknowledged and agreed that due to the sewer system design and construction, no side connections to the conveyance line are possible, and any attempt to introduce a sewer waste stream at any point other than at the pre-treatment septic tanks at the Casino premises will likely result in system failure.

It is agreed that the Omak Municipal Code concerning the operation of the sewer collection and treatment system does not apply outside of the City limits. However, the Customer agrees that its sewer system will be operated in conformity to the provisions of OMC 9.08 pertaining to Sewer Connections, and OMC 9.16 pertaining to protection of the system from damage due to discharge of fats, oils and grease into the City's sewer collection and treatment system.

SECTION FIVE **REPRESENTATIONS**

It is understood and agreed between the Parties that in the event that there is insufficient water available to the City's water utility to serve all the demand on the City's water system, that water rationing or restrictions will be equally applied to the Customer and to the City's individual customers.

The City's sewer collection system requires modification to increase the capacity of the Okanogan River Crossing from East Omak to the collection system leading to the sewer treatment plant. The City's wastewater treatment plant has adequate capacity to serve the increased sewage flows that are anticipated from the new facility.

The Tribes' engineering consultants for the Casino project have projected the Resort will generate a peak hourly demand (PHD) of 80.5 gallons per minute (gpm), a Maximum Daily Demand (MDD) of 47.4 gpm and a Fire Flow requirement of 2,828 gpm for water service. The City's engineering consultants have confirmed that the city can provide the necessary water volumes required for the Resort, but that modifications will be necessary to the water connection point and the water system controls to assure that system pressures in the remainder of the City's water distribution system meet the requirements of the Washington State Department of Health. The connection to the City's water system must be accomplished in a manner and with controls in place to

protect the City's water distribution system from damage in the event of a fire flow event that would draw the maximum instantaneous flows from the system.

SECTION SIX DEFAULT

Parties hereby covenant and agree that, in the event that the other party fails to fully and completely comply with each provision set forth herein, such failure shall constitute a material breach of this Agreement and the non performing Party shall be in default.

SECTION SEVEN REMEDIES

In the event of default, Parties shall be entitled to all remedies available at law or in equity.

SECTION EIGHT NOTICE

Any notice required under this Agreement must be in writing and shall be deemed to have been given when delivered by either the U.S. Postal Service via certified mail, an overnight carrier requiring a signature upon delivery or by fax transmission which has been verified by the sender as having been received. Notice required under this Agreement shall be provided to:

If to Customer:	Colville Gaming LLC Attn: John MacClain 729 Jackson Street Omak, WA 98841
And a copy to:	Colville Gaming LLC Attn: Marvin Abrahamson 729 Jackson Street Omak, WA 98841
If to City:	City of Omak Attn: Mayor PO Box 72 Omak, WA 98841

And a copy to: City of Omak
Attn: City Attorney
PO Box 72
Omak, WA 98841

SECTION NINE INDEMNIFICATION

For any matter arising from this Agreement, City shall hold harmless, indemnify, and defend Customer at its own cost from any claim of liability for personal injury, death or physical property loss which may be asserted by a third party against Customer and which arises from the gross negligence or willful misconduct of the City.

For matters arising from this Agreement, Customer shall hold harmless, indemnify, and defend City at its own cost, from any claim of liability for personal injury, death, or physical property loss which may be asserted by a third party against the City and which arises from the gross negligence or willful misconduct of Customer.

SECTION TEN TERMINATION

Either party may terminate this Agreement at the end of the then current Term by giving the other party notice of intent to terminate at least one hundred twenty (120) days and not more than one hundred eighty (180) days prior to the end of such term.

SECTION ELEVEN MISCELLANEOUS TERMS AND CONDITIONS

1. Entire Agreement. This Agreement shall constitute the entire agreement between the parties. Any prior understanding or representation, of any kind, preceding the date of this Agreement shall not be binding upon either party except to the extent such understandings or representations are incorporated in this Agreement.
2. Modifications. Any modifications of this Agreement or additional obligations assumed by either party in connection with this Agreement shall be binding only if evidenced in writing and signed by each party.
3. Attorney's Fees and Costs. In the event a claim or action is initiated as a result of an unresolved dispute arising from this Agreement, the prevailing party to such claim or action shall be entitled to reimbursement from the non-prevailing party for all costs, including attorney's fees, incurred by the prevailing party, whether such costs are incurred with or without litigation or on appeal.
4. Governing Law. Both parties agree this Agreement shall be governed, constructed, and enforced in accordance with the laws of the State of

Washington. Any action arising from this Agreement shall be filed in the Superior Court in Okanogan, Washington.

5. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed to be one and the same Agreement.
6. Partial Invalidity. The invalidity of any portion of this Agreement will not and shall not be deemed to affect the validity of any other provision. In the event any provision of this Agreement is held to be invalid by a court of competent jurisdiction, the parties agree that all remaining provisions shall be deemed to be in full force and effect as if they had been executed by both parties subsequent to the expungement of the invalid provision.
7. Successors and Assigns. The obligations under this Agreement are personal to the 12 Tribes Casino, LLC. And may not be transferred or assigned without City's prior written consent, which shall not be unreasonably withheld.
8. General Provisions. In the event any provision in this Agreement conflicts with any portion of the City of Omak's Codes and Utility Rate Schedules, the terms and conditions in the City Code and rate schedules shall prevail.

Colville Gaming

City of Omak

By: _____

By: _____
Cindy Gagné

Its: _____

Its: Mayor

Date: _____

Date: _____

MEMORANDUM

To: Omak City Council
Cindy Gagné, Mayor

From: Todd McDaniel, City Administrator

Date: April 7, 2016

Subject: Resolution 29-2016, an agreement with the 12 Tribes Resort and Casino for water and sewer utilities.

The attached Resolution No. 29-2016 a resolution of the Omak City Council approving an agreement with the 12 Tribes Resort and Casino for Water and Sewer Utilities, is forwarded for your consideration.

This agreement recognizes utility services outside of the City limit and the responsibilities each party has in the delivery of reliable services.

Rates for services are tied to the Commercial fee schedule for Water and Sewer services. The Cities responsibility for service ends at the connection points along 8th Avenue. This agreement is reflective of OMC Title 9 and our responsibilities and expectations are the same as for any other commercial connection in the City Limits.

I support this Resolution and Urge its Adoption.

12 Tribes Resort and Casino Water and Sewer Utility Agreement

 **ORIGINAL**

This Water and Sewer Utility Agreement (the "Agreement") is made by and between the City of Omak, (the "City") a municipal corporation of the State of Washington with its offices located at 2 North Ash Street (P. O. Box 72) Omak, WA 98841, and Colville Gaming LLC (the "Customer"), a Limited Liability Company licensed to do business in the State of Washington with a business address of 28968 Hwy 97, Omak, WA 98841 and a mailing address of 729 Jackson Street, Omak, WA 98841, collectively known as "Parties".

RECITALS

WHEREAS, Customer intends to operate a resort and casino located proximate to the City of Omak, Washington; and

WHEREAS, the City owns and operates a water utility providing domestic water service to residents within the corporate boundaries of the City; and

WHEREAS, the City owns and operates a sanitary sewer collection and treatment system that serves properties within the corporate boundaries of the City; and

WHEREAS, the Washington State Department of Health regulates the City's water distribution system including approval of service area boundaries; and

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WHEREAS, the City draws significant amounts of its domestic water from sources within the exterior boundaries of the Colville Reservation; and

WHEREAS, with the water production capacity from the points of withdrawal on the Reservation, the City has adequate water rights and production capacity to serve the demand requirements of the proposed 12 Tribes Resort and Casino in addition to its current customers in its water service area; and

WHEREAS, Customer has determined that is in their best interest to secure potable water from the municipal water system operated by the City; and

WHEREAS, the City has begun the process of amending its Water Comprehensive Plan and its Sewer Comprehensive Plan to encompass the 12 Tribes Resort and Casino project within those respective service boundaries; and

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WHEREAS, City has a published rate schedule in both the Water Utility and the Sewer Utility Commercial Rate Schedule under which the City is willing to provide potable water, and accept sewage effluent; and

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NOW, THEREFORE, for and inconsideration of the terms, conditions and obligations set forth in this Agreement, the adequacy and sufficiency of which is hereby acknowledged, the Parties agree as follows:

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And a copy to:	Colville Gaming LLC Attn: Marvin Abrahamson 729 Jackson Street Omak, WA 98841
If to City:	City of Omak Attn: Mayor PO Box 72 Omak, WA 98841

And a copy to: City of Omak
Attn: City Attorney
PO Box 72
Omak, WA 98841

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For any matter arising from this Agreement, City shall hold harmless, indemnify, and defend Customer at its own cost from any claim of liability for personal injury, death or physical property loss which may be asserted by a third party against Customer and which arises from the gross negligence or willful misconduct of the City.

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SECTION TEN TERMINATION

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2. Modifications. Any modifications of this Agreement or additional obligations assumed by either party in connection with this Agreement shall be binding only if evidenced in writing and signed by each party.
3. Attorney's Fees and Costs. In the event a claim or action is initiated as a result of an unresolved dispute arising from this Agreement, the prevailing party to such claim or action shall be entitled to reimbursement from the non-prevailing party for all costs, including attorney's fees, incurred by the prevailing party, whether such costs are incurred with or without litigation or on appeal.
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Washington. Any action arising from this Agreement shall be filed in the Superior Court in Okanogan, Washington.

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7. Successors and Assigns. The obligations under this Agreement are personal to the 12 Tribes Casino, LLC. And may not be transferred or assigned without City's prior written consent, which shall not be unreasonably withheld.
8. General Provisions. In the event any provision in this Agreement conflicts with any portion of the City of Omak's Codes and Utility Rate Schedules, the terms and conditions in the City Code and rate schedules shall prevail.

Colville Gaming

By:  _____

Its: COO _____

Date: 4-16-2015

City of Omak

By:  _____

Cindy Gagné

Its: Mayor

Date: 4/18/16

APPENDIX M
WATER RIGHTS



State of Washington REPORT OF EXAMINATION FOR WATER RIGHT CHANGE

File NR: CG4-GWC01082-D@5
WR Doc ID: 6202524

Added or Changed Point of Withdrawal/Diversion

PRIORITY DATE
May 1, 1944

WATER RIGHT NUMBER
CG4-GWC01082-D@5

MAILING ADDRESS
CITY OF OMAK
2 N. ASH STREET
PO BOX 72
OMAK, WA 98841-0072

SITE ADDRESS (IF DIFFERENT)

Total Quantity Authorized for Withdrawal or Diversion

WITHDRAWAL RATE	UNITS	ANNUAL QUANTITY (ac-ft/yr)
1630	GPM	1430

Total withdrawals or diversions from all sources must not exceed the total quantity authorized for withdrawal or diversion listed above.

Purpose

PURPOSE	WITHDRAWAL OR DIVERSION RATE			ANNUAL QUANTITY (ac-ft/yr)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON-ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	
Municipal		1630	GPM		1430	01/01 - 12/31
	IRRIGATED ACRES		PUBLIC WATER SYSTEM INFORMATION			
	ADDITIVE	NON-ADDITIVE	WATER SYSTEM ID		CONNECTIONS	
	N/A					

Source

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWP	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
Kenwood Well	Right-of-Way		34N	26E	26	SWSE	48.41287°	-119.52518°
Well No. 9	3426240075	AEC887	34N	26E	24	SESE	48.42740°	-119.49545°
Apple Well	1420033201		34N	26E	26	SWSE	48.41198°	-119.52673°
Eastside Well	3426350116		34N	26E	35	SESE	48.39900°	-119.52195°
OWP#2	3426350099	AAR993	34N	26E	35	SESE	48.40014°	-119.51918°
Okoma Well	3426340128		34N	26E	34	NESE	48.40087°	-119.54092°
*Julia Maley Park Well	1690070800		34N	26E	35	SWNW	48.40607°	-119.53493°
*Oak Street Park Well	1510010003		34N	26E	25	NWSW	48.41510°	-119.51606°

Datum: NAD83/WGS84

*Proposed additional sources

Place of Use (See Attached Map)

PARCELS (NOT LISTED FOR SERVICE AREAS)

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

The place-of-use (POU) of this water right is the service area described in the City of Omak's (City) most recent Water System Plan/Small Water System Management Program approved by the Washington State Department of Health (DOH), so long as the water system is and remains in compliance with the criteria in RCW 90.03.386(2). RCW 90.03.386 may have the effect of revising the POU of this water right.

If the criteria in RCW 90.03.386(2) are not met, the POU of this water right reverts to the last POU described by Ecology in a water right authorization.

Proposed Works

The City's wells pump water through a series of mainlines to four reservoir systems (capacity of 500,000 gallons, 550,000 gallons, 800,000 gallons, and 1,065,000 gallons), which are situated in various locations around the City. The telemetry system is located at City Hall, which controls both the quantities of water pumped and the quantities of water released from the reservoirs to the City's connections.

Proposed water system components associated with the additional points of withdrawal (POWs) will include two additionally drilled and cased wells, vertical turbine pumps, well houses, chlorination equipment, and associated valves, piping and appurtenances necessary to convey water to the service area of the City of Omak.

Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
October 31, 2015	October 31, 2018	October 31, 2023

Measurement of Water Use

How often must water use be measured?	Weekly
How often must water use data be reported to Ecology?	Annually (Jan 31)
What volume should be reported?	Total Annual Volume
What rate should be reported?	Annual Peak Rate of Withdrawal (gpm)

Provisions

A. Wells, Well Logs and Well Construction Standards

- Both newly-constructed wells shall be constructed into the unconsolidated glacial/alluvial sediment aquifer.
- Oak Street Park Well** should be drilled a minimum of 450 feet or down to bedrock through the entire thickness of the Pleistocene alluvial unit unless:
 - unstable borehole conditions are found,
 - sufficient groundwater production is encountered, and/or
 - unacceptable water quality conditions are encountered.

3. **Julia Maley Park Well** should be drilled to a depth of at least 350 feet so to access the productive sand and gravel aquifer zone. The casing and seal should extend at least 40 feet below ground surface. Drilling of the well should be terminated if:
 - (1) bedrock is encountered,
 - (2) unstable borehole conditions are found,
 - (3) sufficient groundwater production is encountered, and/or
 - (4) unacceptable water quality conditions are encountered.
4. A well log of each completed well shall be submitted by the drillers to the Department of Ecology within thirty (30) days of completion of each well. These well logs shall be complete and all information concerning the static water levels in each completed well, in addition to any pump test data shall be submitted as it is obtained.
5. All wells constructed in the state must meet the construction requirements of WAC 173-160 titled "Minimum Standards for the Construction and Maintenance of Wells" and RCW 18.104 titled "Water Well Construction." Any well which is unusable, abandoned, or whose use has been permanently discontinued, or which is in such disrepair that its continued use is impractical or is an environmental, safety or public health hazard must be decommissioned.
6. All wells must be tagged with a Department of Ecology unique well identification number. If you have an existing well and it does not have a tag, please contact the well-drilling coordinator at the regional Department of Ecology office issuing this decision. This tag must remain attached to the well. If you are required to submit water measuring reports, reference this tag number.
7. Installation and maintenance of an access port as described in WAC 173-160-291(3) is required.
8. In addition to the required access port, the applicant must install and maintain, in operating condition, an airline and pressure gage. The pressure gage must be equipped with a standard tire valve and placed in a location accessible to Ecology personnel. The airline must extend from land surface to the top of the pump bowls and the total airline length must be reported to Ecology upon completion of the pump system.

B. Measurements, Monitoring, Metering and Reporting

1. An approved measuring device must be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use," WAC 173-173, which describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition Ecology for modifications to some of the requirements.
2. Water use data shall be recorded weekly. The maximum rate of withdrawal and the annual total volume shall be submitted to Ecology by January 31st of each calendar year.

3. The following information shall be included with each submittal of water-use data:

- Owner.
- Contact name if different.
- WRIA.
- Certificate.
- Washington State Department of Health number.
- Maximum rate of withdrawal including units of measure.
- Purpose of use, and period of use.
- Mailing address.
- Daytime phone number.
- Number of service connections.
- Source name.
- Annual quantity used including units of measure.
- Monthly meter readings including unit of measures.

In the future, Ecology may require additional parameters to be reported or more frequent reporting. Ecology prefers web based data entry but does accept hard copies. Ecology will provide forms and electronic data entry information.

4. Recorded water use data shall be submitted via the Internet. To set up an Internet reporting account, contact the Central Regional Office. If you do not have Internet access, you can still submit hard copies by contacting the Central Regional Office for forms to submit your water use data.

C. Water Level Measurements

1. In order to maintain a sustainable supply of water and ensure that your water source is not impaired by future withdrawals, static water levels **should** be measured and recorded monthly using a consistent methodology. Static water level is defined as the water level in a well when no pumping is occurring and the water level has fully recovered from previous pumping. Static water level data **should** include the following elements:

- Unique Well ID Number.
- Measurement date and time.
- Measurement method (air line, electric tape, pressure transducer, etc.).
- Measurement accuracy (to nearest foot, tenth of foot, etc.).
- Description of the measuring point (top of casing, sounding tube, etc.).
- Measuring point elevation above or below land surface to the nearest 0.1 foot.
- Land surface elevation at the well head to the nearest foot.
- Static water level below measuring point to the nearest 0.1 foot.

D. Maximum Water Limits

1. The amount of water granted is a maximum limit that shall not be exceeded.

2. The City's maximum instantaneous quantities for each well are as follows:

- a. Kenwood Well: 500 gpm.
- b. Apple Well: 1175 gpm.
- c. Eastside Well: 2930 gpm.
- d. Okoma Well: 600 gpm.
- e. OWP No. 2 Well: 5000 gpm.
- f. Well No. 9: 500 gpm.

3. The total instantaneous withdrawal between all of the City's municipal water rights is 10,205 gpm. Groundwater Permit No. G4-32525P (5000 gpm) is subject to curtailment when instream flows in the Okanogan River are below those set in WAC 173-549. In the event the Okanogan River drops below the set minimum flows, the total instantaneous withdrawal from all sources shall not be more than 5205 gpm (10205 gpm - 5000 gpm = 5205 gpm).
4. The total annual withdrawal under all City rights shall not exceed 3500 acre-feet per year (ac-ft/yr).
5. This authorization shall in no way excuse the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations including those administered by other programs of Ecology.

E. Department of Health Requirements

1. Prior to any new construction or alterations of a public water supply system, the State Board of Health rules require public water supply owners to obtain written approval from the Office of Drinking Water of the Washington State Department of Health. Please contact the Office of Drinking Water prior to beginning (or modifying) your project at:

DOH/Division of Environmental Health
16201 E. Indiana Avenue, Suite 1500
Spokane Valley, WA 99216
(509) 329-2100

F. Easement and Right-of-Way

1. The water source and/or water transmission facilities are not wholly located upon land owned by the applicant. Issuance of a water right change authorization by this department does not convey a right of access to, or other right to use, land which the applicant does not legally possess. Obtaining such a right is a private matter between applicant and owner of that land.

G. Water Use Efficiency

1. The water right holder is required to maintain efficient water delivery systems and use of up-to-date water conservation practices consistent with RCW 90.03.005.

H. General Conditions

1. This authorization to make use of public waters of the State is subject to existing rights, including any existing rights held by the United States for the benefit of Indians under treaty or otherwise.

I. Proof of Appropriation

1. A superseding certificate will not be issued until a proof inspection is conducted and a final investigation is made. The superseding certificate will reflect the extent of the project perfected within the limitations of the authorization. Aspects of the investigation will include, as appropriate, the source system instantaneous capacity, beneficial use, annual quantity, acreage, place-of-use, and satisfaction of provisions. Final determination will be calculated based on the best information available to Ecology, including metering data and/or water duty analysis.
2. The water right holder must file the notice of Proof of Appropriation of water (under which the certificate of water right is issued) when the permanent distribution system has been constructed and the quantity of water required by the project has been put to full beneficial use. The superseding certificate will reflect the extent of the project perfected within the

limitations of the water right. Elements of a proof inspection may include, as appropriate, the source(s), system instantaneous capacity, beneficial use(s), annual quantity, place of use, and satisfaction of provisions.

J. Schedule and Inspections

1. Department of Ecology personnel, upon presentation of proper credentials, will have access at reasonable times, to the project location, and to inspect at reasonable times, records of water use, wells, diversions, measuring devices and associated distribution systems for compliance with water law.

Findings of Facts

Upon reviewing the investigator's report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I concur with the investigator that water is available from the source in question; that there will be no impairment of existing rights; that the purpose(s) of use are beneficial; and that there will be no detriment to the public interest.

Therefore, I ORDER approval of Change Application No. CG4-GWC01082-D@5, subject to existing rights and the provisions specified above.

Your Right To Appeal

You have a right to appeal this Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do the following within 30 days of the date of receipt of the Order.

File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.

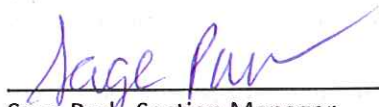
- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.
- You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 1111 Israel RD SW Ste 301 Tumwater, WA 98501	Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

For additional information visit the Environmental Hearings Office Website: <http://www.eho.wa.gov>

To find laws and agency rules visit the Washington State Legislature Website: <http://www.leq.wa.gov/CodeReviser>

Signed at Yakima, Washington, this 29 day of May, 2015.



Sage Park, Section Manager
Water Resources Program/CRO

If you need this document in a format for the visually impaired, call the Water Resources Program at 509-575-2490. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

BACKGROUND

This report serves as the written findings of fact concerning Change Application No. CG4-GWC01082-D@5.

On February 20, 2014, the City of Omak, Washington filed a Change Application with the Okanogan County Conservancy Board (Board) to add two points-of-withdrawal (POW) under previously-filed Groundwater Change Authorization No. CG4-GWC1082-D@1. The application was processed by the Board and submitted to Ecology for review on September 8, 2014. On November 20, 2014, Ecology officially returned the Report of Examination (ROE) without further action, citing RCW 90.80.055(2), "The jurisdiction of a board shall not apply within the boundaries of a federal Indian reservation or to lands held in trust for an Indian band, tribe, or nation by the federal government."

The application was subsequently returned to Ecology to process and given the control number of CG4-GWC01082-D@5.

Table 1: EXISTING Water Right Attributes

Water Right Owner	City of Omak
Priority Date	May 1, 1944
Place of Use	The service area described in the most recent Water System Plan approved by the Washington State Department of Health (DOH), so long as the City of Omak is and remains in compliance with the criteria in RCW 90.03.86(2).

County	Waterbody	Tributary To	WRIA
Okanogan	Groundwater		49-Okanogan

Purpose	Rate	Unit	Ac-ft/yr	Begin Season	End Season
Municipal	1630	GPM	1430	01/01	12/31

Source Name	Parcel	Well Tag	Twp	Rng	Sec	QQ Q
Kenwood Well	Right-of-Way	N/A	34N	26E	26	SWSE
Well No. 9	3426240075	AEC-887	34N	26E	24	SESE
Apple Well	1420033201	N/A	34N	26E	26	SWSE
Eastside Well	3426350116	N/A	34N	26E	35	SESE
OWP #2	3426350099	AAR-993	34N	26E	35	SESE
Okoma Well	3426340128	N/A	34N	26E	34	NESE

GPM = Gallons per minute; Ac-ft/yr = Acre-feet per year; Sec. = Section; QQ Q = Quarter-quarter of a section; WRIA = Water Resource Inventory Area; E.W.M. = East of the Willamette Meridian.

Table 2: REQUESTED Water Right Attributes

Applicant Name	City of Omak
Date of Application	April 7, 2014
Place of Use	The service area described in the most recent Water System Plan approved by the Washington State Department of Health (DOH), so long as the City of Omak is and remains in compliance with the criteria in RCW 90.03.86(2).

County	Waterbody	Tributary To	WRIA
Okanogan	Groundwater		49-Okanogan

Purpose	Rate	Unit	Acre-feet/yr	Begin Season	End Season
Municipal	1630	GPM	1430	01/01	12/31

Source Name	Parcel	Well Tag	Twp	Rng	Sec	QQ Q
Kenwood Well	Right-of-Way	N/A	34N	26E	26	SWSE
Well No. 9	3426240075	AEC-887	34N	26E	24	SESE
Apple Well	1420033201	N/A	34N	26E	26	SWSE
Eastside Well	3426350116	N/A	34N	26E	35	SESE
OWP #2	3426350099	AAR-993	34N	26E	35	SESE
Okoma Well	3426340128	N/A	34N	26E	34	NESE
Julia Maley Park Well-Proposed	1690070800	N/A	34N	26E	35	SWNW
Oak Street Park Well-Proposed	1510010003	N/A	34N	26E	25	NWSW

GPM = Gallons per minute; Ac-ft/yr = Acre-feet per year; Sec. = Section; QQ Q = Quarter-quarter of a section; WRIA = Water Resource Inventory Area; E.W.M. = East of the Willamette Meridian.

Legal Requirements for Requested Change

The following is a list of requirements that must be met prior to authorizing the proposed change in points-of-withdrawal.

Public Notice

RCW 90.03.280 requires that notice of a water right application be published once a week, for two consecutive weeks, in a newspaper of general circulation in the county or counties where the water is to be stored, diverted, and used. Notice of this application was published in the Quad City Herald on April 24 and May 1, 2014. No protests were received by Ecology.

State Environmental Policy Act (SEPA)

A water right application is subject to a SEPA threshold determination (i.e., an evaluation whether there are likely to be significant adverse environmental impacts) if any one of the following conditions are met:

- It is a surface water right application for more than one cubic foot per second (cfs), unless that project is for agricultural irrigation, in which case the threshold is increased to 50 cfs, so long as that irrigation project will not receive public subsidies.
- It is a groundwater right application for more than 2,250 gallons per minute (gpm).
- It is an application that, in combination with other water right applications for the same project, collectively exceed the amounts above.
- It is a part of a larger proposal that is subject to SEPA for other reasons (e.g., the need to obtain other permits that are not exempt from SEPA).
- It is part of a series of exempt actions that, together, trigger the need to do a threshold determination, as defined under WAC 197-11-305.

Because this application does not meet any of these conditions, it is categorically exempt from SEPA and a threshold determination is not required.

Water Resources Statutes and Case Law

RCW 90.03.380(1) states that a water right that has been put to beneficial use may be changed. The point-of-diversion, place-of-use, and purpose-of-use may be changed if it would not result in harm or injury to other water rights.

The Washington Supreme Court has held that Ecology, when processing an application for change to a water right, is required to make a tentative determination of extent and validity of the claim or right. This is necessary to establish whether the claim or right is eligible for change. R. D. Merrill v. PCHB and Okanogan Wilderness League v. Town of Twisp.

RCW 90.44.100 allows Ecology to amend a groundwater permit to:

- (1) Allow the user to construct a replacement or additional well at a new location outside of the location of the original well, or to
- (2) Change the manner or place of use of the water, if:
 - (a) The additional or replacement well taps the same body of public ground water as the original well. RCW 90.44.100(2)(a).
 - (b) Where a replacement well is approved, the user must discontinue use of the original well and properly decommission the original well. RCW 90.44.100(2)(b).
 - (c) Where an additional well is constructed, the user may continue to use the original well, but the combined total withdrawal from all wells shall not enlarge the right conveyed by the original permit or certificate. RCW 90.44.100(2)(c).
 - (d) Other existing rights shall not be impaired. RCW 90.44.100(2)(d).

When changing or adding points-of-withdrawal to groundwater rights (RCW 90.44.100), or when consolidating exempt wells with an existing permit or certificate (RCW 90.44.105), the wells must draw from the *same body of public groundwater*. Indicators that wells tap the *same body of public groundwater* include:

- (a) Hydraulic connectivity.
- (b) Common recharge (catchment) area.
- (c) Common flow regime.
- (d) Geologic materials that allow for storage and flow, with recognizable boundaries or effective barriers to flow.

INVESTIGATION

The following information was obtained from technical reports and research of department records. In order to approve the addition of two POWs under Change Authorization No. CG4-GWC01082-D@5, Ecology must determine:

- The extent and validity of the original water right.
- That the proposed new POWs tap the same body of public groundwater as the authorized wells.
- That the proposed change will not cause impairment to existing water rights or enlarge the original right.
- That the proposed change will not be contrary to the public interest.

History of Water Use

The City submitted a declaration of claim for groundwater right (Claim No. 489) from a well (Eastside Well) located in the SE¼SE¼ of Section 35, T. 34 N., R. 26 E.W.M., on June 14, 1947. On January 13, 1958, the Division of Water Resources, as a result of an ROE, authorized Ground Water Certificate No. 1082-D on March 11, 1958, for 1,630 gpm; 1,430 acre-feet per year (ac-ft/yr) for municipal supply with a priority date of May 1944.

Subsequent change applications were authorized for a total of nine wells. The City currently has municipal water rights totaling 10205 gpm and 3500 ac-ft/yr. Of these amounts, 5000 gpm is subject to curtailment when instream flows in the Okanogan River fall below those set in WAC 173-549. The City has not exceeded its allocated annual withdrawal of 3500 ac-ft under existing rights. The City's 2011 Water System Plan indicates that total water use for the year 2009 was 567,804,000 gallons (1,742 ac-ft/yr).

Previous Changes

The City submitted numerous Change Applications to Ecology on January 3, 1994, requesting authorization of an additional four POWs under Groundwater Certificate **G4-GWC1082-D**. The following POWs were authorized (Control No. CG4-GWC1082-D) in an ROE dated June 7, 2005:

1. Kenwood Well – Located approximately 1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW¼SE¼ of Section 26, T. 34 N., R. 26 E.W.M.
2. Apple Well – Located approximately 800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW¼SE¼ of Section 26, T. 34 N., R. 26 E.W.M.
3. Okama Well – Located approximately 660 feet south and 520 feet west of the east quarter corner of Section 34, being within the NE¼SE¼ of Section 34, T. 34 N., R. 26 E.W.M.
4. Eastside Well – Located approximately 800 feet north and 1170 feet west of the southeast corner of Section 35, being within the SE¼SE¼ of Section 35, T. 34 N., R. 26 E.W.M.
5. OWP No. 2 Well – Located approximately 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE¼SE¼ of Section 35, T. 34 N., R. 26 E.W.M.

The City submitted a Change Application to Ecology on November 24, 1998, requesting authorization to add an additional three POWs under **CG4-GWC1082-D**. The application was later amended on August 4, 2004. Under CG4-GWC1082-D, the following POWs were authorized (Control No. CG4-GWC1082-D@1) in an ROE dated August 11, 2005:

1. Kenwood Well – Located approximately 1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW¼SE¼ of Section 26, T. 34 N., R. 26 E.W.M.
2. Apple Well – Located approximately 800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW¼SE¼ of Section 26, T. 34 N., R. 26 E.W.M.
3. Okama Well – Located approximately 660 feet south and 520 feet west of the east quarter corner of Section 34, being within the NE¼SE¼ of Section 34, T. 34 N., R. 26 E.W.M.
4. Eastside Well – Located approximately 800 feet north and 1170 feet west of the southeast corner of Section 35, being within the SE¼SE¼ of Section 35, T. 34 N., R. 26 E.W.M.
5. OWP No. 2 Well – Located approximately 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE¼SE¼ of Section 35, T. 34 N., R. 26 E.W.M.
6. *Hicks Well – Located approximately 275 feet south and 1000 feet east from the northwest corner of Section 25, being within the NW¼NW¼ of Section 25, T. 34 N., R. 26 E.W.M.

7. *Dean Well – Located approximately 1625 feet north and 225 feet east of the southwest corner of Section 19, being within the NW¼SW¼ of Section 19, T. 34 N., R. 27 E.W.M.
8. *Powers Well – Being within the NE¼NE¼ of Section 26, T. 34 N., R. 26 E.W.M.
9. Well No. 9 – Located approximately 1275 feet north and 100 feet west from the southeast corner of Section 24, being within the SE¼SE¼ of Section 24, T. 34 N., R. 26 E.W.M.

The City submitted a Change Application to the Okanogan Conservancy Board on February 20, 2014, and Ecology received it on April 7, 2014, requesting authorization of an additional two POWs under **CG4-GWC1082-D@1** and it was assigned Control No. CG4-GWC01082-D@5. The following POWs are requested as authorized sources:

1. Kenwood Well – Located approximately 1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW¼SE¼ of Section 26, T. 34 N., R. 26 E.W.M.
2. Apple Well – Located approximately 800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW¼SE¼ of Section 26, T. 34 N., R. 26 E.W.M.
3. Okama Well – Located approximately 660 feet south and 520 feet west of the east quarter corner of Section 34, being within the NE¼SE¼ of Section 34, T. 34 N., R. 26 E.W.M.
4. Eastside Well – Located approximately 800 feet north and 1170 feet west of the southeast corner of Section 35, being within the SE¼SE¼ of Section 35, T. 34 N., R. 26 E.W.M.
5. OWP No. 2 Well – Located approximately 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE¼SE¼ of Section 35, T. 34 N., R. 26 E.W.M.
6. Well No. 9 – Located approximately 1275 feet north and 100 feet west from the southeast corner of Section 24, being within the SE ¼ SE ¼ of Section 24, T. 34 N., R. 26 E.W.M.
7. **(Proposed) Julia Maley Park Well:** Located within the SW¼NW¼, Section 35, Township 34 North, Range 26 E.W.M.
8. **(Proposed) Oak Street Park Well:** Located within the NW¼SW¼, Section 25, Township 34 North, Range 26 E.W.M.

*When Ecology began processing Change Authorization No. CG4-GWC01082-D@5 (the subject of this ROE), it was determined that three of the four previously-requested, added POWs for Change Authorization No. CG4-GWC1082-D@1 (see above) were no longer planned as added POWs. Therefore, the Hicks Well and Dean Well, due to non-production purposes, shall be removed as authorized sources from this Change Authorization. And the Powers Well will also be removed as an authorized source from this Change Authorization due to the City being unable to secure an agreement with the property owner where the well is located.

Proposed Use

The proposed use of water from the two additional POWs, the subject of this ROE, will not change the existing use for municipal supply. Water system components associated with the additional POWs will include two drilled and cased wells, vertical turbine pumps, well houses, chlorination equipment, valves, piping, and associated appurtenances necessary to convey water to the service area of the City of Omak.

Other Rights Appurtenant to the Place of Use

There are 12 other ground and surface water rights whose authorized place-of-use overlaps the properties where the new two POWs are proposed.

Table 3: Overlapping Water Rights on Proposed POW Properties

Control #	Document Type	Qa	Purpose	Source
*G4-29859	New Application	1340	MU	1 Well
CG4-GWC445-D@1	Change/ROE	600	MU	9 Wells
CG4-GWC446-D@3	Change/ROE	96	MU	9 Wells
CG4-GWC3655-A@1	Change/ROE	2080	MU	9 Wells
CG4-GWC3656-A@1	Change/ROE	600	MU	9 Wells
CG4-GWC7332-A@1	Change/ROE	560	MU	9 Wells
G4-31525P	Permit	3500	MU	2 Wells

Definitions: DG=Domestic General, DS=Domestic Single, IR=Irrigation, ST=Stockwater, MU=Municipal

*Application was submitted in 1988 and Ecology has not yet processed.

The remaining Change Authorizations and Permit referenced above are currently owned by the City of Omak. The Change Authorizations use all the same sources excluding the 2 new source proposals requested with this application.

Hydrologic/Hydrogeologic Evaluation

A technical memorandum, dated October 28, 2012, and prepared by a licensed hydrogeologist with GSI Water Solutions, Inc., provides the general hydrogeologic setting and an assessment of the groundwater production potential of the two proposed well sites, as well as recommendations on proposed well construction.

Information provided in the memorandum indicates completion of the proposed wells within the Pleistocene alluvial unit (consisting of unconsolidated to partially unconsolidated stratified clay, silt, sand and gravel) and based on driller's logs of area wells, will produce well yields well in excess of 500 gpm. The memorandum recommends completion of these wells to a depth of at least 350 feet below ground surface (bgs) at the Julia Maley Park site and at least 450 feet bgs at the Oak Street park site. The memorandum also recommends the construction of a surface seal extending at least 40 feet bgs at the Julia Maley Park site given the shallow groundwater contamination known to occur in the general area.

Hydraulic Analysis

Applications for change are governed by RCW 90.44.100, which states in part that, the holder of a valid right to withdraw public groundwater may, without losing the holder's priority of right, construct wells at a new location in substitution for or in addition to those at the original location, or the holder may change the manner or the place-of-use of the water. Such amendment shall be issued by the department only on these conditions:

- (a) The additional or replacement well or wells shall tap the same body of public groundwater as the original well or wells.
- (b) Where a replacement well or wells is approved, the use of the original well or wells shall be discontinued and the original well or wells shall be properly decommissioned as required.
- (c) Where an additional well or wells is constructed, the original well or wells may continue to be used, but the combined total withdrawal from the original and additional well or wells shall not enlarge the right conveyed by the original permit or certificate.
- (d) Other existing rights shall not be impaired.

The department may specify an approved manner of construction and shall require a showing of compliance with the terms of the amendment.

The proposed wells will tap the unconsolidated glacial/alluvial sediment aquifer and are not separated from each other or the original wells by a hydraulic barrier; therefore, the proposed wells are considered to utilize the same body of groundwater as the other wells under this water right.

On October 6, 2014, Ecology licensed hydrogeologist, Anna Hoselton, sent an email to the Ecology permitting unit concurring with the above conclusions, i.e. that the "proposed wells will be in the same body of public groundwater; impairments to existing rights as a result of the change is unlikely; water is available as there is no increase in the original Q_i/Q_a .

Impairment Considerations

A review of Ecology records was performed by Ecology staff via the Water Rights Tracking System (WRTS) on March 1, 2015, for existing groundwater rights, permits, applications, and claims within .5-mile radius of the proposed locations for the Julia Maley Park and Oak Street Park wells.

Oak Street Park Well Site Area

Table 4: Surrounding (0.5-mile radius) Water Rights (by POW) to Oak Street Park Well

Control #	Document Type	Qa	Purpose	Source
G3-+00790C	Certificate	8.7	IR, DS	1 Well
G4-006719CL	Claim	63,637	IR, DG	1 Well
G4-066278CL	Claim	.150	DG	1 Well
G4-111998CL	Claim	40	IR, DG	1 Well
CG4-GWC445-D@1	Change/ROE	600	MU	9 Wells
CG4-GWC446-D@3	Change/ROE	96	MU	9 Wells
CG4-GWC7332-A@1	Change/ROE	560	MU	9 Wells
CG4-GWC3655-A@1	Change/ROE	2080	MU	9 Wells
CG4-GWC3656-A@1	Change/ROE	600	MU	9 Wells

The proposed Oak Street Park well will be cased and sealed to an approximate depth of 450 feet. There are no other recorded domestic wells in the immediate vicinity of the City's proposed well. Consequently, the new Oak Street Park well should not impair any existing domestic wells.

Julia Maley Park Well Site Area

Table 5: Surrounding (0.5-mile radius) Water Rights (by POW) to Julia Maley Park Well

Control #	Document Type	Qa	Purpose	Source
G4-CV1-4P195	Cert of change	128.8	IR	1 Well
G3-+00777C	Certificate	221	IR, ST	1 Well
G3-+22450C	Certificate	10	IR, DM, ST	1 Well
G3-20127C	Certificate	30.3	IR, DS	1 Well
G4-01310C	Certificate	36	IR	1 Well
GWC05211-A	Certificate	20	IR	1 Well
G3-+00718C	Certificate	22.5	IR, DS	1 Well
S4-25681C	Certificate	5.33	IR, DS	Unnamed Spring
GWC-02194-A	Certificate	12	IR, DS	1 Well
S4-113488CL	Claim	23	IR, DG, ST	Spring
G4-060267CL	Claim	30.3	IR, DG	1 Well
G4-136176CL	Claim	4	IR, DG	1 Well
G4-001227CL	Claim	5	IR, DG	1 Well
G4-151347CL	Claim	2	DG	1 Well
G4-151912CL	Claim	4	IR	1 Well
G4-075432CL	Claim	1	DG	1 Well
G4-096352CL	Claim	6	IR, DG	1 Well
G4-129462CL	Claim	2	DG	1 Well
S4-200127CL	Claim	5.33	IR, DG	Unnamed Spring
G4-073085CL	Claim	2	Unspecified	1 Well
G4-124134CL	Claim	2	IR	1 Well
G4-073086CL	Claim	2	Unspecified	1 Well
G4-32096	New Application	804	FS	1 Well
G4-29859	New Application	1340	MU	1 Well

The proposed Julia Maley Park well will be cased and sealed to an approximate depth of 300 feet. There are no other recorded domestic wells in the immediate vicinity of the City's proposed well. Consequently, the new Julia Maley Park well should not impair any existing domestic wells.

Public Interest Considerations

The proposed change is subject to RCW 90.44.100 and therefore, cannot be detrimental to the public interest, including impacts on any watershed planning activities. There were no findings through the investigation to indicate that there would be any detrimental impact to the public welfare through issuance of the proposed change.

Consideration of Protests and Comments

No protests were filed against this application.

Tentative Determination

In order to make a water right change decision, a tentative determination on the validity and extent of the water right must be made. The tentative determination was based on the following findings:

- There are no relinquishment or abandonment concerns due to nonuse as shown through the City of Omak's continued use of the water right to provide municipal supply to its service area.
- There is a water right available and in good standing for change under Groundwater Certificate G4-GWC1082-D@1 for the purpose of year-round municipal supply.
- Groundwater has been historically and beneficially used under this authorization by the City of Omak for municipal supply.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend that this request for a water right be approved in the amounts and within the limitations listed below and subject to the provisions listed above.

Purpose of Use and Authorized Quantities

The amount of water recommended is a maximum limit and the water user may only use that amount of water within the specified limit that is reasonable and beneficial:

- 1630 gpm.
- 1430 acre-feet per year cumulatively between all authorized sources.
- Municipal supply year-round.

Points of Withdrawal

<u>Kenwood Well:</u>	Within the SW¼SE¼, Section 26, Township 34 North, Range 26 E.W.M.
<u>Apple Well:</u>	Within the SW¼SE¼, Section 26, Township 34 North, Range 26 E.W.M.
<u>Okoma Well:</u>	Within the NE¼SE¼, Section 34, Township 34 North, Range 26 E.W.M.
<u>Eastside Well:</u>	Within the SE¼SE¼, Section 35, Township 34 North, Range 26 E.W.M.
<u>OWP No. 2 Well:</u>	Within the SE¼SE¼, Section 35, Township 34 North, Range 26 E.W.M.
<u>Well No. 9:</u>	Within the SE¼SE¼, Section 24, Township 34 North, Range 26 E.W.M.
(Proposed)	
<u>Julia Maley Park Well:</u>	Within the SW¼NW¼, Section 35, Township 34 North, Range 26 E.W.M.
(Proposed)	
<u>Oak Street Park Well:</u>	Within the NW¼SW¼, Section 25, Township 34 North, Range 26 E.W.M.

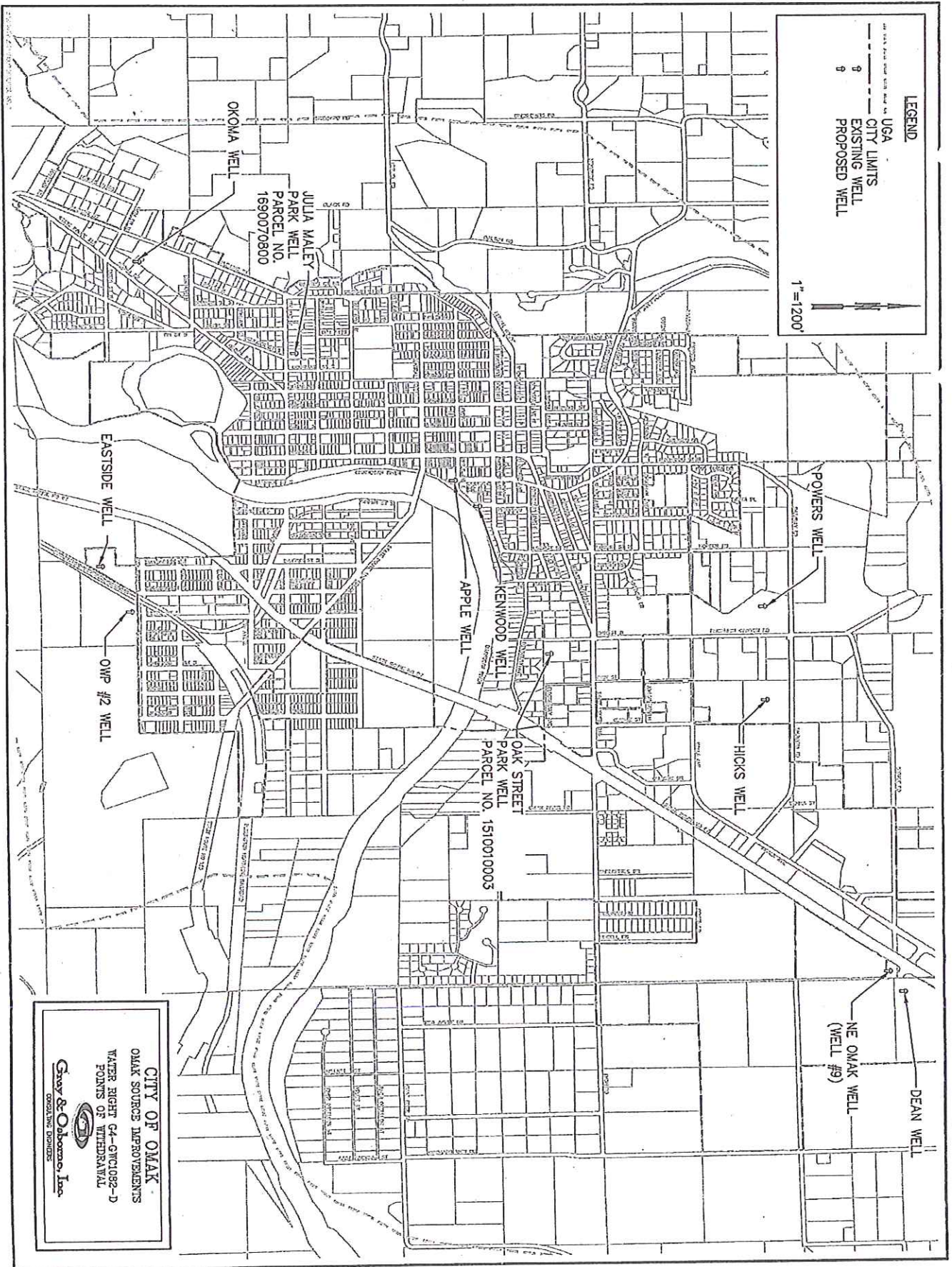
Place of Use

As described on Page 1 of this Report of Examination.


Candis L. Graff, Report Writer


Date

If you need this publication in an alternate format, please call Water Resources Program at (360) 407-6600. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.



Paid

PROGRESS SHEET - APPLICATION FOR CHANGE ON:

AREA 49 CHGWL445-D COUNTY: OKanegun
CG4-GWC445-D

NAME: City of Omak PHONE: 509-826-1170

ADDRESS: PO Box 72 Omak, WA 98841 City State ZIP

PURPOSE OF APPLICATION: add POW'S
CITY of Omak: G4- *004865215

APPLICATION received: 1/3/94 Initial \$10.00 fee received: (☒ Yes () No)

Statement of additional exam fee \$ Sent date 3/3/94 Rec'd date

PUBLICATION: 2/11/94
Approved by: Date Notice Sent date

PROTESTS: By: Name
 date
By: Name
 date
By: Name
 date

Affidavit rec'd: 5/20/94 Checked by: P.P. time expires: 4/22/94 date

Report written by: Date Report sent: 06-07-2005

DEVELOPMENT SCHEDULE

Beginning of Construction: Date sent: Date received:
Extensions:

Completion of Construction: Date sent: Date received:
Extensions:

Proof of Appropriation: Date sent: Date received:
Extensions:

Date well report(s) received:

DATE APPROVED FOR CHANGE: BY:

- () Superseding Permit
- ☒ Superseding Certificate
- () Certificate of Change (on claims & adjudicated rights)
Vol. 1-4, Page .

Date certificate fees requested: Date received:

DATE CHANGE ISSUED: Roe/change issued 6/7/2005.

REMARKS Issued together on 6/7/2005:
Applications for Change on Nos.
CG4-GWC1082-D, CG4-GWC445-D,
CG4-GWC446-D, CG4 GWC3655-A,
CG4-GWC3656-A, and CG4-GWC7332-A



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 W Yakima Ave, Ste 200 • Yakima, WA 98902-3452 • (509) 575-2490

February 12, 2010

Omak City
PO Box 72
Omak WA 98841-0072

Re: Water Right No. CG4-GWC445-D

Our records indicate that you have a Proof Exam inspection pending. This is to remind you that while you await the field inspection, beneficial use of water should continue. By continuing beneficial use as asserted on the *Proof of Appropriation of Water* form, your water right will remain in good standing if:

1. Beneficial use remains within the parameters of the authorization.
2. Beneficial use is consistent with the *Proof of Appropriation of Water* form submitted.
3. The use complies with the provisions stated in the underlying authorization, including any provisions for meter reading and reporting.

Though it may be some time before we are able to conduct the inspection, we will contact you regarding scheduling prior to the inspection.

If you anticipate a period of non-use of this water right, an option to consider is the Trust Water Program, which could protect the water right from relinquishment. You can find out more about putting your water into the Trust Water Right Program: <http://www.ecy.wa.gov/biblio/92088.html> or contact Scott Turner at 509-457-7106 or Kelsey Collins at 509-575-2640.

Complete the enclosed pre-paid postcard and return no later than **March 1, 2010**. If you have questions about your water right, please contact Teresa Mitchell at 509-575-2597.

Sincerely,

Mark C. Schuppe

Mark C. Schuppe
Section Manager
Water Resources Program

100137/gh

Enclosure: Pre-paid postcard

FILE COPY



WATER RIGHTS REVIEW ROUTER

- ☐ Report of Exam (ROE) ☒ ROE for Change
☐ Temporary Permit ☐ Conservancy Board Decision
☐ Preliminary Permit ☐ Short Term Authorization

FILE NO. 664-GW445-D

Y:\STAFF\TURNER\Manager\DMARK\first set\DMARK445-D

AUTHOR Scott Turner (date) 6/7/05 to PK

DRAFT 5/31/05 to ST (by typist) FINAL 6/6/05 to SM

Mark Schuppe MCS (date) 5/13/05
CAROL MORTENSEN
PERMITTEE (date) 5/17/05

Permit Writer [Signature] (date) 6/7/05
 MAIL OUT [Signature] (date) 6/7/05

GWIS MAPPING REVIEW
 (Debra reviews changes BEFORE finalization)
 Debra Kroon [Signature] (date) 6/7/05

GWIS Remarks:
[Handwritten notes]

CIRCLE APPROPRIATE WRIA:

TRIBE	WRIA
Colville Confederated Tribes	<u>49</u> 50 51 52 53 58 60 61
Yakama Nation	29 30 31 32 33 37 38 39 40
Both Tribes	45 46 47 48

cc TO ANYONE ELSE?
Jeffrey L. Lowman, P.E.
Huibregtse, Lowman Associates, Inc.
801 N. 39th Ave
Yakima WA 98902
NO PROTESTS

MINIMUM FLOWS?
 cc CRO Enforcement
 cc River Letter List

REMARKS and/or RELATED FILES:
[Handwritten notes]

ATTACHMENTS:

- ☒ Your Right to Be Heard
☒ Ground Water Bulletin No. 1
☒ BC, CC, PA forms
☒ Water Measurement Requirements
☐ Fish Screening Criteria
☐ Important Information Sheet (Permit)
☐ Other:

PERMIT FEE \$ _____

Permit Fee Calculation: _____



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

June 7, 2005
CERTIFIED MAIL

City of Omak
PO Box 72
Omak WA 98841

RE: Applications for Change on Nos. CG4-GWC1082-D, CG4-GWC445-D, CG4-GWC446-D,
CG4-GWC3655-A, CG4-GWC3656-A, and CG4-GWC7332-A

Your applications to change your water rights have been carefully reviewed in accordance with the requirements of the State's water codes. The Applications for Change have been approved, subject to the conditions and limitations described in the Reports of Examination for Change. Please refer to the enclosed Reports of Examination for Change which summarize our findings and represents our final decision.

You have the right to appeal this decision to the Pollution Control Hearings Board. Pursuant to Chapter 43.21B RCW, your appeal must be filed with the Pollution Control Hearings Board, and served on the Department of Ecology, within thirty (30) days of the date of your receipt of this document.

To appeal this decision, your notice of appeal must contain a copy of the Ecology decision you are appealing.

Your appeal must be filed with:
The Pollution Control Hearings Board
4224 - 6th Avenue SE Rowe Six Bldg 2
PO Box 40903
Lacey WA 98504-0903

Your appeal must also be served on:
The Department of Ecology
Appeals Coordinator
PO Box 47608
Olympia WA 98504-7608

In addition, please send a copy of your appeal to:
Robert F. Barwin
Department of Ecology
15 W Yakima Ave Ste 200
Yakima WA 98902-3452

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City of Onak
June 7, 2005
Page 2 of 2

Please pay particular attention to the Recommendation sections for the terms and conditions of these approvals. If you have any questions or concerns about these decisions, or we if can otherwise provide further assistance, please call Bryce Bealba of the Department of Ecology at (509) 575-2597.

Sincerely,



Robert F. Barwin, Section Manager
Water Resources Program
Central Region Office

RFB:ST:gg
050610

Enclosure(s): Reports of Examination for Change (6)
"Your Right to Be Heard" Information Sheet

cc: Lois Trevino, Water Administrator, Office of Environmental Trust, Colville Confederated Tribes
Jeffrey T. Louman, P.E., Huibregse Louman Associates Inc.

f-1chgg.doc



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

June 7, 2005

To: Lois Trevino, Water Administrator, Office of Environmental Trust, Colville Confederated Tribes

RE: Reports of Examination for Change on Nos. CG4-GWC1082-D, CG4-GWC445-D,
CG4-GWC446-D, CG4-GWC3655-A, CG4-GWC3656-A, and CG4-GWC7332-A
(City of Omak, Applicant)

Since you are identified as a party interested in the above water right applications, we are enclosing copies of our Reports of Examination for Change which summarize our findings and represents our final decision.

You have the right to appeal this decision to the Pollution Control Hearings Board. Pursuant to Chapter 43.21B RCW, your appeal must be filed with the Pollution Control Hearings Board, and served on the Department of Ecology, within thirty (30) days of the date of your receipt of this document.

To appeal this decision, your notice of appeal must contain a copy of the Ecology decision you are appealing.

Your appeal must be filed with:

The Pollution Control Hearings Board
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PO Box 40903
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Your appeal must also be served on:

The Department of Ecology
Appeals Coordinator
PO Box 47608
Olympia WA 98504-7608

In addition, please send a copy of your appeal to:

Robert F. Barwin
Department of Ecology
15 W Yakima Ave Ste 200
Yakima WA 98902-3452

If you have any questions or concerns about these decisions, or we if can otherwise provide further assistance, please call Bryce Bealba of the Department of Ecology at (509) 575-2597.

Sincerely,

Robert F. Barwin, Section Manager
Water Resources Program
Central Region Office

RFB:gg050610a

Enclosures: Reports of Examination for Change (6)

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FILE COPY





STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION FOR CHANGE
TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)
☒ Ground Water (Issued in accordance with the provisions of Chapter 253, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
December 1913	CG4-GWC445-D		
NAME			
City of Omak			
ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
PO Box 72	Omak	WA	98841

PUBLIC WATERS TO BE APPROPRIATED

SOURCE		
5 Wells		
TRIBUTARY OF (IF SURFACE WATERS)		
MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	500	600
QUANTITY, TYPE OF USE, PERIOD OF USE		
500 gallons per minute and 600 acre-feet per year continuously for municipal supply.		

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL			
1) Kenwood Well: 1100 feet north and 600 feet east of the south quarter corner of Section 26.			
2) Apple Well: 800 feet north and 200 feet east of the south quarter corner of Section 26.			
3) Okoma Well: 660 feet south and 520 feet west of the east quarter corner of Section 34.			
4) Eastside Well: 800 feet north and 1170 feet west of the southeast corner of Section 35.			
5) OWP No. 2 Well: 1210 feet north and 530 feet west from the southeast corner of Section 35.			
LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.
1) SW ¹ / ₄ SE ¹ / ₄	26	34	26 E.
2) SW ¹ / ₄ SE ¹ / ₄	26		
3) NE ¹ / ₄ SE ¹ / ₄	34		
4) SE ¹ / ₄ SE ¹ / ₄	35		
5) SE ¹ / ₄ SE ¹ / ₄	35		
			W.R.L.A. 49
			COUNTY Okanogan

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

The place of use of this water right is the service area described in the Water System Plan approved by the Washington State Department of Health on December 22, 2004, so long as the City of Omak is and remains in compliance with the criteria in RCW 90.03/386(2). RCW 90.03.386 may have the effect of revising the place of use of this water right.

FILE COPY

DESCRIPTION OF PROPOSED WORKS

The City of Omak's wells pump water through a series of main lines to four reservoir systems (500,000 gallons, 550,000 gallons, 800,000 gallons, and 1,065,000 gallons) sited in various locations around the City. The telemetry system is located at City Hall which controls both the quantities of water pumped to and the quantities of water released from the reservoirs to the City's connections.

DEVELOPMENT SCHEDULE		
BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER PUT TO FULL USE BY THIS DATE:
Complete	Complete	Good Standing

REPORT

BACKGROUND INFORMATION

On January 3, 1994, the City of Omak, Washington, filed an Application for Change to add five points of withdrawal under Application No. G4-GWC445-D. After discussions with city officials and their consultant, it was determined that one of the Omak Wood Products wells (OWP No. 1) would not need to be added to the City of Omak's water rights, leaving four points of withdrawal to be added. The application was accepted and assigned identifier No. CG4-GWC445-D.

The City of Omak (the City) submitted two sets of proposed Applications for Change to the Department of Ecology, Central Region Office. The first set, submitted January 3, 1994, requests authorization to consolidate all of the points of withdrawal under six of the City's existing rights.

The City's second set of Applications for Change, submitted November 24, 1998, request the addition of Well No. 9 to each of their existing water rights. A Report of Examination was issued for Application for Change No. CG4-GWC446-D@1 (Apple well) approving the use of Well No. 9 on December 7th, 2000. The second set of applications were amended on August 4, 2004, requesting to add three wells in addition to Well No. 9 to the City's existing rights.

This report will address the Department of Ecology's findings of fact and recommendations related to Application for Change No. CG4-GWC445-D. Separate reports will address the specific recommendations for each Application for Change. Although many elements of the reports are identical, the evaluation for adding all water rights to each source, including the consideration of the potential for impairing existing rights due to increased pumping on an annual basis at each source, will be considered separately.

Attributes of Ground Water Certificate No. G4-GWC445-D

Name on Certificate, Claim, Permit:	City of Omak
Priority Date, First Use:	December, 1913
Instantaneous Quantity:	500 gallons per minute (gpm)
Annual Quantity:	600 acre-feet per year (acre-ft/yr)
Source:	A Well (Kenwood well)
Point of Withdrawal:	1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW ¹ / ₄ SE ¹ / ₄ of Section 26, T. 34 N., R. 26 E.W.M.
Purpose of Use:	Municipal supply for the City of Omak
Period of Use:	Continuously throughout the year
Place of Use:	City of Omak, Okanogan County, Washington

Proposed Change

Name of Applicant:	City of Omak
Application Date:	January 3, 1994
Instantaneous Quantity:	500 gpm
Annual Quantity:	600 acre-ft/yr
Source:	6 Wells
Points of Diversion:	1) <u>Kenwood Well</u> : 1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW ¹ / ₄ SE ¹ / ₄ Section 26, T. 34 N., R. 26 E.W.M. 2) <u>Apple Well</u> : 800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW ¹ / ₄ SE ¹ / ₄ of Section 26, T. 34 N., R. 26 E.W.M. 3) <u>Okoma Well</u> : 660 feet south and 520 feet west of the east quarter corner of Section 34, being within the NE ¹ / ₄ SE ¹ / ₄ of Section 34, T. 34 N., R. 26 E.W.M. 4) <u>Eastside Well</u> : 800 feet north and 1170 feet west of the southeast corner of Section 35, being within the SE ¹ / ₄ SE ¹ / ₄ of Section 35, T. 34 N., R. 26 E.W.M. 5) <u>OWP No. 2 Well</u> : 1210 feet north and 530 feet west from the southeast corner of Section 36, being within the SE ¹ / ₄ SE ¹ / ₄ of Section 35, T. 34 N., R. 26 E.W.M.
Purpose of Use:	Municipal supply for the City of Omak
Period of Use:	Continuously throughout the year
Place of Use:	City of Omak, Okanogan County, Washington

Public Notice of the application was given in the Omak-Okanogan County Chronicle on March 16 and March 23, 1994. There were no protests during the 30 day protest period.

INVESTIGATION

The following information was obtained from a site inspection conducted by Department of Ecology (Ecology) staff Scott Turner and Melissa Nihsen, with the Assistant Director of Public Works present, on July 28, 2004, research of department records, and conversations with the applicant and department staff. In order to approve the addition of four points of withdrawal under No. GWC 445-D, Ecology must determine:

- The validity and extent of the original water right.
- That the proposed new points of withdrawal tap the same body of public ground water as the Kenwood well.
- That the proposed change will not cause impairment to existing water rights or enlarge the original right.
- That the proposed change will not be contrary to the public interest.

The intent of Applications for Change Nos. CG4-GWC445-D, CG4-GWC446-D, CG4-GWC1082-A, CG4-GWC3655-A, CG4-GWC3656-A, and CG4-GWC7332-A, is to increase the City's flexibility in managing its ground water withdrawals for municipal supply. This in part came about because Washington State Department of Health (DOH) declared the Apple and Kenwood wells as ground water under the influence of surface water (GUI). As a result, the City currently uses those wells only in an emergency need situation. This presents a need for the City to compensate for the water not produced by these wells through increased use of their other wells. The requested changes would allow the withdrawal of water from any of the City's wells at any time within the volume limits of one or more water rights.

Currently there are five wells that the City operates under municipal water rights. The wells pump water through main lines to four reservoir systems (500,000 gallons, 550,000 gallons, 800,000 gallons, and 1,065,000 gallons) sited in various locations around the City. The telemetry system is located at City Hall, which controls both the quantities of water pumped and the quantities of water released from the reservoirs to the City's connections.

The City of Omak's Existing Municipal Water Rights

The city filed the declarations for the vested water uses under RCW 90.44 090 on July 7, 1947, that resulted in the issuance of Ground Water Declaration Certificate Nos. 445-D, 446-D, and 1082-D, described in more detail below.

The City proposes to consolidate the wells under each of the following water rights. The water rights are listed below in priority date sequence.

Ground Water Declaration Certificate No. 445-D has a priority date of December 1913, and certifies the withdrawal of 500 gpm, 600 acre-ft/yr for municipal supply from a well (known as the Kenwood well) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M. This well has been categorized by DOH as a ground water source under the influence of surface water. This well was reported to be a standby well in the Report of Finding on Ground Water Declaration Claim 486 dated November 3, 1947. This well is identified as source S03 by DOH.

Ground Water Declaration Certificate No. 446-D has a priority date of March 1936, and certifies the withdrawal of 800 gpm, 96 acre-ft/yr for municipal supply originally from one well (known as the Apple well) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M. This well has been categorized by DOH as a GUI source. This well is identified as source S02 by DOH. Water Right Change Authorization No. CG4-GWC446-D@1 added Well No. 9 as an additional source to this Certificate, the well is located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 24, T. 34 N., R. 26 E.W.M. This well is identified as source S08 by DOH.

Ground Water Declaration Certificate No. 1082-D has a priority date of May 1944, and certifies the withdrawal of 1630 gpm, 1430 acre-ft/yr for municipal supply from a well (known as the Eastside well) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M. The well was equipped with three pumps; a 15 horsepower (hp), a 30 hp, and a 40 hp rated at 280 gpm, 550 gpm, and 800 gpm respectively. This well is identified as source S01 by DOH.

Ground Water Certificate No. 3655-A has a priority date of March 20, 1958. It is the second authorization from the Eastside well (see discussion about the earlier right under Ground Water Declaration Certificate No. 1082-D). It certifies the withdrawal of 1300 gpm, 2080 acre-ft/yr for municipal supply.

Ground Water Certificate No. 3656-A has a priority date of March 20, 1958, and certifies the withdrawal of 375 gpm, 600 acre-ft/yr for municipal supply. This is a second authorization from the Apple well (see earlier discussion under Ground Water Declaration Certificate No. 446-D) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M. As described earlier, this well has been categorized by DOH as a GUI source.

Ground Water Certificate No. 7332-A has a priority date of June 22, 1970, and certifies the withdrawal of 600 gpm, 560 acre-ft/yr for municipal supply from May 1 through October 31 from a well (known as the Okoma well) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M. Any water withdrawal by the City in excess of 3456 acre-feet from any municipal source was to be deducted from the annual volume authorized by this right. This well is identified as source S04 by DOH.

The first set of applications on file with Ecology proposes to also add a well that the City thought is authorized under Ground Water Permit No. G4-31525P (no Application for Change was submitted under this Permit). Ground Water Permit No. G4-31525P has a priority of November 23, 1992, and authorizes the withdrawal of 5000 gpm, 3500 acre-ft/yr from two wells (interruptible when the Okanogan River drops below minimum instream flows as outlined in the Permit) for municipal supply. The wells described in this Permit are located approximately 1,150 feet west and 500 feet north from the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M. A provision in this Permit states that the annual quantity is not additive to the City's existing rights, and limits all of the City's water rights to 3500 acre-ft/yr. The

intent of the Change Applications is to add the Omak Wood Products Well No. 2 (OWP No. 2) as an authorized source under the above mentioned Certificates, but does not propose to add the permitted quantities under Permit No. G4-31525P to the other Certificates.

During the course of this investigation it was discovered that the source the City believes to be authorized under G4-31525P (OWP No. 2), is not described on the original Permit. This oversight has resulted in an unauthorized change in point of withdrawal. OWP No. 2 is located approximately 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M., approximately 1,000 feet northeast from the authorized points withdrawal. This well is the authorized source under Certificate of Change CCVOL1-4P238, and is identified as source S07 by DOH. The original Public Notice given for G4-31525P, on the 13th and 20th of January 1993, in the Omak-Okanogan County Chronicle described the proposed sources for the Permit as being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M. As noted above, OWP No. 2 is also located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M. RCW 90.44.100(3) allows for "the construction of a replacement or new additional well or wells at the location of the original well or wells (emphasis added) shall be allowed without application to the department for an amendment". For the City to legally operate OWP No. 2 under G4-31525P, they must either request and receive a change of point of withdrawal or meet the criteria in RCW 90.44.100(3).

This application proposes to add the sources of the above mentioned water rights (four in total). Figure 1 is a graphical representation of the change, showing the source for G4-GWC445-D (Kenwood well) and the location of the proposed additional wells.

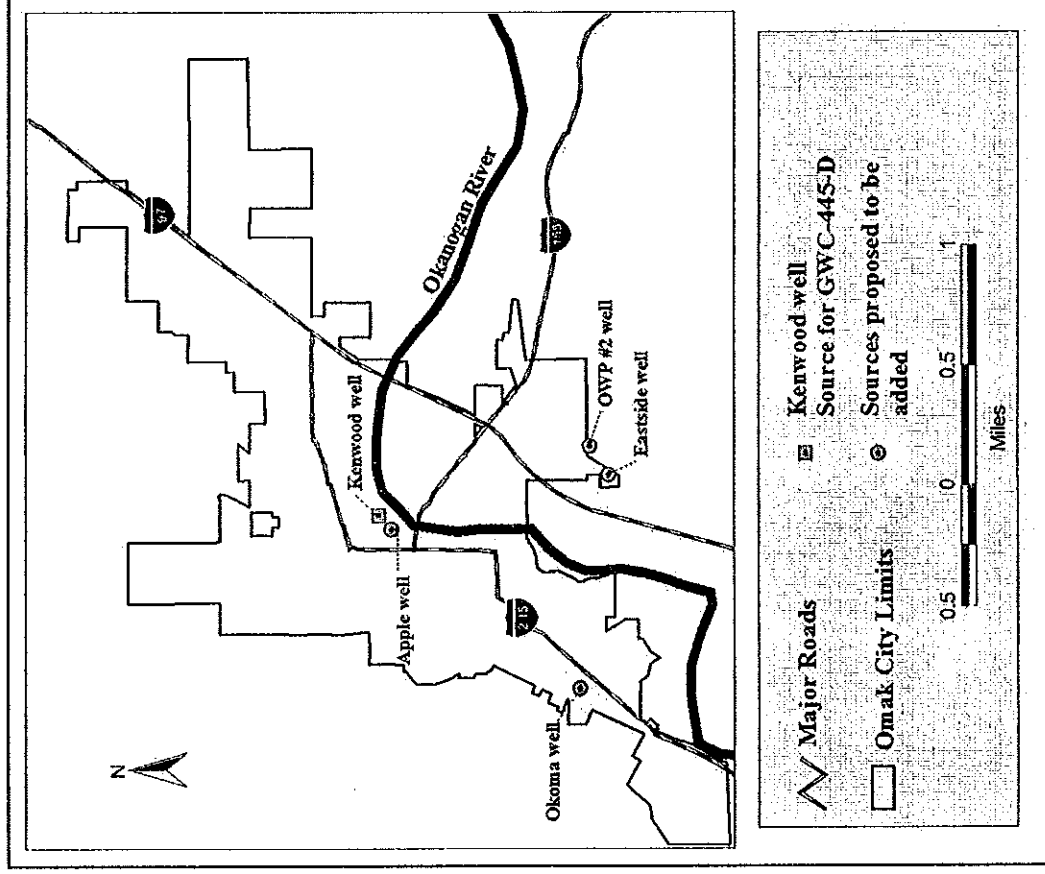


Figure 1. Overview of the five wells the City of Omak proposes to consolidate.

Ground Water Rights within Omak's Urban Growth Area

Review of the following water right record shows that many of the Certificates below were preceded by Permits for larger quantities than were ultimately perfected.

Ground Water Certificate No. G4-26176C describes a well located approximately 1000 feet east and 40 feet north from the southwest corner of Section 24 being within the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 24, T. 34 N., R. 26 E.W.M. Water is withdrawn from the well at up to 230 gpm and 117 acre-ft/yr for primary irrigation of 6 acres and standby reserve for 20 acres. The primary right for irrigation is provided by the Okanogan Irrigation District. The place of use is that part of Section 24, T. 34 N., R. 26 E.W.M. described as follows: the S $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ and that part of the NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ lying south of the L. B. Lateral of the Okanogan Irrigation District and also the NE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 25, T. 34 N., R. 26 E.W.M.

Ground Water Certificate No. G4-26558C describes a right for a well situated approximately 1310 feet west and 1050 feet north from the south quarter corner Section 24 being within the SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 24, T. 34 N., R. 26 E.W.M. It allows for the withdrawal of up to 19 gpm, 0.25 acre-ft/yr for in-house domestic supply and 7 acre-ft/yr to be used during the irrigation season from April 1 through October 15 as standby reserve for the irrigation of two acres. The primary right for irrigation is provided by the Okanogan Irrigation District. The place of use is the N $\frac{1}{2}$ of the west 330 feet of the N $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 24, T. 34 N., R. 26 E.W.M. lying south of the county road right of way.

Sumcrest Plat Water System

This system is identified by DOH as PWS ID No. 85207 and has two water rights:

Ground Water Certificate No. G4-23779C is for a well within the NE¼SE¼ Section 25, T. 34 N., R. 26 E.W.M. and certifies the withdrawal for 300 gpm, 30 acre-ft/yr for community domestic supply for 30 homes located within the SE¼SE¼ Section 25, T. 35 N., R. 26 E.W.M.

The second authorization, from the same wells under Ground Water Permit No. G4-26888P with priority date of July 21, 1980, is for two wells within the E½ Section 25, T. 34 N., R. 26 E.W.M. The Permit authorizes the withdrawal of 300 gpm, and 200 acre-ft/yr for community domestic supply for 200 homes and mobile homes. The place of use is the E½E¼SE¼ Section 25, T. 34 N., R. 26 E.W.M.

Sandflat Water Users Association

Another community system in the area is the Sandflat Water Users Association, identified by DOH as PWS No. 09064. It is authorized water use under Superseding Ground Water Permit No. G4-26301P with a priority date of July 20, 1979, from two (2) wells located within the NW¼SW¼ Section 30, T. 34 N., R. 26 E.W.M. The Permit authorizes the withdrawal of ground water at 250 gpm, and 220 acre-ft/yr for 245 homes (houses, apartments, duplexes, and condominiums).

One well is reported to be drilled 445 feet deep with a 250 gpm capacity and the other is 214 feet deep with 109 gpm capacity.

Irrigation water within the Sandflat place of use is provided from a surface water diversion under authority of Surface Water Permit No. S4-24234P for the diversion of surface water from the Okanogan River subject to instream flows set by Chapter 173-549 WAC, the Water Resources Program for the Okanogan River Basin, WRIA 49.

Aston Estates

Aston Estates is a public water system operating under three Certificates of Water Right. The Ground Water Certificates are listed below

Certificate No. G4-23805C with priority date of January 6, 1975, certifies the withdrawal of 40 gpm and 54 acre-ft/yr for a well located within the NE¼NW¼ Section 31, T. 34 N., R. 27 E.W.M. to serve 60 homes within Aston's First Addition in Government Lots 2 and 3 Section 31, T. 34 N., R. 27 E.W.M.

Certificate No. G4-23806C with priority date of January 6, 1975, certifies the withdrawal of 45 gpm and 54 acre-ft/yr from a well located approximately 875 feet west and 850 feet south of the N quarter corner within the NE¼NW¼ of Section 31, T. 34 N., R. 27 E.W.M. to serve 60 homes within Aston's First Addition in Government Lots 2 and 3, Section 31, T. 34 N., R. 27 E.W.M. These are the same 60 homes referenced by Certificate No. G4-23805C. The 54 acre-ft/yr is the maximum annual quantity under both rights, but the instantaneous quantities (40 and 45 gpm) are additive.

A third well is covered by Certificate No. G4-29424C, and authorizes 54.9 acre-ft/yr for 61 homes (60 were covered by the earlier two water rights described above) less any quantity withdrawn under Certificate Nos. G4-23805C and G4-23806C. The instantaneous quantity of 90 gpm is additive to the quantities (40 and 45 gpm) under Certificate Nos. G4-23805C and G4-23806C. This well is located approximately 510 feet west and 650 feet south of the north quarter corner in Section 31 being within Government Lot 2 Section 31, T. 34 N., R. 27 E.W.M.

Water Quantity

Table 1 identifies the Municipal Ground Water Certificates that are included in City of Omak's Water System Plan.

Table 1: Municipal Ground Water Certificates Held by the City of Omak

Certificate No.	Source	Priority date	Qi (gpm)	Qa (acre-ft/yr)	Place of use
445-D	Kenwood well	December 1913	500	600	City of Omak
446-D	Apple well	March 1936	800	96	City of Omak
3656-A	Apple well	March 20, 1958	375	600	City of Omak
1082-D	Eastside well	May 1944	1630	1430	City of Omak
3655-A	Eastside well	March 20, 1958	1300	2080	City of Omak
7332-A	Okoma well	June 22, 1970	600	560	City of Omak
G4-31525P	OWP No. 2**	November 23, 1992	5000	3500*	City of Omak

*This annual quantity is not additive to the City's other municipal rights, furthermore this Permit limits the total withdrawal under all of the City's rights not to exceed 3500 acre-ft/yr.

**OWP No. 2 represents an unauthorized change in point of withdrawal described in the The City of Omak's Existing Municipal Water Rights section of this report.

Water Demand Forecasting

Historical population and water use reported in the Draft 2004 Water System Plan indicates the extent that the City has continued to develop water use under its water rights. Historical population data included in the plan states that in 1980 the population was 4,007 with gradual increases up to 4,721 in 2000. This represents a 17.83% increase in the population for that

20 year period. The Water System Plan also contains information on the existing water supply and demand, as well as projections for future water demand and how that relates to the existing supply. The Water System Plan outlines the annual water production for the years of 1998 through 2002. Within that five year period, 1998 was indicated to be the highest production year at approximately 600 million gallons (1841 acre-feet); leaving approximately 1600 acre-feet of the City’s total water rights to be developed. The future water demand forecast for the year 2023 predicts that the City’s annual water use will be 819.3 million gallons (2514 acre-feet). These data indicate a trend of past growth, and the City’s continuing growth into their existing water rights with the flexibility for further growth.

Instantaneous Quantities

Water Right Declaration No. 445-D certifies the withdrawal of 500 gpm. The proposed change would authorize the withdrawal of that 500 gpm from all of the wells mentioned in Table 1. The City has voluntarily agreed to maximum instantaneous quantities of each well as stated on the original Certificates. The maximum Q_i on each of the certificated sources is listed in Table 2.

Table 2. Maximum Q_i Placed on Municipal Sources for the City of Omak

Source	Q_i (gpm)
Kenwood well	500 gpm
Apple well	1175 gpm
Eastside well	2930 gpm
Okoma well	600 gpm
OWP No. 2	5000 gpm

The voluntary cap on instantaneous quantities was proposed by the City for three reasons:

- 1) The city does not intend on improving each well to increase water use beyond the capacities shown in Table 2.
- 2) If there were no caps, all of the instantaneous quantities would have to be cumulatively evaluated for impairment at *each* source (approximately 5,200 gpm at each well), greatly increasing the chance for the proposed changes to impair other water users in the area.
- 3) The second set of Water Right Change Applications proposes to add new sources, further increasing the City’s flexibility in obtaining adequate water production.

Interruptible Water Right Permit No. G4-31525P

Ground Water Permit No. G4-31525P is subject to a provision limiting use when flows in the Okanogan River drop below the minimum flows set in Chapter 173-549 WAC. The proposed application requests to add a non-interruptible right to the source of this Permit. This would, in essence, allow the City to pump from OWP No. 2 Well at times when they would historically have to shut it down. But, at times when the Okanogan River drops below minimum instream flows, the 5,000 gpm authorized under G4-31525 cannot be used.

Annual Quantities

The water system plan states that during the years of 1998 and 2002 the Kenwood well (source for this change) was used for a total of 10.5 acre-feet in 1998, and 13.6 acre-feet in 2000. In order to pump the full 600 acre-feet authorized by this water right, the Kenwood well would need to withdraw 500 gpm for 271 days. While the data in the City’s plan suggest that the City has not put Groundwater Declaration No. 445-D to full beneficial use, it is uncertain whether the Kenwood well may have been relied upon to a greater extent historically. It is clear that a portion of the 6 rights the City proposes to transfer is inchoate and that some of these rights were issued based on Ecology’s former “pumps-and-pipes” methodology. Adding the additional sources would allow the City to begin to legally use the annual quantities associated with this water right through sources other than the Kenwood well. The authorization of additional sources will not allow a greater annual quantity of water to be withdrawn; the right will be limited to 600 acre-ft/yr from all sources.

Second Engrossed Second Substitute House Bill 1338 (SESSH B 1338)

In Department of Ecology v. Theodoratus, 135 Wn.2d 582, 957 P.2d 1241, the Washington Supreme Court held in a scenario that involved a non-municipal water supplier that Ecology’s administrative practice of issuing Certificates of Water Right prior to full beneficial use was in error. This created uncertainty with respect to the water rights of Certificate holders, such as the City of Omak, that received Certificates based on system capacity rather than the extent of actual use.

Recent legislative changes have affected municipal water rights. SESH B 1338 provided clarification and certainty for municipal water rights documented by Certificates which were issued based on system capacity. RCW 90.03.330 (3) states that:

“This sub-Section applies to the water right represented by a Water Right Certificate issued prior to September 9, 2003, for municipal water supply purposes as defined in RCW 90.03.015 where the Certificate was issued based on an administrative policy for issuing such Certificates once works for diverting or withdrawing and distributing water for municipal supply purposes were constructed rather than after the water had been placed to actual beneficial use. Such a water right is a right in good standing.”

HYDROGEOLOGIC SETTING

A licensed Ecology staff hydrogeologist reviewed and stamped a separate technical memorandum which discusses the hydrogeologic analysis for this application. The hydrogeologic interpretations provided below are extracted from this memorandum.

This section describes in general terms the hydrogeology surrounding the City of Omak, Okanogan County, Washington. In this area, the Okanogan River flows in an overall southerly direction, however, through the City of Omak the river takes a 90 degree bend to the west. Consequently, the City spans an area both north and south of the Okanogan River. Glacial terraces, located toward the north and west of the City, are a local remnant left by ancient ice sheets that once scoured the Okanogan River Valley. Sedimentary deposits, largely composed of glacial drift, glacial outwash, glaciolacustrine and more recent alluvial materials along with lesser amounts of glacial till, dune sands, and mass wasting materials, have in filled the ice scoured valley. The City of Omak is located near the western edge of the Okanogan Metamorphic Core Complex. Gneissic granodiorite, a meta-igneous rock of the Okanogan Core Complex, forms the valley walls to the south and east of the Okanogan River. To the north and west of the river, valley walls are composed of igneous rocks (dacite and quartz monzonite) and metasedimentary rocks of the Cave Mountain Formation. Thick glacial deposits obscure much of the described bedrock in the low lying areas; however more resistant bedrock knobs protrude through the glacial materials in places along the valley floor.

Well log data on file with Ecology indicates the glacial/alluvial sediments, which form the unconsolidated aquifer, consist of clays, silts, sands, gravels, glacial till, boulders, cobbles and hardpan/cemented gravel. Well log data also indicates this aquifer is bound at depth by bedrock, or what well drillers generally refer to as granite, a geologic description drillers applied to the various rock types that outcrop on both sides of the river. Sediment thicknesses range from approximately 14 feet to as much as 620 feet, with total thicknesses and/or depth to bedrock varying throughout the area. However, it appears that there is a thinning of sediments toward the southwest of Omak (Section 34, T. 34 N., R. 26 E.W.M.), as many wells are completed into the underlying bedrock in this area. Well log data suggests that most wells surrounding the City of Omak encounter a varying sequence of sediments, suggesting sediment layers pinch out and are discontinuous throughout the area. The wide range of sediments and thicknesses contribute to heterogeneous aquifer characteristics, for example areas in the unconsolidated aquifer where clays and silts are present will likely have lower permeabilities, hydraulic conductivities and well yields than areas encountering mostly sands and gravels. Well logs indicate well yields range from 20 gpm to 1630 gpm for wells utilizing glacial/alluvial materials. This range reflects varied sediments and aquifer characteristics throughout the Omak area. The low range of 20 gpm begins to approach a small but notable difference from bedrock wells that tend to yield approximately 5-10 gpm or less. The unconsolidated aquifer is recharged by precipitation infiltrating into the surficial sediments and from interaction with the Okanogan River. Static water levels for the subject wells and other selected wells on file with Ecology, which are completed into surficial sediments, when corrected for elevation, indicate that ground water head levels correlate with river level elevations. This relationship suggests an exchange of flow between the ground water and surface water. Aquifer recharge and ground water levels tend to fluctuate as the hydrologic system responds to seasonal variations.

Hydrogeologic Analysis of the Site

The City of Omak has multiple ground water rights and corresponding wells which collectively constitute their municipal water supply. The City submitted 6 Change Applications in 1994, requesting to add each of their existing municipal supply wells (5 existing wells) to each one of the following water rights G4-GWC445-D, G4-GWC446-D, G4-GWC1082-D, G4-GWC3655-A, G4-GWC3656-A, and G4-GWC7332-A. The City submitted 6 additional change applications in 1998 requesting to add 4 new wells to each of the above water rights. Both requests would allow for greater flexibility in the City's water system operations. This analysis will address all six 1994 applications. If the six 1994 Change Applications are approved, the City would have the ability to withdraw water quantities from the above mentioned water rights from any of the City's five existing wells, however each water right will not be allowed to exceed its historically designated instantaneous water quantity. This request is in part due to two existing city wells, the Apple Well and Kenwood Well, being designated GUL. As a result, the City currently classifies these two wells as emergency use wells only.

The table below delineates the suite of water rights being evaluated, existing wells, annual water quantities, instantaneous water quantities, depth of wells and corresponding static water levels.

Well Name	Original Water Right No.	Instantaneous Quantity Qi (gpm)	Annual Quantity Qa (acre-ft/yr)	Depth of Well (ft)	Static Water Level swl (ft)
Kenwood	445-D	500	600	26	16.5
Apple	446-D + 3656-A	1175	696	29	10.0
Eastside	1082-D + 3655-A	2930	3510	40	28.5
Okoma	7332-A	600	560	105	8.75
OWP No. 2	G4-31525P**	Interruptible 5000	3500*	69	38.75
*This quantity is not additive and furthermore this Permit limits the Qa under all the City's water rights not to exceed 3500 acre-ft/yr.					
**OWP No. 2 represents an unauthorized change in point of withdrawal described in the The City of Omak's Existing Municipal Water Rights section of this report.					

The City voluntarily capped the instantaneous water quantity at each well, to reduce the risk of impairing existing water rights in close proximity. To clarify, the instantaneous quantity at each well is limited to the aforementioned quantity stated in the table. The combined annual water quantity that would be allowed to be withdrawn from any combination of wells, should the change be approved, is 3500 acre-ft/yr, as stated in G4-31525P.

Discussion of Existing Wells

The Kenwood well is located approximately 1100 feet north and 600 feet east of the south quarter corner of Section 26, T. 34 N., R. 26 E.W.M., and approximately 50 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was designated GUI by the Washington State Department of Health. The Kenwood well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 20 feet below ground surface (bgs). However, the well log on file with Ecology indicates the well is 14 feet in diameter and completed to a depth of 26 feet 2 inches bgs. These discrepancies, as well as discrepancies in other well documents described subsequently in the report, are likely the result of information being passed down through comprehensive water plans over the years rather than well alteration (Louman, 2005). The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 16.5 feet was recorded at the time of drilling, December 1913. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 500 gpm and 7 feet of drawdown in the well were also reported. If approved, the proposed changes would allow the Kenwood well to withdraw up to 500 gpm, in emergency situations.

The Apple well is located approximately 800 feet north and 200 feet east of the south quarter corner of Section 26, T. 34 N., R. 26 E.W.M., and approximately 80 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was also designated GUI by DOH. The Apple well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 10 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is completed to 29 feet bgs. The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 10 feet 4 inches was recorded at the time of drilling, February 1936. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 800 gpm and 10 feet 4 inches of drawdown in the well were also reported. If approved, the proposed changes would allow the Apple well to withdraw up to 1175 gpm, in emergency situations.

The Eastside well is located approximately 800 feet north and 1170 feet west of the southeast corner of Section 35, T. 34 N., R. 26 E.W.M., and approximately 1900 feet east of the Okanogan River. This well is currently in use by the City and houses 4 turbine pumps which have a combined capacity to pump 2,800 gpm. The Eastside well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is 14 feet in diameter and completed to 40 feet 10 inches bgs. The materials encountered during drilling, as reported on the well log, include soil, rock and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 28 feet 6 inches was recorded during the time of drilling in 1944. However, a static water level of 12.4 feet was recorded by Ecology staff, via the City's real-time telemetry system, during a site visit on July 28, 2004. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. The telemetry system also indicated the Eastside well was pumping at a rate of 1488 gpm at the time. A yield of 1630 gpm and 1 foot of drawdown in the well was also reported on the well log. Mike Ervin, City of Omak Water Department Chief Operator, indicated during the site visit that the Eastside well shuts off when the storage reservoir is full, as opposed to shutting off because the water level in the well has dropped. If approved, the proposed changes would allow the Eastside well to withdraw up to 2930 gpm.

The Okoma well is located approximately 660 feet south and 520 feet west of the east quarter corner of Section 34, T. 34 N., R. 26 E.W.M., and approximately 2300 feet west of the Okanogan River. This well is currently in use by the City and is equipped with one turbine pump, which has the capacity to pump 500 gpm. The well log on file with Ecology indicates the Okoma well is 16 inches in diameter, completed to a depth of 105 feet bgs and screened from 55 feet to 90 feet bgs. Materials encountered during drilling include clay, silt, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 8 feet 9 inches was recorded at the time of drilling, winter 1988-1989. However, Mike Ervin informed Ecology staff during the site exam the current static water level is approximately 13 feet bgs and the pumping water level is approximately 32 feet bgs. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A well test performed by the driller and reported on the well log indicated a yield of 350 to 400 gpm with 69.3 feet of drawdown in the well after 13.5 hours. This well is located in an area where the aquifer thins, therefore the well is producing as expected, meaning it is producing less than other city wells which are located in areas where the aquifer is thicker. The steep drawdown could also be explained in combination with well efficiency, well construction and/or development and the 18 feet of silt with clay encountered in the well. If approved, the proposed changes would allow the Okoma well to withdraw up to 600 gpm.

The OWP No. 2 Well is located approximately 1210 feet north and 530 feet west of the southeast corner of Section 35, T. 34 N., R. 26 E.W.M., and approximately 2600 feet east of the Okanogan River. This well is currently in use by the City, which is leased from Omak Wood Products. The OWP No. 2 Well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, is 24 inches in diameter, completed to a depth of 69 feet bgs, cased to a depth of 44 feet bgs and screened from 44 to 60 feet bgs. An additional inner well screen was installed from 46 to 69 feet bgs during well rehabilitation in July of 1996. Materials encountered during drilling include silt, sand, gravel and cobbles, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 38.75 was recorded in a schematic of the well located within the Comprehensive Water Plan, while a static water level of 36.5 feet was recorded during rehabilitation. According to the well log on file with Ecology, a well test was performed during rehabilitation with a maximum yield of 2500 gpm and 3.8 feet of drawdown in the well after 5.5 hours. The City's telemetry system indicated the OWP No. 2 Well was pumping at a rate of 1341 gpm at the time of the site visit, July 2004. If approved, the proposed changes would allow the OWP No. 2 Well to withdraw up to 5,000 gpm. Note, the water right associated with this well is interruptible and subject to instream flows on the Okanogan River.

Many factors influence the determination as to whether significant interference effecting surrounding wells in the area is expected to take place due to these changes. By observation, there have been no reports of well interference filed with Ecology due to the current use at any of the City's original wells, all original wells penetrate the same aquifer and the total water quantity withdrawn from the aquifer will remain the same. The Kenwood, Apple, Eastside and Okoma wells are all located within the City limits. According to the City of Omak Municipal Code 9.04.040, the City shall be the exclusive provider of domestic water within the City limits, meaning other wells located within the city limits may not be used for domestic purposes. Therefore, domestic wells on file with Ecology, within the city limits are likely no longer in use. However, the possibility exists that domestic wells within the City limits, exempt from the permitting requirements contained in RCW 90.44.050, could be used for the watering of a lawn or of a noncommercial garden not exceeding one-half acre in area. The OWP No. 2 Well is located approximately 50 feet south of the city limits, on the Colville Reservation. The tribe was consulted about how the proposed water right changes would allow non-interruptible water rights to be transferred to the OWP No. 2 Well. Since the geologic setting and hydrogeology are consistent in the approximate 1 mile distance or less between subject well locations, the instantaneous quantity for each well is limited to the quantity associated with its original water right and the total water quantity withdrawn from the aquifer will not increase, interference which may take place is not expected to be significant.

Relationship Between the Original Source and Proposed Source

In order to transfer or add a well to an existing water right, "the additional or replacement well or wells shall tap the same body of public ground water as the original well or wells," as stated in Chapter 90.44.100(2)(a) RCW. The subject wells tap the unconsolidated glacial/alluvial sediment aquifer and are not separated from each other by a hydraulic barrier, such as a fault. Therefore, all five subject wells are considered to utilize the same body of ground water.

FINDINGS

- In accordance with Chapter 90.44 RCW and Chapter 90.03 RCW, the author makes a tentative determination that Ground Water Declaration No. 445-D is a valid right, with an instantaneous quantity of 500 gpm and an annual quantity of 600 acre-ft/yr, and is eligible for change. Although the City of Omak has not put the full certificated amount of water to beneficial use, the inchoate portion is in good standing and may be developed by the City consistent with the intent of the original Certificate.
- The four additional points of withdrawal tap the same body of public ground water as the Kenwood well.
- Approval of this change request will not cause impairment of existing rights or will not enlarge the original right.
- Approval of this change will not be detrimental to the public interest.

RECOMMENDATIONS

Water Use

Based on the above facts and findings, it is recommended that the requested additional 4 points of withdrawal under Ground Water Declaration No. 445-D be authorized as follows:

Purpose of Use

500 gpm and 600 acre-ft/yr for year round municipal supply purposes.

Points of Withdrawal

- 1) Kenwood Well- 1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M.
- 2) Apple Well- 800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 26, T. 34 N., R. 26 E.W.M.
- 3) Okoma Well- 660 feet south and 520 feet west of the east quarter corner of Section 34, being within the NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 34, T. 34 N., R. 26 E.W.M.
- 4) Eastside Well- 800 feet north and 1170 feet west of the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M.
- 5) OWP No. 2 Well- 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M.

Place of Use

The place of use of this water right is the service area described in the Water System Plan approved by the Washington State Department of Health on December 22, 2004, so long as the City of Omak is and remains in compliance with the criteria in RCW 90.03/386(2). RCW 90.03.386 may have the effect of revising the place of use of this water right.

Construction Schedule

Begin Construction by:	Complete
Complete Construction by:	Complete
Apply water to full beneficial use by:	Good Standing

Provisions

A Certificate of Change will not be issued until a proof inspection is conducted and a final investigation is made. The Certificate of Change will reflect the extent of the project perfected within the limitations of the authorization. Aspects of the investigation will include, as appropriate, the source, system instantaneous capacity, beneficial use, annual quantity, acreage, place of use, and satisfaction of provisions. Final determination will be calculated based on the best information available to Ecology, including metering data and/or water duty analysis.

The amount of water granted is a maximum limit that shall not be exceeded.

The City's maximum instantaneous quantities for each well as stated on the original Certificates are as follows:

Kenwood well:	500 gpm
Apple well:	1175 gpm
Eastside well:	2930 gpm
Okoma well:	600 gpm
OWP No. 2 well:	5000 gpm

The total instantaneous withdrawal between all of the City's municipal water rights is 10205 gpm. Ground Water Permit No. G4-32525P (5000 gpm) is subject to curtailment when instream flows in the Okanogan River are below those set in Chapter 173-549 WAC. In the event the Okanogan River drops below the set minimum flows, the total instantaneous withdrawal from all sources shall not be more than 5205 gpm (10205 gpm - 5000 gpm = 5205 gpm)

The total annual withdrawal under all rights shall not exceed 3500 acre-ft/yr.

This authorization shall in no way excuse the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations including those administered by other programs of the Department of Ecology.

Well construction is limited to the same body of public ground water as the original well.

All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gage may be installed in addition to the access port.

An approved measuring device shall be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", Chapter 173-173 WAC.


Water use data shall be recorded weekly. The maximum rate of withdrawal and the annual total volume shall be submitted to Ecology by January 31st of each calendar year.

The following information shall be included with each submittal of water use data: owner, contact name if different, mailing address, daytime phone number, WRIA, Certificate, number of service connections, source name, Washington State Department of Health number, annual quantity used including units of measure, maximum rate of withdrawal including units of measure, monthly meter readings including unit of measures, purpose of use, and period of use. In the future, Ecology may require additional parameters to be reported or more frequent reporting. Ecology prefers web based data entry, but does accept hard copies. Ecology will provide forms and electronic data entry information.

Chapter 173-173 WAC describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition Ecology for modifications to some of the requirements. Installation, operation and maintenance requirements are enclosed as a document entitled "Water Measurement Device Installation and Operation Requirements".

SHOULD BE
SUPERSEDED CERT
RATHER THAN
CERT OF CUMG
06/04/05

Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the records of water use that are kept to meet the above conditions, and to inspect at reasonable times any measuring device used to meet the above conditions.


Report by:  6-7-05
Scott Turner, Water Resources Program Date

FINDINGS OF FACT AND DECISION

Upon reviewing the above report, I find all facts relevant and material to the subject application have been thoroughly investigated. Furthermore, I find the change of water right as recommended will not be detrimental to existing rights and is not detrimental to the public welfare.

Therefore, I ORDER the additional points of withdrawal under Ground Water Application No. CG4-GWC445-D be approved, subject to the existing rights and provisions specified in the foregoing report.

Signed at Yakima, Washington, this 7th day of June 2005.


Robert F. Barwin, Section Manager
Water Resources Program
Central Region Office

MEMORANDUM

Date: May 6th, 2005

To: File

From: Melissa Downes

Re: Hydrogeologic analysis for water right change applications by the City of Omak, file numbers CG4-GWC445-D, CG4-GWC446-D, CG4-GWC1082-D, CG4-GWC3655-A, CG4-GWC3656-A and CG4-GWC7332-A. Analysis by Melissa Downes and reviewed by Anna Hoselton.

Hydrogeologic Setting:

This section describes in general terms the hydrogeology surrounding the City of Omak, Okanogan County, Washington. In this area, the Okanogan River flows in an overall southerly direction, however through the City of Omak the river takes a 90 degree bend to the west. Consequently, the City spans an area both north and south of the Okanogan River. Glacial terraces, located toward the north and west of the City, are a local remnant left by ancient ice sheets that once scoured the Okanogan River Valley. Sedimentary deposits, largely composed of glacial drift, glacial outwash, glaciolacustrine and more recent alluvial materials along with lesser amounts of glacial till, dune sands, and mass wasting materials, have in filled the ice scoured valley. The City of Omak is located near the western edge of the Okanogan Metamorphic Core Complex. Gneissic granodiorite, a meta-igneous rock of the Okanogan Core Complex, forms the valley walls to the south and east of the Okanogan River. To the north and west of the river, valley walls are composed of igneous rocks (dacite and quartz monzonite) and metasedimentary rocks of the Cave Mountain Formation. Thick glacial deposits obscure much of the described bedrock in the low lying areas; however more resistant bedrock knobs protrude through the glacial materials in places along the valley floor.

Well log data on file with Ecology indicates the glacial/alluvial sediments, which form the unconsolidated aquifer, consist of clays, silts, sands, gravels, glacial till, boulders, cobbles and hardpan/cemented gravel. Well log data also indicates this aquifer is bound at depth by bedrock, or what well drillers generally refer to as granite, a geologic description drillers applied to the various rock types that outcrop on both sides of the river. Sediment thicknesses range from approximately 14 feet to as much as 620 feet, with total thicknesses and/or depth to bedrock varying throughout the area. However, it appears that there is a thinning of sediments toward the southwest of Omak (section 34, T 34N, R26E), as many wells are completed into the underlying bedrock in this area. Well log data suggests that most wells surrounding the City of Omak encounter a varying sequence of sediments, suggesting sediment layers pinch out and are discontinuous throughout the area. The wide range of sediments and thicknesses contribute to heterogeneous aquifer characteristics, for example areas in the unconsolidated aquifer where clays and silts are present will likely have lower permeabilities, hydraulic conductivities and well yields than areas encountering mostly sands and gravels. Well logs indicate well yields range from 20 gpm to 1630 gpm for wells utilizing glacial/alluvial materials. This range reflects varied sediments and aquifer characteristics throughout the Omak area. The low range of 20 gpm

begins to approach a small but notable difference from bedrock wells that tend to yield approximately 5-10 gpm or less. The unconsolidated aquifer is recharged by precipitation infiltrating into the surficial sediments and from interaction with the Okanogan River. Static water levels for the subject wells and other selected wells on file with Ecology, which are completed into surficial sediments, when corrected for elevation, indicate that ground water head levels correlate with river level elevations. This relationship suggests an exchange of flow between the ground water and surface water. Aquifer recharge and ground water levels tend to fluctuate as the hydrologic system responds to seasonal variations.

Hydrogeologic Analysis of the Site:

The City of Omak has multiple ground water rights and corresponding wells which collectively constitute their municipal water supply. The City submitted 6 change applications in 1994, requesting to add each of their existing municipal supply wells (5 existing wells) to each one of the following water rights G4-GWC445-D, G4-GWC446-D, G4-GWC1082-D, G4-GWC3655-A, G4-GWC3656-A and G4-GWC7332-A. The City submitted 6 additional change applications in 1998 requesting to add 4 new wells to each of the above water rights. Both requests would allow for greater flexibility in the City's water system operations. This analysis will address all six 1994 applications. If the six 1994 change applications are approved, the City would have the ability to withdraw water quantities from the above mentioned water rights from any of the City's 5 existing wells, however each water right will not be allowed to exceed its historically designated instantaneous water quantity. This request is in part due to two existing city wells, the Apple Well and Kenwood Well, being designated groundwater under the influence of surface water (GUDI). As a result, the City currently classifies these two wells as emergency use wells only.

The table below delineates the suite of water rights being evaluated, existing wells, annual water quantities, instantaneous water quantities, depth of wells and corresponding static water levels.

Well Name	Original Water Right No.	Instantaneous Quantity Qi (gpm)	Annual Quantity Qa (afy)	Depth of Well (ft)	Static Water Level swl (ft)
Kenwood	445-D	500	600	26	16.5
Apple	446-D + 3656-A	1175	696	29	10.0
Eastside	1082-D + 3655-A	2930	3510	40	28.5
Okoma	7332-A	600	560	105	8.75
OWP #2	G4-31525P	Interruptible 5000	3500*	69	38.75

* This quantity is not additive and furthermore this permit limits the Qa under all the city's water rights not to exceed 3500 afy.

The City voluntarily capped the instantaneous water quantity at each well, to reduce the risk of impairing existing water rights in close proximity. To clarify, the instantaneous quantity at each well is limited to the aforementioned quantity stated in the table. The combined annual water

quantity that would be allowed to be withdrawn from any combination of wells, should the change be approved, is 3500 afy, as stated in G4-31525P.

Discussion of Existing Wells:

The Kenwood well is located approximately 1100 feet north and 600 feet east of the south quarter corner of Section 26, T34N, R26E, and approximately 50 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was designated GUI by the Washington State Department of Health (DOH). The Kenwood well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 20 feet below ground surface (bgs). However the well log on file with Ecology indicates the well is 14 feet in diameter and completed to a depth of 26 feet 2 inches bgs. These discrepancies, as well as discrepancies in other well documents described subsequently in the report, are likely the result of information being passed down through comprehensive water plans over the years rather than well alteration (Louman, 2005). The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 16.5 feet was recorded at the time of drilling, December 1913. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 500 gallons per minute (gpm) and 7 feet of drawdown in the well were also reported. If approved the proposed changes would allow the Kenwood well to withdraw up to 500 gpm, in emergency situations.

The Apple well is located approximately 800 feet north and 200 feet east of the south quarter corner of Section 26, T34N, R26E, and approximately 80 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was also designated GUI by DOH. The Apple well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 10 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is completed to 29 feet bgs. The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 10 feet 4 inches was recorded at the time of drilling, February 1936. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 800 gpm and 10 feet 4 inches of drawdown in the well were also reported. If approved, the proposed changes would allow the Apple well to withdraw up to 1175 gpm, in emergency situations.

The Eastside well is located approximately 800 feet north and 1170 feet west of the southeast corner of Section 35, T34N, R26E, and approximately 1900 feet east of the Okanogan River. This well is currently in use by the City and houses 4 turbine pumps which have a combined capacity to pump 2,800 gpm. The Eastside well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is 14 feet in diameter and completed to 40 feet 10 inches bgs. The materials encountered during drilling, as reported on the well log, include soil, rock and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 28 feet 6 inches was

recorded during the time of drilling in 1944. However, a static water level of 12.4 feet was recorded by Ecology staff, via the City's real-time telemetry system, during a site visit on July 28, 2004. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. The telemetry system also indicated the Eastside well was pumping at a rate of 1488 gpm at the time. A yield of 1630 gpm and 1 foot of drawdown in the well was also reported on the well log. Mike Ervin, City of Omak Water Department Chief Operator, indicated during the site visit that the Eastside well shuts off when the storage reservoir is full, as opposed to shutting off because the water level in the well has dropped. If approved, the proposed changes would allow the Eastside well to withdraw up to 2930 gpm.

The Okoma well is located approximately 660 feet south and 520 feet west of the east quarter corner of Section 34, T34N, R26E, and approximately 2300 feet west of the Okanogan River. This well is currently in use by the City and is equipped with one turbine pump, which has the capacity to pump 500 gpm. The well log on file with Ecology indicates the Okoma well is 16 inches in diameter, completed to a depth of 105 feet bgs and screened from 55 feet to 90 feet bgs. Materials encountered during drilling include clay, silt, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 8 feet 9 inches was recorded at the time of drilling, winter 1988-1989. However, Mike Ervin informed Ecology staff during the site exam the current static water level is approximately 13 feet bgs and the pumping water level is approximately 32 feet bgs. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A well test performed by the driller and reported on the well log indicated a yield of 350 to 400 gpm with 69.3 feet of drawdown in the well after 13.5 hours. This well is located in an area where the aquifer thins, therefore the well is producing as expected, meaning it is producing less than other city wells which are located in areas where the aquifer is thicker. The steep drawdown could also be explained in combination with well efficiency, well construction and/or development and the 18 feet of silt with clay encountered in the well. If approved, the proposed changes would allow the Okoma well to withdraw up to 600 gpm.

The OWP#2 well is located approximately 1210 feet north and 530 feet west of the southeast corner of Section 35, T34N, R26E, and approximately 2600 feet east of the Okanogan River. This well is currently in use by the City, which is leased from Omak Wood Products. The OWP#2 well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, is 24 inches in diameter, completed to a depth of 69 feet bgs, cased to a depth of 44 feet bgs and screened from 44 to 60 feet bgs. An additional inner well screen was installed from 46 to 69 feet bgs during well rehabilitation in July of 1996. Materials encountered during drilling include silt, sand, gravel and cobbles, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 38.75 was recorded in a schematic of the well located within the Comprehensive Water Plan, while a static water level of 36.5 feet was recorded during rehabilitation. According to the well log on file with Ecology, a well test was performed during rehabilitation with a maximum yield of 2500 gpm and 3.8 feet of drawdown in the well after 5.5 hours. The City's telemetry system indicated the OWP#2 well was pumping at a rate of 1341 gpm at the time of the site visit, July 2004. If approved, the proposed changes

would allow the OWP#2 well to withdraw up to 5,000 gpm. Note, the water right associated with this well is interruptible and subject to instream flows on the Okanogan River.

Many factors influence the determination of whether significant interference effecting surrounding wells in the area is expected to take place due to these changes. By observation, there have been no reports of well interference filed with Ecology due to the current use at any of the City's original wells, all original wells penetrate the same aquifer and the total water quantity withdrawn from the aquifer will remain the same. The Kenwood, Apple, Eastside and Okoma wells are all located within the city limits. According to the City of Omak Municipal Code 9.04.040, the city shall be the exclusive provider of domestic water within the city limits, meaning wells located within the city limits may not be used for domestic purposes. Therefore domestic wells, on file with Ecology, within the city limits are likely no longer in use. The OWP#2 well is located approximately 50 feet south of the city limits, on the Colville Confederated Tribal Reservation. The tribe has acknowledged and does not object to the proposed water right changes, knowing the changes would allow non-interruptible water rights to be transferred to the OWP#2 well. Since the geologic setting and hydrogeology are consistent in the approximate 1 mile distance or less between subject well locations, the instantaneous quantity for each well is limited to the quantity associated with its original water right and the total water quantity withdrawn from the aquifer will not increase, interference which may take place is not expected to be significant.

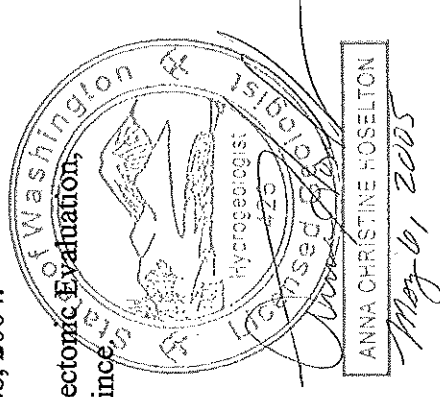
Relationship between the Original Source and Proposed Source:

In order to transfer or add a well to an existing water right, "the additional or replacement well or wells shall tap the same body of public ground water as the original well or wells," as stated in Chapter 90.44.100(2a) RCW. The subject wells tap the unconsolidated glacial/alluvial sediment aquifer and are not separated from each other by a hydraulic barrier, such as a fault. Therefore, all five subject wells are considered to utilize the same body of ground water.

References:

- Gulick, C.W. and Korosec, M.A. 1990. Geologic Map of the Omak 1:100,000 Quadrangle, Washington. Washington Division of Geology and Earth Resources. Open File Report 90-12.
- Louman, Jeff (with Huibregtse, Louman Associates, Inc, the City of Omak's consulting engineers). 2005. Personal Communication May 3, 2005.
- Huibregtse, Louman Associates, Inc. 2004. City of Omak Comprehensive Water Plan (Preliminary), Project No. 03018. Ecology received date September 28, 2004.

United States Department of Interior, Bureau of Reclamation. 1989. Seismotectonic Evaluation, Northwest Rocky Mountains -- Okanogan Uplands Geomorphic Province,

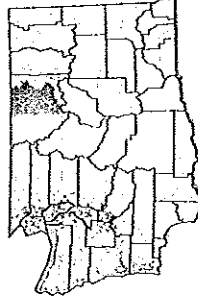




STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

January 12, 2004



Your address
is in the
Okanogan
watershed

City of Omak
PO Box 72
Omak WA 98841-0072

Dear Applicant:

RE: Water Right Change Applications No. CG4-GWC445-D, CG4-GWC446-D,
CG4-GWC1082-D, CG4-GWC3655-A, CG4-GWC3656-A, CG4-GWC7332-A,
CG4-GWC445-D@1, CG4-GWC1082-D@1, CG4-GWC3655-A@1,
CG4-GWC3656-A@1, CG4-GWC7332-A@1, CG4-31525

This letter is regarding water right change applications that you submitted to the Department of Ecology. The Department is beginning to process water right change applications within Okanogan County (Water Resource Inventory Area 49).

Enclosed are copies of the public notices for the change applications that you submitted. Due to the time lag in our processing these applications, we would like to verify your interest in proceeding with the projects as described in the public notices.

If you do not wish to proceed with the projects, please let us know and we will reject the applications. If your plans have changed from what was described in the public notices, you may need to file new change applications. Ecology staff will be contacting you to discuss the proposed changes and, in some cases, arrange for a site visit.

To contact us, you may call Bryce Bealba in this office at (509) 575-2597.

Sincerely,

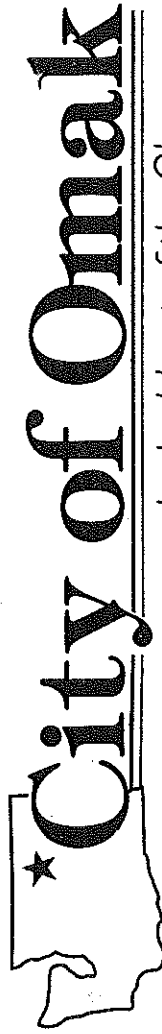
Randall Doneen
Unit Supervisor
Water Resources Program

RD:TM:eg
040118

Enclosures: Copies of Affidavits of Public Notice

FILE COPY





2 N. Ash
(509) 826-1170

P.O. Box 72
Omak, WA 98841

State of Washington — In the Heart of the Okanogan

E. Walt Smith
Mayor

May 19, 1994

Water Resources Program
Central Regional Office
Department of Ecology
3601 W. Washington
Yakima, Wa. 98903-1164

Gentlemen:

Enclosed are the original Affidavits of Publication regarding the following Water Applications:

CHG GWC #3655-A
CHG GWC #3656-A
CHG GWC #445-D
CHG GWC #1082-D
CHG GWC #7332-A
CH GWC #446-D

Please contact me for any further information you may need.

Sincerely,

Trish Sieker
City Clerk/Treasurer

Affidavit of Publication

STATE OF WASHINGTON ss.
County of Okanogan

State of Washington
Department of Ecology
Yakima, Washington
**NOTICE OF APPLICATION TO
ADD FIVE (5) POINTS OF
WITHDRAWAL AS
AUTHORIZED UNDER
GROUND WATER
CERTIFICATE NO. 445-D**

TAKE NOTICE: That on January 3, 1994, the City of Omak, Washington, has applied to add five (5) points of withdrawal as authorized under the above-referenced certificate.

That said certificate authorizes the withdrawal of 500 gallons per minute, 600 acre-feet per year, of water from a pump well from a point located within Omak Addition being within the SW 1/4 SE 1/4 of Section 26, Township 34 N., Range 26 E.W.M., Okanogan County.

That said water is authorized for the purpose of municipal supply within the City of Omak, Okanogan County.

That the applicant proposes to add five (5) points of withdrawal from five (5) wells located within the SW 1/4 SE 1/4 of Section 26; the NE 1/4 SE 1/4 of Section 34; and the SE 1/4 SE 1/4 of Section 35; all within Township 34 N., Range 26 E.W.M., Okanogan County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections; protests must be accompanied by a two dollar (\$2.00) recording fee and filed with the Department of Ecology, 3601 W. Washington Ave., Yakima, WA 98903, within thirty (30) days from March 23, 1994.

Published by the Omak-Okanogan County Chronicle.
(94-134-Mar. 16, 23)

The undersigned, being first duly sworn on oath, deposes and says that she is the principal clerk of the Omak-Okanogan County Chronicle, a weekly newspaper, that she is duly authorized to make this affidavit; that said newspaper is a legal newspaper and has been approved as a legal newspaper by order of the Superior Court in the county in which it is published and it is now and has been for more than six months prior to the date of the publications hereinafter referred to, published in the English language continuously as a weekly newspaper in Omak, Okanogan County, Washington, and it is now and during all of said time was printed in an office maintained at 618 Okoma Drive, the place of publication of said newspaper. That the annexed is a true copy of

Notice of Application
(5 points of withdrawal, No. 445-D)

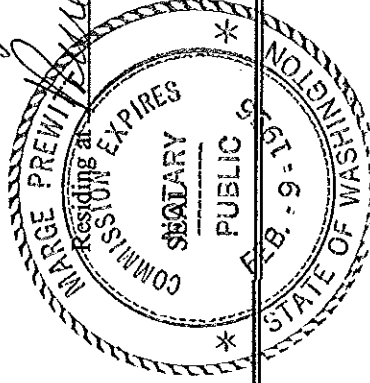
as it was published in regular issues (and not in supplement form) of said newspaper once a week for a period of two consecutive weeks, commencing on the 16th day of March, 19 94, and ending on the

23rd day of March, 19 94, both dates inclusive, and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of \$ 68.75, which amount has been paid in full, at the rate of \$5.50 per column inch.

Elizabeth A. Widel
Principal Clerk

Subscribed and sworn to before me this 23rd day of March, 19 94

Marge Preuett
Notary Public in and for the State of Washington



Ok 6/17/94
ms



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

May 17, 1994 3601 W. Washington • Yakima, Washington 98903-1164 • (509) 575-2800

City of Omak
PO Box 72
Omak, WA 98841

RE: Water Application No. CHG GWC #445-D

On March 5, 1994 , we forwarded to you a notice for publication.

To date, we have not received the original Affidavit of Publication concerning your application. The publishing newspaper should provide you with a notarized original Affidavit of Publication which should be forwarded to our office as soon as possible.

If we do not hear from you within thirty (30) days from the date of this letter, we will assume you are no longer interested in your application and it will be rejected with no further notice.

Sincerely,

Water Resources Program
Central Regional Office

NOTE: PLEASE ADVISE OF ANY ADDRESS CHANGE



STATE OF WASHINGTON

DEPARTMENT OF HEALTH

West 924 Sinto Avenue • Spokane, Washington 99201-2595 • FAX (509) 456-2997

March 25, 1994

SC
Doug Clausing
Section Manager
Water Resources Program
Central Regional Office
3601 W. Washington
Yakima, WA 98903

RE: Multiple Domestic Water Supplies

I have compiled comments regarding public water supply applications for the following

CHG4-30664P Michael J. Hansen: It appears from this application that it is a change of use from manufacturing to domestic for up to 80 homes. Making the assumption that the 80 homes do not yet exist, this change would create a new public water system. New public water systems should be made aware of our Drinking Water Regulations (WAC 246-290). Also, under our guidelines, 19 ac-ft per year is insufficient for 80 homes.

CHS4-28056C US Okanogan National Forest: DOH fully supports the change from surface water to ground water. Eliminating a surface water supply in favor of a new, protected groundwater supply, is a benefit to public health protection.

CHGWC445-D, CGHWC446-D, CHGWC1082-D, CHGWC3655-A, CHGWC3656-A, CGHWC7332-A City of Omak: No comment. It is unclear what the City of Omak is trying to do with these applications, more information would be helpful.

S4-31918 City of Cashmere: The 1800 ac/ft identified in the application is consistent with the future source required in the approved water system plan.

G4-31916 Tollefson: No Comment

G4-31914 Seneca Foods Corporation: We are not aware of this project and do not know if it is an extension to an existing system or the creation of a new system. Site approval is required for the well and an engineering report for the proposed project will be required. The system must also to meet other Drinking Water Requirements per WAC 246-290.

Water Right Applications
3/25/94
Page 2

The systems may contact their regional engineer (Scott Torpie: Douglas, Okanogan, Chelan or Tom Justus: Benton) or myself, for further information on meeting our requirements.

Thank you for the opportunity to comment on these applications.

Sincerely,

Michele Vazquez

Michele Vazquez
Regional Planner
(509) 456-2774

cc: Tom Justus
Scott Torpie



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

3601 W. Washington • Yakima, Washington 98903-1164 • (509) 575-2800

March 3, 1994

City of Onak
PO Box 72
Onak, WA 98841

Re: Application for Change Under No. GWC 445-D

We have received your application for change for appropriation of water and it has been assigned the above number. Please refer to it by number in future correspondence.

Please complete the following two steps:

1. Enclosed is a notice of your application for change which must be published once a week for two consecutive weeks in a newspaper published in Okanogan County. The newspaper should have general circulation in the locality where the water is to be diverted and used, and must be qualified as a legal newspaper. Publishing the notice in a remote part of the county, when not necessary, may be cause for you to be required to republish the notice in a designated newspaper.

Publication should start within 30 days from the date of this letter.

To assure accuracy, it is your responsibility to check the notice carefully before having it published. If an error is detected, please contact this office for correction and/or resolution. The actual date of the second printing must appear in both publications.

2. After publication, the publishing newspaper should provide you with a notarized original Affidavit of Publication which should be forwarded to our office as soon as possible.

Sincerely,

Water Resources Program
Central Regional Office

Enclosure(s): ~~XXXXXXXXXX~~.
Public Notice
Newspaper List

NOTE: PLEASE ADVISE OF ANY ADDRESS CHANGE

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
YAKIMA, WASHINGTON

NOTICE OF APPLICATION TO ADD FIVE (5) POINTS OF WITHDRAWAL AS
AUTHORIZED UNDER GROUND WATER CERTIFICATE NO. 445-D

TAKE NOTICE:

That on January 3, 1994, the City of Omak, Washington, has applied to add five (5) points of withdrawal as authorized under the above-referenced certificate.

That said certificate authorizes the withdrawal of 500 gallons per minute, 600 acre-feet per year, of water from a pump well from a point located within Omak Addition being within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 26, Township 34 N., Range 26 E.W.M., Okanogan County.

That said water is authorized for the purpose of municipal supply within the City of Omak, Okanogan County.

That the applicant proposes to add five (5) points of withdrawal from five (5) wells located within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 26; the NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 34; and the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35; all within Township 34 N., Range 26 E.W.M., Okanogan County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections; protests must be accompanied by a two dollar (\$2.00) recording fee and filed with the Department of Ecology, 3601 W. Washington Ave., Yakima, WA 98903, within thirty (30) days from:

(last date of publication to be entered above by the publisher)

940305



2 N. Ash
(509) 826-1170

P.O. Box 72
Omak, WA 98841

State of Washington In the Heart of the Okanogan

March 1, 1994

E. Walt Smith
Mayor

Department of Ecology
3601 West Washington
Yakima, WA 98903-1164

ATTENTION: Doug Clausung, Sec. Mgr., Water Resources Program

SUBJECT : City of Omak Water Rights Applications for Change

Dear Mr. Clausung:

Enclosed is a check for \$600.00, as requested in your letter dated February 18, 1994, for the required \$100.00 surcharge per application. We understand that the next step in the "change" of water right process is to publish in our local paper, DOE supplied public notices regarding the applications.

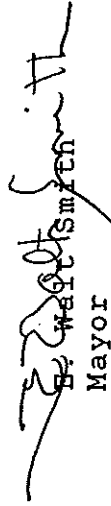
As you are aware, the City of Omak has received Community Economic Revitalization Board (CERB) grant funds and Public Works Trust Fund - Timber Impact Program loan funds for construction of water system improvements related to cooling and re-using water being discharged by Omak Wood Products's power generation plant. Completion of these improvements within a time frame consistent with the funding contracts is critical.

As the submittal of the subject change applications is a provision of DOE's Report of Examination, dated April 22, 1993, and the procurement of the appropriate water rights changes is necessary for the successful completion of the project, the City of Omak respectfully requests that the Department of Ecology process the six (6) subject applications in the most expedient manner.

Should you have any questions or require additional information, please contact Mr. Fred Sheldon, Omak Public Works Director, at (509) 826-1170.

Very truly yours,

CITY OF OMAK


E. Walt Smith
Mayor

EWS/nld

pc: Huibregtse, Louman Associates, Inc.



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

3601 W. Washington • Yakima, Washington 98903-1164 • (509) 575-2800

February 18, 1994
CERTIFIED MAIL

City of Omak
PO Box 72
Omak, WA 98841

RE: Six Water Right Applications for Change

We are in receipt of six (6) of your water right applications. Please be advised that this year the Legislature passed a new law requiring applicants to pay a \$100 surcharge on all water right applications received between July 1, 1993 and June 30, 1994. This new law applies to your applications. There is a total of \$600.00 due at this time.

Your payment must be postmarked by April 23, 1994. Otherwise your application will be rejected and your priority date will be lost. There will be no further notice regarding payment of the surcharge. Payment must be made by check or money order (not cash) to the Department of Ecology.

If you have any questions regarding the surcharge or the status of your application, please call Myria Autrey Johnson at (509) 575-2800.

Sincerely,

Doug Clausen
Doug Clausen, Section Manager
Water Resources Program

VW

cc: Jeffrey Louman
3800 Summitview Ave Suite 100
Yakima, WA 98902

ap-9a
7/93

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

APPLICATION FOR CHANGE OF WATER RIGHT

☐ PURPOSE ☐ DIVERSION OR WITHDRAWAL
☐ PLACE ☒ ADDITIONAL POINT OR POINTS

Accepted By	MA
Date	1/18/85
Field Exam Required?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Determined By	

CK # 18088 # 60

NAME	City of Omak			Bus. Tel.	(509)826-1170		
ADDRESS	P.O. Box 72	(CITY)	Omak	(STATE)	WA	(ZIP CODE)	98841
APPLICATION NUMBER		PERMIT NUMBER		CERTIFICATE NUMBER	445-D		
DECEASED RIGHT (TITLE OF CASE)							

APPROPRIATIONS MADE (GIVE DATE IF PRIOR TO JUNE 7, 1917 IF SURFACE WATER, OR JUNE 7, 1945 IF GROUND WATER)

IS THE WATER RIGHT RECORDED IN YOUR NAME? ☒ YES ☐ NO IF NO, GIVE NAME RECORDED UNDER

1. RIGHT CONSISTS OF

WATERS USED FROM (STREAM, LAKE, WELL, OR TRENCH, ETC.)
Well

GALLONS PER MINUTE OR CUBIC FEET PER SECOND
500 GPM

WATER CURRENTLY USED FOR

Municipal Water Supply

TIME OF USE
Emergency

2. LOCATION OF PRESENT POINT OF DIVERSION OR WITHDRAWAL

ENTER BELOW THE DISTANCES FROM THE NEAREST SECTION OR PROPERTY CORNER TO THE DIVERSION OR WITHDRAWAL

1100 Ft. North and 600 Ft. East of the South 1/4 Corner of Section 26

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)

SW 1/4 of SE 1/4

SECTION

26

TOWNSHIP N.

34

RANGE (E. OR W.) W.M.

26E

COUNTY

Okanogan

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, COMPLETE THIS SECTION

LOT BLOCK OF (GIVE NAME OF PLAT OR ADDITION)

3. LEGAL DESCRIPTION OF LANDS WATER IS USED ON

City of Omak Water System Service Area

SECTION 25, 26, 27, 34, 35 & 36 TOWNSHIP N. 34 RANGE, (E. OR W.) W.M. 26E COUNTY Okanogan

(ATTACH SEPARATE SHEET IF NECESSARY)

ARE YOU THE LEGAL OWNER OF THE ABOVE DESCRIBED LANDS IF NO, EXPLAIN YOUR INTEREST

☐ YES ☒ NO

Municipal Water Purveyor

REASONS FOR THE PROPOSED CHANGE

Consolidation of all City of Omak wells and existing water rights. Also the

addition of two existing Omak Wood Products wells to City of Omak water rights.

A MINIMUM FEE OF \$10.00 MUST ACCOMPANY THIS APPLICATION

CONTINUE ON REVERSE SIDE

CHANGE

4. CHANGE WATER USE TO _____ CHANGE REQUESTED _____ TIME OF USE _____ GALLONS PER MINUTE OR CUBIC FEET PER SECOND _____
Continuous 600 GPM

5. LOCATION OF PROPOSED POINT OF DIVERSION OR WITHDRAWAL _____
ON ACCOMPANYING SECTION MAPS, ACCURATELY MARK AND IDENTIFY EACH POINT OF DIVERSION. SHOW NORTH-SOUTH AND EAST-WEST DISTANCES FROM NEAREST SECTION CORNER OR PROPERTY CORNER. ALSO, ENTER BELOW THE DISTANCES FROM THE NEAREST SECTION OR PROPERTY CORNER TO THE DIVERSION OR WITHDRAWAL.
See Attachment

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION) _____ SECTION _____ TOWNSHIP N. _____ RANGE (E. OR W.) W.M. _____ COUNTY _____

6. IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, COMPLETE THIS SECTION
LOT _____ BLOCK _____ OF (GIVE NAME OF PLAT OR ADDITION) _____

ARE YOU THE OWNER OF THE LAND ON WHICH THE PROPOSED POINT OF DIVERSION OR WITHDRAWAL IS TO BE LOCATED
☒ YES ☐ NO With the exception of two Omak Wood Products wells.

LEGAL DESCRIPTION OF LANDS WATER IS TO BE USED ON _____

City of Omak Water System Future Service Area

(As defined in the City of Omak Comprehensive

Water System Plan dated February 1990)

SECTION 25, 26, 27, 34, 35 & 36 TOWNSHIP N. 34 RANGE, (E. OR W.) W.M. 26E COUNTY Okanogan

(ATTACH SEPARATE SHEET IF NECESSARY)
ARE YOU THE LEGAL OWNER OF THE ABOVE DESCRIBED LANDS IF NO, EXPLAIN YOUR INTEREST
☐ YES ☒ NO Municipal Water Purveyor

* PLEASE NOTE LEGAL LAND OWNER SIGNATURE AND APPLICANT SIGNATURE ARE BOTH REQUIRED. IF THE LEGAL LAND OWNER AND APPLICANT ARE THE SAME, PLEASE SIGN IN BOTH PLACES. THANK YOU.

LEGAL LANDOWNER (PLEASE PRINT) _____ APPLICANT'S SIGNATURE _____

LEGAL LANDOWNER SIGNATURE (OWNER OF PROPERTY DESCRIBED IN ITEM NUMBER 3) _____

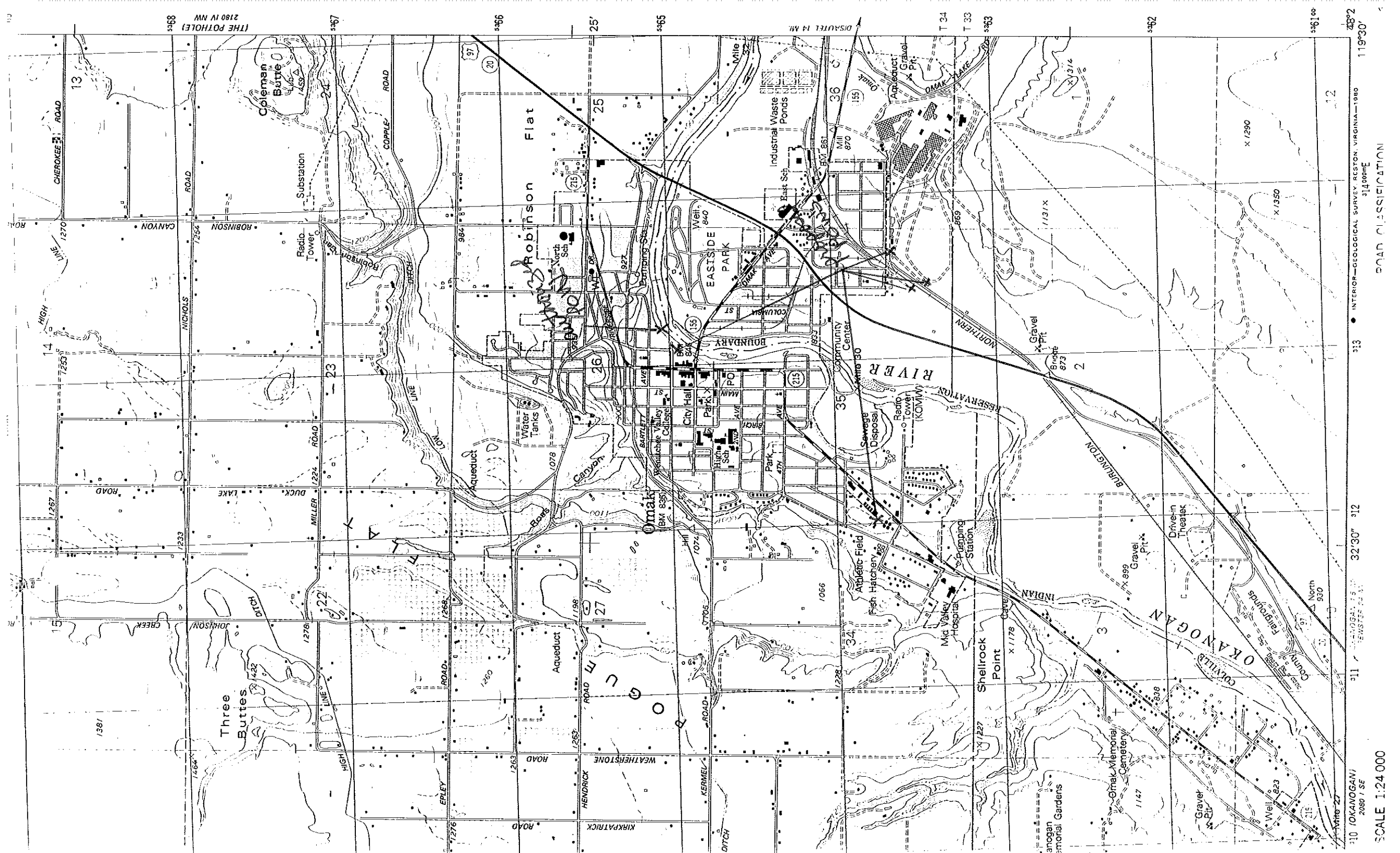
LEGAL LANDOWNER'S ADDRESS _____

December 27, 1993

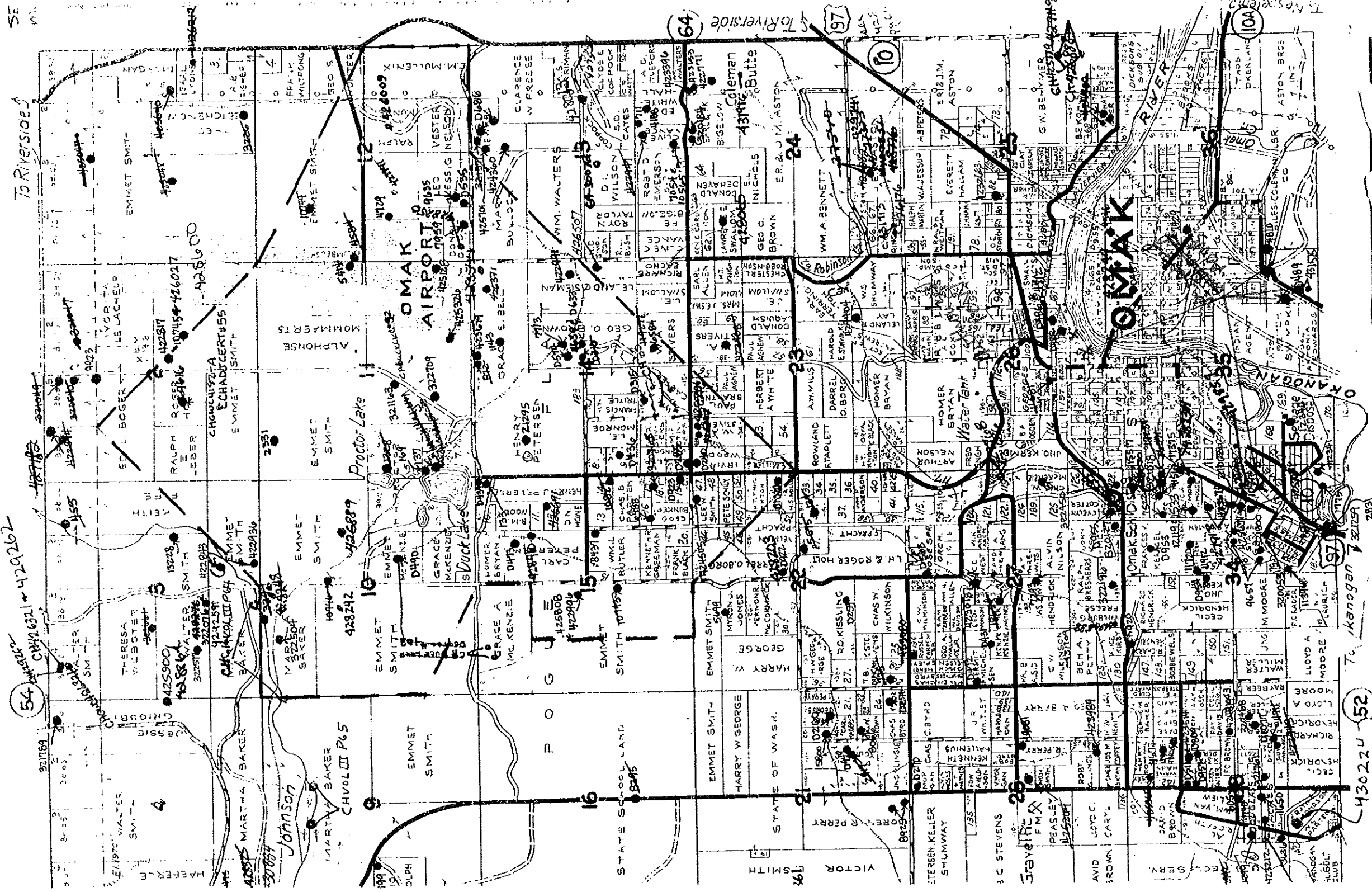
**CITY OF OMAK
WELL NO. 1, CERT. NO. 445-D**

ADDITIONAL POINTS OF WITHDRAWAL

<u>Source Name</u>	<u>Water Rights Certificate</u>	<u>Current Pump Capacity</u>	<u>Section</u>	<u>Township</u>	<u>Range</u>	<u>Location</u>
City of Omak Well No. 3 (Apple)	446-D & 3656	500 GPM	✓26	34N	26E	800' North & 200' East of South 1/4 Corner
City of Omak Well No. 4 (East Omak)	1082-D & 3655	2,800 GPM	✓35	34N	26E	800' North & 1170' West of Southeast Corner
City of Omak Well No. 5 (Okoma)	7332	400 GPM	✓34	34N	26E	660' South & 520' West of East 1/4 Corner
Omak Wood Products Well No. 2	Claim No. 005741	1,800 GPM	✓35	34N	26E	1,210' North & 530' West of Southeast Corner
Omak Wood Products No. 3	Claim No. 005741	2,000 GPM	✓35	34N	26E	470' North & 1,060' West of Southeast Corner



OKANOGAN COUNTY, WASHINGTON



CERTIFICATE RECORD No. 1 PAGE No. 445-D UNDER DECLARATION OF CLAIM No. 486

STATE OF WASHINGTON, COUNTY OF Okanogan

Certificate of Ground Water Right

Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and the rules and regulations of the State Supervisor of Hydraulics thereunder.

THIS IS TO CERTIFY That CITY OF OMAK WATER DEPARTMENT

of Omak, Washington has filed

in the office of the State Supervisor of Hydraulics of Washington Declaration of Claim No. 486

to withdraw ground waters of the State from a Pump Well

located ~~xxxxxx~~ at Southeast corner of 2nd Street East in Omak Addition,

Omak, Washington. 26-36-26.6

for the purpose of Municipal supply

The right to the use of said ground waters has been sustained and approved by the Supervisor of Hydraulics in accordance with Chapter 263, Laws of Washington for 1945, and is hereby entered of record in Volume 1 of Ground Water Certificates at page 445-D; the right approved has a priority of December, 1913; the amount of water which the Declarant is entitled to withdraw for the aforesaid purpose is limited to the amount actually beneficially used and shall not exceed 500 gallons per minute; 500 acre-feet per year; and is appurtenant to the following described lands or place of use:

City of Omak, Okanogan County, Washington

The right to the use of the ground water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Hydraulics affixed this 15th day of December, 1947

RODNEY RYKER
State Supervisor of Hydraulics.

By *Chas J Bartholet*
CHAS. J. BARTHOLET, Deputy

REPORT OF FINDINGS ON GROUND WATER Decl. 486

NAME H. G. Hubbert, Supt. of Water, City of Omaha

DATE OF WORKS: pump well Date of Examination June 26, 1947

Dimensions: 26 1/2" x 14' Progress of Works completed

QUANTITY CLAIMED xx 500 5 p.m. 500 acre feet per year
~~Approved for~~

LOCATION SE corner of 2nd Street East in Omaha Addition

USE: Municipal

Irrigation- acreage: Present planned feasible

Municipal: Population 3,300 as of present

Industrial:

Time Pump Will be (put) in:

Other Water Rights of Applicant: Ground Water Decl. 487, 488 and 489

Proximity to existing works, springs or streams:

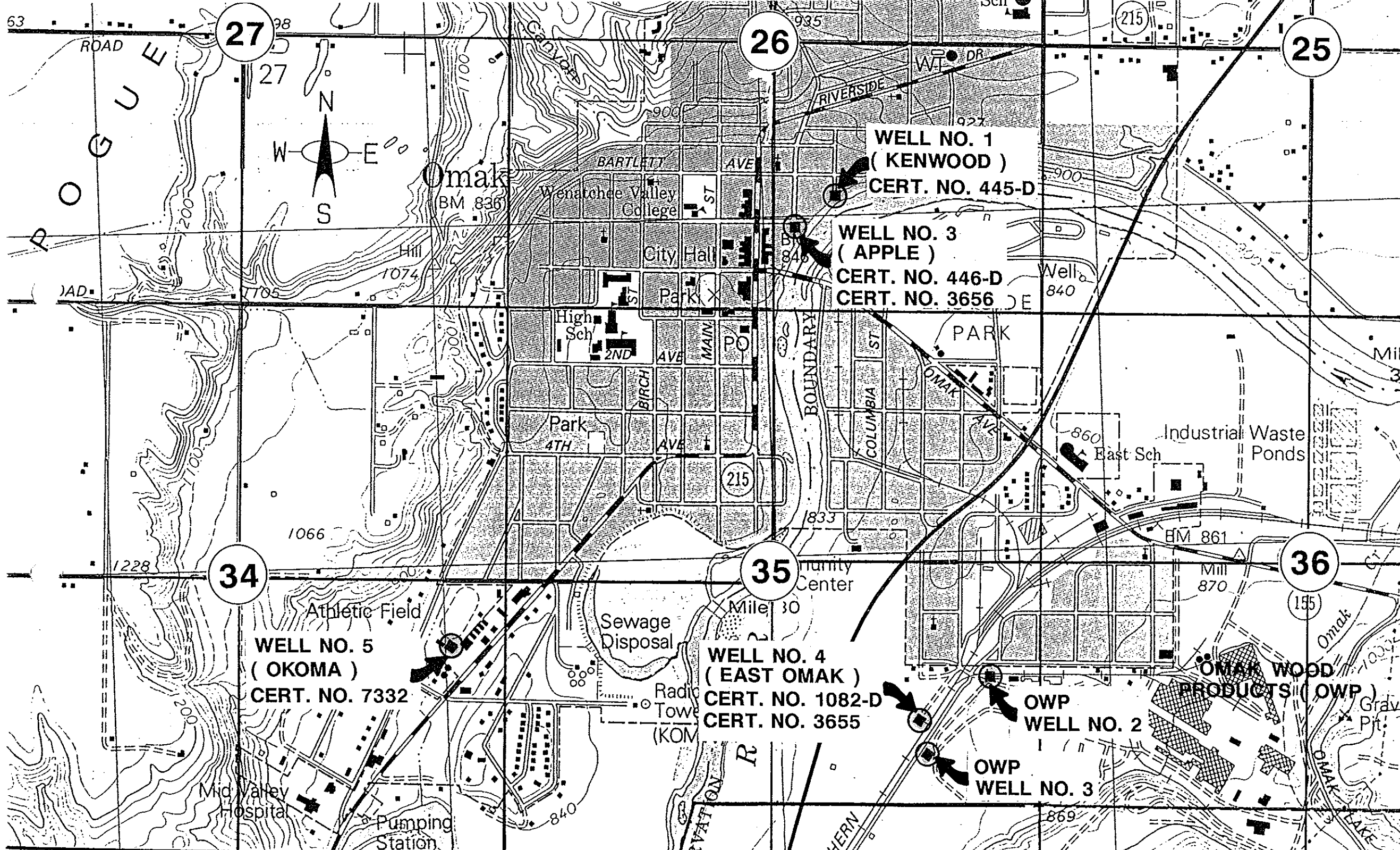
Water Bearing Zone:

RECOMMENDATIONS

Approved for 500 5 p.m. 500 acre-feet
per year, subject to existing water rights.
This is now a standby well, and will be used when needed. The
maximum number of acre feet a year to be used will not exceed 600 acre-feet
a year.

Signed this 3rd day of November, 1947

FRED R. ROBERTS
Ground Water Geologist



27

26

25

34

35

36

Omak

WELL NO. 1
(KENWOOD)
CERT. NO. 445-D

WELL NO. 3
(APPLE)
CERT. NO. 446-D
CERT. NO. 3656

WELL NO. 5
(OKOMA)
CERT. NO. 7332

WELL NO. 4
(EAST OMAK)
CERT. NO. 1082-D
CERT. NO. 3655

OWP
WELL NO. 2

OWP
WELL NO. 3

OMAK WOOD
PRODUCTS (OWP)

Grave
Pit



BARTLETT AVE

CITY HALL

HIGH SCH

PARK

Industrial Waste
Ponds

Athletic Field

Sewage
Disposal

Radio
Tower
(KOM)

Mid Valley
Hospital

Pumping
Station

OMAK R

SOUTHERN

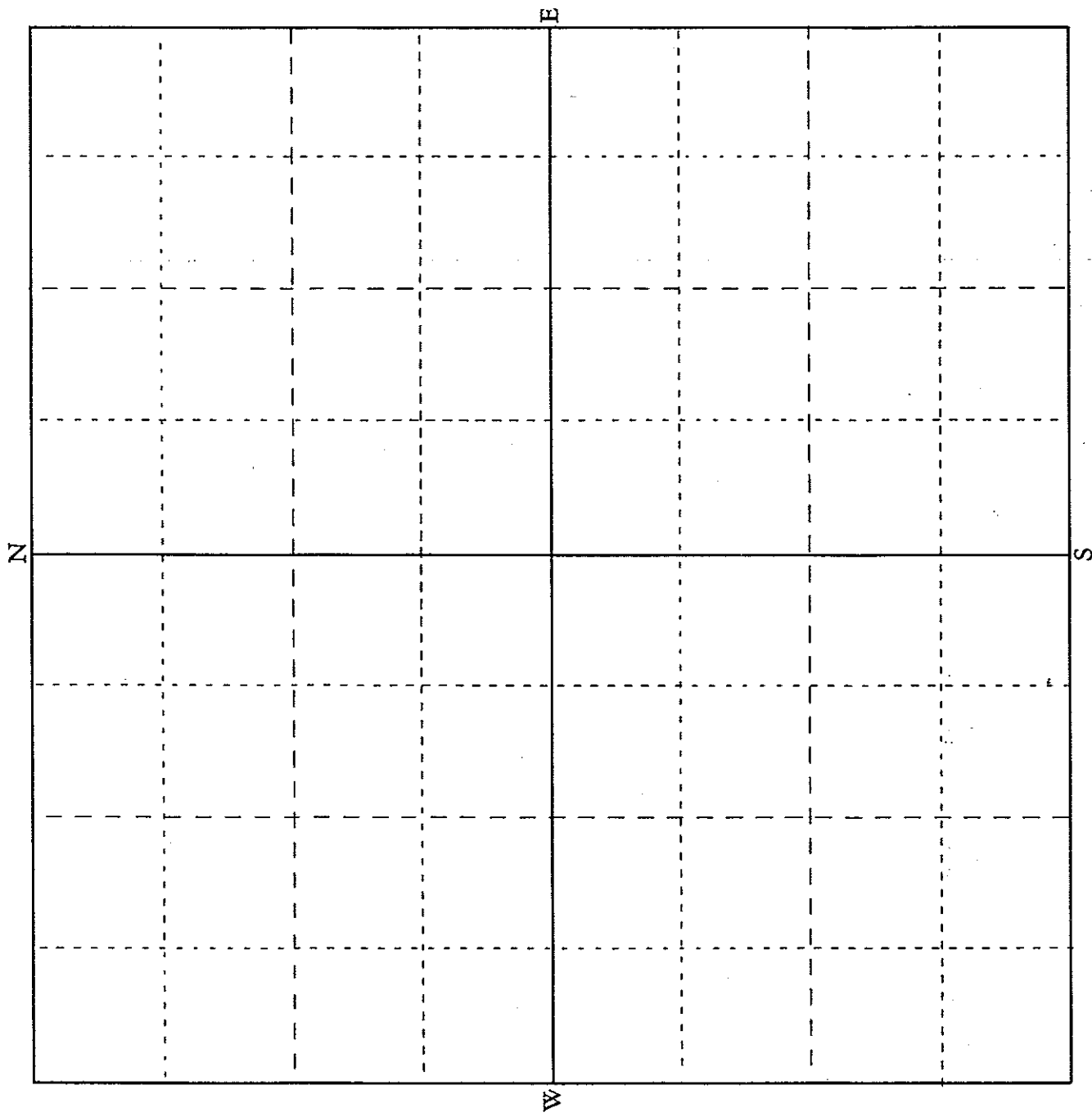
OMAK

OMAK LAKE

SECTION MAP

* SEE ATTACHMENT

Sec. _____ Twp. _____ N. R. _____

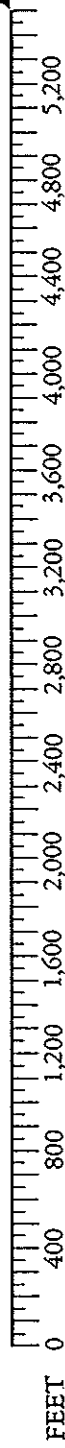


Scale: 1 inch = 800 feet (each small square = 10 acres)

Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source): For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile. Indicate traveling directions from nearest town in space below.

Detach here

Fold along scale



Detach this scale at the perforation, fold excess paper under or cut off excess by cutting along the scale line. This scale corresponds to the SECTION MAP above. You can read feet directly from this scale to outline property and locate points of diversion or withdrawal on the SECTION MAP. Enclose this map along with the application and \$10.00 examination fee.

Huibregtse, Louman Associates, Inc.

William L. Huibregtse, PE
Jeffrey T. Louman, PE
Theodore W. Pooler, PE
Dennis J. Whitcher, PE
Donald H. Wilton, PLS

3800 Summitview, Suite 100
Yakima, Washington 98902

Phone: 509 / 966-7000
FAX: 509 / 966-3800

December 27, 1993

Department of Ecology
3601 West Washington
Yakima, WA 98903-1164

Attn: Doug Clausing
Section Manager

Re: City of Omak
Applications for Change of Water Right

Dear Mr. Clausing:

As you are aware, the City of Omak is actively pursuing the re-use of water used by Omak Wood Products, (OWP) for power generation at their mill. The Department of Ecology (DOE) issued a "Report of Examination" on April 22, 1993, recommending that the City of Omak be issued a permit authorizing withdrawal of up to 5,000 gpm, 3,500 acre feet per year from the two OWP wells subject to a number of provisions.

Subsequent to the "Report", you attended a meeting at the City's engineering consultants office on May 19, 1993, along with Mr. Fred Rajala, DOE, who authored the report. At the meeting, which included Fred Sheldon, City Public Works Director and our engineering consultants, Bill Huibregtse, PE, and Jeff Louman, PE, you recommended that the City apply for change of water right adding the two OWP wells to Omak's existing water rights. Fred Rajala also suggested adding all City wells to each existing water right thereby tying each well to each existing right in case a particular water right was ever contested in the future.

Enclosed are six (6) "Application For Change Of Water Right" documents and a check for the \$60.00 examination fee. Each application seeks additional points of withdrawal, these being the other City of Omak wells and the two Omak Wood Products wells. Where appropriate, the applications also modify the instantaneous withdrawal rate to coincide with existing pumping capacities at the subject well.

Please contact Mr. Jeff Louman, PE, at telephone number (509) 966-7000 should you have any questions or require additional information.

Very truly yours,


E. Walt Smith
Mayor

EWS/jk
OM4-31

Enclosures

copy: Huibregtse, Louman Associates, Inc.

CHANGE APPLICATIONS	PROCESSING CHECKLIST	01-10-91	CC																												
APPLICATION FEES	Minimum \$10.00 fee attached 0-500 cfs = \$2.00/cfs 501-2000 cfs = \$.50/cfs 2001 + cfs = \$.20/cfs																														
NAME & ADDRESS	Applicants Name, Address, & Phone Number																														
SIGNATURE	Applicant																														
GENERAL COMPLETENESS	Quantities, Uses, Legal Descriptions, Maps, etc.																														
WHAT'S BEING CHANGED?	If change on a Certificate: Identify & Copy from Microfiche If change on a Permit: Pull & use permit file, use left side.																														
PREPARE FOLDER	Staple Check or Receipt and Action Slip to top of folder Mark Action Slip: approved receipts label advertise prepare folder																														
COMPARE WITH RIGHT	Compare with Cert or Permit, check quantities, POU, POD/W, use, ect.																														
TOP OF APPLICATION	Initial accepted County WRIA in top left corner, circled																														
MAPPING	Xerox: Topo & Metsker Map: Authorized & Proposed POU & POD/W																														
METSKER	Put "CH" in front of old number "S" on Progress Sheet																														
PREPARE PROGRESS SHEET	Control number at top Purpose of Change Date application received Date fee received if different Authorize Public Notice																														
PREPARE FIELD PACK	Applicant's Name & WRIA																														
Copy, Label & put in front of file	<table><thead><tr><th>AGENCY</th><th>APP</th><th>TOPO</th><th>MISC</th></tr></thead><tbody><tr><td>(mult-dom) DOH</td><td>✓</td><td></td><td></td></tr><tr><td>(surface FISH</td><td></td><td></td><td></td></tr><tr><td>(49, water) GAME</td><td></td><td></td><td></td></tr><tr><td>50,51,52,53,58,60,61) COLV</td><td>✓</td><td>✓</td><td>Both: 45, 46</td></tr><tr><td>31,32,33,37,38,39,40) YAKI</td><td></td><td></td><td>47, 48</td></tr><tr><td>(29,30 (all) FIELD PACK</td><td>X</td><td>X</td><td>X</td></tr></tbody></table>			AGENCY	APP	TOPO	MISC	(mult-dom) DOH	✓			(surface FISH				(49, water) GAME				50,51,52,53,58,60,61) COLV	✓	✓	Both: 45, 46	31,32,33,37,38,39,40) YAKI			47, 48	(29,30 (all) FIELD PACK	X	X	X
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31,32,33,37,38,39,40) YAKI			47, 48																												
(29,30 (all) FIELD PACK	X	X	X																												
CHANGE BOOK	Record in Book of Change Applications																														
PUBLIC NOTICE (see examples)	Applicant's Name Purpose of Change Authorized rights - cfs or gpm, POD/W, POU, use Proposed Changes Protest Blurb																														
AREA MAPS	Concern area - alert someone Hold or Adj. - send letter																														
WRACTIV	Enter & Stamp entered																														

WR 1D # 2632619

PROGRESS SHEET - APPLICATION FOR CHANGE ON:

WR 49 C64-GWC 445-D @1 COUNTY OKANAGAN
64-004863WR15

NAME: CITY OF OMAK PHONE: (509) 926-1170

ADDRESS: P.O. Box 72 OMAK WA, 98841 ZIP

PURPOSE OF APPLICATION: ADD POW

Original Right Holder: CITY OF OMAK (00486/00445-A)

Application received: NOVEMBER 24, 1998 Initial \$10.00 fee received: (X) Yes () No

Statement of additional exam fee \$ Sent Received

PUBLICATION: Date 8-25-04 Notice Sent 2-16-99

CONSULTED AGENCIES: DOH DOW DOF USBR TRIBES

PROTESTS: By: Name

 By: Name

 By: Name

Affidavit received: 3/23/99 Checked by: DMM P.P. time expires: 4/9/99
amended rec'd 10/17/04 Checked by: OST P.P. expires 10/29/04

Report written by: Scott Turner Date Report Sent: 08-11-2005

DEVELOPMENT SCHEDULE

Beginning of Construction: Date sent: 1-7-08 Date received:
02-01-2006 Extensions: 12-31-2011

Completion of Construction: Date sent: Date received:
Extensions:

Proof of Appropriation: Date sent: Date received:
Extensions:

Date well report(s) received:

DATE APPROVED FOR CHANGE: BY:

- () Superseding Permit
☒ Superseding Certificate
() Certificate of Change (on claims)
Vol. 1-4, Page

Date certificate fees requested: Date received:

DATE CHANGE ISSUED:

REMARKS:

City of Omak (six ROEs for Change issued 08/11/2005)
CG4-GWC445D@I, CG4-GWC446-D@3, CG4 GWC1082-D@I,
G4-GWC3655@I, CG4 GWC3656 A@I, CG4-GWC7332-A@I



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 W Yakima Ave, Ste 200 • Yakima, WA 98902-3452 • (509) 575-2490

January 7, 2008
CERTIFIED MAIL
7006 0100 0002 8191 8256

City of Omak
Attn: Dale Sparber, Mayor
PO Box 72
Omak WA 98841

Re: RE: Water Right Change Authorizations No. CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1, CG4-GWC445-D@1, CG4-GWC7332-A@1, and CG4-GWC446-D@3

In response to your request, you are hereby granted an extension of time in which to begin construction. Your new deadline to begin construction of your water system and submit a completed *Beginning of Construction* form is **December 31, 2011**.

Reason(s) for granting extension:

The City of Omak has shown due diligence toward beginning their project by taking the following steps:

- They have secured a Drinking Water State Revolving Fund (DWSRF) loan to assist with the acquisition of the two authorized wells and new transmission facilities.
- They are actively negotiating a price with one of the land owners for the project and are currently waiting for a counter offer.
- They have tested the wells capacity during the negotiation period.
- They have completed designs of the needed pump house and transmission main for one of the authorized wells.
- They need additional time to complete well purchase negotiations and initiate well construction activities.

You have a right to appeal this decision. To appeal this you must:

- File your appeal with the Pollution Control Hearing Board within 30 days of the "date of receipt" of this document. Filing means actual receipt by the Board during regular office hours.
- Serve your appeal on the Department of Ecology within 30 days of the "date of receipt" of this document. Service may be accomplished by any of the procedures identified in WAC 371-08-305(10). "Date of receipt" is defined at RCW 43.21B.001(2).

Be sure to do the following:

- Include a copy of this document that you are appealing with your Notice of Appeal.
- Serve and file your appeal in paper form; electronic copies are not accepted.



FILE COPY



1. To file your appeal with the Pollution Control Hearings Board:

Mail appeal to:	OR	Deliver your appeal in person to:
The Pollution Control Hearings Board PO Box 40903 Olympia WA 98504-0903		The Pollution Control Hearings Board 4224 - 6th Ave SE Rowe Six, Bldg 2 Lacey WA 98503

2. To serve your appeal on the Department of Ecology:

Mail appeal to:	OR	Deliver your appeal in person to:
The Department of Ecology Appeals Coordinator PO Box 47608 Olympia WA 98504-7608		The Department of Ecology Appeals Coordinator 300 Desmond Dr SE Lacey WA 98503

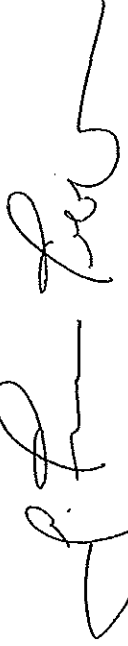
3. And send a copy of your appeal packet to:

G. Thomas Tebb, L.E.G.
The Department of Ecology
Central Region Office
15 W Yakima Ave Ste 200
Yakima WA 98902-3452

*For additional information visit the Environmental Hearings Office Website: <http://www.eho.wa.gov>
To find laws and agency rules visit the Washington State Legislature Website: <http://www.l.leg.wa.gov/CodeReviser>*

If you have any questions or concerns about this information, please call the Department of Ecology at (509) 575-2597.

Sincerely,



G. Thomas Tebb, L.E.G.
Section Manager
Water Resources Program

GTT:ST:gh
080106

Enclosure(s): *Beginning of Construction forms (6)*
"Your Right to Be Heard" Information Sheet

CS-4a.doc

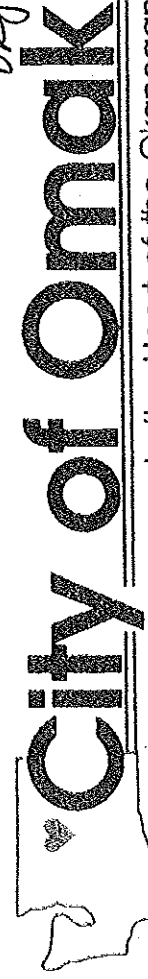
Y903

B 30.
Ch. 2005
3-5-07
WJ

RECEIVED
JAN 11 11 40 AM '07

MAR 05 2007

CENTRAL REGIONAL OFFICE
MKT



State of Washington In the Heart of the Okanogan

February 28, 2007

Washington Department of Ecology
15 West Yakima Avenue, Suite 200
Yakima, WA 98902-3452

Attn: Erin Gutierrez
Water Resources Program

Re: Water Rights Change Application No. CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1, CG4-GWC445-D@1, CG4-GWC7332-A@1, and CG4-GWC446-D@3

Dear Ms. Gutierrez:

The City of Omak requests that the development schedule for each of the authorized water rights changes referenced above, be extended to December 31, 2011. We have experienced delays in acquiring two existing, privately owned wells that were authorized in the water rights changes.

The City secured a Drinking Water State Revolving Fund (DWSRF) loan from the Public Works Board in 2005 for the construction of several potable water system improvements. Acquisition of two existing wells identified as the "Hicks" and "Dean" wells, and construction of new pumphouse and transmission main improvements were part of the DWSRF project. Unfortunately, we have had difficulty negotiating a price for the wells and properties with the owners. Recently, however, Okanogan County purchased the "Dean" well and surrounding property and, as a condition of annexation, has been required to transfer ownership of the well to the City.

The City has been actively negotiating with the "Hicks" well owner for some time. We had the well and property appraised and made a "fair market" offer. The price was not acceptable to the owner and they initiated their own second appraisal. As of this date we have not received a counter offer price.

During the "Hicks" well negotiation period, we conducted a well capacity pump test and required potable water quality tests. Our engineers have also completed

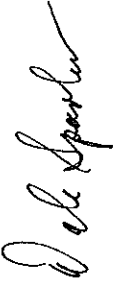
design of the "Hicks" pumphouse and transmission main and are ready to proceed with advertising for bids as soon as the well is acquired.

It is extremely important to the City of Omak to develop additional sources of potable water supply north of the Okanogan River and off the Colville Indian Nation reservation.

We will continue to pursue acquisition of the existing wells and/or drill new wells on nearby property if necessary. A development schedule time extension is needed in order to allow sufficient time to complete well purchase negotiations and to initiate construction activities.

Thank you for your attention in this matter. Should you have any questions or require additional information please contact our engineering consultant, Jeff Louman, PE at (509) 966-7000.

Sincerely,

A handwritten signature in cursive script, appearing to read "Dale Sparber".

Dale Sparber
Mayor



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

February 1, 2007

City of Omak
PO Box 72
Omak WA 98841-0072

RE: Water Right Change Authorizations No. CG4-GWC1082-D@1, CG4-GWC3655-A@1,
CG4-GWC3656-A@1, CG4-GWC445-D@1, CG4-GWC7332-A@1, and
CG4-GWC446-D@3

This letter is to remind you that the development schedule of the authorized changes to your water rights required that you begin construction of the project by June 1, 2006. **You are now out of compliance with the development schedule in your change authorizations.**

When you received your change authorizations, we sent you *Beginning of Construction* (BC) forms so that you could notify us that you had begun construction. We have not received your BC forms. If you have begun construction, additional forms are enclosed for you to fill in and return to us.

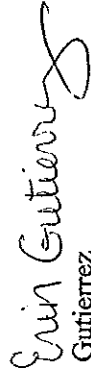
If you have not begun construction of your project, you must obtain an extension of the development schedule or your change authorizations may be cancelled. ***Your request must be in writing and include the following information:***

- A description of the efforts you have made to begin the project.
- A schedule for beginning the project.
- Reasons why the project has not begun.
- Any additional information that will assist us in evaluating your request for extension.

To request an extension, a non-refundable fee of \$50 for each change authorization must be submitted along with the extension request. Ecology will review the submitted information to determine whether an extension can be granted. If it is not granted, we will notify you in writing and that decision may be appealed.

Please submit completed *Beginning of Construction* forms or the above-requested information **within thirty (30) days**. If you are no longer interested in pursuing the project or if your project has changed since the change authorizations were issued, please contact this office in writing. Questions or concerns can be directed to Teresa Mitchell at (509) 575-2597.

Sincerely,


Erin Gutierrez
Water Resources Program

EG:gh
070201

Enclosure(s): *Beginning of Construction* forms (6)

BC1 for Change.doc

FILE COPY

WATER RIGHTS REVIEW ROUTER

- ☐ Report of Exam (ROE) ☒ ROE for Change
☐ Temporary Permit ☐ Conservancy Board Decision
☐ Preliminary Permit ☐ Short Term Authorization

FILE NO. 64-6 we 445 DC1

Y:\STAFF\Turner\Mark Second set\Mark 445 DC1

AUTHOR Turner 6-9-05 (date)

DRAFT 7/20/05 to cm FINAL 8/10/05 gjs (by typist)

Mark Schuppe DC Schuppe 7/14/05 (date)

Phil Crane Carol M 7/27/05 (date)

Permit Writer _____ (date)

MAIL OUT 88 8/11/05 (date)

GWIS MAPPING REVIEW
(Debra reviews changes BEFORE finalization)

Debra Kroon Debra 8/5/05 (date)

GWIS Remarks: Good to go

CIRCLE APPROPRIATE WRIA:

TRIBE	WRIA
Colville Confederated Tribes	<u>(49)</u> 50 51 52 53 58 60 61
Yakama Nation	29 30 31 32 33 37 38 39 40
Both Tribes	45 46 47 48

cc TO ANYONE ELSE?

~~Jeffrey T. Louman, PE~~
 Huibregtse, Louman Associates, Inc.
 801 North 39th Ave
 Bellingham, WA 98902
 CCT

MINIMUM FLOWS?

cc CRO Enforcement _____
 cc River Letter List _____

REMARKS and/or RELATED FILES:

NO PROTESTS

ATTACHMENTS:

- ☒ Your Right to Be Heard
☒ Ground Water Bulletin No. 1
☒ BC CC, PA forms 6/2006
☒ Water Measurement Requirements
☐ Fish Screening Criteria
☐ Important Information Sheet (Permit)
☐ Other: _____

PERMIT FEE \$ _____

Permit Fee Calculation: _____



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

August 11, 2005
CERTIFIED MAIL

City of Omak
PO Box 72
Omak WA 98841-0072

**RE: Applications for Change on Nos. CG4-GWC445D@1, CG4-GWC446-D@3,
CG4-GWC1082-D@1, G4-GWC3655-A@1, CG4-GWC3656-A@1, CG4-GWC7332-A@1**

Your applications to change your water rights have been carefully reviewed in accordance with the requirements of the State's water codes. The Applications for Change have been approved, subject to the conditions and limitations described in the Reports of Examination for Change. Please refer to the enclosed Reports of Examination for Change, which summarize our findings and represents our final decision.

You have the right to appeal this decision to the Pollution Control Hearings Board. Pursuant to Chapter 43.21B RCW, your appeal must be filed with the Pollution Control Hearings Board, and served on the Department of Ecology, within thirty (30) days of the date of your receipt of this document.

To appeal this decision, your notice of appeal must contain a copy of the Ecology decision you are appealing.

Your appeal must be filed with:

The Pollution Control Hearings Board
4224 - 6th Avenue SE Rowe Six Bldg 2
PO Box 40903
Lacey WA 98504-0903

Your appeal must also be served on:

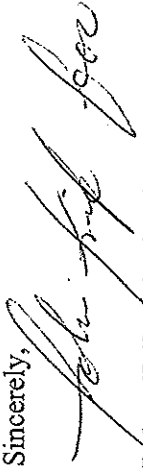
The Department of Ecology
Appeals Coordinator
PO Box 47608
Olympia WA 98504-7608

In addition, please send a copy of your appeal to:

Robert F. Barwin
Department of Ecology
15 W Yakima Ave Ste 200
Yakima WA 98902-3452

Please pay particular attention to the Recommendation section for the terms and conditions of this approval. If you have any questions or concerns about this decision, or we if can otherwise provide further assistance, please call Bryce Bealba of the Department of Ecology at (509) 575-2597.

Sincerely,



Robert F. Barwin, Section Manager
Water Resources Program
Central Region Office

RFB:ST:gg
050814

Enclosure(s): Reports of Examination for Change (6)
"Your Right to Be Heard" Information Sheet
Beginning of Construction Forms (6)
Ground Water Bulletin No. 1
Water Measurement Requirements

cc: Lois Trevino, Water Administrator, Office of Environmental Trust, Colville Confederated Tribes
f-lchgg.doc



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

August 11, 2005

To: Lois Trevino, Water Administrator, Office of Environmental Trust, Colville Confederated Tribes

RE: Reports of Examination for Change on Nos. CG4-GWC445D@1, CG4-GWC446-D@3,
CG4-GWC1082-D@1, G4-GWC3655@1, CG4-GWC3656-A@1, CG4-GWC7332-A@1
(City of Omak, Applicant)

Since you are identified as a party interested in the above water right applications, we are enclosing copies of our Reports of Examination for Change which summarize our findings and represents our final decision.

You have the right to appeal this decision to the Pollution Control Hearings Board. Pursuant to Chapter 43.21B RCW, your appeal must be filed with the Pollution Control Hearings Board, and served on the Department of Ecology, within thirty (30) days of the date of your receipt of this document.

To appeal this decision, your notice of appeal must contain a copy of the Ecology decision you are appealing.

Your appeal must be filed with:

The Pollution Control Hearings Board
4224 - 6th Avenue SE Rowe Six Bldg 2
PO Box 40903
Lacey WA 98504-0903

Your appeal must also be served on:

The Department of Ecology
Appeals Coordinator
PO Box 47608
Olympia WA 98504-7608

In addition, please send a copy of your appeal to:

Robert F. Barwin
Department of Ecology
15 W Yakima Ave Ste 200
Yakima WA 98902-3452

If you have any questions or concerns about these decisions, or we if can otherwise provide further assistance, please call Bryce Bealba of the Department of Ecology at (509) 575-2597.

Sincerely,

Robert F. Barwin, Section Manager
Water Resources Program
Central Region Office

FILE

DAV





WASHINGTON STATE
DEPARTMENT OF
ECOLOGY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION FOR CHANGE
TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON



Surface Water

(Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)



Ground Water

(Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE December 1913	APPLICATION NUMBER CG4-GWC445D@1	PERMIT NUMBER	CERTIFICATE NUMBER
NAME City of Omak			
ADDRESS (STREET) PO Box 72		(CITY) Omak	(STATE) WA
			(ZIP CODE) 98841-0072

PUBLIC WATERS TO BE APPROPRIATED

SOURCE 9 wells
TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE 500	MAXIMUM ACRE-FEET PER YEAR 600
-------------------------------	-----------------------------------	-----------------------------------

QUANTITY, TYPE OF USE, PERIOD OF USE
500 gallons per minute and 600 acre-feet per year continuously for municipal supply.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION--WITHDRAWAL

Kenwood Well: 1100 feet north and 600 feet east of the south quarter corner of Section 26.
Apple Well: 800 feet north and 200 feet east of the south quarter corner of Section 26.
Okoma Well: 660 feet south and 520 feet west of the east quarter corner of Section 34.
Eastside Well: 800 feet north and 1170 feet west of the southeast corner of Section 35.
OWP No. 2: 1210 feet north and 530 feet west from the southeast corner of Section 35.
Hicks Well: 275 feet south and 1000 feet east from the northwest corner of Section 25.
Powers Well: Being within the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 26.
Well No. 9: 1275 feet north and 100 feet west from the southeast corner of Section 24.
Dean Well: 1625 feet north and 225 feet east of the southwest corner of Section 19.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.	W.R.L.A.	COUNTY
SW $\frac{1}{4}$ SE $\frac{1}{4}$	26	34	26 E	49	Okanogan
SW $\frac{1}{4}$ SE $\frac{1}{4}$	26				
NE $\frac{1}{4}$ SE $\frac{1}{4}$	34				
SE $\frac{1}{4}$ SE $\frac{1}{4}$	35				
SE $\frac{1}{4}$ SE $\frac{1}{4}$	35				
NW $\frac{1}{4}$ NW $\frac{1}{4}$	25				
NE $\frac{1}{4}$ NE $\frac{1}{4}$	26				
SE $\frac{1}{4}$ SE $\frac{1}{4}$	24				
NW $\frac{1}{4}$ SW $\frac{1}{4}$	19		27 E		

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
-----	-------	------------------------------------

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

The place of use of this water right is the service area described in the most recent Water System Plan approved by the Washington State Department of Health, so long as City of Omak is and remains in compliance with the criteria in RCW 90.03.386(2). RCW 90.03.386 may have the effect of revising the place of use of this water right.

If the criteria in RCW 90.03.386(2) are not met, the place of use of this water right reverts to the last place of use described by the Department of Ecology in a water right authorization.

FILE COPY

DESCRIPTION OF PROPOSED WORKS

The City's wells pump water through a series of main lines to four reservoir systems (500,000 gallons, 550,000 gallons, 800,000 gallons, and 1,065,000 gallons) sited in various locations around the City of Omak. The telemetry system is located at City Hall, which controls both the quantities of water pumped and the quantities of water released from the reservoirs to the City's connections.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	WATER PUT TO FULL USE BY THIS DATE
June 2006	June 2011	Good Standing

REPORT

BACKGROUND INFORMATION

On November 24, 1998, the City of Omak, Washington, filed an Application for Change to add one point of withdrawal under Ground Water Declaration Certificate No. 445-D. In late 2004, the City of Omak (the City) requested to amend that application to add an additional three points of withdrawal for a total of four additional points of withdrawal. The application was accepted and assigned identifier No. CG4-GWC445-D@1.

This application is part of the second set of two sets of change applications submitted to the Department of Ecology (Ecology) by the City. The first set, submitted January 3, 1994, requests authorization to consolidate all the points of withdrawal under six of the City's existing rights. Ecology approved those applications on June 7, 2005.

The City's second set of Applications for Change, submitted November 24, 1998, request the addition of Well No. 9 to each of their existing water rights. A Report of Examination issued for Application for Change No. CG4-GWC446-D@1 (Apple Well) approving the use of Well No. 9 on December 7, 2000. This second set of applications were amended on August 4, 2004, requesting to add three wells, in addition to Well No. 9, to the City's existing rights.

This report will address Ecology's findings of fact and recommendations related to Application for Change No. CG4-GWC445-D@1. Separate reports will address the specific recommendations for each Application for Change. Although many elements of the reports are identical, the evaluation for authorizing four additional points of withdrawal for each water right, including the consideration of the potential for impairing existing rights due to increased pumping rates at each source, will be considered separately.

Attributes of Ground Water Declaration Certificate No. 445-D

Name on Certificate, Claim, Permit:	City of Omak
Priority Date, First Use:	December 1913
Instantaneous Quantity:	500 gallons per minute (gpm)
Annual Quantity:	600 acre-feet per year (acre-ft/yr)
Source:	5 wells
Points of Withdrawal:	Kenwood Well: 1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW ¹ / ₄ SE ¹ / ₄ Section 26, T. 34 N., R. 26 E.W.M. Apple Well: 800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW ¹ / ₄ SE ¹ / ₄ of Section 26, T. 34 N., R. 26 E.W.M. Okoma Well: 660 feet south and 520 feet west of the east quarter corner of Section 34, being within the NE ¹ / ₄ SE ¹ / ₄ of Section 34, T. 34 N., R. 26 E.W.M. Eastside Well: 800 feet north and 1170 feet west of the southeast corner of Section 35, being within the SE ¹ / ₄ SE ¹ / ₄ of Section 35, T. 34 N., R. 26 E.W.M. OWP No. 2 Well: 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE ¹ / ₄ SE ¹ / ₄ of Section 35 , T. 34 N., R. 26 E.W.M.
Purpose of Use:	Municipal supply for the City of Omak
Period of Use:	Continuously throughout the year
Place of Use:	City of Omak, Okanogan County, Washington

Proposed Change

Name of Applicant:	City of Omak
Application Date:	November 24, 1998; Amended August 4, 2004
Instantaneous Quantity:	500 gpm
Annual Quantity:	600 acre-ft/yr
Source:	9 wells
Point of Diversion:	<p>Kenwood Well: 1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW$\frac{1}{4}$SE$\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M.</p> <p>Apple Well: 800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW$\frac{1}{4}$SE$\frac{1}{4}$ of Section 26, T. 34 N., R. 26 E.W.M.</p> <p>Okoma Well: 660 feet south and 520 feet west of the east quarter corner of Section 34, being within the NE$\frac{1}{4}$SE$\frac{1}{4}$ of Section 34, T. 34 N., R. 26 E.W.M.</p> <p>Eastside Well: 800 feet north and 1170 feet west of the southeast corner of Section 35, being within the SE$\frac{1}{4}$SE$\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M.</p> <p>OWP No. 2: 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE$\frac{1}{4}$SE$\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M.</p> <p>Hicks Well: 275 feet south and 1000 feet east from the northwest corner of Section 25, being within the NW$\frac{1}{4}$NW$\frac{1}{4}$ of Section 25, T. 34 N., R. 26 E.W.M.</p> <p>Dean Well: 1625 feet north and 225 feet east of the southwest corner of Section 19, being within the NW$\frac{1}{4}$SW$\frac{1}{4}$ of Section 19, T. 34 N., R. 27 E.W.M.</p> <p>Proposed Powers Well: being within the NE$\frac{1}{4}$NE$\frac{1}{4}$ of Section 26, T. 34 N., R. 26 E.W.M.</p> <p>Well No. 9: 1275 feet north and 100 feet west from the southeast corner of Section 24, being within the SE$\frac{1}{4}$SE$\frac{1}{4}$ of Section 24, T. 34 N., R. 26 E.W.M.</p>
Purpose of Use:	Municipal supply for the City of Omak
Period of Use:	Continuously throughout the year
Place of Use:	City of Omak, Okanogan County, Washington

Public Notice of the application was given in the Omak-Okanogan County Chronicle on March 3 and 10, 1999. An amended Public Notice of the application was given in the Omak-Okanogan County Chronicle on September 22 and 29, 2004. There were no protests during either 30 day protest period.

INVESTIGATION

The following information was obtained from a site inspection conducted by Ecology staff Scott Turner and Melissa Nihsen, with the Assistant Director of Public Works present, on July 28, 2004; research of department records, and conversations with the applicant and department staff. In order to approve the addition of four points of withdrawal under No. GWC 445-D, Ecology must determine:

- The validity and extent of the original water right.
- That the proposed new points of withdrawal tap the same body of public ground water as the authorized wells.
- That the proposed change will not cause impairment to existing water rights or enlarge the original right.
- That the proposed change will not be contrary to the public interest.

Filing of Applications for Change Nos. CG4-GWC445-D@1, CG4-GWC446-D@3, CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1, and CG4-GWC7332-A@1 attempts to increase the City's flexibility in managing its ground water withdrawals for municipal supply. This, in part, came about because Washington State Department of Health (DOH) declared the Apple and Kenwood Wells as ground water under the influence of surface water (GUD). As a result, the City currently uses those wells only in an emergency need situation. This presents a need for the City to compensate for the water not produced by these wells through the use of newly acquired wells.

Currently there are five wells that the City operates under municipal water rights. The wells pump water through main lines to four reservoir systems (500,000 gallons, 550,000 gallons, 800,000 gallons, and 1,065,000 gallons) sited in various locations around the City. The telemetry system is located at City Hall, which controls both the quantities of water pumped and the quantities of water released from the reservoirs to the City's connections.

The City of Omak's Existing Municipal Water Rights

The City filed the declarations for the vested water uses under RCW 90 44 090 on July 7, 1947, that resulted in the issuance of Ground Water Declaration Certificate Nos. 445-D, 446-D, and 1082-D, described in more detail below.

The water rights are listed below in priority date sequence.

Report Continued

Ground Water Declaration Certificate No. 445-D has a priority date of December 1913, and certifies the withdrawal of 500 gpm, 600 acre-ft/yr for municipal supply from a well (known as the Kenwood Well) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$, Section 26, T. 34 N., R. 26 E.W.M. This well has been categorized by DOH as a GUI source. This well was reported to be a standby well in the Report of Finding on Ground Water Declaration Claim No. 486 dated November 3, 1947. This well is identified as source S03 by DOH. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Apple Well, the Eastside Well, the Okoma Well and Omak Wood Products Well No. 2 (OWP No. 2) under this Certificate.

Ground Water Declaration Certificate No. 446-D has a priority date of March 1936, and certifies the withdrawal of 800 gpm, 96 acre-ft/yr for municipal supply from a well (known as the Apple Well) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$, Section 26, T. 34 N., R. 26 E.W.M. This well has been categorized by DOH as a GUI source. This well is identified as source S02 by DOH. On December 7, 2000, Ecology approved an Application for Water Right Change authorizing the use of Well No. 9 under this Certificate. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Kenwood Well, the Eastside Well, the Okoma Well and OWP No. 2 under this Certificate.

Ground Water Declaration Certificate No. 1082-D has a priority date of May 1944, and certifies the withdrawal of 630 gpm, 1430 acre-ft/yr for municipal supply from a well (known as the Eastside Well) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 35, T. 34 N., R. 26 E.W.M. The well was equipped with three pumps; a 15 horsepower (hp), a 30 hp, and a 40 hp rated at 280 gpm, 550 gpm, and 800 gpm respectively. This well is identified as source S01 by DOH. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Apple Well, the Kenwood Well, the Okoma Well and OWP No. 2 under this Certificate.

Ground Water Certificate No. 3655-A has a priority date of March 20, 1958. It is the second authorization from the Eastside Well (see discussion about the earlier right under Ground Water Declaration Certificate No. 1082-D). It certifies the withdrawal of 1300 gpm, 2080 acre-ft/yr for municipal supply. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Apple Well, the Kenwood Well, the Okoma Well and OWP No. 2 under this Certificate.

Ground Water Certificate No. 3656-A has a priority date of March 20, 1958, and certifies the withdrawal of 375 gpm, 600 acre-ft/yr for municipal supply. This is a second authorization from the Apple Well (see earlier discussion under Ground Water Declaration Certificate No. 446-D) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$, Section 26, T. 34 N., R. 26 E.W.M. As described earlier, this well has been categorized by DOH as a GUI source. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Kenwood Well, the Eastside Well, the Okoma Well and OWP No. 2 under this Certificate.

Ground Water Certificate No. 7332-A has a priority date of June 22, 1970, and certifies the withdrawal of 600 gpm, 560 acre-ft/yr for municipal supply from May 1 through October 31 from a well (known as the Okoma Well) located in the NE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 34, T. 34 N., R. 26 E.W.M. Any water withdrawal by the City in excess of 3456 acre-feet from any municipal source is to be deducted from the annual volume authorized by this right. This well is identified as source S04 by DOH. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Apple Well, the Eastside Well, the Kenwood Well and OWP No. 2 under this Certificate.

Ground Water Permit No. G4-31525P has a priority of November 23, 1992, and authorizes the withdrawal of 5000 gpm, 3500 acre-ft/yr from two wells (interruptible when the Okanogan River drops below minimum instream flows as outlined in the Permit) for municipal supply. The wells described in this Permit are located approximately 1,150 feet west and 500 feet north from the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 35, T. 34 N., R. 26 E.W.M. A provision in this Permit states that the annual quantity is not additive to the City's existing rights, and limits all of the City's water rights to 3500 acre-ft/yr.

The source the City believed to be authorized under Ground Water Permit No. G4-31525P (OWP No. 2) is not described on the original Permit. This oversight has resulted in an unauthorized change in point of withdrawal. OWP No. 2 is located approximately 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M., approximately 1,000 feet northeast from the authorized points of withdrawal. OWP No. 2 is actually the authorized source under Certificate of Change No. CCVOL1-4P238, and is identified as source S07 by DOH.

The original Public Notice was given for Ground Water Permit No. G4-31525P on January 13 and 20, 1993, in the Omak-Okanogan County Chronicle. That Public Notice described the proposed sources for Ground Water Permit No. G4-31525P as being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M. As noted above, OWP No. 2 is also located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M. RCW 90.44.100(3) states "the construction of a replacement or new additional well or wells at the location of the original well or wells (emphasis added) shall be allowed without application to the department for an amendment". On July 27, 2005, the City submitted a Showing of Compliance form stating they have met the criteria stated in RCW 90.44.100(3) in order to legally operate OWP No. 2 under Ground Water Permit No. G4-31525P. The Showing of Compliance form is currently under review by Ecology.

Proposed Additional Sources

The City proposes to add four additional wells, located northeast of the existing municipal wells, under each of the water rights above. The City is requesting the addition of the following four wells to each of their municipal water rights:

- The Dean Well: Source for Ground Water Certificate No. G4-28873C, described in the Ground Water Rights within Omak's Urban Growth Area section of this report. The well is reported to be 312 feet deep, and capable of pumping about 300 gpm. The City would like to increase the capacity of this well to 500 gpm. The City's application requests only to add this well as an additional source under Ground Water Declaration Certificate No. 445-D.

- **The Hicks Well:** This well is located within the place of use, but is not the authorized source for Ground Water Certificate No. G4-26176C, described in the **Ground Water Rights within Omak's Urban Growth Area** section of this report. The well is reported to be 247 feet deep with a static water level of 150 feet. The Hicks Well is capable of pumping about 600 gpm, but the City would like to increase the capacity to 700 gpm.
- **The Powers Well:** A source to be drilled in the future. Located within the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 26, T. 34 N., R. 26 E.W.M.
- **Well No. 9:** This well is identified as source SO8 by DOH. Authorized as an additional source for Ground Water Declaration Certificate No. 446-D (Apple Well) on December 7, 2000. This well is 305 feet deep with a static water level of 203 feet. Well No. 9 is equipped with a pump capable of producing about 100 gpm, but the City would like to increase the capacity to 500 gpm.

Figure 1 illustrates the location of the City's authorized municipal wells, and the location of the proposed additional wells.

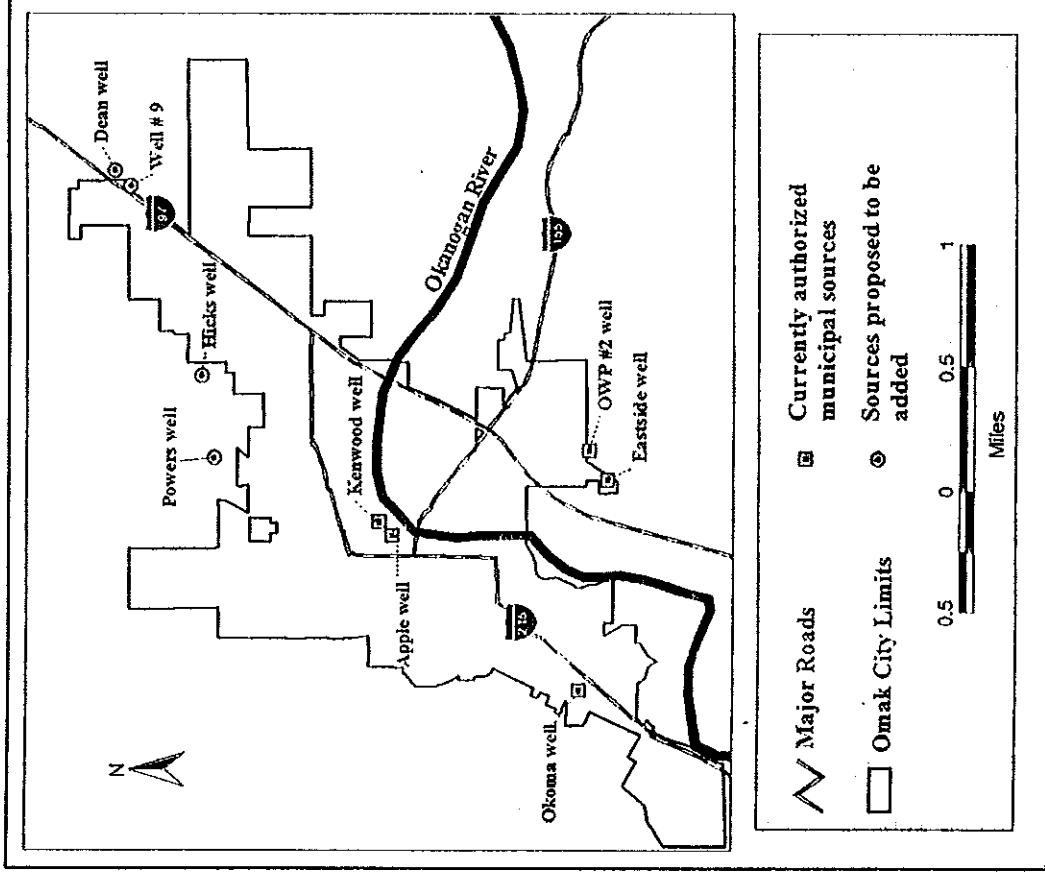


Figure 1. Overview showing the five currently authorized wells and the four proposed wells.

Ground Water Rights within Omak's Urban Growth Area

Ground Water Certificate No. G4-28873C describes a well located approximately 200 feet east and 1700 feet north of the southwest corner of Section 19, being within NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 19, T. 34 N., R. 27 E.W.M. That water right issued for a well for quantities up to 288 gpm and 55 acre-ft/yr for the irrigation of 55 acres from April 1 to October 31. The place of use is all of Government Lot 4 and the S $\frac{1}{2}$ of Government Lot 3 lying southeasterly of State Hwy 97 in Section 19, T. 34 N., R. 27 E.W.M. During the 2004 site inspection, it was observed that the place of use was covered in established sagebrush and appeared not to have been watered within the last five or more years.

Ground Water Certificate No. G4-26176C describes a well located approximately 1000 feet east and 40 feet north from the southwest corner of Section 24 being within the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 24, T. 34 N., R. 26 E.W.M. Water is withdrawn from the well at up to 230 gpm and 117 acre-ft/yr for primary irrigation of 6 acres and standby reserve for 20 acres. The primary right for irrigation of the 20 acres is provided by the Okanogan Irrigation District. The place of use is that part of Section 24, T. 34 N., R. 26 E.W.M. described as follows: the S $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ and that part of the NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ lying south of the L. B. Lateral of the Okanogan Irrigation District and also the NE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 25, T. 34 N., R. 26 E.W.M.

Report Continued

Ground Water Certificate No. G4-26558C describes a right for a well situated approximately 1310 feet west and 1050 feet north from the south quarter corner Section 24 being within the SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 24, T. 34 N., R. 26 E.W.M. It allows for the withdrawal of up to 19 gpm, 0.25 acre-ft/yr for in-house domestic supply and 7 acre-ft/yr to be used during the irrigation season from April 1 through October 15 as standby reserve for the irrigation of two acres. The primary right for irrigation is provided by the Okanogan Irrigation District. The place of use is the N $\frac{1}{2}$ of the west 330 feet of the N $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 24, T. 34 N., R. 26 E.W.M. lying south of the county road right of way.

Suncrest Plat Water System

This system is identified by DOH as PWS ID No. 85207 and has two water rights:

Ground Water Certificate No. G4-23779C is for a well within the NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 25, T. 34 N., R. 26 E.W.M. and certifies the withdrawal for 300 gpm, 30 acre-ft/yr for community domestic supply for 30 homes located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 25, T. 35 N., R. 26 E.W.M.

The second authorization from the same wells under Ground Water Permit No. G4-26888P with priority date of July 21, 1980, is for two wells within the E $\frac{1}{2}$ Section 25, T. 34 N., R. 26 E.W.M. The Permit authorizes the withdrawal of 300 gpm, and 200 acre-ft/yr for community domestic supply for 200 homes and mobile homes. The place of use is the E $\frac{1}{2}$ E $\frac{1}{2}$ SE $\frac{1}{4}$ Section 25, T. 34 N., R. 26 E.W.M.

Sandflat Water Users Association

Another community system in the area is the Sandflat Water Users Association, identified by DOH as PWS No. 09064. It is authorized water use under Superseding Ground Water Permit No. G4-26301P with a priority date of July 20, 1979, from two wells located within the NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 30, T. 34 N., R. 26 E.W.M. The Permit authorizes the withdrawal of ground water at 250 gpm, and 220 acre-ft/yr for 245 homes (houses, apartments, duplexes, and condominiums). One well is reported to be drilled 445 feet deep with a 250 gpm capacity, and the other is 214 feet deep with a 109 gpm capacity.

Irrigation water within the Sandflat place of use is provided from a surface water diversion under authority of Surface Water Permit No. S4-24234P for the diversion of surface water from the Okanogan River subject to instream flows set by Chapter 173-549 WAC, the Water Resources Program for the Okanogan River Basin, WRIA 49.

Aston Estates

Aston Estates is a public water system operating under three Certificates of Water Right.

Certificate No. G4-23805C with priority date of January 6, 1975, certifies the withdrawal of 40 gpm and 54 acre-ft/yr for a well located within the NE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 31, T. 34 N., R. 27 E.W.M. to serve 60 homes within Aston's First Addition in Government Lots 2 and 3, Section 31, T. 34 N., R. 27 E.W.M.

Certificate No. G4-23806C with priority date of January 6, 1975, certifies the withdrawal of 45 gpm and 54 acre-ft/yr from a well located approximately 875 feet west and 850 feet south of the north quarter corner within the NE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 31, T. 34 N., R. 27 E.W.M., to serve 60 homes within Aston's First Addition in Government Lots 2 and 3, Section 31, T. 34 N., R. 27 E.W.M. These are the same 60 homes referenced by Certificate No. G4-23805C. The 54 acre-ft/yr is the maximum annual quantity under both rights, but the instantaneous quantities (40 and 45 gpm) are additive.

A third well is covered by Certificate No. G4-29424C, and authorizes 54.9 acre-ft/yr for 61 homes (60 were covered by the earlier two water rights described above) less any quantity withdrawn under Certificate Nos. G4-23805C and G4-23806C. The instantaneous quantity of 90 gpm is additive to the quantities (40 and 45 gpm) under Certificate Nos. G4-23805C and G4-23806C. This well is located approximately 510 feet west and 650 feet south of the north quarter corner in Section 31 being within Government Lot 2, Section 31, T. 34 N., R. 27 E.W.M.

Water Quantity

Table 1 identifies the Municipal Ground Water Certificates that are included in City of Omak's Water System Plan.

Table 1: Municipal Ground Water Certificates Held by the City of Omak

Certificate No.	Source	Priority date	Qi (gpm)	Qa (acre ft/yr)	Place of use
445-D	Kenwood Well	December 1913	500	600	City of Omak
446-D	Apple Well	March 1936	800	96	City of Omak
3656-A	Apple Well	March 20, 1958	375	600	City of Omak
1082-D	Eastside Well	May 1944	1630	1430	City of Omak
3655-A	Eastside Well	March 20, 1958	1300	2080	City of Omak
7332-A	Okoma Well	June 22, 1970	600	560	City of Omak
G4-31525P	OWP No. 2**	November 23, 1992	5000	3500*	City of Omak

*This annual quantity is not additive to the City's other municipal rights, furthermore this Permit limits the total withdrawal under all of the City's rights not to exceed 3500 acre-ft/yr.

**OWP No. 2 represents an unauthorized change in point of withdrawal described in the City of Omak's Existing Municipal Water Rights section of this report.

Water Demand Forecasting

Historical population and water use reported in the Draft 2004 Water System Plan indicates the extent that the City has continued to develop water use under its water rights. Historical population data included in the plan states that in 1980 the population was 4,007 with gradual increases up to 4,721 in 2000. This represents a 17.83% increase in the population for that 20 year period. The Water System Plan also contains information on the existing water supply and demand, as well as projections for future water demand and how that relates to the existing supply. The Water System Plan outlines the annual water production for the years of 1998 through 2002. Within that five year period, 1998 was indicated to be the highest production year at approximately 600 million gallons (1841 acre-feet); leaving approximately 1600 acre-feet of the City's total water rights to be developed. The future water demand forecast for the year 2023 predicts that the City's annual water use will be 819.3 million gallons (2514 acre-feet). These data indicate a trend of past growth, and the City's continuing growth into their existing water rights with the flexibility for further growth.

Instantaneous Quantities

Ground Water Declaration Certificate No. 445-D certifies the withdrawal of 500 gpm. The proposed change would authorize the withdrawal of that 500 gpm from all of the wells listed in Table 2. The City proposed maximum instantaneous quantities of each well. The maximum Qi for each source submitted by the City is listed in Table 2.

Table 2. Maximum Qi placed on all Possible Sources for the City of Omak

Source	Qi (gpm)
Kenwood Well	500 gpm
Apple Well	1175 gpm
Eastside Well	2930 gpm
Okoma Well	600 gpm
OWP No. 2	5000 gpm
Well No. 9	500 gpm*
Dean Well	500 gpm*
Hicks Well	700 gpm*
Proposed Powers well	500 gpm*

*instantaneous quantities are non-additive to the City's municipal rights.

The voluntary cap on instantaneous quantities was proposed by the City for three reasons:

- 1) The City does not intend on improving any existing well to increase water use beyond the capacities shown in Table 2.
- 2) If there were no caps, all of the instantaneous quantities would have to be cumulatively evaluated for impairment at each source (approximately 5200 gpm at each well), greatly increasing the chance for the proposed changes to impair other water users in the area.
- 3) Adding Well No. 9, the Dean Well, the Hicks Well and the proposed Powers Well will increase the City's flexibility in obtaining adequate water production.

Annual Quantities

The water system plan states that during the years of 1998 and 2002 the Kenwood Well (original source for this water right) was used for a total of 10.5 acre-feet in 1998, and 13.6 acre-feet in 2000. In order to pump the full 600 acre-feet authorized by this water right, the Kenwood Well would need to withdraw 500 gpm for 271 days. While the data in the City's plan suggests that the City has not put Ground Water Declaration Certificate No. 445-D to full beneficial use, it is uncertain whether the Kenwood Well may have been relied upon to a greater extent historically. It is clear that a portion of the six rights the City proposes to transfer is inchoate and that some of these rights were issued based on Ecology's former "pumps-and-pipes" methodology. Adding the additional sources would allow the City to begin to legally use the annual quantities associated with this water right through sources other than the Kenwood Well. The authorization of additional sources will not allow a greater annual quantity of water to be withdrawn; the right will be limited to 600 acre-ft/yr from all sources.

Second Engrossed Second Substitute House Bill 1338 (SESSH 1338)

In Department of Ecology v. Theodoratus, 135 Wn.2d 582, 957 P.2d 1241, the Washington Supreme Court held in a scenario that involved a non-municipal water supplier that Ecology's administrative practice of issuing Certificates of Water Right prior to full beneficial use was in error. This created uncertainty with respect to the water rights of Certificate holders, such as the City of Omak, that received Certificates based on system capacity rather than the extent of actual use.

Recent legislative changes have affected municipal water rights. SESSH 1338 provided clarification and certainty for municipal water rights documented by Certificates which were issued based on system capacity. RCW 90.03.330 (3) states that:

"This sub-section applies to the water right represented by a Water Right Certificate issued prior to September 9, 2003, for municipal water supply purposes as defined in RCW 90.03.015 where the Certificate was issued based on an administrative policy for issuing such Certificates once works for diverting or withdrawing and distributing water for municipal supply purposes were constructed rather than after the water had been placed to actual beneficial use. Such a water right is a right in good standing."

A licensed Ecology staff hydrogeologist reviewed and stamped a separate technical memorandum that discusses the hydrogeologic analysis for this application. The hydrogeologic interpretations provided below are extracted from this memorandum.

Hydrogeologic Setting

This section describes in general terms the hydrogeology surrounding the City of Omak, Okanogan County, Washington. In this area, the Okanogan River flows in an overall southerly direction, however, through the City of Omak the river takes a 90 degree bend to the west. Consequently, the City spans an area both north and south of the Okanogan River. Glacial terraces, located toward the north and west of the City, are a local remnant left by ancient ice sheets that once scoured the Okanogan River Valley. Sedimentary deposits, largely composed of glacial drift, glacial outwash, glaciolacustrine and more recent alluvial materials along with lesser amounts of glacial till, dune sands, and mass wasting materials, have in filled the ice scoured valley. The City of Omak is located near the western edge of the Okanogan Metamorphic Core Complex. Gneissic granodiorite, a meta-igneous rock of the Okanogan Core Complex, forms the valley walls to the south and east of the Okanogan River. To the north and west of the river, valley walls are composed of igneous rocks (dacite and quartz monzonite) and metasedimentary rocks of the Cave Mountain Formation. Thick glacial deposits obscure much of the described bedrock in the low lying areas; however, more resistant bedrock knobs protrude through the glacial materials in places along the valley floor.

Well log data on file with Ecology indicates the glacial/alluvial sediments, which form the unconsolidated aquifer, consist of clays, silts, sands, gravels, glacial till, boulders, cobbles and hardpan/cemented gravel. Well log data also indicates this aquifer is bound at depth by bedrock, or what well drillers generally refer to as granite, a geologic description drillers applied to the various rock types that outcrop on both sides of the river. Sediment thicknesses range from approximately 14 feet to as much as 620 feet, with total thicknesses and/or depth to bedrock varying throughout the area. However, it appears that there is a thinning of sediments toward the southwest of Omak (Section 34, T. 34 N., R. 26 E. W.M.), as many wells are completed into the underlying bedrock in this area. Well log data suggests that most wells surrounding the City of Omak encounter a varying sequence of sediments, suggesting sediment layers pinch out and are discontinuous throughout the area. The wide range of sediments and thicknesses contribute to heterogeneous aquifer characteristics; for example, areas in the unconsolidated aquifer where clays and silts are present will likely have lower permeabilities, hydraulic conductivities and well yields than areas encountering mostly sands and gravels. Well logs indicate well yields range from 20 gpm to 1630 gpm for wells utilizing glacial/alluvial materials. This range reflects varied sediments and aquifer characteristics throughout the Omak area. The low range of 20 gpm begins to approach a small but notable difference from bedrock wells that tend to yield approximately 5-10 gpm or less. The unconsolidated aquifer is recharged by precipitation infiltrating into the surficial sediments and from interaction with the Okanogan River. Static water levels for the subject wells and other selected wells on file with Ecology, which are completed into surficial sediments, when corrected for elevation, indicate that ground water head levels correlate with river level elevations. This relationship suggests an exchange of flow between the ground water and surface water. Aquifer recharge and ground water levels tend to fluctuate as the hydrologic system responds to seasonal variations.

Impairment, Qualifying Ground Water Withdrawal Facilities, and Well Interference

There are three concepts that are important when considering whether a withdrawal of water from a well would impair another existing water right. The concepts are defined as follows:

Impairment is an adverse impact on the physical availability of water for a beneficial use that is entitled to protection i.e. water rights that are both senior and junior in priority to the right the applicant seeks to change.

Qualifying ground water withdrawal facilities are defined as those wells which in the opinion of Ecology are adequately constructed. An adequately constructed well is one that (a) is constructed in compliance with well construction requirements; (b) fully penetrates the saturated thickness of an aquifer or withdraws water from a reasonable and feasible pumping lift (Chapter 173-150 WAC); (c) the withdrawal facilities must be able to accommodate a reasonable variation in seasonal pumping water levels; and (d) the withdrawal facilities including pumping facilities must be properly sized to the ability of the aquifer to produce water.

Well interference may occur when several wells penetrate and withdraw ground water from the same aquifer. Each pumping well creates a drawdown cone. When several wells pump from the same aquifer, well density, aquifer characteristics, and pumping demand may result in individual drawdown cones that intersect and form a composite drawdown cone. At any point in an aquifer, the composite drawdown caused by pumping wells will be greatly influenced by the transmissivity (T) of the aquifer. In aquifers with high Ts, composite drawdown will generally be much less than in aquifers with similar properties but with low Ts. Transmissivity is related to hydraulic conductivity (K) and the saturated thickness (b) of an aquifer by the relationship $T=Kb$.

An aquifer's hydraulic conductivity (K) is derived from the physical properties of both the fluid and geologic materials that form an aquifer. Once formed, an aquifer's saturated thickness (b) becomes important in evaluating its transmissivity. For regions of similar K in an aquifer, a large saturated thickness will result in a much higher T than a small saturated thickness. As a result, regions of similar K in an aquifer with a large saturated thickness will experience less composite drawdown or well interference than with a small saturated thickness.

Some conditions, however, will increase or steepen composite drawdown in an aquifer. For instance, where characteristics (such as very fine, clay-rich, or poorly sorted sediments) of an unconfined aquifer cause significant drawdown relative to the saturated thickness, the composite drawdown will increase as saturated thickness is reduced and T becomes smaller. Additionally, in regions where negative or no-flow boundaries occur, such as near the edges of a valley fill aquifer where it is bounded by bedrock, composite drawdown will be steeper than in the central part (generally the greatest thickness region) of the aquifer. Consequently, it is commonly understood that the greatest composite drawdown or well interference is more

likely to occur in regions of low transmissivities, thin saturated thicknesses and near negative or no-flow boundaries than in regions of high transmissivities, large saturated thicknesses, and away from negative or no-flow boundaries.

Hydrogeologic Analysis of the Site

The City of Omak has multiple ground water rights and corresponding wells, which collectively constitute their municipal water supply. The City submitted six Change Applications in 1994, requesting to add each of their existing municipal supply wells (5 existing wells) to each one of the following Water Rights: G4-GWC445-D, G4-GWC446-D, G4-GWC1082-D, G4-GWC3655-A, G4-GWC3656-A and G4-GWC7332-A. The City submitted six additional Change Applications in 1998 requesting to add four proposed wells to each of the above water rights. Both requests would allow for greater flexibility in the City's water system operations. In total, if both sets of Change Applications are approved, the City would have the ability to withdraw water quantities from up to nine wells from any of the above-mentioned water rights, however, each water right will not be allowed to exceed its historic water quantity. This analysis will address all six 1998 applications. These requests are in part due to two existing city wells, the Apple Well and Kenwood Well, being designated groundwater under the influence of surface water (GUI). As a result, the City currently classifies these two wells as emergency use wells only.

Table 3 delineates the suite of water rights, existing wells, corresponding annual water quantities, instantaneous water quantities, depth of wells and corresponding static water levels.

Table 3

Well Name	Original Water Right No.	Instantaneous Quantity Qi (gpm)	Annual Quantity Qa (acre-ft/yr)	Depth of Well (ft)	Static Water Level swl (ft)
Kenwood	445-D	500	600	26	16.5
Apple	446-D + 3656-A	1175	696	29	10.0
Eastside	1082-D + 3655-A	2930	3510	40	28.5
Okoma	7332-A	600	560	105	8.75
OWP No.2	G4-31525P**	Interruptible 5000	3500*	69	38.75
Hicks		700		247	150
Dean		500		312	212
No.9 (NE Omak)		500		295	203
Proposed Powers		500			

*This quantity is not additive and furthermore this Permit limits the Qa under all the City's water rights not to exceed 3500 acre-ft/yr.

**OWP No. 2 represents an unauthorized change in point of withdrawal described in the City of Omak's Existing Municipal Water Rights section of this report.

The City voluntarily capped the instantaneous water quantity at each well, to reduce the risk of impairing existing water rights in close proximity. To clarify, the instantaneous quantity at each well is limited to the aforementioned quantity stated in the table. The combined annual water quantity that would be allowed to be withdrawn from any combination of wells, should the change be approved, is 3500 acre-ft/yr, as stated in G4-31525P.

Discussion of Existing Wells

The Kenwood Well is located approximately 1100 feet north and 600 feet east of the south quarter corner of Section 26, T. 34 N., R. 26 E.W.M., and approximately 50 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was designated GUI by DOH. The Kenwood Well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 20 feet below ground surface (bgs). However, the well log on file with Ecology indicates the well is 14 feet in diameter and completed to a depth of 26 feet 2 inches bgs. These discrepancies, as well as discrepancies in other well documents described subsequently in the report, are likely the result of information being passed down through comprehensive water plans over the years rather than well alteration (Louman, 2005). The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 16.5 feet was recorded at the time of drilling, December 1913. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 500 gpm and 7 feet of drawdown in the well were also reported. If approved, the proposed changes would allow the Kenwood Well to withdraw up to 500 gpm in emergency situations.

The Apple Well is located approximately 800 feet north and 200 feet east of the south quarter corner of Section 26, T. 34 N., R. 26 E.W.M., and approximately 80 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was also designated GUI by DOH. The Apple Well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 10 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is completed to 29 feet bgs. The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 10 feet 4 inches was recorded at the time of drilling, February 1936. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 800 gpm and 10 feet 4 inches of drawdown in the well were also reported. If approved, the proposed changes would allow the Apple Well to withdraw up to 1175 gpm in emergency situations.

The Eastside Well is located approximately 800 feet north and 1170 feet west of the southeast corner of Section 35, T. 34 N., R. 26 E.W.M., and approximately 1900 feet east of the Okanogan River. This well is currently in use by the City and houses 4 turbine pumps which have a combined capacity to pump 2800 gpm. The Eastside Well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is 14 feet in diameter and completed to 40 feet 10 inches bgs. The materials encountered during drilling, as reported on the well log, include silt, rock and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 28 feet 6 inches was recorded during the time of drilling in 1944. However, a static water level of 12.4 feet was recorded by Ecology staff, via the City's real-time telemetry system, during a site visit on July 28, 2004. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. The telemetry system also indicated the Eastside Well was pumping at a rate of 1488 gpm at the time. A yield of 1630 gpm and 1 foot of drawdown in the well was also reported on the well log. Mike Ervin, City of Omak Water Department Chief Operator, indicated during the site visit that the Eastside Well shuts off when the storage reservoir is full, as opposed to shutting off because the water level in the well has dropped. If approved, the proposed changes would allow the Eastside Well to withdraw up to 2930 gpm.

The Okoma Well is located approximately 660 feet south and 520 feet west of the east quarter corner of Section 34, T. 34 N., R. 26 E.W.M., and approximately 2300 feet west of the Okanogan River. This well is currently in use by the City and is equipped with one turbine pump, which has the capacity to pump 500 gpm. The well log on file with Ecology indicates the Okoma well is 16 inches in diameter, completed to a depth of 105 feet bgs and screened from 55 feet to 90 feet bgs. Materials encountered during drilling include clay, silt, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 8 feet 9 inches was recorded at the time of drilling, winter 1988-1989. However, Mike Ervin informed Ecology staff during the site exam the current static water level is approximately 13 feet bgs and the pumping water level is approximately 32 feet bgs. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A well test performed by the driller and reported on the well log indicated a yield of 350 to 400 gpm with 69.3 feet of drawdown in the well after 13.5 hours. This well is located in an area where the aquifer thins, therefore, the well is producing as expected, meaning it is producing less than other City wells which are located in areas where the aquifer is thicker. The steep drawdown could also be explained in combination with well efficiency, well construction and/or development and the 18 feet of silt with clay encountered in the well. If approved, the proposed changes would allow the Okoma Well to withdraw up to 600 gpm.

The OWP No.2 Well is located approximately 1210 feet north and 530 feet west of the southeast corner of Section 35, T. 34 N., R. 26 E.W.M., and approximately 2600 feet east of the Okanogan River. This well is currently in use by the City, which is leased from Omak Wood Products. The OWP No.2 Well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, is 24 inches in diameter, completed to a depth of 69 feet bgs, cased to a depth of 44 feet bgs and screened from 44 to 60 feet bgs. An additional inner well screen was installed from 46 to 69 feet bgs during well rehabilitation in July of 1996. Materials encountered during drilling include silt, sand, gravel and cobbles, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 38.75 was recorded in a schematic of the well located within the Comprehensive Water Plan, while a static water level of 36.5 feet was recorded during rehabilitation. According to the well log on file with Ecology, a well test was performed during rehabilitation with a maximum yield of 2500 gpm and 3.8 feet of drawdown in the well after 5.5 hours. The City's telemetry system indicated the OWP No.2 Well was pumping at a rate of 1341 gpm at the time of the site visit, July 2004. If approved, the proposed changes would allow the OWP No. 2 Well to withdraw up to 5000 gpm. Note, the water right associated with this well is interruptible and subject to instream flows on the Okanogan River.

Hydrogeologic Analysis of Proposed Well Sites

The Hicks Well is located approximately 275 feet south and 1000 feet east from the northwest corner of Section 25, T. 34 N., R. 26 E.W.M., and approximately 4000 feet north of the Okanogan River. The City is proposing to acquire this well from the current property owner, Marlene (Hicks) Rawley, during 2005, according to the City of Omak Comprehensive Water Plan (Preliminary) 2004. This well does not appear to be associated with a state issued water right. As indicated by the proposed use on the water well report on file with Ecology, the well was constructed for domestic purposes. The Hicks Well is 8 inches in diameter and completed to a depth of 247 feet bgs. Materials encountered during drilling include clay, sand, and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 150 feet was recorded at the time of drilling, April 1998. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A 4-hour spring season pump test performed by Irrigation, Technology and Control indicated a pumping rate of 600+ gpm with 8 feet of drawdown in the well after 4 hours. It appears that stabilization occurred quickly during recovery, as the pre-pumping static water level was achieved within 3 seconds of shutting off the pump. If approved, the proposed changes would allow the Hicks Well to withdraw up to 700 gpm.

Well No. 9 also known as the NE Omak Well is located approximately 1275 feet north and 100 feet west of the southeast corner of Section 24, T. 34 N., R. 26 E.W.M., and approximately 5800 feet west of the Okanogan River. This well was authorized as an additional source for Water Right No. GWC-446-D on December 7th, 2000, and is currently in use. The City had the well constructed in July 2001. The well log on file with Ecology indicates the well is 12 inches in diameter, completed to a depth of 295 feet bgs, screened from 268 to 282 feet bgs, and gravel packed from 200 to 295 feet bgs. Materials encountered during drilling include clay, silt, sand, and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 203 feet was recorded at the time of drilling, July 2001. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A 24-hour pump test performed by Arcadia Drilling Inc. on July 16, 2001, indicated a pumping rate of 120 - 132 gpm with 59.5 feet of drawdown in the well after 24 hours. It appears that the pre-pumping static water level was achieved within 2 hours of shutting off the pump. Explanations for the steep drawdown in this well could be any combination of the well efficiency, well construction and/or development and the significant quantity of silt and clay materials encountered compared to any of the previously described wells. The City would like to eventually increase the capacity of this well. If approved, the proposed changes would allow Well No. 9 to withdraw up to 500 gpm.

The Dean Well is located approximately 1625 feet north and 225 feet east of the southwest corner of Section 19, T. 34 N., R. 27 E. W.M., and approximately 5400 feet west of the Okanogan River. The City is proposing to acquire this well during 2005 as well. This well appears to be associated with Water Right No. G4-28873C, however, Ecology does not have a water well report on file for this well. The water right documents refer to the dimensions of the Dean (irrigation) Well as being 8 inches in diameter and 312 feet deep. These documents also refer to a domestic well located on the Dean property within approximately 50 feet of the irrigation well, reportedly with a depth of 335 feet deep, however, a water well report is also unavailable for this well. Mr. Dean reported at the time, spring 1987, that the irrigation and domestic wells had the same static water level of 212 feet bgs. When corrected for elevation, the reported static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. The City of Omak's NE Omak Well is located approximately 500 feet southwest of the proposed well location and has a depth of 295 feet, a static water level of 203 feet bgs and encountered clay, silt, sand and gravel materials during drilling. It is likely that the Dean (irrigation) Well penetrates similar materials within the same aquifer, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. If approved, the proposed changes would allow the Dean Well to withdraw up to 500 gpm.

The proposed Powers Well has not been drilled at this time; however the City has proposed the well be located within the NE¼, NE ¼ of Section 26, T. 34 N., R. 26 E. W.M. Note, this location is a ¼ section west of the Hicks Well. Well logs on file with Ecology in the same quarter section as the proposed Powers Well, indicate the sediments encountered locally include clay, silt, sand and gravel and the sediments are at least 350 feet deep. The proposed well shall be completed into the glacial/alluvial aquifer to be considered the same body of ground water as the original wells. If approved, the proposed changes would allow the proposed Powers Well to withdraw up to 500 gpm.

Some wells in and around the City of Omak terminate above the bottom of the unconsolidated aquifer and others utilize the full saturated thickness. Water well reports from wells terminating in bedrock (the bottom of the sediment aquifer) indicate a minimum sediment thickness of 38 feet in an area south of the City where the aquifer thins, while water well reports from wells terminating above the bottom of the aquifer suggest a sediment thickness up to 620 feet in areas. However, saturated thicknesses (b) throughout the area are much less than sediment thicknesses and range from approximately 10 feet south of the City where the aquifer thins, to 393 feet north of the City in the area of the proposed well locations. Saturated thickness (b) is 97 feet for the Hicks Well, 92 feet for Well No. 9 and estimated to be 100 feet for the Dean Well. Since all these values approach 100 feet, the saturated thickness (b) for the subject wells will subsequently be referred to as 100 feet. In the area of the proposed wells, well reports indicate that the majority of wells terminate above the bottom of the aquifer and do not utilize the aquifer's full saturated thickness. Drillers have estimated yields for wells completed into the unconsolidated glacial/alluvial sediment aquifer to be between 20 and 1630 gpm. Based on the results of the pumping tests on the Hicks Well and Well No. 9, specific capacity was determined to be approximately 75 gpm per foot of drawdown and 2.7 gpm per foot of drawdown respectively. This noticeable difference is further evidence that the wide range of sediments and thicknesses contribute to heterogeneous aquifer characteristics. As noted above, Well No. 9 encountered significantly more silts and clays than the Hicks Well, likely contributing to its lower well yield and specific capacity. Transmissivities (T) also vary greatly due to the heterogeneous nature of the aquifer and are estimated to range from approximately 4000 gallons per day per foot (gpd/ft) to 115,000 gpd/ft. Hydraulic conductivities (K), then, for a saturated thickness of 100 feet would range between 40 gallons per day per square foot (gpd/ft²) and 1150 gpd/ft².

Evaluation by Theis non-equilibrium equation coupled with image well theory to simulate aquifer boundary conditions at the Hicks and Powers Well locations, using the upper value of hydraulic conductivity, indicates that at approximately 50 feet from a subject well, aquifer drawdown due to the maximum instantaneous pumping rate of 700 gpm (Hicks Well) at 182 days, will be about 4 feet or less. However, a more conservative analysis to simulate boundary conditions at well No. 9 and the Dean Well locations, using a mid-range hydraulic conductivity of 600 gpd/ft², indicates that at approximately 50 feet from a subject well, aquifer drawdown due to maximum instantaneous pumping rate of 500 gpm at 182 days, will be about 10 feet or less. A mid-range K value was used in the analysis because 600 gpd/ft² is still a conservative value when compared to literature K values of 1 to 5,000 gpd/ft² for silty sand, the materials being utilized in Well No. 9, (Freeze & Cherry, 1979). The analyses were run at 182 days (half a year) under the assumption that the proposed wells would not be running for 365 days (a full year) continuously. If a subject well is pumped in cycles or if it is pumped at less than the maximum instantaneous quantity, the predicted effect(s) would be reduced. Total annual water quantities will not be increasing from the aquifer, however by adding the proposed wells to the suite of water rights, the overall pumping effects will be spread over a broader area within the aquifer. With the closest known well located approximately 50 feet from the Dean Well and even further distances from the other subject wells, composite drawdown/well interference which may occur is not expected to be significant.

Relationship between the Original Source and Proposed Source

In order to transfer or add a well to an existing water right, "the additional or replacement well or wells shall tap the same body of public ground water as the original well or wells," as stated in Chapter 90.44.100(2a) RCW. The subject wells tap the unconsolidated glacial/alluvial sediment aquifer and are not separated from each other or the original wells by a hydraulic barrier, such as a fault. Therefore, all four subject wells are considered to utilize the same body of ground water as the original five wells.

FINDINGS

- In accordance with Chapter 90.44 RCW and Chapter 90.03 RCW, the author makes a tentative determination that Ground Water Declaration Certificate No. 445-D is a valid right, with an instantaneous quantity of 500 gpm and an annual quantity of 600 acre-ft/yr, and is eligible for change. Although the City of Omak has not put the full certificated amount of water to beneficial use, the inchoate portion is in good standing and may be developed by the City consistent with the intent of the original Certificate.
- The four additional points of withdrawal tap the same body of public ground water as the authorized wells.
- Approval of this change request will not cause impairment of existing rights or will not enlarge the original right.
- Approval of this change will not be detrimental to the public interest.

RECOMMENDATIONS

Water Use

Based on the above facts and findings, it is recommended that the requested additional 4 points of withdrawal under Ground Water Certificate No. 445-D be authorized as follows:

Quantities and Purpose of Use

500 gpm and 600 acre-ft/yr for year round municipal supply purposes.

Points of Withdrawal

Kenwood Well: 1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M.

Apple Well: 800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 26, T. 34 N., R. 26 E.W.M.

Okoma Well: 660 feet south and 520 feet west of the east quarter corner of Section 34, being within the NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 34, T. 34 N., R. 26 E.W.M.

Eastside Well: 800 feet north and 1170 feet west of the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M.

OWP No. 2 Well: 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M.

Hicks Well: 275 feet south and 1000 feet east from the northwest corner of Section 25, being within the NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 25, T. 34 N., R. 26 E.W.M.

Dean Well: 1625 feet north and 225 feet east of the southwest corner of Section 19, being within the NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 19, T. 34 N., R. 27 E.W.M.

Proposed Powers Well: being within the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 26, T. 34 N., R. 26 E.W.M.

Well No. 9: 1275 feet north and 100 feet west from the southeast corner of Section 24, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 24, T. 34 N., R. 26 E.W.M.

Place of Use

The place of use of this water right is the service area described in the most recent Water System Plan approved by the Washington State Department of Health, so long as City of Omak is and remains in compliance with the criteria in RCW 90.03.386(2). RCW 90.03.386 may have the effect of revising the place of use of this water right.

If the criteria in RCW 90.03.386(2) are not met, the place of use of this water right reverts to the last place of use described by Ecology in a water right authorization.

Construction Schedule

Begin Construction by:	June 2006
Complete Construction by:	June 2011
Apply water to full beneficial use by:	Good Standing

PROVISIONS

A Certificate of Change will not be issued until a proof inspection is conducted and a final investigation is made. The Certificate of Change will reflect the extent of the project perfected within the limitations of the authorization. Aspects of the investigation will include, as appropriate, the source, system instantaneous capacity, beneficial use, annual quantity, acreage, place of use, and satisfaction of provisions. Final determination will be calculated based on the best information available to Ecology, including metering data and/or water duty analysis.

The amount of water granted is a maximum limit that shall not be exceeded.

The City's maximum instantaneous quantities for each well are as follows:

<u>Kenwood Well:</u>	<u>500 gpm</u>
<u>Apple Well:</u>	<u>1175 gpm</u>
<u>Eastside Well:</u>	<u>2930 gpm</u>
<u>Okoma Well:</u>	<u>600 gpm</u>
<u>OWP No. 2:</u>	<u>5000 gpm</u>
<u>Well No. 9:</u>	<u>500 gpm</u>
<u>Dean Well:</u>	<u>500 gpm</u>
<u>Hicks Well:</u>	<u>700 gpm</u>
<u>Proposed Powers Well:</u>	<u>500 gpm</u>

The total instantaneous withdrawal between all of the City's municipal water rights is 10205 gpm. Ground Water Permit No. G4-32525P (5000 gpm) is subject to curtailment when instream flows in the Okanogan River are below those set in Chapter 173-549 WAC. In the event the Okanogan River drops below the set minimum flows, the total instantaneous withdrawal from all sources shall not be more than 5205 gpm (10205gpm - 5000gpm = 5205gpm)

The total annual withdrawal under all rights shall not exceed 3500 acre-ft/yr.

This authorization shall in no way excuse the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations including those administered by other programs of the Department of Ecology.

Well Construction

All newly constructed wells shall be constructed into the unconsolidated glacial/alluvial sediment aquifer.

All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gage may be installed in addition to the access port.

Metering

An approved measuring device shall be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", Chapter 173-173 WAC.

Water use data shall be recorded weekly. The maximum rate of withdrawal and the annual total volume shall be submitted to Ecology by January 31st of each calendar year.

The following information shall be included with each submittal of water use data: owner, contact name if different, mailing address, daytime phone number, WRIA, Certificate, number of service connections, source name, Washington State Department of Health number, annual quantity used including units of measure, maximum rate of withdrawal including units of measure, monthly meter readings including unit of measures, purpose of use, and period of use. In the future, Ecology may require additional parameters to be reported or more frequent reporting. Ecology prefers web based data entry, but does accept hard copies. Ecology will provide forms and electronic data entry information.

Chapter 173-173 WAC describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition Ecology for modifications to some of the requirements. Installation, operation and maintenance requirements are enclosed as a document entitled "Water Measurement Device Installation and Operation Requirements".

Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the records of water use that are kept to meet the above conditions, and to inspect at reasonable times any measuring device used to meet the above conditions.

Report by: [Signature] 8-10-05
Scott Turner, Water Resources Program Date

FINDINGS OF FACT AND DECISION

Upon reviewing the above report, I find all facts relevant and material to the subject application have been thoroughly investigated. Furthermore, I find the change of water right as recommended will not be detrimental to existing rights and is not detrimental to the public welfare.

Therefore, I ORDER the additional points of withdrawal under Ground Water Application No. CG4-GWC445-D@1 be approved, subject to the existing rights and provisions specified in the foregoing report.

Signed at Yakima, Washington, this 11th day of August, 2005.

[Signature]
Robert F. Barwin, Section Manager
Water Resources Program
Central Region Office

Turner, Scott (ECY)

From: Jeff Louman [jlouman@hlacivil.com]
Sent: Tuesday, October 05, 2004 2:40 AM
To: Turner, Scott (ECY)
Cc: freds@omakcity.com
Subject: Re: City of Omak

Scott:

The draft Comprehensive Water Plan shows that there were 1814 service (2,300 ERUs) within the City in 2002. However, the City says they currently have 1946 water meters which they read monthly. This would equate to approximately 2,500 ERUs. It may be that some businesses have more than one meter but are considered as only one service account.

Regarding the instantaneous withdrawal rates at the various wells, the City proposes the following:

Leave all existing City wells - Source Nos. 1 (Eastside), 2 (Apple), 3 (Kenwood), 4 (Okoma), 6 (East Omak Park), and 7 (OWP No. 2) at their existing water rights instantaneous withdrawal rates,

New Source No. 8 (NE Omak) = maximum of 500 GPM,

Proposed New Source (Hicks Well) = maximum of 700 GPM, *660001-4754 6426176L*

Proposed New Source (Dean Well) = maximum of 500 GPM, and *64-25873L*

Proposed New Source (Powers Well) = maximum of 500 GPM.

Please confirm that this e-mail arrived and was understandable.

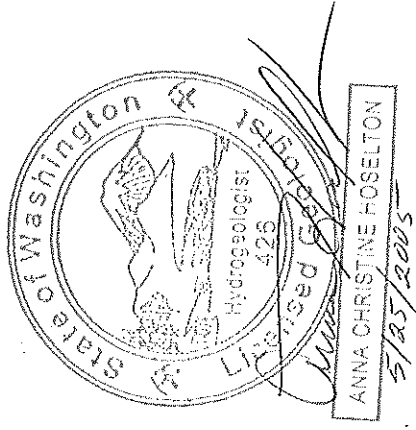
Thanks, Jeff

----- Original Message -----
From: Turner, Scott (ECY)
To: 'Jeffrey T. Louman (jlouman@hlacivil.com)'
Sent: Tuesday, October 05, 2004 3:23 PM
Subject: City of Omak

Good Morning,

One question and a request for you this morning. Page 11 of the 1994 Comprehensive Water Plan states that there were 1703 connections total served by the City. Is that true today? Or are there a more recent number of connections. And finally, have you spoken with the city guys regarding the instantaneous quantities they would need on each well.

Thanks



MEMORANDUM

Date: May 19th, 2005

To: File

From: Melissa Downes

Re: Hydrogeologic analysis for water right change applications by the City of Omak, file numbers CG4-GWC445-D@1, CG4-GWC446-D@3, CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1 and CG4-GWC7332-A@1. Analysis by Melissa Downes and reviewed by Anna Hoselton.

Hydrogeologic Setting:

This section describes in general terms the hydrogeology surrounding the City of Omak, Okanogan County, Washington. In this area, the Okanogan River flows in an overall southerly direction, however through the City of Omak the river takes a 90 degree bend to the west. Consequently, the City spans an area both north and south of the Okanogan River. Glacial terraces, located toward the north and west of the City, are a local remnant left by ancient ice sheets that once scoured the Okanogan River Valley. Sedimentary deposits, largely composed of glacial drift, glacial outwash, glaciolacustrine and more recent alluvial materials along with lesser amounts of glacial till, dune sands, and mass wasting materials, have in filled the ice scoured valley. The City of Omak is located near the western edge of the Okanogan Metamorphic Core Complex. Gneissic granodiorite, a meta-igneous rock of the Okanogan Core Complex, forms the valley walls to the south and east of the Okanogan River. To the north and west of the river, valley walls are composed of igneous rocks (dacite and quartz monzonite) and metasedimentary rocks of the Cave Mountain Formation. Thick glacial deposits obscure much of the described bedrock in the low lying areas; however more resistant bedrock knobs protrude through the glacial materials in places along the valley floor.

Well log data on file with Ecology indicates the glacial/alluvial sediments, which form the unconsolidated aquifer, consist of clays, silts, sands, gravels, glacial till, boulders, cobbles and hardpan/cemented gravel. Well log data also indicates this aquifer is bound at depth by bedrock, or what well drillers generally refer to as granite, a geologic description drillers applied to the various rock types that outcrop on both sides of the river. Sediment thicknesses range from approximately 14 feet to as much as 620 feet, with total thicknesses and/or depth to bedrock varying throughout the area. However, it appears that there is a thinning of sediments toward the southwest of Omak (section 34, T 34N, R26E), as many wells are completed into the underlying bedrock in this area. Well log data suggests that most wells surrounding the City of Omak encounter a varying sequence of sediments, suggesting sediment layers pinch out and are discontinuous throughout the area. The wide range of sediments and thicknesses contribute to heterogeneous aquifer characteristics; For example, areas in the unconsolidated aquifer where clays and silts are present will likely have lower permeabilities, hydraulic conductivities and well yields than areas encountering mostly sands and gravels. Well logs indicate well yields range from 20 gpm to 1630 gpm for wells utilizing glacial/alluvial materials. This range reflects varied sediments and aquifer characteristics throughout the Omak area. The low range of 20 gpm

begins to approach a small but notable difference from bedrock wells that tend to yield approximately 5-10 gpm or less. The unconsolidated aquifer is recharged by precipitation infiltrating into the surficial sediments and from interaction with the Okanogan River. Static water levels for the subject wells and other selected wells on file with Ecology, which are completed into surficial sediments, when corrected for elevation, indicate that ground water head levels correlate with river level elevations. This relationship suggests an exchange of flow between the ground water and surface water. Aquifer recharge and ground water levels tend to fluctuate as the hydrologic system responds to seasonal variations.

Impairment, Qualifying Ground Water Withdrawal Facilities, and Well Interference:

There are three concepts that are important when considering whether a withdrawal of water from a well would impair another existing water right. The concepts are defined as follows:

Impairment is an adverse impact on the physical availability of water for a beneficial use that is entitled to protection i.e. water rights that are both senior and junior in priority to the right the applicant seeks to change.

Qualifying ground water withdrawal facilities are defined as those wells which in the opinion of the Department are adequately constructed. An adequately constructed well is one that (a) is constructed in compliance with well construction requirements; (b) fully penetrates the saturated thickness of an aquifer or withdraws water from a reasonable and feasible pumping lift (WAC 173-150); (c) the withdrawal facilities must be able to accommodate a reasonable variation in seasonal pumping water levels; and (d) the withdrawal facilities including pumping facilities must be properly sized to the ability of the aquifer to produce water.

Well interference may occur when several wells penetrate and withdraw ground water from the same aquifer. Each pumping well creates a drawdown cone. When several wells pump from the same aquifer, well density, aquifer characteristics, and pumping demand may result in individual drawdown cones that intersect and form a composite drawdown cone. At any point in an aquifer, the composite drawdown caused by pumping wells will be greatly influenced by the transmissivity (T) of the aquifer. In aquifers with high Ts, composite drawdown will generally be much less than in aquifers with similar properties but with low Ts. Transmissivity is related to hydraulic conductivity (K) and the saturated thickness (b) of an aquifer by the relationship $T=Kb$.

An aquifer's hydraulic conductivity (K) is derived from the physical properties of both the fluid and geologic materials that form an aquifer. Once formed, an aquifer's saturated thickness (b) becomes important in evaluating its transmissivity. For regions of similar K in an aquifer, a large saturated thickness will result in a much higher T than a small saturated thickness. As a result, regions of similar K in an aquifer with a large saturated thickness will experience less composite drawdown or well interference than with a small saturated thickness.

Some conditions, however, will increase or steepen composite drawdown in an aquifer. For instance, where characteristics (such as very fine, clay-rich, or poorly sorted sediments) of an unconfined aquifer cause significant drawdown relative to the saturated thickness, the composite drawdown will increase as saturated thickness is reduced and T becomes smaller. Additionally,

in regions where negative or no-flow boundaries occur, such as near the edges of a valley fill aquifer where it is bounded by bedrock, composite drawdown will be steeper than in the central part (generally the greatest thickness region) of the aquifer. Consequently, it is commonly understood that the greatest composite drawdown or well interference is more likely to occur in regions of low transmissivities, thin saturated thicknesses and near negative or no-flow boundaries than in regions of high transmissivities, large saturated thicknesses, and away from negative or no-flow boundaries.

Hydrogeologic Analysis of the Site:

The City of Omak has multiple ground water rights and corresponding wells which collectively constitute their municipal water supply. The City submitted 6 change applications in 1994, requesting to add each of their existing municipal supply wells (5 existing wells) to each one of the following water rights G4-GWC445-D, G4-GWC446-D, G4-GWC1082-D, G4-GWC3655-A, G4-GWC3656-A and G4-GWC7332-A. The City submitted 6 additional change applications in 1998 requesting to add 4 proposed wells to each of the above water rights. Both requests would allow for greater flexibility in the City's water system operations. In total, if both sets of change applications are approved, the City would have the ability to withdraw water quantities from up to 9 wells from any of the above mentioned water rights, however each water right will not be allowed to exceed its historic water quantity. This analysis will address all six 1998 applications. These requests are in part due to two existing city wells, the Apple Well and Kenwood Well, being designated groundwater under the influence of surface water (GUI). As a result, the City currently classifies these two wells as emergency use wells only.

The table below delineates the suite of water rights, existing wells, corresponding annual water quantities, instantaneous water quantities, depth of wells and corresponding static water levels.

Well Name	Original Water Right No.	Instantaneous Quantity Qi (gpm)	Annual Quantity Qa (afy)	Depth of Well (ft)	Static Water Level swl (ft)
Kenwood	445-D	500	600	26	16.5
Apple	446-D + 3656-A	1175	696	29	10.0
Eastside	1082-D + 3655-A	2930	3510	40	28.5
Okoma	7332-A	600	560	105	8.75
OWP #2	G4-31525P	Interruptible 5000	3500*	69	38.75
Hicks		700		247	150
Dean		500		312	212
#9 (NE Omak)		500		295	203
Proposed Powers		500			
* This quantity is not additive and furthermore this permit limits the Qa under all the city's water rights not to exceed 3500 afy.					

The City voluntarily capped the instantaneous water quantity at each well, to reduce the risk of impairing existing water rights in close proximity. To clarify, the instantaneous quantity at each

well is limited to the aforementioned quantity stated in the table. The combined annual water quantity that would be allowed to be withdrawn from any combination of wells, should the change be approved, is 3500 afy, as stated in G4-31525P.

Discussion of Existing Wells:

The Kenwood well is located approximately 1100 feet north and 600 feet east of the south quarter corner of Section 26, T34N, R26E, and approximately 50 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was designated GUI by the Washington State Department of Health (DOH). The Kenwood well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 20 feet below ground surface (bgs). However the well log on file with Ecology indicates the well is 14 feet in diameter and completed to a depth of 26 feet 2 inches bgs. These discrepancies, as well as discrepancies in other well documents described subsequently in the report, are likely the result of information being passed down through comprehensive water plans over the years rather than well alteration (Louman, 2005). The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 16.5 feet was recorded at the time of drilling, December 1913. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 500 gallons per minute (gpm) and 7 feet of drawdown in the well were also reported. If approved the proposed changes would allow the Kenwood well to withdraw up to 500 gpm, in emergency situations.

The Apple well is located approximately 800 feet north and 200 feet east of the south quarter corner of Section 26, T34N, R26E, and approximately 80 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was also designated GUI by DOH. The Apple well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 10 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is completed to 29 feet bgs. The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 10 feet 4 inches was recorded at the time of drilling, February 1936. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 800 gpm and 10 feet 4 inches of drawdown in the well were also reported. If approved, the proposed changes would allow the Apple well to withdraw up to 1175 gpm, in emergency situations.

The Eastside well is located approximately 800 feet north and 1170 feet west of the southeast corner of Section 35, T34N, R26E, and approximately 1900 feet east of the Okanogan River. This well is currently in use by the City and houses 4 turbine pumps which have a combined capacity to pump 2,800 gpm. The Eastside well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is 14 feet in diameter and completed to 40 feet 10 inches bgs. The materials encountered during drilling, as reported on the well log, include soil, rock and gravel, suggesting the well is completed into the

unconsolidated glacial/alluvial sediment aquifer. A static water level of 28 feet 6 inches was recorded during the time of drilling in 1944. However, a static water level of 12.4 feet was recorded by Ecology staff, via the City's real-time telemetry system, during a site visit on July 28, 2004. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. The telemetry system also indicated the Eastside well was pumping at a rate of 1488 gpm at the time. A yield of 1630 gpm and 1 foot of drawdown in the well was also reported on the well log. Mike Ervin, City of Omak Water Department Chief Operator, indicated during the site visit that the Eastside well shuts off when the storage reservoir is full, as opposed to shutting off because the water level in the well has dropped. If approved, the proposed changes would allow the Eastside well to withdraw up to 2930 gpm.

The Okoma well is located approximately 660 feet south and 520 feet west of the east quarter corner of Section 34, T34N, R26E, and approximately 2300 feet west of the Okanogan River. This well is currently in use by the City and is equipped with one turbine pump, which has the capacity to pump 500 gpm. The well log on file with Ecology indicates the Okoma well is 16 inches in diameter, completed to a depth of 105 feet bgs and screened from 55 feet to 90 feet bgs. Materials encountered during drilling include clay, silt, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 8 feet 9 inches was recorded at the time of drilling, winter 1988-1989. However, Mike Ervin informed Ecology staff during the site exam the current static water level is approximately 13 feet bgs and the pumping water level is approximately 32 feet bgs. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A well test performed by the driller and reported on the well log indicated a yield of 350 to 400 gpm with 69.3 feet of drawdown in the well after 13.5 hours. This well is located in an area where the aquifer thins, therefore the well is producing as expected, meaning it is producing less than other city wells which are located in areas where the aquifer is thicker. The steep drawdown could also be explained in combination with well efficiency, well construction and/or development and the 18 feet of silt with clay encountered in the well. If approved, the proposed changes would allow the Okoma well to withdraw up to 600 gpm.

The OWP#2 well is located approximately 1210 feet north and 530 feet west of the southeast corner of Section 35, T34N, R26E, and approximately 2600 feet east of the Okanogan River. This well is currently in use by the City, which is leased from Omak Wood Products. The OWP#2 well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, is 24 inches in diameter, completed to a depth of 69 feet bgs, cased to a depth of 44 feet bgs and screened from 44 to 60 feet bgs. An additional inner well screen was installed from 46 to 69 feet bgs during well rehabilitation in July of 1996. Materials encountered during drilling include silt, sand, gravel and cobbles, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 38.75 was recorded in a schematic of the well located within the Comprehensive Water Plan, while a static water level of 36.5 feet was recorded during rehabilitation. According to the well log on file with Ecology, a well test was performed during rehabilitation with a maximum yield of 2500 gpm and 3.8 feet of drawdown in the well after 5.5 hours. The City's telemetry system indicated the OWP#2 well was pumping at a rate of 1341 gpm at the time of the site visit, July 2004. If approved, the proposed changes

would allow the OWP#2 well to withdraw up to 5,000 gpm. Note, the water right associated with this well is interruptible and subject to instream flows on the Okanogan River.

Hydrogeologic Analysis of Proposed Well Sites:

The Hicks well is located approximately 275 feet south and 1000 feet east from the northwest corner of Section 25, T34N, R26E, and approximately 4000 feet north of the Okanogan River. The City is proposing to acquire this well from the current property owner, Marlene (Hicks) Rawley, during 2005, according to the City of Omak Comprehensive Water Plan (Preliminary) 2004. This well does not appear to be associated with a state issued water right. As indicated by the proposed use on the water well report on file with Ecology, the well was constructed for domestic purposes. The Hicks well is 8 inches in diameter and completed to a depth of 247 feet bgs. Materials encountered during drilling include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 150 feet was recorded at the time of drilling, April 1998. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A 4-hour spring season pump test performed by Irrigation, Technology and Control indicated a pumping rate of 600+ gpm with 8 feet of drawdown in the well after 4 hours. It appears that stabilization occurred quickly during recovery, as the pre-pumping static water level was achieved within 3 seconds of shutting off the pump. If approved, the proposed changes would allow the Hicks well to withdraw up to 700 gpm.

The #9 well also known as the NE Omak well is located approximately 1275 feet north and 100 feet west of the southeast corner of Section 24, T34N, R26E, and approximately 5800 feet west of the Okanogan River. This well was authorized as an additional source for water right no. GWC-446-D on December 7th, 2000, and is currently in use. The City had the well constructed in July 2001. The well log on file with Ecology indicates the well is 12 inches in diameter, completed to a depth of 295 feet bgs, screened from 268 to 282 feet bgs, and gravel packed from 200 to 295 feet bgs. Materials encountered during drilling include clay, silt, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 203 feet was recorded at the time of drilling, July 2001. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A 24-hour pump test performed by Arcadia Drilling Inc. on July 16, 2001, indicated a pumping rate of 120 – 132 gpm with 59.5 feet of drawdown in the well after 24 hours. It appears that the pre-pumping static water level was achieved within 2 hours of shutting off the pump. Explanations for the steep drawdown in this well could be any combination of the well efficiency, well construction and/or development and the significant quantity of silt and clay materials encountered compared to any of the previously described wells. The city would like to eventually increase the capacity of this well. If approved, the proposed changes would allow well #9 to withdraw up to 500 gpm.

The Dean well is located approximately 1625 feet north and 225 feet east of the southwest corner of Section 19, T34N, R27E, and approximately 5400 feet west of the Okanogan River. The City is proposing to acquire this well during 2005 as well. This well appears to be associated with water right no. G4-28873C, however, Ecology does not have a water well report on file for this well. The water right documents refer to the dimensions of the Dean (irrigation) well as being 8

inches in diameter and 312 feet deep. These documents also refer to a domestic well located on the Dean property within approximately 50 feet of the irrigation well, reportedly with a depth of 335 feet deep, however a water well report is also unavailable for this well. Mr. Dean reported at the time, spring 1987, that the irrigation and domestic wells had the same static water level of 212 feet bgs. When corrected for elevation, the reported static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. The City of Omak's NE Omak well is located approximately 500 feet southwest of the proposed well location and has a depth of 295 feet, a static water level of 203 feet bgs and encountered clay, silt, sand and gravel materials during drilling. It is likely that the Dean (irrigation) well penetrates similar materials within the same aquifer, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. If approved, the proposed changes would allow the Dean well to withdraw up to 500 gpm.

The proposed Powers well has not been drilled at this time; however the City has proposed the well be located within the NE $\frac{1}{4}$, NE $\frac{1}{4}$ of Section 26, T34N, R26E. Note, this location is a $\frac{1}{4}$ section west of the Hicks well. Well logs on file with Ecology in the same quarter section as the proposed Powers well, indicate the sediments encountered locally include clay, silt, sand and gravel and the sediments are at least 350 feet deep. The proposed well shall be completed into the glacial/alluvial aquifer to be considered the same body of ground water as the original wells. If approved, the proposed changes would allow the proposed Powers well to withdraw up to 500 gpm.

Some wells in and around the City of Omak terminate above the bottom of the unconsolidated aquifer and others utilize the full saturated thickness. Water well reports from wells terminating in bedrock (the bottom of the sediment aquifer) indicate a minimum sediment thickness of 38 feet in an area south of the City where the aquifer thins, while water well reports from wells terminating above the bottom of the aquifer suggest a sediment thickness up to 620 feet in areas. However, saturated thicknesses (b) throughout the area are much less than sediment thicknesses and range from approximately 10 feet south of the city where the aquifer thins, to 393 feet north of the city in the area of the proposed well locations. Saturated thickness (b) is 97 feet for the Hicks well, 92 feet for well #9 and estimated to be 100 feet for the Dean well. Since all these values approach 100 feet, the saturated thickness (b) for the subject wells will subsequently be referred to as 100 feet. In the area of the proposed wells, well reports indicate that the majority of wells terminate above the bottom of the aquifer and do not utilize the aquifer's full saturated thickness. Drillers have estimated yields for wells completed into the unconsolidated glacial/alluvial sediment aquifer to be between 20 and 1630 gpm. Based on the results of the pumping tests on the Hicks well and well #9, specific capacity was determined to be approximately 75 gpm per foot of drawdown and 2.7 gpm per foot of drawdown respectively. This noticeable difference is further evidence that the wide range of sediments and thicknesses contribute to heterogeneous aquifer characteristics. As noted above, well #9 encountered significantly more silts and clays than the Hicks well, likely contributing to its lower well yield and specific capacity. Transmissivities (T) also vary greatly due to the heterogeneous nature of the aquifer and are estimated to range from approximately 4,000 gallons per day per foot (gpd/ft) to 115,000 gpd/ft. Hydraulic conductivities (K), then, for a saturated thickness of 100 feet would range between 40 gallons per day per square foot (gpd/ft²) and 1150 gpd/ft².

Evaluation by Theis non-equilibrium equation coupled with image well theory to simulate aquifer boundary conditions at the Hicks and Powers well locations, using the upper value of hydraulic conductivity, indicates that at approximately 50 feet from a subject well, aquifer drawdown due to the maximum instantaneous pumping rate of 700 gpm (Hicks well) at 182 days, will be about 4 feet or less. However a more conservative analysis to simulate boundary conditions at well #9 and the Dean well locations, using a mid-range hydraulic conductivity of 600 gpd/ft², indicates that at approximately 50 feet from a subject well, aquifer drawdown due to maximum instantaneous pumping rate of 500 gpm at 182 days, will be about 10 feet or less. A mid-range K value was used in the analysis because 600 gpd/ft² is still a conservative value when compared to literature K values of 1 to 5,000 gpd/ft² for silty sand, the materials being utilized in well #9, (Freeze & Cherry, 1979). The analyses were run at 182 days (half a year) under the assumption that the proposed wells would not be running for 365 days (a full year) continuously. If a subject well is pumped in cycles or if it is pumped at less than the maximum instantaneous quantity, the predicted effect(s) would be reduced. Total annual water quantities will not be increasing from the aquifer, however by adding the proposed wells to the suite of water rights, the overall pumping effects will be spread over a broader area within the aquifer. With the closest known well located approximately 50 feet from the Dean well and even further distances from the other subject wells, composite drawdown/well interference which may occur is not expected to be significant

Relationship between the Original Source and Proposed Source:

In order to transfer or add a well to an existing water right, “the additional or replacement well or wells shall tap the same body of public ground water as the original well or wells,” as stated in Chapter 90.44.100(2a) RCW. The subject wells tap the unconsolidated glacial/alluvial sediment aquifer and are not separated from each other or the original wells by a hydraulic barrier, such as a fault. Therefore, all four subject wells are considered to utilize the same body of ground water as the original five wells.

References:

- Freeze, R.A. and Cherry, J.A. 1979. Groundwater. Upper Saddle River, NJ: Prentice Hall.
- Gulick, C.W. and Korosec, M.A. 1990. Geologic Map of the Omak 1:100,000 Quadrangle, Washington. Washington Division of Geology and Earth Resources. Open File Report 90-12.
- Huibregtse, Louman Associates, Inc. 2004. City of Omak Comprehensive Water Plan (Preliminary), Project No. 03018. Ecology received date September 28, 2004.
- Louman, Jeff (with Huibregtse, Louman Associates, Inc, the City of Omak’s consulting engineers). 2005. Personal Communication May 3, 2005.
- United States Department of Interior, Bureau of Reclamation. 1989. Seismotectonic Evaluation, Northwest Rocky Mountains – Okanogan Uplands Geomorphic Province.



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

October 28, 2004

Dale Sparber
City of Omak
P.O. Box 72
Omak, Washington 98841-0072

Re: Ground Water Application Nos. CG4-GWC445-D@1, CG4-GWC446-D@3,
CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1 and
CG4-GWC7332-A@1

We acknowledge receipt of affidavit of publication of notice in connection with the above numbered applications.

The water codes require that no action be taken until after the expiration of a thirty (30) day period from the last date of publication. This time period allows concerned citizens to file any protests or objections to your proposed water use.

An examination of your applications will be made along with other applications located in your vicinity. It may be some time before this is done, due to the large backlog of applications. Please be aware that you are not authorized to proceed with development of your proposed water system until you receive written authorization from this office.

If you have any questions or concerns about any of this information, please call Scott Turner of the Department of Ecology at (509) 457-7106.

Sincerely,

Erin C. Gutierrez

Erin Gutierrez
Water Resources Program

EG:hd
041053

PLEASE ADVISE THIS OFFICE OF ANY ADDRESS CHANGE

pa-12.doc





State of Washington In the Heart of the Okanogan

Dale Sparber, Mayor
2 North Ash
(509) 826-1170
P.O. Box 72
Omak, WA 98841
Fax: 509-826-6531
info@omakcity.com

October 6, 2004



Department of Ecology
Erin Gutierrez
15 West Yakima Avenue
Suite 200
Yakima, WA. 98902-3452

Re: Applications for Change No. CG4-GWC445-D@1, CG4-GWC446-D@3,
CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1,
CG4-GWC7332-A@1

Enclosed is the notarized original Affidavit of Publication the amended notice of application for change of the Omak City water rights. This publication was published in two consecutive weeks 9/22/04 and 9/29/04.

If you have further questions, please contact our office at 509-826-1170.

Sincerely,

Connie Thomas
Utility Billing Clerk

enclosure

Note: changes were made to
PN from what was mailed to
City of Omak 8/25/04 - Permit
writer Scott Turner okay'd
the aff. of Pub.

EG-10-27-04

(2004-369 Sept. 22 & 29)
STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
YAKIMA, WASHINGTON

AMENDED NOTICE OF APPLICATIONS FOR CHANGE OF THE OMAK CITY WATER RIGHTS

TAKE NOTICE:

Consolidated Notices of Applications to Change to change the point of diversion (replace) or add a point of withdrawal (add) under the City of Omak Water Rights detailed below. These requests were submitted November 24, 1998 except for change to Certificate No. 446-D which was submitted August 4, 2004. They are part of the City of Omak Water System. The proposed wells are to be located within the SE1/4SE1/4 of Section 24, NW1/4NW1/4 of Section 25, and NW1/4SW1/4 of Section 19 NE1/4NE1/4 of Section 26, all in T. 34 N., R. 26 E.W.M.

Rights and proposed change:

Add or replace wells under Certificate No. 445-d with priority date of December 1913 for 500 gpm, 600 acre-feet per year for municipal supply from a well (Kenwood) located in the SW1/4SE1/4 Section 26, T. 34 N., R. 26 E.W.M.

Add or replace wells under Certificate No. 446-d with priority date of March 1936 as changed by Change Authorization No. CG4-GWC446-D @1 for 800 gpm, 96 acre-feet per year for municipal supply from a well (Apple) located in the SW1/4SE1/4 of Section 26, and the new well located within the SE1/4SE1/4 of Section 24, T. 34 N., R. 26 E.W.M.

Add wells under Certificate No. 1082-D with priority date of May 1944 for 1630 gallons per minute (gpm), 1430 acre-feet per year for municipal supply from a well (Eastside) located in the SE1/4SE1/4 Section 35, T. 34 N., R. 26 E.W.M.

Add wells under Certificate No. 3655-A with priority date of March 20, 1958 for 1300 gpm, 2080 acre-feet per year for municipal supply from a well (Eastside) located in the SE 1/4SE1/4 Section 35, T. 34 N., R. 26 E.W.M.

Add or replace wells under Certificate No. 3656-A with priority date of March 20, 1958 for 375 gpm, 600 acre-feet per year for municipal supply from a well (Apple) located in the SW 1/4SE1/4 Section 26, T. 34 N., R. 26 E.W.M.

Add wells under Certificate No. 7332-A with priority date of June 22, 1970 for 600 gpm, 560 acre-feet per year for municipal supply from May 1 through October 31 from a well (Eastside) located in the SE1/4SE1/4 Section 35, T. 34 N., R. 26 E.W.M.

Even though the public notices have been combined, each water right change request will be evaluated on its own merits. Protests or objections against the change of any of these rights should be filed separately by water right, must include a detailed statement of the basis for objection. All letters of protest will become public record. Each protest must be accompanied by a \$2.00 recording fee (check or money order only) and filed with the Department of Ecology, 15 W. Yakima Avenue, Suite 200, Yakima, WA 98902-3452, within thirty (30) days from: September 29, 2004.

Published by The Omak-Okanogan County Chronicle.

Affidavit of Publication

STATE OF WASHINGTON ss.
County of Okanogan

The undersigned, being duly sworn on oath, deposes and says that she is the principal clerk of the Omak-Okanogan County Chronicle, a weekly newspaper, that she is duly authorized to make this affidavit; that said newspaper is a legal newspaper and has been approved as a legal newspaper by order of the Superior Court in the county in which it is published and it is now and has been for more than six months prior to the date of publications hereinafter referred to, published in the English language continuously as a weekly newspaper in Omak, Okanogan County, Washington, and it is now and during all of said time was printed in an office maintained at 618 Okoma Drive, the place of publication of said newspaper. That the annexed is a true copy of

Amended Notice applicati

as it was published in regular issues (and not in supplement form) of said newspaper on the following dates:

09/22/04, 09/29/04

and that such newspaper was regularly distributed to its subscribers during all of said period. The full amount of the fee charged for the foregoing publication is the sum of \$ 246.40 at the rate of \$7.95 per column inch.

Elizabeth D. David

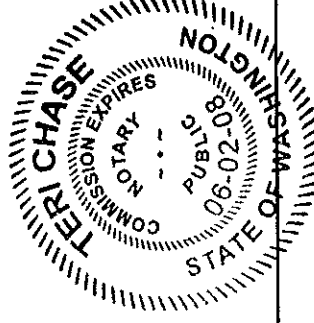
Principal Clerk

Subscribed, and sworn to before me 9-29-04

Notary Public in and for the State of Washington

Residing at Mary Washington

SEAL



OK
10-27-04

RECEIVED

SEP 30 2004

CITY OF OMAK



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

August 25, 2004

Dale Sparber
City of Omak
PO Box 72
Omak WA 98841-0072

RE: Applications for Change No. CG4-GWC445-D@1, CG4-GWC446-D@3, CG4-GWC1082-D@1,
CG4-GWC3655-A@1, CG4-GWC3656-A@1, CG4-GWC7332-A@1

This letter is regarding your applications for change for appropriation of water. Please refer to the above-assigned application numbers if you contact us as it will help us serve you more quickly.

Please complete the following two steps:

1. Enclosed is a combined notice of your applications for change, which must be published once a week for two consecutive weeks in a newspaper published in Okanogan County. The newspaper should have general circulation in the locality where the water is to be diverted and used, and must be qualified as a legal newspaper. Publishing the notice in a remote part of the county, when not necessary, may be cause for you to be required to republish the notice in a designated newspaper. The enclosed newspaper list may help you select an appropriate newspaper for the area.

Publication should start within 30 days from the date of this letter.

To assure accuracy, it is your responsibility to check the notice carefully before having it published. If an error is detected, please contact this office for correction and/or resolution. If we later find an error in your public notice, you will be required to re-publish an amended notice.

2. After publication, the publishing newspaper should provide you with a notarized original Affidavit of Publication, which should be forwarded to our office as soon as possible. Please do not send a photocopy of the affidavit.

If you do not wish to proceed with the project, please let us know and we will reject the application. If your plans have changed from what is described in the public notice, you may need to file a new change and, in some cases, arrange for a site visit.

If you have questions or concerns about this information, please call Scott Turner at (509) 457-7106. Thank you for your attention to this matter.

Sincerely,

Erin C. Gutierrez

Erin Gutierrez
Water Resources Program

040816/eg
Enclosures: Public Notice
Newspaper List

pn-3 WRIA



FILE COPY



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
YAKIMA, WASHINGTON

AMENDED NOTICE OF APPLICATIONS FOR CHANGE OF THE OMAK CITY WATER
RIGHTS

TAKE NOTICE:

Consolidated Notices of Applications to Change to change the point of diversion (replace) or add a point of withdrawal (add) under the City of Omak Water Rights detailed below. These requests were submitted November 24, 1998 except for change to Certificate No. 446-D which was submitted August 4, 2004. They are part of the City of Omak Water System. The proposed wells are to be located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 24, NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 25, and SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 19, all in T. 34 N., R. 26 E.W.M.

Rights and proposed change:

Add or replace wells under Certificate No. 445-D with priority date of December 1913 for 500 gpm, 600 acre-feet per year for municipal supply from a well (Kenwood) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M.

Add or replace wells under Certificate No. 446-D with priority date of March 1936 as changed by Change Authorization No. CG4-GWC446-D@1 for 800 gpm, 96 acre-feet per year for municipal supply from a well (Apple) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 26, and the new well located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 24, T. 34 N., R. 26 E.W.M.

Add wells under Certificate No. 1082-D with priority date of May 1944 for 1630 gallons per minute (gpm), 1430 acre-feet per year for municipal supply from a well (Eastside) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M.

Add wells under Certificate No. 3655-A with priority date of March 20, 1958 for 1300 gpm, 2080 acre-feet per year for municipal supply from a well (Eastside) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M.

Add or replace wells under Certificate No. 3656-A with priority date of March 20, 1958 for 375 gpm, 600 acre-feet per year for municipal supply from a well (Apple) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M.

Add wells under Certificate No. 7332-A with priority date of June 22, 1970 for 600 gpm, 560 acre-feet per year for municipal supply from May 1 through October 31 from a well (Eastside) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M.

Even though the public notices have been combined, each water right change request will be evaluated on its own merits. Protests or objections against the change of any of these rights should be filed separately by water right, must include a detailed statement of the basis for objections. All letters of protest will become public record. Each protest must be accompanied by a \$2.00 recording fee (check or money order only) and filed with the Department of Ecology, 15 W. Yakima Avenue, Suite 200, Yakima, WA 98902-3452, within thirty (30) days from:

(last date of publication to be entered above by the publisher)



State of Washington In the Heart of the Okanogan

Dale Sparber, Mayor

2 North Ash
(509) 826-1170
P.O. Box 72
Omak, WA 98841
Fax: 509-826-6531
info@omakcity.com

July 29, 2004

Washington Department of Ecology
Water Resources Program
15 West Yakima Avenue, Suite 200
Yakima, WA 98902-3452

Attn: Phil Crane
Water Resources Program

Re: City of Omak
Water Rights Change Application - Additional Points of Withdrawal

Dear Mr. Crane:

The City of Omak requests that the following water rights change applications, previously submitted to W.D.O.E. in November 1998, be amended with the addition of two additional points of withdrawal:

CG4-GWC445-D@1
CG4-GWC1082-D@1
CG4-GWC3655-A@1
CG4-GWC3656-A@1
CG4-GWC7332-A@1

The two additional points of withdrawal are identified as the "Hicks Well", located in the Northwest Quarter, Northwest Quarter Section 25, Township 34 North, Range 26 East, W.M. and the "Dean Well", located in the Southwest Quarter, Southwest Quarter Section 19, Township 34 North, Range 26 East, W.M.

Additionally, the City is submitting the enclosed new Application for Change/Transfer of Water Right requesting the addition of the Hicks Well" and the "Dean Well" as additional points of withdrawal to Ground Water Rights Certificate 446-D.

Thank you for your consideration of these water rights changes. Should you have any questions, please contact the City's engineering consultant, Mr. Jeffrey T. Louman, PE at (509) 966-7000.

Very truly yours,

Dale Sparber

Dale Sparber
Mayor, City of Omak

Enclosure: Application for Change of Water Right (Additional Points of Withdrawal)

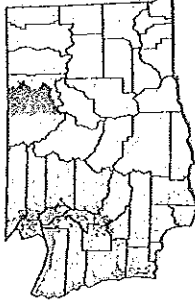




STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

January 12, 2004



Your address
is in the
Okanogan
watershed

City of Omak
PO Box 72
Omak WA 98841-0072

Dear Applicant:

RE: Water Right Change Applications No. CG4-GWC445-D, CG4-GWC446-D,
CG4-GWC1082-D, CG4-GWC3655-A, CG4-GWC3656-A, CG4-GWC7332-A,
CG4-GWC445-D@1, CG4-GWC1082-D@1, CG4-GWC3655-A@1,
CG4-GWC3656-A@1, CG4-GWC7332-A@1, CG4-31525

This letter is regarding water right change applications that you submitted to the Department of Ecology. The Department is beginning to process water right change applications within Okanogan County (Water Resource Inventory Area 49).

Enclosed are copies of the public notices for the change applications that you submitted. Due to the time lag in our processing these applications, we would like to verify your interest in proceeding with the projects as described in the public notices.

If you do not wish to proceed with the projects, please let us know and we will reject the applications. If your plans have changed from what was described in the public notices, you may need to file new change applications. Ecology staff will be contacting you to discuss the proposed changes and, in some cases, arrange for a site visit.

To contact us, you may call Bryce Bealba in this office at (509) 575-2597.

Sincerely,

Randall Doneen
Unit Supervisor
Water Resources Program

RD:TM:reg
040118

Enclosures: Copies of Affidavits of Public Notice

FILE COPY





STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

15 West Yakima, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

April 8, 1999

The Honorable E Walt Smith
Mayor of Omak
PO Box 72
Omak WA 98841-0072

RE: **City of Omak** - No. G4-31525P, and consolidated public notice for changes on files No. CG4-GWC445-D@1, CG4-GWC446-D@1, CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1, and CG4-GWC7332-A@1

In review of the consolidated public notice to add Well #9 to each of 7 water rights, I discovered that Notice of Beginning of Construction (bc) has not been submitted on Ground Water Permit No. G4-31525P. There are notes that there may have been construction problems with a well constructed under that permit. The bc was due May 1, 1995. A request for extension should be submitted and the filing of the bc if appropriate.

Enclosed for your use is a bc form.

We consider construction started when you have taken steps to develop the source or taken steps to be able to withdraw water from the source and completed if you have installed a system capable of delivering the quantity of water you will be using, (mainline laid, pump installed) for the permitted use to the place of use. Full beneficial use is when the water has been put to the intended use within the limits of the permit.

The letter requesting extension should address:

1. Efforts made since the permit issued to begin and complete construction.
2. An anticipated time schedule for completing construction of the water system.
3. Any additional remarks concerning your project that will assist us in making our decision of whether to keep the permit alive.

The request for extension needs to be accompanied by the extension fee. Submit the fee either by check or money order made payable to the Department of Ecology. The extension fee required to cover from May 1995 to May 1999 for this permit is \$40.00. An additional \$10.00 would be required if you needed an additional year to May 2000 in which to begin construction.

 **FILE COPY** 

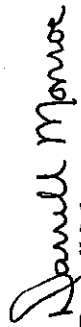
E Walt Smith
RE: City of Omak
Page 2
April 8, 1999

The Department will have to defend its decision to work on your applications for change out of priority date sequence. Please add a discussion as to why there is a critical need for Well #9 when there is a large quantity (5000 gpm) undeveloped permitted pair of wells authorized (assuming an extension is granted) to serve the area.

Thank you in advance for your early attention to this matter.

I hope you find this information of assistance. Feel free to contact me at (509) 457-7143 if you have questions. There is an answering system at that number to cover times when I am away from my desk.

Sincerely,


Darrell Monroe
Water Resources Program

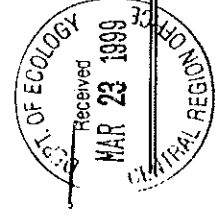
DM:gh
990410

Enclosure: Notice of Beginning of Construction

copy: Jeff Louman

Files: G4-31525P, CG4-GWC445-D@1, CG4-GWC446-D@1, CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1, CG4-GWC7332-A@1

2017



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
YAKIMA, WASHINGTON
NOTICE OF APPLICATIONS
FOR CHANGE OF THE OMAK
CITY WATER RIGHTS
TAKE NOTICE:

Consolidated Notices of Applications to Change to change the point of diversion (replace) or add a point of withdrawal (add) under the City of Omak Water Rights detailed below. The City is seeking expedited evaluation under WAC 173-152 for the change proposed for the water rights associated with their Apple and Kenwood wells. The Apple and Kenwood wells are being evaluated by Department of Health for risk of contamination due to influence of surface water.

These seven requests were submitted November 24, 1998. They are part of the City of Omak Water System. The proposed new well (#9) is to be located within the SE 1/4 SE 1/4 Section 24, T. 34 N., R. 26 E., W.M.

Rights and proposed change:
Add or replace well under Certificate No. 445-D with priority date of December 1913 for 500 gpm, 600 acre-feet per year for municipal supply from a well (Kenwood) located in the SW 1/4 SE 1/4 Section 26, T. 34 N., R. 26 E., W.M.

Add or replace well under Certificate No. 446-D with priority date of March 1936 for 800 gpm, 96 acre-feet per year for municipal supply from a well (Apple) located in the SW 1/4 SE 1/4 Section 26, T. 34 N., R. 26 E., W.M.

Add well under Certificate No. 1082-D with priority date of May 1944 for 1630 gallons per minute (gpm), 1430 acre-feet per year for municipal supply from a well (Eastside) located in the SE 1/4 SE 1/4 Section 35, T. 34 N., R. 26 E., W.M.

Add well under Certificate No. 3655-A with priority date of March 20, 1958 for 1300 gpm, 2080 acre-feet per year for municipal supply from a well (Eastside) located in the SE 1/4 SE 1/4 Section 35, T. 34 N., R. 26 E., W.M.

Add or replace well under Certificate No. 3656-A with priority date of March 20, 1958 for 375 gpm, 600 acre-feet per year for municipal supply from a well (Apple) located in the SW 1/4 SE 1/4 Section 26, T. 34 N., R. 26 E., W.M.

Add well under Certificate No. 7332-A with priority date of June 22, 1970 for 600 gpm, 560 acre-feet per year for municipal supply from May 1 through October 31 from a well (Eastside) located in the SE 1/4 SE 1/4 Section 35, T. 34 N., R. 26 E., W.M.

Add well under Superceding Ground Water Permit No. G4-31525P with priority date of November 23, 1992 for 5000 gpm, 3500 acre-feet per year for municipal supply from 2 wells (Omak Wood Products) located in the SE 1/4 SE 1/4 Section 35, T. 34 N., R. 26 E., W.M.

Even though the public notices have been combined, each water right change request will be evaluated on its own merits. Protests or objections against the change of any of these rights should be filed separately by water right. must include a detailed statement of the basis for objections. All letters of protest will become public record. Each protest must be accompanied by a \$2.00 recording fee and filed with the Department of Ecology, 15 W. Yakima Avenue, Suite 200, Yakima, WA 98902, within thirty (30) days from March 10, 1999.

Published by The Omak-Okanogan County Chronicle.
1999-Mar-30

Affidavit of Publication

STATE OF WASHINGTON ss.
County of Okanogan

The undersigned, being first duly sworn on oath, deposes and says that she is the principal clerk of the Omak-Okanogan County Chronicle, a weekly newspaper, that she is duly authorized to make this affidavit; that said newspaper is a legal newspaper and has been approved as a legal newspaper by order of the Superior Court in the county in which it is published and it is now and has been for more than six months prior to the date of the publications hereinafter referred to, published in the English language continuously as a weekly newspaper in Omak, Okanogan County, Washington, and it is now and during all of said time was printed in an office maintained at 618 Okoma Drive, the place of publication of said newspaper. That the annexed is a true copy of

Notice of Application for Change

as it was published in regular issues (and not in supplement form) of said newspaper once a week for a period of two consecutive weeks, commencing on the 3rd day of March, 19 99 and ending on the

10th day of March, 19 99, both dates inclusive, and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of \$ 162.00, which amount has been paid in full, at the rate of \$6.00 per column inch.

Elizabeth B. Caldwell
Principal Clerk

Subscribed and sworn to before me this 11th day of March, 19 99.

Kristin F. Vigoren
Notary Public in and for the State of Washington

Residing at im: LWA
SEAL
KRISTIN F. VIGOREN
STATE OF WASHINGTON
NOTARY --- PUBLIC
MY COMMISSION EXPIRES 12-02-02

OK for Notices
Protest Period ends 4/9/99
WRATS updated 4/6/99



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

15 West Yakima, Suite 200 • Yakima, Washington 98902 • (509) 575-2490

February 16, 1999

City of Omak
PO Box 72
Omak WA 98841-0072

RE: Applications for Change

We have received your applications for appropriation of water. Please complete the following two steps:

1. Enclosed is a notice of your applications, which must be published once a week for two consecutive weeks in a newspaper published in Okanogan County. The newspaper should have general circulation in the locality where the water is to be diverted and used, and must be qualified as a legal newspaper. Publishing the notice in a remote part of the county, when not necessary, may be cause for you to be required to republish the notice in a designated newspaper. The enclosed newspaper list may help you select an appropriate newspaper for the area.

Publication should start within 30 days from the date of this letter.

To assure accuracy, it is your responsibility to check the notice carefully before having it published. If you find an error, please contact this office for correction and/or resolution. If we later find an error in your public notice, you will be required to re-publish an amended notice.

2. After publication, the publishing newspaper should provide you with a notarized original Affidavit of Publication, which should be forwarded to our office as soon as possible. Please do not send a photocopy of the affidavit.

If you have any questions or concerns about any of this information, please call Darrell Monroe at (509) 457-7143. Thank you for your attention to this matter.

Sincerely,

Darrell Monroe

Darrell Monroe
Water Resources Program

DM:gh
990227a

Enclosures: Public Notice
Newspaper List

cc: Jeff Louman

pn-3.doc

FILE COPY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
YAKIMA, WASHINGTON

NOTICE OF APPLICATIONS FOR CHANGE OF THE OMAK CITY WATER
RIGHTS

TAKE NOTICE:

Consolidated Notices of Applications to Change to change the point of diversion (replace) or add a point of withdrawal (add) under the City of Omak Water Rights detailed below. The City is seeking expedited evaluation under WAC 173-152 for the change proposed for the water rights associated with their Apple and Kenwood wells. The Apple and Kenwood wells are being evaluated by Department of Health for risk of contamination due to influence of surface water.

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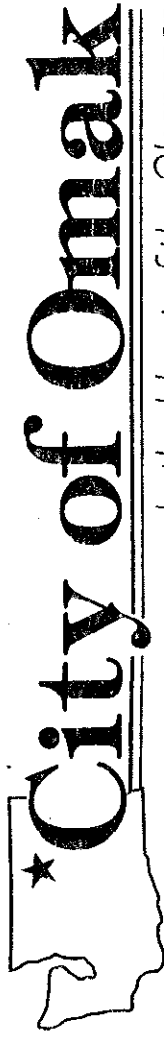
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Even though the public notices have been combined, each water right change request will be evaluated on its own merits. Protests or objections against the change of any of these rights should be filed separately by water right, must include a detailed statement of the basis for objections. All letters of protest will become public record. Each protest must be accompanied by a \$2.00 recording fee and filed with the Department of Ecology, 15 W. Yakima Avenue, Suite 200, Yakima, WA 98902, within thirty (30) days from:

(last date of publication to be entered above by the publisher)

990227

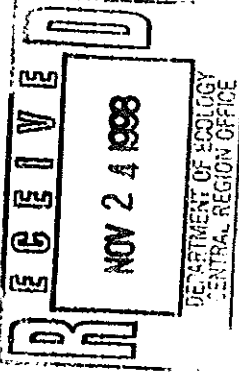


State of Washington — In the Heart of the Okanogan

2 N. Ash
(509) 826-1170

P.O. Box 72
Omak, WA 98841

E. Walt Smith
Mayor



November 23, 1998

Department of Ecology
Water Resources Program
15 West Yakima Avenue, #200
Yakima, WA 98901

Attn: Darryl Monroe

Re: City of Omak
Proposed Well No. 9

Dear Mr. Monroe:

The City of Omak has been attempting for the last two years to secure a new water well source as a replacement for two existing wells near the Okanogan River. These two existing wells, Well No. 2 - Apple, and Well No. 3 - Kenwood, are currently undergoing testing to determine whether they are under the influence of surface water from the Okanogan River. The Washington State Department of Health has encouraged the City to abandon or at least reduce its dependence on these two wells as a domestic supply to Omak's water system.

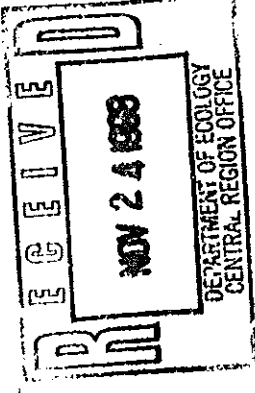
Recently, the City was approached by Hubbard Well Drilling regarding purchasing an existing well which they constructed in the Fall of 1997. Enclosed is a well log provided by Hubbard Drilling showing the construction of the existing well. It is our understanding the well was drilled with the anticipation of offering it for sale to the City of Omak. Please be advised that the City was not involved at any time with the construction of the well.

On November 17, 1997, you transmitted a letter to Mr. Clinton Watts regarding the unauthorized construction of a municipal well. You had understood at the time that the City of Omak was involved in the drilling activity. The City's engineering consultant, Mr. Jeff Louman, PE, of Huibregtse, Louman Associates, Inc., advised you at that time that Mr. Watts, although a City Councilmember, was not acting on behalf of the City.

The City originally rejected the offer to purchase this "Hubbard" well, as the price was not acceptable. The City of Omak continued to pursue the possible purchase of other existing wells in the area and the possibility of drilling a new well on its own. The recent offer by Hubbard Well Drilling to sell the well to the City was at an acceptable price. We have determined this new price to be comparable to the City purchasing property and drilling a new well in the same area. It has, therefore, been determined by the Omak City Council that purchasing the "Hubbard" well is in the best interests of the public.

check # 1177
\$70.00 TMM
11/24/98

For 7
Application
@ \$10 per
AP




The purchase of the "Hubbard" well is subject to it first being test pumped to determine its capacity. The City of Omak respectfully requests that the Department of Ecology grant its approval to test pump this "Hubbard" well. As the purchase of the well is dependent on this test pumping, we will appreciate any expedited decision so that we can proceed as early as possible. It is planned to have this new well "on-line" in the City's water system by early Summer 1999. Until this new source is in service, the northeast Omak upper pressure zone and new 560,000 gallon reservoir will be without water supply.

Enclosed are seven (7) Applications for Change of Water Rights and the required \$70.00 total application fee. These "Change" applications request adding this proposed new Well No. 9 (Hubbard Well) as an additional point of withdrawal to the City's existing water rights. The City is not requesting additional water rights volumes or withdrawal rates.

Should you have any questions, please contact Mr. Jeff Louman, PE, at telephone number (509) 966-7000. Your earliest consideration will be most appreciated.

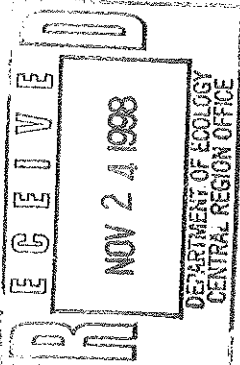
Very truly yours,


E. Walt Smith, Mayor
City of Omak

EWS/jk
OM6-64

Enclosures

copy: Huibregtse, Louman Associates, Inc.



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

APPLICATION FOR CHANGE OF WATER RIGHT

☐ PURPOSE ☐ DIVERSION OR WITHDRAWAL
☐ PLACE ☒ ADDITIONAL POINT OR POINTS

Accepted By _____
Date _____
Is Field Exam. Required? <input type="checkbox"/> YES <input type="checkbox"/> NO
Determined By _____

NAME City of Omak		Bus. Tel. (509) 826-1170	
		Home Tel. _____	
		Other Tel. _____	
ADDRESS P.O. Box 72		(CITY) Omak	(STATE) WA (ZIP CODE) 98841
APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER 445-D	
DECREED RIGHT (TITLE OF CASE)			

APPROPRIATIONS MADE (GIVE DATE IF PRIOR TO JUNE 7, 1917 IF SURFACE WATER, OR JUNE 7, 1945 IF GROUND WATER)

IS THE WATER RIGHT RECORDED IN YOUR NAME? ☒ YES ☐ NO IF NO, GIVE NAME RECORDED UNDER

1. RIGHT CONSISTS OF			
WATERS USED FROM (STREAM, LAKE, WELL, OR TRENCH, ETC.) Well No. 3- Kenwood (Formerly Well No. 1)		GALLONS PER MINUTE OR CUBIC FEET PER SECOND 500 GPM	
WATER CURRENTLY USED FOR Municipal Water Supply		TIME OF USE Emergency	
2. LOCATION OF PRESENT POINT OF DIVERSION OR WITHDRAWAL ENTER BELOW THE DISTANCES FROM THE NEAREST SECTION OR PROPERTY CORNER TO THE DIVERSION OR WITHDRAWAL 1100 ft. North and 600 ft. East of the South 1/4 Corner of Section 26.			
LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION) SW 1/4 of SE 1/4		SECTION 26	TOWNSHIP N. 34
		RANGE (E. OR W.) W.M. 26 E.	COUNTY Okanogan
IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, COMPLETE THIS SECTION			
LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)	

3. LEGAL DESCRIPTION OF LANDS WATER IS USED ON
City of Omak Water System Service Area

SECTION 3	TOWNSHIP N. 33	RANGE (E or W) W.M. 26 E.	COUNTY Okanogan
SECTION 19	TOWNSHIP N. 34	RANGE (E or W) W.M. 27 E.	COUNTY Okanogan
SECTION 23, 24, 25, 26, 27, 34, 35, 36	TOWNSHIP N. 34	RANGE (E. OR W.) W.M. 26 E.	COUNTY Okanogan
(ATTACH SEPARATE SHEET IF NECESSARY)			
ARE YOU THE LEGAL OWNER OF THE ABOVE DESCRIBED LANDS		IF NO, EXPLAIN YOUR INTEREST	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		Municipal Water Purveyor	

REASONS FOR THE PROPOSED CHANGE

Addition of one (1) new well to the City's existing water rights. The new well will potentially replace Wells No. 2 and 3 which are under investigation for surface water (Okanogan River) influence.

A MINIMUM FEE OF \$10.00 MUST ACCOMPANY THIS APPLICATION

CONTINUE ON REVERSE SIDE

CHANGE

4.

CHANGE WATER USE TO

TIME OF USE

Continuous

GALLONS PER MINUTE OR CUBIC FEET PER SECOND

1000

5.

LOCATION OF PROPOSED POINT OF DIVERSION OR WITHDRAWAL

ON ACCOMPANYING SECTION MAPS, ACCURATELY MARK AND IDENTIFY EACH POINT OF DIVERSION. SHOW NORTH-SOUTH AND EAST-WEST DISTANCES FROM NEAREST SECTION CORNER OR PROPERTY CORNER.

ALSO, ENTER BELOW THE DISTANCES FROM THE NEAREST SECTION OR PROPERTY CORNER TO THE DIVERSION OR WITHDRAWAL.

Approximately 1,200 ft North and 200 ft West of the Southeast Corner of Section 24.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)

SECTION

24

TOWNSHIP N.

34

RANGE (E. OR W.) W.M.

26 E.

COUNTY

Okanogan

6.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, COMPLETE THIS SECTION

LOT

BLOCK

OF (GIVE NAME OF PLAT OR ADDITION)

ARE YOU THE OWNER OF THE LAND ON WHICH THE PROPOSED POINT OF DIVERSION OR WITHDRAWAL IS TO BE LOCATED

☒ YES

☐ NO

The property is being acquired as part of the well purchase.

LEGAL DESCRIPTION OF LANDS WATER IS USED ON

City of Omak Water System Future Service Area as defined in the City of Omak

Comprehensive Water Plan.

SECTION	TOWNSHIP N.	RANGE (E or W) W.M.	COUNTY
3	33	26 E.	Okanogan
SECTION	TOWNSHIP N.	RANGE (E or W) W.M.	COUNTY
19	34	27 E.	Okanogan
SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.	COUNTY
23, 24, 25, 26, 27, 34, 35,	34	26 E.	Okanogan
36			

(ATTACH SEPARATE SHEET IF NECESSARY)

ARE YOU THE LEGAL OWNER OF THE ABOVE DESCRIBED LANDS

IF NO, EXPLAIN YOUR INTEREST

☐ YES

☒ NO

Municipal Water Purveyor

* PLEASE NOTE LEGAL LAND OWNER SIGNATURE AND APPLICANT SIGNATURE ARE BOTH REQUIRED. IF THE LEGAL LAND OWNER AND APPLICANT ARE THE SAME, PLEASE SIGN IN BOTH PLACES. THANK YOU.

City of Omak

E. WALT SMITH - MAYOR

LEGAL LANDOWNER (PLEASE PRINT)

APPLICANT'S SIGNATURE

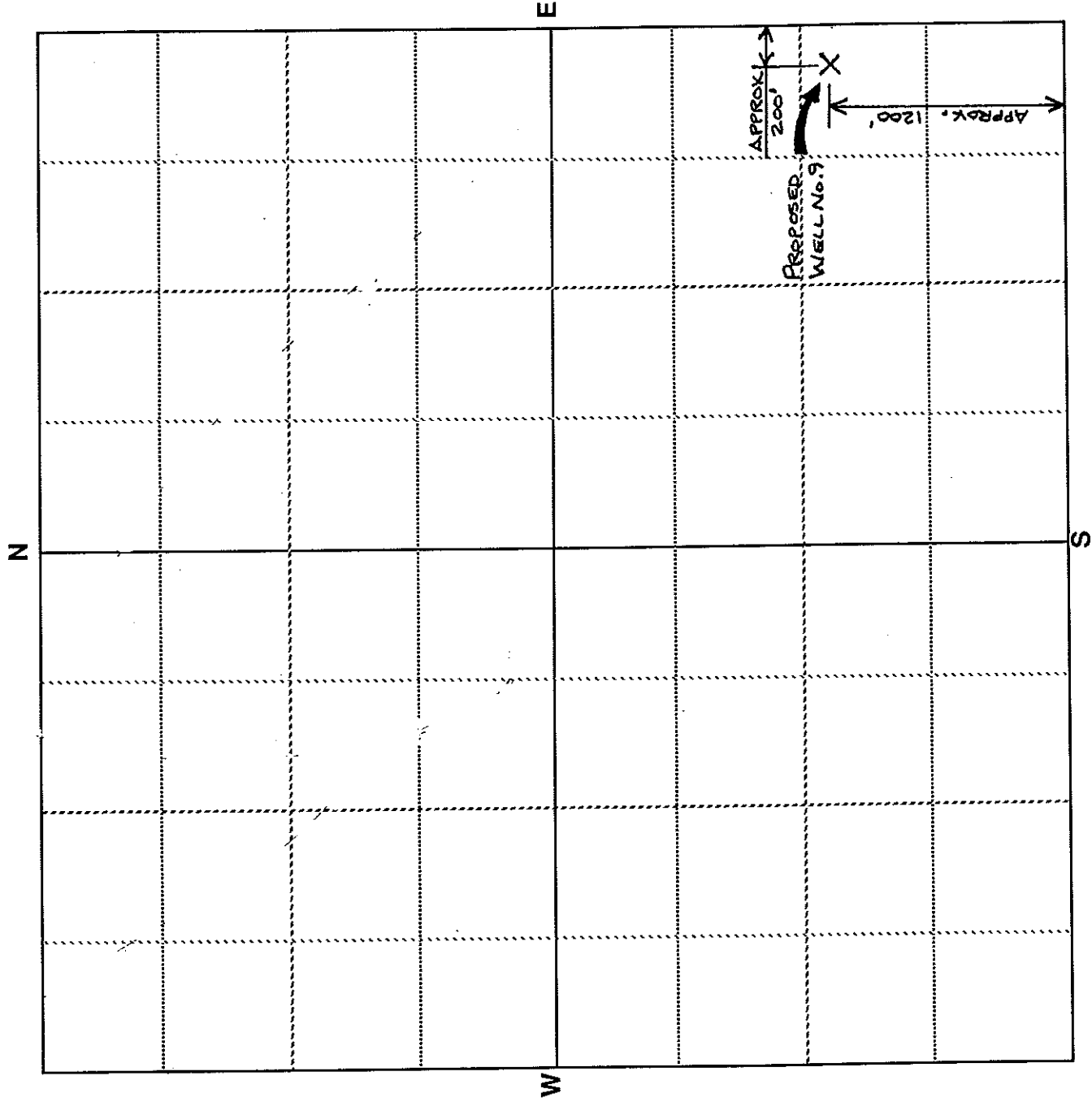
LEGAL LANDOWNER SIGNATURE (OWNER OF PROPERTY DESCRIBED IN ITEM NUMBER 3)

2 North Ash, Omak, Wa. 98841

LEGAL LANDOWNER'S ADDRESS

SECTION MAP

Sec. 24 Twp. 34 N.R. 26 E.W.M.



Scale: 1 inch = 800 feet (each small square = 10 acres)

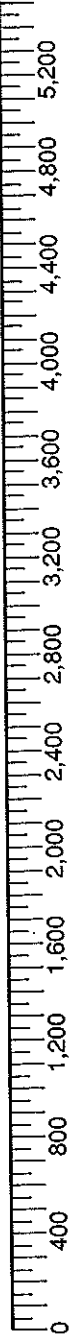
Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source). For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile. Indicate traveling directions from nearest town in space below.

North of the City of Omak along Highway 97. Turn east at the Copple Road/Sand Flats Road intersection with Highway 97. The proposed Well No. 9 is immediately South of Sand Flats Road at the intersection.

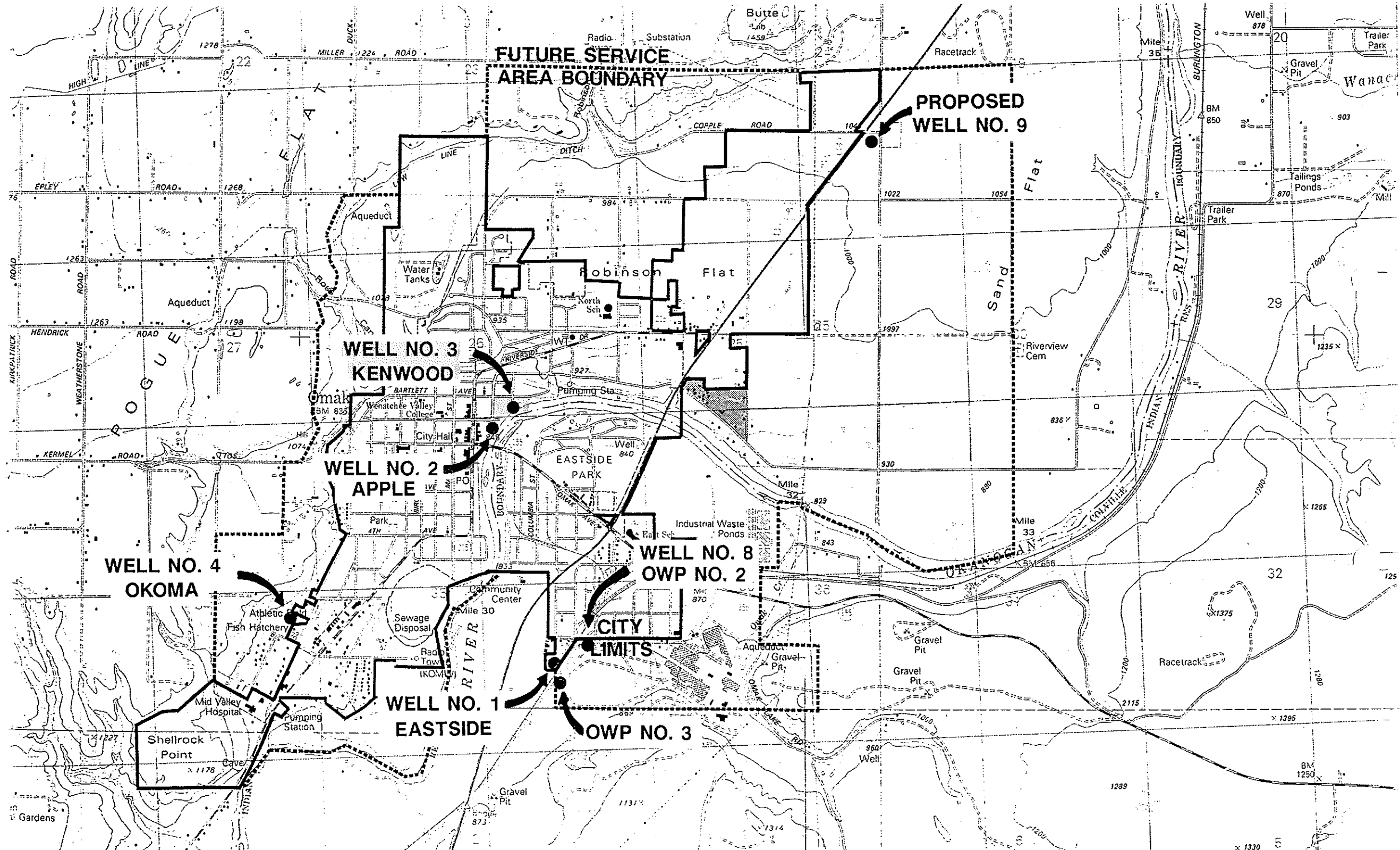
Detach here

Fold along scale

FEET



Detach this scale at the perforation, fold excess paper under or cut off excess by cutting along the scale line. This scale corresponds to the SECTION MAP above. You can read feet directly from this scale to outline property and locate points of diversion or withdrawal on the SECTION MAP. Enclose this map along with the application and \$10.00 examination fee.



**FUTURE SERVICE
AREA BOUNDARY**

**PROPOSED
WELL NO. 9**

**WELL NO. 3
KENWOOD**

**WELL NO. 2
APPLE**

**WELL NO. 4
OKOMA**

**WELL NO. 8
OWP NO. 2**

**WELL NO. 1
EASTSIDE**

OWP NO. 3

**CITY
LIMITS**

CERTIFICATE RECORD No. 1 PAGE No. 445-D UNDER DECLARATION OF CLAIM No. 478

STATE OF WASHINGTON, COUNTY OF Okanogan

Certificate of Ground Water Right

Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and the rules and regulations of the State Supervisor of Hydraulics thereunder.

THIS IS TO CERTIFY That CITY OF OMAK WATER DEPARTMENT

of Omak, Washington has filed

in the office of the State Supervisor of Hydraulics of Washington Declaration of Claim No. 486 to withdraw ground waters of the State from a Pump Well

located ~~near~~ at Southeast corner of 2nd Street East in Omak Addition,

Omak, Washington

26-30-36E

for the purpose of Municipal supply

The right to the use of said ground waters has been sustained and approved by the Supervisor of Hydraulics in accordance with Chapter 263, Laws of Washington for 1945, and is hereby entered of record in Volume 1 of Ground Water Certificates at page 445-D; the right approved has a priority of December, 1913; the amount of water which the Declarant is entitled to withdraw for the aforesaid purpose is limited to the amount actually beneficially used and shall not exceed 500 gallons per minute; 600 acre-feet per year, and is appurtenant to the following described lands or place of use:

City of Omak, Okanogan County, Washington

PERFORATED CASIN

Number per foot and size of perforations, or describe screen)

from... to...

from..... to.....

from.....to.....

LOG OF WELL: (Describe each stratum or formation clearly, indicate if water bearing, and give thickness and depth as indicated.)

[illegible]

(b) INFILTRATION TRENCH: Covered or open.

Dimensions: Length.....ft. Minimum depth.....ft. Maximum depth.....ft.

Bottom width.....ft. Discharge..... g.p.m. Date of test.....

(c) TUNNEL: Type of ining.

Dimensions:

(Length, course, and cross-sectional size)

49

COUNTY: Okfuskee

PHONE: 509-826-1170

State ZIP

add POW's

Initial \$10.00 fee received: (☒) Yes (☐) No

Sent _____ date _____ Rec'd _____ date _____

2194

3-4-94
date

Name _____

472
date

Date Report sent: 06-07-2005

CHANGE PROCESS SHEET



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 W Yakima Ave, Ste 200 • Yakima, WA 98902-3452 • (509) 575-2490

February 12, 2010

Omak City
PO Box 72
Omak WA 98841-0072

Re: Water Right No. CG4-GWC446-D

Our records indicate that you have a Proof Exam inspection pending. This is to remind you that while you await the field inspection, beneficial use of water should continue. By continuing beneficial use as asserted on the *Proof of Appropriation of Water* form, your water right will remain in good standing if:

1. Beneficial use remains within the parameters of the authorization.
2. Beneficial use is consistent with the *Proof of Appropriation of Water* form submitted.
3. The use complies with the provisions stated in the underlying authorization, including any provisions for meter reading and reporting.

Though it may be some time before we are able to conduct the inspection, we will contact you regarding scheduling prior to the inspection.

If you anticipate a period of non-use of this water right, an option to consider is the Trust Water Program, which could protect the water right from relinquishment. You can find out more about putting your water into the Trust Water Right Program: <http://www.ecy.wa.gov/biblio/92088.html> or contact Scott Turner at 509-457-7106 or Kelsey Collins at 509-575-2640.

Complete the enclosed pre-paid postcard and return no later than **March 1, 2010**. If you have questions about your water right, please contact Teresa Mitchell at 509-575-2597.

Sincerely,

Mark C. Schuppe
Section Manager
Water Resources Program

100137/gh

Enclosure: Pre-paid postcard

EX-103
COPY



WATER RIGHTS REVIEW ROUTER

- ☐ Report of Exam (ROE) ☒ ROE for Change
☐ Temporary Permit ☐ Conservancy Board Decision
☐ Preliminary Permit ☐ Short Term Authorization

FILE NO. CG4 - GWC 446-D
 Y:\STAFF\TURNER\changes\omak\first st\omak 446-D

AUTHOR Scott Turner (date) 6/7/05 to DK
 DRAFT (by typist) FINAL 6/6/05 to ST

Mark Schuppe ALLS 5/13/05 (date)
CAROL MORTENSEN
Phil Crane 5/17/05 (date)
 Permit Writer [Signature] 6/7/05 (date)

MAIL OUT 88 6/7/05 (date)

GWIS MAPPING REVIEW
 (Debra reviews changes BEFORE finalization)
 Debra Kroon AK DK 6/7/05 (date)

GWIS Remarks:
Search & replace ✓
East Omak well w/
Eastside well
Add sentence to pg. 4 ✓
referencing CCV061-4P238
[Signature]
Pg 5 & 7 Tables reference ✓
OWP NO 2 as with rights
being AUTH under G4-31925P
 Y:\Admin\Misc Router 1 (01/24/2005)

CIRCLE APPROPRIATE WRIA:

TRIBE	WRIA
Colville Confederated Tribes	<u>49</u> 50 51 52 53 58 60 61
Yakama Nation	29 30 31 32 33 37 38 39 40
Both Tribes	45 46 47 48

cc TO ANYONE ELSE?
✓ GCT
✓ Jeffrey Lowman P.E.

MINIMUM FLOWS?
 cc CRO Enforcement
 cc River Letter List

REMARKS and/or RELATED FILES:
No protests

- ATTACHMENTS:
☒ Your Right to Be Heard
☒ Ground Water Bulletin No. 1
☐ BC, CC, PA forms
☒ Water Measurement Requirements
☐ Fish Screening Criteria
☐ Important Information Sheet (Permit)
☐ Other:

PERMIT FEE \$
 Permit Fee Calculation:



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

June 7, 2005
CERTIFIED MAIL

City of Omak
PO Box 72
Omak WA 98841

**RE: Applications for Change on Nos. CG4-GWC1082-D, CG4-GWC445-D, CG4-GWC446-D,
CG4-GWC3655-A, CG4-GWC3656-A, and CG4-GWC7332-A**

Your applications to change your water rights have been carefully reviewed in accordance with the requirements of the State's water codes. The Applications for Change have been approved, subject to the conditions and limitations described in the Reports of Examination for Change. Please refer to the enclosed Reports of Examination for Change which summarize our findings and represents our final decision.

You have the right to appeal this decision to the Pollution Control Hearings Board. Pursuant to Chapter 43.21B RCW, your appeal must be filed with the Pollution Control Hearings Board, and served on the Department of Ecology, within thirty (30) days of the date of your receipt of this document.

To appeal this decision, your notice of appeal must contain a copy of the Ecology decision you are appealing.

Your appeal must be filed with:

The Pollution Control Hearings Board
4224 - 6th Avenue SE Rowe Six Bldg 2
PO Box 40903
Lacey WA 98504-0903

Your appeal must also be served on:

The Department of Ecology
Appeals Coordinator
PO Box 47608
Olympia WA 98504-7608

In addition, please send a copy of your appeal to:

Robert F. Barwin
Department of Ecology
15 W Yakima Ave Ste 200
Yakima WA 98902-3452

FILE COPY



SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>1. Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p>2. Print your name and address on the reverse so that we can return the card to you.</p> <p>3. Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>Article Addressed to:</p> <p>CITY OF OMAH PO BOX 72 OMAH WA 98841</p> <p>WR/sg ROE/Ch (6) CG4-GWC1082-D, CG4-GWC445-D, CG4-GWC446-D, CG4-GWC3655-A, CG4-GWC3656-A, and CG4-GWC7332-A</p>		<p>A. Signature: <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name)</p> <p>C. Date of Delivery</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, enter delivery address below: <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>3. Service Type:</p> <p><input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail</p> <p><input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise</p> <p><input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>		<p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>Article Number: 7003 2260 0006 9878 5487</p> <p>(Transfer from service label)</p>		<p>Domestic Return Receipt</p> <p>102595-02-M-15-00</p>	

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Original green card is in
CG4-GWC 1082-D



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

June 7, 2005

To: Lois Trevino, Water Administrator, Office of Environmental Trust, Colville Confederated Tribes

RE: Reports of Examination for Change on Nos. CG4-GWC1082-D, CG4-GWC445-D,
CG4-GWC446-D, CG4-GWC3655-A, CG4-GWC3656-A, and CG4-GWC7332-A
(City of Omak, Applicant)

Since you are identified as a party interested in the above water right applications, we are enclosing copies of our Reports of Examination for Change which summarize our findings and represents our final decision.

You have the right to appeal this decision to the Pollution Control Hearings Board. Pursuant to Chapter 43.21B RCW, your appeal must be filed with the Pollution Control Hearings Board, and served on the Department of Ecology, within thirty (30) days of the date of your receipt of this document.

To appeal this decision, your notice of appeal must contain a copy of the Ecology decision you are appealing.

Your appeal must be filed with:

The Pollution Control Hearings Board
4224 - 6th Avenue SE Rowe Six Bldg 2
PO Box 40903
Lacey WA 98504-0903

Your appeal must also be served on:

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Appeals Coordinator
PO Box 47608
Olympia WA 98504-7608

In addition, please send a copy of your appeal to:

Robert F. Barwin
Department of Ecology
15 W Yakima Ave Ste 200
Yakima WA 98902-3452

If you have any questions or concerns about these decisions, or we if can otherwise provide further assistance, please call Bryce Bealba of the Department of Ecology at (509) 575-2597.

Sincerely,

Robert F. Barwin, Section Manager
Water Resources Program
Central Region Office

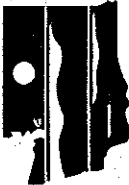
RFB:gg050610a

Enclosures: Reports of Examination for Change (6)

f-10th.doc

FILE COPY





WASHINGTON STATE
DEPARTMENT OF
E C O L O G Y

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION FOR CHANGE
TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

- ☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)
- ☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE March 1936	APPLICATION NUMBER CG4-GWC446-D	PERMIT NUMBER	CERTIFICATE NUMBER
NAME City of Omak			
ADDRESS (STREET) PO Box 72		(CITY) Omak	(STATE) WA
		(ZIP CODE) 98841	

PUBLIC WATERS TO BE APPROPRIATED			
SOURCE 6 Wells			
TRIBUTARY OF (IF SURFACE WATERS)			
MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE- FEET PER YEAR	
	800	96	
QUANTITY, TYPE OF USE, PERIOD OF USE 800 gallons per minute and 96 acre-feet per year continuously for municipal supply.			

LOCATION OF DIVERSION/WITHDRAWAL					
APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL					
1) Kenwood Well: 1100 feet north and 600 feet east of the south quarter corner of Section 26.					
2) Apple Well: 800 feet north and 200 feet east of the south quarter corner of Section 26.					
3) Okoma Well: 660 feet south and 520 feet west of the east quarter corner of Section 34.					
4) Eastside Well: 800 feet north and 1170 feet west of the southeast corner of Section 35.					
5) OWP No. 2 Well: 1210 feet north and 530 feet west from the southeast corner of Section 35;					
6) Well No. 9: 1275 feet north and 100 feet west from the southeast corner of Section 24.					
LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.	W.R.L.A.	COUNTY
1) SW $\frac{1}{4}$ SE $\frac{1}{4}$	26	34	26 E.	49	Okanogan
2) SW $\frac{1}{4}$ SE $\frac{1}{4}$	26				
3) NE $\frac{1}{4}$ SE $\frac{1}{4}$	34				
4) SE $\frac{1}{4}$ SE $\frac{1}{4}$	35				
5) SE $\frac{1}{4}$ SE $\frac{1}{4}$	35				
6) SE $\frac{1}{4}$ SE $\frac{1}{4}$	24				

RECORDED PLATTED PROPERTY	
LOT	BLOCK
OF (GIVE NAME OF PLAT OR ADDITION)	

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED
--

The place of use of this water right is the service area described in the Water System Plan approved by the Washington State Department of Health on December 22, 2004, so long as the City of Omak is and remains in compliance with the criteria in RCW 90.03/386(2). RCW 90.03.386 may have the effect of revising the place of use of this water right.

FILE COPY

DESCRIPTION OF PROPOSED WORKS

The City of Omak's wells pump water through a series of main lines to four reservoir systems (500,000 gallons, 550,000 gallons, 800,000 gallons, and 1,065,000 gallons) sited in various locations around the City. The telemetry system is located at City Hall which controls both the quantities of water pumped to and the quantities of water released from the reservoirs to the City's connections.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	WATER PUT TO FULL USE BY THIS DATE
Complete	Complete	Good Standing

REPORT

BACKGROUND INFORMATION

On January 3, 1994, the City of Omak, Washington, filed an Application for Change to add five points of withdrawal under Application No. G4-GWC446-D. After discussions with city officials and their consultant, it was determined that one of the Omak Wood Products wells (OWP No. 1) would not need to be added to the city's water rights, leaving four points of withdrawal to be added. The application was accepted and assigned identifier No. CG4-GWC446-D.

The City of Omak (the City) submitted two sets of proposed Applications for Change to the Department of Ecology, Central Region Office. The first set, submitted January 3, 1994, requests authorization to consolidate all of the points of withdrawal under six of the City's existing rights.

The City's second set of Applications for Change, submitted November 24, 1998, request the addition of Well No. 9 to each of their existing water rights. A Report of Examination was issued for Application for Change No. CG4-GWC446-D@1 (Apple well) approving the use of Well No. 9 on December 7th, 2000. The second set of Applications were amended on August 4, 2004, requesting to add three wells in addition to Well No. 9 to the City's existing rights.

This report will address the Department of Ecology's findings of fact and recommendations related to Application for Change No. CG4-GWC446-D. Separate reports will address the specific recommendations for each Application for Change. Although many elements of the reports are identical, the evaluation for adding all water rights to each source, including the consideration of the potential for impairing existing rights due to increased pumping on an annual basis at each source, will be considered separately.

Attributes of Ground Water Certificate No. G4-GWC446-D

Name on Certificate, Claim, Permit:	City of Omak
Priority Date, First Use:	March, 1936
Instantaneous Quantity:	800 gallons per minute (gpm)
Annual Quantity:	96 acre-feet per year (acre-ft/yr)
Source:	2 wells
Point of Withdrawal:	800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW ¹ / ₄ SE ¹ / ₄ of Section 26; and 1275 feet north and 100 feet west from the southeast corner of Section 24, being within the SE ¹ / ₄ SE ¹ / ₄ of Section 24, both being within T. 34 N., R. 26 E.W.M.
Purpose of Use:	Municipal supply
Period of Use:	Continuously throughout the year
Place of Use:	City of Omak, Okanogan County, Washington

Proposed Change

Name of Applicant:	City of Omak
Application Date:	January 3, 1994
Instantaneous Quantity:	800 gpm
Annual Quantity:	96 acre-ft/yr
Source:	6 wells
Point of Diversion:	1) <u>Kenwood Well</u> - 1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW ¹ / ₄ SE ¹ / ₄ Section 26, T. 34 N., R. 26 E.W.M. 2) <u>Apple Well</u> - 800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW ¹ / ₄ SE ¹ / ₄ of Section 26, T. 34 N., R. 26 E.W.M. 3) <u>Okorna Well</u> - 660 feet south and 520 feet west of the east quarter corner of Section 34, being within the NE ¹ / ₄ SE ¹ / ₄ of Section 34, T. 34 N., R. 26 E.W.M. 4) <u>Eastside Well</u> - 800 feet north and 1170 feet west of the southeast corner of Section 35, being within the SE ¹ / ₄ SE ¹ / ₄ of Section 35, T. 34 N., R. 26 E.W.M. 5) <u>OWP No. 2 Well</u> - 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE ¹ / ₄ SE ¹ / ₄ of Section 35, T. 34 N., R. 26 E.W.M. 6) <u>Well No. 9</u> - 1275 feet north and 100 feet west from the southeast corner of Section 24, being within the SE ¹ / ₄ SE ¹ / ₄ of Section 24, T. 34 N., R. 26 E.W.M.
Purpose of Use:	Municipal supply
Period of Use:	Continuously throughout the year
Place of Use:	City of Omak, Okanogan County, Washington

Public Notice of the application was given in the Omak-Okanogan County Chronicle on March 16 and March 23, 1994. There were no protests during the 30 day protest period.

INVESTIGATION

The following information was obtained from a site inspection conducted by Department of Ecology (Ecology) staff Scott Turner and Melissa Nihlsen, with the Assistant Director of Public Works present, on July 28, 2004, research of department records, and conversations with the applicant and department staff. In order to approve the addition of four points of withdrawal under No. GWC 446-D, Ecology must determine:

- The validity and extent of the original water right.
- That the proposed new points of withdrawal tap the same body of public ground water as the Apple well.
- That the proposed change will not cause impairment to existing water rights or enlarge the original right.
- That the proposed change will not be contrary to the public interest.

The intent of Applications for Change Nos. CG4-GWC445-D, CG4-GWC446-D, CG4-GWC1082-A, CG4-GWC3655-A, CG4-GWC3656-A, and CG4-GWC7332-A, is to increase the City's flexibility in managing its ground water withdrawals for municipal supply. This in part came about because Washington State Department of Health (DOH) declared the Apple and Kenwood wells as ground water under the influence of surface water (GUI). As a result, the City currently uses those wells only in an emergency need situation. This presents a need for the City to compensate for the water not produced by these wells through increased use of their other wells. The requested changes would allow the withdrawal of water from any of the City's wells at any time within the volume limits of one or more water rights.

Currently there are five wells that the City operates under municipal water rights. The wells pump water through main lines to four reservoir systems (500,000 gallons, 550,000 gallons, 800,000 gallons, and 1,065,000 gallons) sited in various locations around the City. The telemetry system is located at City Hall, which controls both the quantities of water pumped and the quantities of water released from the reservoirs to the City's connections.

The City of Omak's Existing Municipal Water Rights

The city filed the declarations for the vested water uses under RCW 90.44 090 on July 7, 1947, that resulted in the issuance of Ground Water Declaration Certificate Nos. 445-D, 446-D, and 1082-D, described in more detail below.

The City proposes to consolidate the wells under each of the following water rights. The water rights are listed below in priority date sequence.

Ground Water Declaration Certificate No. 445-D has a priority date of December 1913, and certifies the withdrawal of 500 gpm, 600 acre-ft/yr for municipal supply from a well (known as the Kenwood well) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M. This well has been categorized by DOH as a ground water source under the influence of surface water. This well was reported to be a standby well in the Report of Finding on Ground Water Declaration Claim No. 486 dated November 3, 1947. This well is identified as source S03 by DOH.

Ground Water Declaration Certificate No. 446-D has a priority date of March 1936, and certifies the withdrawal of 800 gpm, 96 acre-ft/yr for municipal supply originally from one well (known as the Apple well) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M. This well has been categorized by DOH as a GUI source. This well is identified as source S02 by DOH. Water Right Change Authorization No. CG4-GWC446-D@1 added Well No. 9 as an additional source to this Certificate, the well is located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 24, T. 34 N., R. 26 E.W.M. This well is identified as source S08 by DOH.

Ground Water Declaration Certificate No. 1082-D has a priority date of May 1944, and certifies the withdrawal of 1630 gpm, 1430 acre-ft/yr for municipal supply from a well (known as the Eastside well) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M. The well was equipped with three pumps; a 15 horsepower (hp), a 30 hp, and a 40 hp rated at 280 gpm, 550 gpm, and 800 gpm respectively. This well is identified as source S01 by DOH.

Ground Water Certificate No. 3655-A has a priority date of March 20, 1958. It is the second authorization from the Eastside well (see discussion about the earlier right under Ground Water Declaration Certificate No. 1082-D). It certifies the withdrawal of 1300 gpm, 2080 acre-ft/yr for municipal supply.

Ground Water Certificate No. 3656-A has a priority date of March 20, 1958, and certifies the withdrawal of 375 gpm, 600 acre-ft/yr for municipal supply. This is a second authorization from the Apple well (see earlier discussion under Ground Water Declaration Certificate No. 446-D) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M. As described earlier, this well has been categorized by DOH as a GUI source.

Ground Water Certificate No. 7332-A has a priority date of June 22, 1970, and certifies the withdrawal of 600 gpm, 560 acre-ft/yr for municipal supply from May 1 through October 31 from a well (known as the Okoma well) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M. Any water withdrawal by the City in excess of 3456 acre-feet from any municipal source was to be deducted from the annual volume authorized by this right. This well is identified as source S04 by DOH.

The first set of applications on file with Ecology proposes to also add a well that the City thought is authorized under Ground Water Permit No. G4-31525P (no Application for Change was submitted under this Permit). Ground Water Permit No. G4-31525P has a priority of November 23, 1992, and authorizes the withdrawal of 5000 gpm, 3500 acre-ft/yr from two wells (interruptible when the Okanogan River drops below minimum instream flows as outlined in the Permit) for municipal supply. The wells described in this permit are located approximately 1,150 feet west and 500 feet north from the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M. A provision in this Permit states that the

annual quantity is not additive to the City's existing rights, and limits all of the City's water rights to 3500 acre-ft/yr. The intent of the Change Applications is to add the Omak Wood Products Well No. 2 (OWP No. 2) as an authorized source under the above mentioned Certificates, but does not propose to add the permitted quantities under Permit No. G4-31525P to the other Certificates.

During the course of this investigation it was discovered that the source the City believes to be authorized under G4-31525P (OWP No. 2), is not described on the original permit. This oversight has resulted in an unauthorized change in point of withdrawal. OWP No. 2 is located approximately 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M., approximately 1,000 feet northeast from the authorized points of withdrawal. This well is the authorized source under Certificate of Change CCVOL1-4P238, and is identified as source S07 by DOH. The original public notice given for G4-31525P, on the 13th and 20th of January 1993, in the Omak-Okanogan County Chronicle described the proposed sources for the permit as being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M. RCW 90.44.100(3) allows for "the construction of a replacement or new additional well or wells at the location of the original well or wells (emphasis added) shall be allowed without application to the department for an amendment". For the City to legally operate OWP No. 2 under G4-31525P, they must either request and receive a change of point of withdrawal or meet the criteria in RCW 90.44.100(3).

This application proposes to add the sources of the above mentioned water rights (four in total). Figure 1 is a graphical representation of the change, showing the source for G4-GWC446-D (Apple well) and the location of the proposed additional wells.

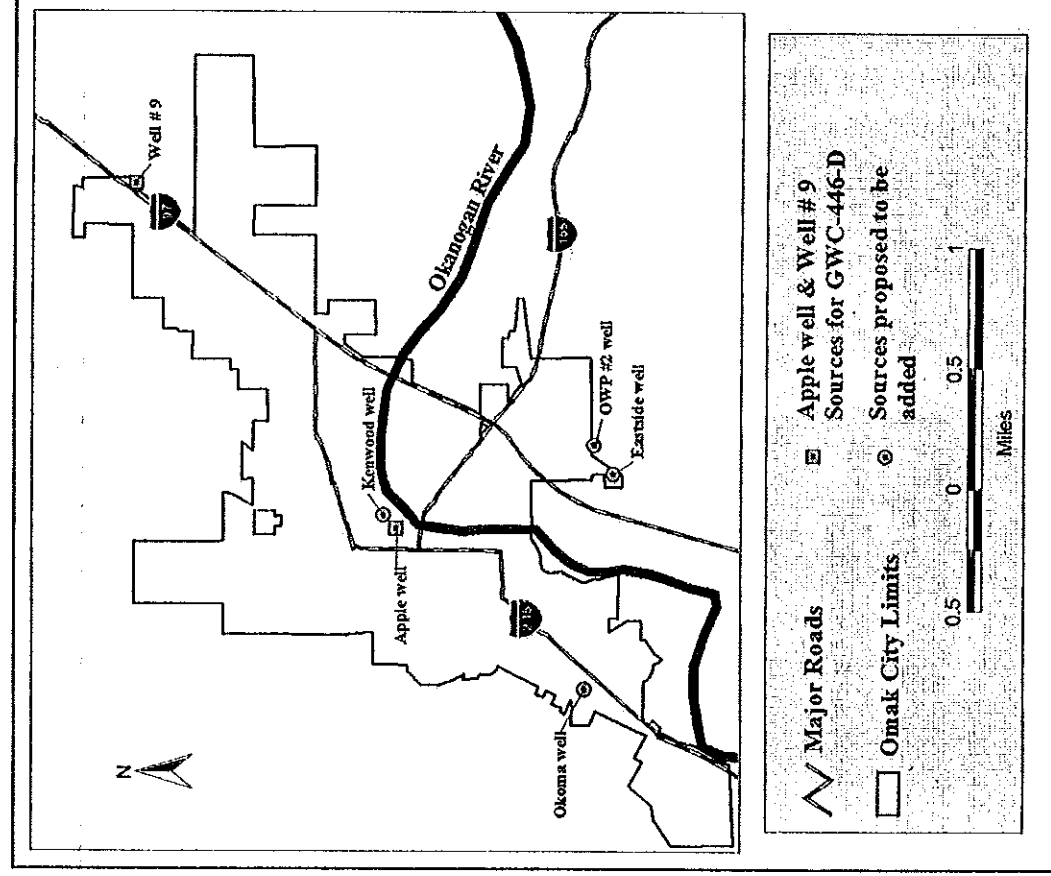


Figure 1. Overview of the five wells the City of Omak proposes to consolidate.

Ground Water Rights within Omak's Urban Growth Area

Review of the following water right record shows that many of the Certificates below were preceded by Permits for larger quantities than were ultimately perfected.

Ground Water Certificate No. G4-26176C describes a well located approximately 1000 feet east and 40 feet north from the southwest corner of Section 24 being within the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 24, T. 34 N., R. 26 E.W.M. Water is withdrawn from the well at up to 230 gpm and 117 acre-ft/yr for primary irrigation of 6 acres and standby reserve for 20 acres. The primary right for irrigation is provided by the Okanogan Irrigation District. The place of use is that part of Section 24, T. 34 N., R. 26 E.W.M. described as follows: the S $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ and that part of the NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ lying south of the L. B. Lateral of the Okanogan Irrigation District and also the NE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 25, T. 34 N., R. 26 E.W.M.

Ground Water Certificate No. G4-26558C describes a right for a well situated approximately 1310 feet west and 1050 feet north from the south quarter corner Section 24 being within the SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 24, T. 34 N., R. 26 E.W.M. It allows for the withdrawal of up to 19 gpm, 0.25 acre-ft/yr for in-house domestic supply and 7 acre-ft/yr to be used during the irrigation season from April 1 through October 15 as standby reserve for the irrigation of two acres. The primary right for irrigation is provided by the Okanogan Irrigation District. The place of use is the N $\frac{1}{2}$ of the west 330 feet of the N $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 24, T. 34 N., R. 26 E.W.M. lying south of the county road¹-right of way.

Suncrest Plat Water System

This system is identified by DOH as PWS ID No. 85207 and has two water rights:

Ground Water Certificate No. G4-23779C is for a well within the NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 25, T. 34 N., R. 26 E.W.M. and certifies the withdrawal for 300 gpm, 30 acre-ft/yr for community domestic supply for 30 homes located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 25, T. 35 N., R. 26 E.W.M.

The second authorization, from the same wells under Ground Water Permit No. G4-26888P with priority date of July 21, 1980, is for two wells within the E $\frac{1}{2}$ Section 25, T. 34 N., R. 26 E.W.M. The Permit authorizes the withdrawal of 300 gpm, and 200 acre-ft/yr for community domestic supply for 200 homes and mobile homes. The place of use is the E $\frac{1}{2}$ E $\frac{1}{2}$ SE $\frac{1}{4}$ Section 25, T. 34 N., R. 26 E.W. M.

Sandflat Water Users Association

Another community system in the area is the Sandflat Water Users Association, identified by DOH as PWS No. 09064. It is authorized water use under Superseding Ground Water Permit No. G4-26301P with a priority date of July 20, 1979, from two (2) wells located within the NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 30, T. 34 N., R. 26 E.W.M. The Permit authorizes the withdrawal of ground water at 250 gpm, and 220 acre-ft/yr for 245 homes (houses, apartments, duplexes, and condominiums).

One well is reported to be drilled 445 feet deep with a 250 gpm capacity and the other is 214 feet deep with 109 gpm capacity.

Irrigation water within the Sandflat place of use is provided from a surface water diversion under authority of Surface Water Permit No. S4-24234P for the diversion of surface water from the Okanogan River subject to instream flows set by Chapter 173-549 WAC, the Water Resources Program for the Okanogan River Basin, WRIA 49.

Aston Estates

Aston Estates is a public water system operating under three Certificates of Water Right. The Ground Water Certificates are listed below

Certificate No. G4-23805C with priority date of January 6, 1975, certifies the withdrawal of 40 gpm and 54 acre-ft/yr for a well located within the NE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 31, T. 34 N., R. 27 E.W.M. to serve 60 homes within Aston's First Addition in Government Lots 2 and 3 Section 31, T. 34 N., R. 27 E.W.M.

Certificate No. G4-23806C with priority date of January 6, 1975, certifies the withdrawal of 45 gpm and 54 acre-ft/yr from a well located approximately 875 feet west and 850 feet south of the N quarter corner within the NE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 31, T. 34 N., R. 27 E.W.M. to serve 60 homes within Aston's First Addition in Government Lots 2 and 3, Section 31, T. 34 N., R. 27 E.W.M. These are the same 60 homes referenced by Certificate No. G4-23805C. The 54 acre-ft/yr is the maximum annual quantity under both rights, but the instantaneous quantities (40 and 45 gpm) are additive.

A third well is covered by Certificate No. G4-29424C, and authorizes 54.9 acre-ft/yr for 61 homes (60 were covered by the earlier two water rights described above) less any quantity withdrawn under Certificate Nos. G4-23805C and G4-23806C. The instantaneous quantity of 90 gpm is additive to the quantities (40 and 45 gpm) under Certificate Nos. G4-23805C and G4-23806C. This well is located approximately 510 feet west and 650 feet south of the north quarter corner in Section 31 being within Government Lot 2 Section 31, T. 34 N., R. 27 E.W.M.

Water Quantity

Table 1 identifies the Municipal Ground Water Certificates that are included in City of Omak's Water System Plan.

Table 1: Municipal Ground Water Certificates Held by the City of Omak

Certificate No.	Source	Priority date	Qi (gpm)	Qa (acre ft/yr)	Place of use
445-D	Kenwood well	December 1913	500	600	City of Omak
446-D	Apple well	March 1936	800	96	City of Omak
3656-A	Apple well	March 20, 1958	375	600	City of Omak
1082-D	Eastside well	May 1944	1630	1430	City of Omak
3655-A	Eastside well	March 20, 1958	1300	2080	City of Omak
7332-A	Okoma well	June 22, 1970	600	560	City of Omak
G4-31525P	OWP No. 2**	November 23, 1992	5000	3500*	City of Omak

*This annual quantity is not additive to the City's other municipal rights, furthermore this Permit limits the total withdrawal under all of the City's rights not to exceed 3500 acre-ft/yr.

**OWP No. 2 represents an unauthorized change in point of withdrawal described in the The City of Omak's Existing Municipal Water Rights section of this report.

Water Demand Forecasting

Historical population and water use reported in the Draft 2004 Water System Plan indicates the extent that the City has continued to develop water use under its water rights. Historical population data included in the plan states that in 1980 the population was 4,007 with gradual increases up to 4,721 in 2000. This represents a 17.83% increase in the population for that

20 year period. The Water System Plan also contains information on the existing water supply and demand, as well as projections for future water demand and how that relates to the existing supply. The Water System Plan outlines the annual water production for the years of 1998 through 2002. Within that five year period, 1998 was indicated to be the highest production year at approximately 600 million gallons (1841 acre-feet); leaving approximately 1600 acre-feet of the City's total water rights to be developed. The future water demand forecast for the year 2023 predicts that the City's annual water use will be 819.3 million gallons (2514 acre-feet). These data indicate a trend of past growth, and the City's continuing growth into their existing water rights with the flexibility for further growth.

Instantaneous Quantities

Water Right Declaration No. 446-D certifies the withdrawal of 800 gpm. The proposed change would authorize the withdrawal of that 800 gpm from all of the wells mentioned in Table 2. The city has voluntarily agreed to maximum instantaneous quantities of each well as stated on the original certificates. The maximum Q_i on each of the certificated sources is listed in Table 2.

Table 2. Maximum Q_i placed on Municipal Sources for the City of Omak

Source	Q_i (gpm)
Kenwood well	500 gpm
Apple well	1175 gpm
Eastside well	2930 gpm
Okoma well	600 gpm
OWP No. 2	5000 gpm

The voluntary cap on instantaneous quantities was proposed by the City for three reasons:

- 1) The city does not intend on improving each well to increase water use beyond the capacities shown in Table 2.
- 2) If there were no caps, all of the instantaneous quantities would have to be cumulatively evaluated for impairment at each source (approximately 5,200 gpm at each well), greatly increasing the chance for the proposed changes to impair other water users in the area.
- 3) The second set of Water Right Change Applications proposes to add new sources, further increasing the City's flexibility in obtaining adequate water production.

Interruptible Water Right Permit No. G4-31525P

Ground Water Permit No. G4-31525P is subject to a provision limiting use when flows in the Okanogan River drop below the minimum flows set in Chapter 173-549 WAC. The proposed application requests to add a non-interruptible right to the source of this Permit. This would, in essence, allow the City to pump from OWP No. 2 Well at times when they would historically have to shut it down. But, at times when the Okanogan River drops below minimum instream flows, the 5,000 gpm authorized under G4-31525 cannot be used.

Annual Quantities

The water system plan states that during the years of 1998 through 2002 the Apple well (source for this change) was not used. The lack of use in this five year period can be explained because the city currently classifies this well as emergency use only, due to the fact that DOH has recently declared it as GUL. In order to pump the full 96 acre-feet authorized by this water right, the Apple well would need to withdraw 800 gpm for 27 days. While the data in the City's plan suggest that the City has not put Groundwater Declaration No. 446-D to full beneficial use, it is uncertain whether the Apple well may have been relied upon to a greater extent historically. It is clear that a portion of the 6 rights the City proposes to transfer is inchoate and that some of these rights were issued based on Ecology's former "pumps-and-pipes" methodology. Adding the additional sources would allow the city to begin to legally use the annual quantities associated with this water right through sources other than the Apple well. The authorization of additional sources will not allow a greater annual quantity of water to be withdrawn; the right will be limited to 96 acre-ft/yr from all sources.

Second Engrossed Second Substitute House Bill 1338 (SESSHB 1338)

In Department of Ecology v. Theodoratus, 135 Wn.2d 582, 957 P.2d 1241, the Washington Supreme Court held in a scenario that involved a non-municipal water supplier that Ecology's administrative practice of issuing Certificates of Water Right prior to full beneficial use was in error. This created uncertainty with respect to the water rights of Certificate holders, such as the City of Omak, that received Certificates based on system capacity rather than the extent of actual use.

Recent legislative changes have affected municipal water rights. SESSHB 1338 provided clarification and certainty for municipal water rights documented by Certificates which were issued based on system capacity. RCW 90.03.330 (3) states that:

"This sub-section applies to the water right represented by a Water Right Certificate issued prior to September 9, 2003, for municipal water supply purposes as defined in RCW 90.03.015 where the Certificate was issued based on an administrative policy for issuing such Certificates once works for diverting or withdrawing and distributing water for municipal supply purposes were constructed rather than after the water had been placed to actual beneficial use. Such a water right is a right in good standing."

HYDROGEOLOGIC SETTING

A licensed Ecology staff hydrogeologist reviewed and stamped a separate technical memorandum which discusses the hydrogeologic analysis for this application. The hydrogeologic interpretations provided below are extracted from this memorandum.

This section describes in general terms the hydrogeology surrounding the City of Omak, Okanogan County, Washington. In this area, the Okanogan River flows in an overall southerly direction, however, through the City of Omak the river takes a 90 degree bend to the west. Consequently, the City spans an area both north and south of the Okanogan River. Glacial terraces, located toward the north and west of the City, are a local remnant left by ancient ice sheets that once scoured the Okanogan River Valley. Sedimentary deposits, largely composed of glacial drift, glacial outwash, glaciolacustrine and more recent alluvial materials along with lesser amounts of glacial till, dune sands, and mass wasting materials, have in filled the ice scoured valley. The City of Omak is located near the western edge of the Okanogan Metamorphic Core Complex. Gneissic granodiorite, a meta-igneous rock of the Okanogan Core Complex, forms the valley walls to the south and east of the Okanogan River. To the north and west of the river, valley walls are composed of igneous rocks (dacite and quartz monzonite) and metasedimentary rocks of the Cave Mountain Formation. Thick glacial deposits obscure much of the described bedrock in the low lying areas; however more resistant bedrock knobs protrude through the glacial materials in places along the valley floor.

Well log data on file with Ecology indicates the glacial/alluvial sediments, which form the unconsolidated aquifer, consist of clays, silts, sands, gravels, glacial till, boulders, cobbles and hardpan/cemented gravel. Well log data also indicates this aquifer is bound at depth by bedrock, or what well drillers generally refer to as granite, a geologic description drillers applied to the various rock types that outcrop on both sides of the river. Sediment thicknesses range from approximately 14 feet to as much as 620 feet, with total thicknesses and/or depth to bedrock varying throughout the area. However, it appears that there is a thinning of sediments toward the southwest of Omak (Section 34, T. 34 N., R. 26 E.W.M.), as many wells are completed into the underlying bedrock in this area. Well log data suggests that most wells surrounding the City of Omak encounter a varying sequence of sediments, suggesting sediment layers pinch out and are discontinuous throughout the area. The wide range of sediments and thicknesses contribute to heterogeneous aquifer characteristics, for example areas in the unconsolidated aquifer where clays and silts are present will likely have lower permeabilities, hydraulic conductivities and well yields than areas encountering mostly sands and gravels. Well logs indicate well yields range from 20 gpm to 1630 gpm for wells utilizing glacial/alluvial materials. This range reflects varied sediments and aquifer characteristics throughout the Omak area. The low range of 20 gpm begins to approach a small but notable difference from bedrock wells that tend to yield approximately 5-10 gpm or less. The unconsolidated aquifer is recharged by precipitation infiltrating into the surficial sediments and from interaction with the Okanogan River. Static water levels for the subject wells and other selected wells on file with Ecology, which are completed into surficial sediments, when corrected for elevation, indicate that ground water head levels correlate with river level elevations. This relationship suggests an exchange of flow between the ground water and surface water. Aquifer recharge and ground water levels tend to fluctuate as the hydrologic system responds to seasonal variations.

Hydrogeologic Analysis of the Site

The City of Omak has multiple ground water rights and corresponding wells which collectively constitute their municipal water supply. The City submitted 6 Change Applications in 1994, requesting to add each of their existing municipal supply wells (5 existing wells) to each one of the following water rights G4-GWC445-D, G4-GWC446-D, G4-GWC1082-D, G4-GWC3655-A, G4-GWC3656-A, and G4-GWC7332-A. The City submitted 6 additional change applications in 1998 requesting to add 4 new wells to each of the above water rights. Both requests would allow for greater flexibility in the City's water system operations. This analysis will address all six 1994 applications. If the six 1994 Change Applications are approved, the City would have the ability to withdraw water quantities from the above mentioned water rights from any of the City's five existing wells, however each water right will not be allowed to exceed its historically designated instantaneous water quantity. This request is in part due to two existing city wells, the Apple Well and Kenwood Well, being designated GUL. As a result, the City currently classifies these two wells as emergency use wells only.

The table below delineates the suite of water rights being evaluated, existing wells, annual water quantities, instantaneous water quantities, depth of wells and corresponding static water levels.

Well Name	Original Water Right No.	Instantaneous Quantity Qi (gpm)	Annual Quantity Qa (acre-ft/yr)	Depth of Well (ft)	Static Water Level swl (ft)
Kenwood	445-D	500	600	26	16.5
Apple	446-D + 3656-A	1175	696	29	10.0
Eastside	1082-D + 3655-A	2930	3510	40	28.5
Okoma	7332-A	600	560	105	8.75
OWP No. 2	G4-31525P	Interruptible 5000	3500*	69	38.75

*This quantity is not additive and furthermore this Permit limits the Qa under all the City's water rights not to exceed 3500 acre-ft/yr.
**OWP No. 2 represents an unauthorized change in point of withdrawal described in the The City of Omak's Existing Municipal Water Rights section of this report.

The City voluntarily capped the instantaneous water quantity at each well, to reduce the risk of impairing existing water rights in close proximity. To clarify, the instantaneous quantity at each well is limited to the aforementioned quantity stated in the table. The combined annual water quantity that would be allowed to be withdrawn from any combination of wells, should the change be approved, is 3500 acre-ft/yr, as stated in G4-31525P.

Discussion of Existing Wells

The Kenwood well is located approximately 1100 feet north and 600 feet east of the south quarter corner of Section 26, T. 34 N., R. 26 E.W.M., and approximately 50 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was designated GUI by the Washington State Department of Health. The Kenwood well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 20 feet below ground surface (bgs). However, the well log on file with Ecology indicates the well is 14 feet in diameter and completed to a depth of 26 feet 2 inches bgs. These discrepancies, as well as discrepancies in other well documents described subsequently in the report, are likely the result of information being passed down through comprehensive water plans over the years rather than well alteration (Lourman, 2005). The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 16.5 feet was recorded at the time of drilling, December 1913. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 500 gpm and 7 feet of drawdown in the well were also reported. If approved, the proposed changes would allow the Kenwood well to withdraw up to 500 gpm, in emergency situations.

The Apple well is located approximately 800 feet north and 200 feet east of the south quarter corner of Section 26, T. 34 N., R. 26 E.W.M., and approximately 80 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was also designated GUI by DOH. The Apple well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 10 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is completed to 29 feet bgs. The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 10 feet 4 inches was recorded at the time of drilling, February 1936. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 800 gpm and 10 feet 4 inches of drawdown in the well were also reported. If approved, the proposed changes would allow the Apple well to withdraw up to 1175 gpm, in emergency situations.

The Eastside well is located approximately 800 feet north and 1170 feet west of the southeast corner of Section 35, T. 34 N., R. 26 E.W.M., and approximately 1900 feet east of the Okanogan River. This well is currently in use by the City and houses 4 turbine pumps which have a combined capacity to pump 2,800 gpm. The Eastside well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is 14 feet in diameter and completed to 40 feet 10 inches bgs. The materials encountered during drilling, as reported on the well log, include soil, rock and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 28 feet 6 inches was recorded during the time of drilling in 1944. However, a static water level of 12.4 feet was recorded by Ecology staff, via the City's real-time telemetry system, during a site visit on July 28, 2004. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. The telemetry system also indicated the Eastside well was pumping at a rate of 1488 gpm at the time. A yield of 1630 gpm and 1 foot of drawdown in the well was also reported on the well log. Mike Ervin, City of Omak Water Department Chief Operator, indicated during the site visit that the Eastside well shuts off when the storage reservoir is full, as opposed to shutting off because the water level in the well has dropped. If approved, the proposed changes would allow the Eastside well to withdraw up to 2930 gpm.

The Okoma well is located approximately 660 feet south and 520 feet west of the east quarter corner of Section 34, T. 34 N., R. 26 E.W.M., and approximately 2300 feet west of the Okanogan River. This well is currently in use by the City and is equipped with one turbine pump, which has the capacity to pump 500 gpm. The well log on file with Ecology indicates the Okoma well is 16 inches in diameter, completed to a depth of 105 feet bgs and screened from 55 feet to 90 feet bgs. Materials encountered during drilling include clay, silt, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 8 feet 9 inches was recorded at the time of drilling, winter 1988-1989. However, Mike Ervin informed Ecology staff during the site exam the current static water level is approximately 13 feet bgs and the pumping water level is approximately 32 feet bgs. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A well test performed by the driller and reported on the well log indicated a yield of 350 to 400 gpm with 69.3 feet of drawdown in the well after 13.5 hours. This well is located in an area where the aquifer thins, therefore the well is producing as expected, meaning it is producing less than other city wells which are located in areas where the aquifer is thicker. The steep drawdown could also be explained in combination with well efficiency, well construction and/or development and the 18 feet of silt with clay encountered in the well. If approved, the proposed changes would allow the Okoma well to withdraw up to 600 gpm.

The OWP No. 2 Well is located approximately 1210 feet north and 530 feet west of the southeast corner of Section 35, T. 34 N., R. 26 E.W.M., and approximately 2600 feet east of the Okanogan River. This well is currently in use by the City, which is leased from Omak Wood Products. The OWP No. 2 Well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, is 24 inches in diameter, completed to a depth of 69 feet bgs, cased to a depth of 44 feet bgs and screened from 44 to 60 feet bgs. An additional inner well screen was installed from 46 to 69 feet bgs during well rehabilitation in July of 1996. Materials encountered during drilling include silt, sand, gravel and cobbles, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 38.75 was recorded in a schematic of the well located within the Comprehensive Water Plan, while a static water level of 36.5 feet was recorded during rehabilitation. According to the well log on file with Ecology, a well test was performed during rehabilitation with a maximum yield of 2500 gpm and 3.8 feet of drawdown in the well after 5.5 hours. The City's telemetry system indicated the OWP No. 2 Well was pumping at a rate of 1341 gpm at the time of the site visit, July 2004. If approved, the proposed changes would allow the OWP No. 2 Well to withdraw up to 5,000 gpm. Note, the water right associated with this well is interruptible and subject to instream flows on the Okanogan River.

Many factors influence the determination of whether significant interference effecting surrounding wells in the area is expected to take place due to these changes. By observation, there have been no reports of well interference filed with Ecology due to the current use at any of the City's original wells, all original wells penetrate the same aquifer and the total water quantity withdrawn from the aquifer will remain the same. The Kenwood, Apple, Eastside and Okoma wells are all located within the City limits. According to the City of Omak Municipal Code 9.04.040, the City shall be the exclusive provider of domestic water within the City limits, meaning other wells located within the city limits may not be used for domestic purposes. Therefore, domestic wells on file with Ecology, within the city limits are likely no longer in use. However, the possibility exists that domestic wells within the City limits, exempt from the permitting requirements contained in RCW 90.44.050, could be used for the watering of a lawn or of a noncommercial garden not exceeding one-half acre in area. The OWP No. 2 Well is located approximately 50 feet south of the city limits, on the Colville Reservation. The tribe was consulted about how the proposed water right changes would allow non-interruptible water rights to be transferred to the OWP No. 2 Well. Since the geologic setting and hydrogeology are consistent in the approximate 1 mile distance or less between subject well locations, the instantaneous quantity for each well is limited to the quantity associated with its original water right and the total water quantity withdrawn from the aquifer will not increase, interference which may take place is not expected to be significant.

Relationship Between the Original Source and Proposed Source

In order to transfer or add a well to an existing water right, "the additional or replacement well or wells shall tap the same body of public ground water as the original well or wells," as stated in Chapter 90.44.100(2)(a) RCW. The subject wells tap the unconsolidated glacial/alluvial sediment aquifer and are not separated from each other by a hydraulic barrier, such as a fault. Therefore, all five subject wells are considered to utilize the same body of ground water.

FINDINGS

- In accordance with Chapter 90.44 RCW and Chapter 90.03 RCW, the author makes a tentative determination that Ground Water Declaration No. 446-D is a valid right, with an instantaneous quantity of 800 gpm and an annual quantity of 96 acre-ft/yr, and is eligible for change. Although the City of Omak has not put the full certificated amount of water to beneficial use, the inchoate portion is in good standing and may be developed by the City consistent with the intent of the original Certificate.
- The four additional points of withdrawal tap the same body of public ground water as the Apple well.
- Approval of this change request will not cause impairment of existing rights or will not enlarge the original right.
- Approval of this change will not be detrimental to the public interest.

RECOMMENDATIONS

Water Use

Based on the above facts and findings, it is recommended that the requested additional 4 points of withdrawal under GWC446-D be authorized as follows:

Purpose of Use

800 gpm and 96 acre-ft/yr for year round municipal supply purposes.

Points of Withdrawal

- 1) Kenwood Well: 1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M.
- 2) Apple Well: 800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 26, T. 34 N., R. 26 E.W.M.
- 3) Okoma Well: 660 feet south and 520 feet west of the east quarter corner of Section 34, being within the NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 34, T. 34 N., R. 26 E.W.M.
- 4) Eastside Well: 800 feet north and 1170 feet west of the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M.
- 5) OWP No. 2 Well: 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M.
- 6) Well No. 9: 1275 feet north and 100 feet west from the southeast corner of Section 24, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 24, T. 34 N., R. 26 E.W.M.

Place of Use

The place of use of this water right is the service area described in the Water System Plan approved by the Washington State Department of Health on December 22, 2004, so long as the City of Omak is and remains in compliance with the criteria in RCW 90.03/386(2). RCW 90.03.386 may have the effect of revising the place of use of this water right.

Construction Schedule

Begin Construction by:	Complete
Complete Construction by:	Complete
Apply water to full beneficial use by:	Good Standing

Provisions

A Certificate of Change will not be issued until a proof inspection is conducted and a final investigation is made. The Certificate of Change will reflect the extent of the project perfected within the limitations of the authorization. Aspects of the investigation will include, as appropriate, the source, system instantaneous capacity, beneficial use, annual quantity, acreage, place of use, and satisfaction of provisions. Final determination will be calculated based on the best information available to Ecology, including metering data and/or water duty analysis.

The amount of water granted is a maximum limit that shall not be exceeded.

The City's maximum instantaneous quantities for each well as stated on the original certificates are as follows:

- Kenwood well: 500 gpm
- Apple well: 1175 gpm
- Eastside well: 2930 gpm
- Okorna well: 600 gpm
- OWP No. 2 well: 5000 gpm

The total instantaneous withdrawal between all of the city's municipal water rights is 10205 gpm. Ground Water Permit No. G4-31525P (5000 gpm) is subject to curtailment when instream flows in the Okanogan River are below those set in Chapter 173-549 WAC. In the event the Okanogan River drops below the set minimum flows, the total instantaneous withdrawal from all sources shall not be more than 5205 gpm (10205gpm – 5000gpm = 5205gpm)

The total annual withdrawal under all rights shall not exceed 3500 acre-ft/yr.

This authorization shall in no way excuse the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations including those administered by other programs of the Department of Ecology.

Well construction is limited to the same body of public ground water as the original well.

All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells.

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gage may be installed in addition to the access port.


An approved measuring device shall be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use". Chapter 173-173 WAC.

Water use data shall be recorded weekly. The maximum rate of withdrawal and the annual total volume shall be submitted to Ecology by January 31st of each calendar year.

The following information shall be included with each submittal of water use data: owner, contact name if different, mailing address, daytime phone number, WRIA, Certificate, number of service connections, source name, Washington State Department of Health number, annual quantity used including units of measure, maximum rate of withdrawal including units of measure, monthly meter readings including unit of measures, purpose of use, and period of use. In the future, Ecology may require additional parameters to be reported or more frequent reporting. Ecology prefers web based data entry, but does accept hard copies. Ecology will provide forms and electronic data entry information.

Chapter 173-173 WAC describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition Ecology for modifications to some of the requirements. Installation, operation and maintenance requirements are enclosed as a document entitled "Water Measurement Device Installation and Operation Requirements".

Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the records of water use that are kept to meet the above conditions, and to inspect at reasonable times any measuring device used to meet the above conditions.

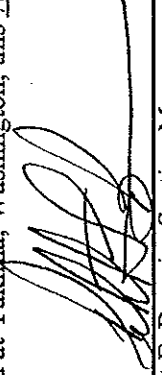
Report by:  _____
Scott Turner, Water Resources Program Date 6-7-05

FINDINGS OF FACT AND DECISION

Upon reviewing the above report, I find all facts relevant and material to the subject application have been thoroughly investigated. Furthermore, I find the change of water right as recommended will not be detrimental to existing rights and is not detrimental to the public welfare.

Therefore, I ORDER the additional points of withdrawal under Ground Water Application No. CG4-GWC446-D be approved, subject to the existing rights and provisions specified in the foregoing report.

Signed at Yakima, Washington, this 7th day of June 2005.

 _____
Robert F. Barwin, Section Manager
Water Resources Program
Central Region Office

MEMORANDUM

Date: May 6th, 2005

To: File

From: Melissa Downes

Re: Hydrogeologic analysis for water right change applications by the City of Omak, file numbers CG4-GWC445-D, CG4-GWC446-D, CG4-GWC1082-D, CG4-GWC3655-A, CG4-GWC3656-A and CG4-GWC7332-A. Analysis by Melissa Downes and reviewed by Anna Hoselton.

Hydrogeologic Setting:

This section describes in general terms the hydrogeology surrounding the City of Omak, Okanogan County, Washington. In this area, the Okanogan River flows in an overall southerly direction, however through the City of Omak the river takes a 90 degree bend to the west. Consequently, the City spans an area both north and south of the Okanogan River. Glacial terraces, located toward the north and west of the City, are a local remnant left by ancient ice sheets that once scoured the Okanogan River Valley. Sedimentary deposits, largely composed of glacial drift, glacial outwash, glaciolacustrine and more recent alluvial materials along with lesser amounts of glacial till, dune sands, and mass wasting materials, have in filled the ice scoured valley. The City of Omak is located near the western edge of the Okanogan Metamorphic Core Complex. Gneissic granodiorite, a meta-igneous rock of the Okanogan Core Complex, forms the valley walls to the south and east of the Okanogan River. To the north and west of the river, valley walls are composed of igneous rocks (dacite and quartz monzonite) and metasedimentary rocks of the Cave Mountain Formation. Thick glacial deposits obscure much of the described bedrock in the low lying areas; however more resistant bedrock knobs protrude through the glacial materials in places along the valley floor.

Well log data on file with Ecology indicates the glacial/alluvial sediments, which form the unconsolidated aquifer, consist of clays, silts, sands, gravels, glacial till, boulders, cobbles and hardpan/cemented gravel. Well log data also indicates this aquifer is bound at depth by bedrock, or what well drillers generally refer to as granite, a geologic description drillers applied to the various rock types that outcrop on both sides of the river. Sediment thicknesses range from approximately 14 feet to as much as 620 feet, with total thicknesses and/or depth to bedrock varying throughout the area. However, it appears that there is a thinning of sediments toward the southwest of Omak (section 34, T 34N, R26E), as many wells are completed into the underlying bedrock in this area. Well log data suggests that most wells surrounding the City of Omak encounter a varying sequence of sediments, suggesting sediment layers pinch out and are discontinuous throughout the area. The wide range of sediments and thicknesses contribute to heterogeneous aquifer characteristics, for example areas in the unconsolidated aquifer where clays and silts are present will likely have lower permeabilities, hydraulic conductivities and well yields than areas encountering mostly sands and gravels. Well logs indicate well yields range from 20 gpm to 1630 gpm for wells utilizing glacial/alluvial materials. This range reflects varied sediments and aquifer characteristics throughout the Omak area. The low range of 20 gpm

begins to approach a small but notable difference from bedrock wells that tend to yield approximately 5-10 gpm or less. The unconsolidated aquifer is recharged by precipitation infiltrating into the surficial sediments and from interaction with the Okanogan River. Static water levels for the subject wells and other selected wells on file with Ecology, which are completed into surficial sediments, when corrected for elevation, indicate that ground water head levels correlate with river level elevations. This relationship suggests an exchange of flow between the ground water and surface water. Aquifer recharge and ground water levels tend to fluctuate as the hydrologic system responds to seasonal variations.

Hydrogeologic Analysis of the Site:

The City of Omak has multiple ground water rights and corresponding wells which collectively constitute their municipal water supply. The City submitted 6 change applications in 1994, requesting to add each of their existing municipal supply wells (5 existing wells) to each one of the following water rights G4-GWC445-D, G4-GWC446-D, G4-GWC1082-D, G4-GWC3655-A, G4-GWC3656-A and G4-GWC7332-A. The City submitted 6 additional change applications in 1998 requesting to add 4 new wells to each of the above water rights. Both requests would allow for greater flexibility in the City's water system operations. This analysis will address all six 1994 applications. If the six 1994 change applications are approved, the City would have the ability to withdraw water quantities from the above mentioned water rights from any of the City's 5 existing wells, however each water right will not be allowed to exceed its historically designated instantaneous water quantity. This request is in part due to two existing city wells, the Apple Well and Kenwood Well, being designated groundwater under the influence of surface water (GUI). As a result, the City currently classifies these two wells as emergency use wells only.

The table below delineates the suite of water rights being evaluated, existing wells, annual water quantities, instantaneous water quantities, depth of wells and corresponding static water levels.

Well Name	Original Water Right No.	Instantaneous Quantity Qi (gpm)	Annual Quantity Qa (afy)	Depth of Well (ft)	Static Water Level swl (ft)
Kenwood	445-D	500	600	26	16.5
Apple	446-D + 3656-A	1175	696	29	10.0
Eastside	1082-D + 3655-A	2930	3510	40	28.5
Okoma	7332-A	600	560	105	8.75
OWP #2	G4-31525P	Interruptible 5000	3500*	69	38.75
* This quantity is not additive and furthermore this permit limits the Qa under all the city's water rights not to exceed 3500 afy.					

The City voluntarily capped the instantaneous water quantity at each well, to reduce the risk of impairing existing water rights in close proximity. To clarify, the instantaneous quantity at each well is limited to the aforementioned quantity stated in the table. The combined annual water

quantity that would be allowed to be withdrawn from any combination of wells, should the change be approved, is 3500 afy, as stated in G4-31525P.

Discussion of Existing Wells:

The Kenwood well is located approximately 1100 feet north and 600 feet east of the south quarter corner of Section 26, T34N, R26E, and approximately 50 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was designated GUI by the Washington State Department of Health (DOH). The Kenwood well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 20 feet below ground surface (bgs). However the well log on file with Ecology indicates the well is 14 feet in diameter and completed to a depth of 26 feet 2 inches bgs. These discrepancies, as well as discrepancies in other well documents described subsequently in the report, are likely the result of information being passed down through comprehensive water plans over the years rather than well alteration (Louman, 2005). The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 16.5 feet was recorded at the time of drilling, December 1913. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 500 gallons per minute (gpm) and 7 feet of drawdown in the well were also reported. If approved the proposed changes would allow the Kenwood well to withdraw up to 500 gpm, in emergency situations.

The Apple well is located approximately 800 feet north and 200 feet east of the south quarter corner of Section 26, T34N, R26E, and approximately 80 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was also designated GUI by DOH. The Apple well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 10 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is completed to 29 feet bgs. The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 10 feet 4 inches was recorded at the time of drilling, February 1936. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 800 gpm and 10 feet 4 inches of drawdown in the well were also reported. If approved, the proposed changes would allow the Apple well to withdraw up to 1175 gpm, in emergency situations.

The Eastside well is located approximately 800 feet north and 1170 feet west of the southeast corner of Section 35, T34N, R26E, and approximately 1900 feet east of the Okanogan River. This well is currently in use by the City and houses 4 turbine pumps which have a combined capacity to pump 2,800 gpm. The Eastside well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is 14 feet in diameter and completed to 40 feet 10 inches bgs. The materials encountered during drilling, as reported on the well log, include soil, rock and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 28 feet 6 inches was

recorded during the time of drilling in 1944. However, a static water level of 12.4 feet was recorded by Ecology staff, via the City's real-time telemetry system, during a site visit on July 28, 2004. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. The telemetry system also indicated the Eastside well was pumping at a rate of 1488 gpm at the time. A yield of 1630 gpm and 1 foot of drawdown in the well was also reported on the well log. Mike Ervin, City of Omak Water Department Chief Operator, indicated during the site visit that the Eastside well shuts off when the storage reservoir is full, as opposed to shutting off because the water level in the well has dropped. If approved, the proposed changes would allow the Eastside well to withdraw up to 2930 gpm.

The Okoma well is located approximately 660 feet south and 520 feet west of the east quarter corner of Section 34, T34N, R26E, and approximately 2300 feet west of the Okanogan River. This well is currently in use by the City and is equipped with one turbine pump, which has the capacity to pump 500 gpm. The well log on file with Ecology indicates the Okoma well is 16 inches in diameter, completed to a depth of 105 feet bgs and screened from 55 feet to 90 feet bgs. Materials encountered during drilling include clay, silt, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 8 feet 9 inches was recorded at the time of drilling, winter 1988-1989. However, Mike Ervin informed Ecology staff during the site exam the current static water level is approximately 13 feet bgs and the pumping water level is approximately 32 feet bgs. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A well test performed by the driller and reported on the well log indicated a yield of 350 to 400 gpm with 69.3 feet of drawdown in the well after 13.5 hours. This well is located in an area where the aquifer thins, therefore the well is producing as expected, meaning it is producing less than other city wells which are located in areas where the aquifer is thicker. The steep drawdown could also be explained in combination with well efficiency, well construction and/or development and the 18 feet of silt with clay encountered in the well. If approved, the proposed changes would allow the Okoma well to withdraw up to 600 gpm.

The OWP#2 well is located approximately 1210 feet north and 530 feet west of the southeast corner of Section 35, T34N, R26E, and approximately 2600 feet east of the Okanogan River. This well is currently in use by the City, which is leased from Omak Wood Products. The OWP#2 well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, is 24 inches in diameter, completed to a depth of 69 feet bgs, cased to a depth of 44 feet bgs and screened from 44 to 60 feet bgs. An additional inner well screen was installed from 46 to 69 feet bgs during well rehabilitation in July of 1996. Materials encountered during drilling include silt, sand, gravel and cobbles, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 38.75 was recorded in a schematic of the well located within the Comprehensive Water Plan, while a static water level of 36.5 feet was recorded during rehabilitation. According to the well log on file with Ecology, a well test was performed during rehabilitation with a maximum yield of 2500 gpm and 3.8 feet of drawdown in the well after 5.5 hours. The City's telemetry system indicated the OWP#2 well was pumping at a rate of 1341 gpm at the time of the site visit, July 2004. If approved, the proposed changes

would allow the OWP#2 well to withdraw up to 5,000 gpm. Note, the water right associated with this well is interruptible and subject to instream flows on the Okanogan River.

Many factors influence the determination of whether significant interference effecting surrounding wells in the area is expected to take place due to these changes. By observation, there have been no reports of well interference filed with Ecology due to the current use at any of the City's original wells, all original wells penetrate the same aquifer and the total water quantity withdrawn from the aquifer will remain the same. The Kenwood, Apple, Eastside and Okoma wells are all located within the city limits. According to the City of Omak Municipal Code 9.04.040, the city shall be the exclusive provider of domestic water within the city limits, meaning wells located within the city limits may not be used for domestic purposes. Therefore domestic wells, on file with Ecology, within the city limits are likely no longer in use. The OWP#2 well is located approximately 50 feet south of the city limits, on the Colville Confederated Tribal Reservation. The tribe has acknowledged and does not object to the proposed water right changes, knowing the changes would allow non-interruptible water rights to be transferred to the OWP#2 well. Since the geologic setting and hydrogeology are consistent in the approximate 1 mile distance or less between subject well locations, the instantaneous quantity for each well is limited to the quantity associated with its original water right and the total water quantity withdrawn from the aquifer will not increase, interference which may take place is not expected to be significant.

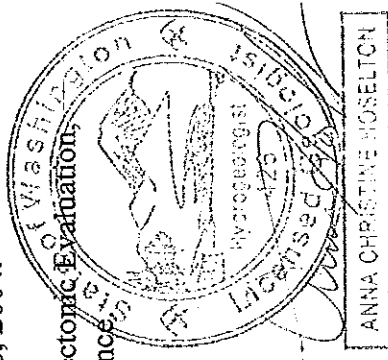
Relationship between the Original Source and Proposed Source:

In order to transfer or add a well to an existing water right, "the additional or replacement well or wells shall tap the same body of public ground water as the original well or wells," as stated in Chapter 90.44.100(2a) RCW. The subject wells tap the unconsolidated glacial/alluvial sediment aquifer and are not separated from each other by a hydraulic barrier, such as a fault. Therefore, all five subject wells are considered to utilize the same body of ground water.

References:

- Gulick, C.W. and Korosec, M.A. 1990. Geologic Map of the Omak 1:100,000 Quadrangle, Washington. Washington Division of Geology and Earth Resources. Open File Report 90-12.
- Louman, Jeff (with Huibregtse, Louman Associates, Inc, the City of Omak's consulting engineers). 2005. Personal Communication May 3, 2005.
- Huibregtse, Louman Associates, Inc. 2004. City of Omak Comprehensive Water Plan (Preliminary), Project No. 03018. Ecology received date September 28, 2004.
- United States Department of Interior, Bureau of Reclamation. 1989. Seismotectonic Evaluation, Northwest Rocky Mountains – Okanogan Uplands Geomorphic Province

*original located in
CG4-GWCA45-D*

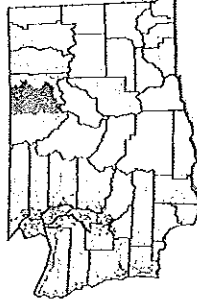




STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

January 12, 2004



Your address
is in the
Okanogan
watershed

City of Omak
PO Box 72
Omak WA 98841-0072

Dear Applicant:

RE: Water Right Change Applications No. CG4-GWC445-D, CG4-GWC446-D,
CG4-GWC1082-D, CG4-GWC3655-A, CG4-GWC3656-A, CG4-GWC7332-A,
CG4-GWC445-D@1, CG4-GWC1082-D@1, CG4-GWC3655-A@1,
CG4-GWC3656-A@1, CG4-GWC7332-A@1, CG4-31525

This letter is regarding water right change applications that you submitted to the Department of Ecology. The Department is beginning to process water right change applications within Okanogan County (Water Resource Inventory Area 49).

Enclosed are copies of the public notices for the change applications that you submitted. Due to the time lag in our processing these applications, we would like to verify your interest in proceeding with the projects as described in the public notices.

If you do not wish to proceed with the projects, please let us know and we will reject the applications. If your plans have changed from what was described in the public notices, you may need to file new change applications. Ecology staff will be contacting you to discuss the proposed changes and, in some cases, arrange for a site visit.

To contact us, you may call Bryce Bealba in this office at (509) 575-2597.

Sincerely,

Randall Doneen
Unit Supervisor
Water Resources Program

RD:TM:eg
040118

Enclosures: Copies of Affidavits of Public Notice

FILE COPY





2 N. Ash
(509) 826-1170

P.O. Box 72
Omak, WA 98841

E. Walt Smith
Mayor

State of Washington — In the Heart of the Okanogan

May 19, 1994

Water Resources Program
Central Regional Office
Department of Ecology
3601 W. Washington
Yakima, Wa. 98903-1164

Gentlemen:

Enclosed are the original Affidavits of Publication regarding the following Water Applications:

CHG GWC #3655-A
CHG GWC #3656-A
CHG GWC #445-D
CHG GWC #1082-D
CHG GWC #7332-A
CH GWC #446-D

Please contact me for any further information you may need.

Sincerely,

Trish Sieker
City Clerk/Treasurer

Affidavit of Publication

STATE OF WASHINGTON ss.
County of Okanogan

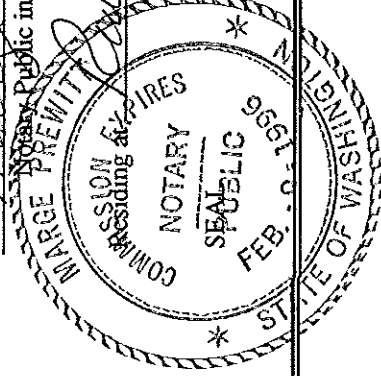
The undersigned, being first duly sworn on oath, deposes and says that she is the principal clerk of the Omak-Okanogan County Chronicle, a weekly newspaper, that she is duly authorized to make this affidavit; that said newspaper is a legal newspaper and has been approved as a legal newspaper by order of the Superior Court in the county in which it is published and it is now and has been for more than six months prior to the date of the publications hereinafter referred to, published in the English language continuously as a weekly newspaper in Omak, Okanogan County, Washington, and it is now and during all of said time was printed in an office maintained at 618 Okoma Drive, the place of publication of said newspaper. That the annexed is a true copy of
Notice of Application
(5 points of withdrawal, No. 446-D)

as it was published in regular issues (and not in supplement form) of said newspaper once a week for a period of two consecutive weeks, commencing on the 16th day of March, 19 94, and ending on the 23rd day of March, 19 94, both dates inclusive, and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of \$ 66.00, which amount has been paid in full, at the rate of \$5 per column inch.

Elizabeth A Widel
Principal Clerk

Subscribed and sworn to before me this 23rd day of March, 19 94

Marge Prentiss
Notary Public in and for the State of Washington



State of Washington
Department of Ecology
Yakima, Washington
Notice of Application to add
five (5) points of withdrawal as
authorized under ground water
certificate no. 446-D.

Take notice:

That on January 3, 1994, the City of Omak, Washington, has applied to add five (5) points of withdrawal as authorized under the above-referenced certificate.

That said certificate authorizes the withdrawal of 800 gallons per minute, 96 acre-feet per year, of water from a pump well from a point located within Block 3 of Omak Addition being within the SW1/4SE1/4 of Section 26, Township 34 N., Range 26 E.W.M., Okanogan County.

That said water is authorized for the purpose of municipal supply within the City of Omak, Okanogan County.

That the applicant proposes to add five (5) points of withdrawal from five (5) wells located within the SW1/4SE1/4 of Section 26; the NE1/4SE1/4 of Section 34; and the SE1/4SE1/4 of Section 35; all within Township 34 N., Range 26 E.W.M., Okanogan County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections; protests must be accompanied by a two dollar (\$2.00) recording fee and filed with the Department of Ecology, 3601 W. Washington Ave., Yakima, WA 98903, within thirty (30) days from: March 23, 1994.
Published by the Omak-Okanogan County Chronicle.
(94-129-Mar. 16, 23)

OK 5/24/94
mjs

Affidavit of Publication

STATE OF WASHINGTON
County of Okanogan ss.

State of Washington
Department of Ecology
Yakima, Washington
Notice of Application to add
five (5) points of withdrawal as
authorized under ground water
certificate no. 446-D.

Take notice:

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3 of Omak Addition being within
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Township 34 N., Range 26
E.W.M., Okanogan County.

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ply within the City of Omak,
Okanogan County.

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al from five (5) wells located with-
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ogy, 3601 W. Washington Ave.,
Yakima, WA 98903, within thirty
(30) days from: March 23, 1994.
Published by the Omak-
Okanogan County Chronicle.
(94-129-Mar. 16, 23)

The undersigned, being first duly sworn on oath, deposes and
says that she is the principal clerk of the Omak-Okanogan
County Chronicle, a weekly newspaper, that she is duly
authorized to make this affidavit; that said newspaper is a
legal newspaper and has been approved as a legal newspaper
by order of the Superior Court in the county in which it is
published and it is now and has been for more than six months
prior to the date of the publications hereinafter referred to,
published in the English language continuously as a weekly
newspaper in Omak, Okanogan County, Washington, and it is
now and during all of said time was printed in an office
maintained at 618 Okoma Drive, the place of publication of
said newspaper. That the annexed is a true copy of
Notice of Application
(5 points of withdrawal, No. 446-D)

as it was published in regular issues (and not in supplement
form) of said newspaper once a week for a period of two
consecutive weeks, commencing on the 16th day of
March, 19 94,
and ending on the
23rd day of March, 19 94,
both dates inclusive, and that such newspaper was regularly
distributed to its subscribers during all of said period. That the
full amount of the fee charged for the foregoing publication is
the sum of \$ 66.00, which amount has been paid in
full, at the rate of \$5 per column inch.

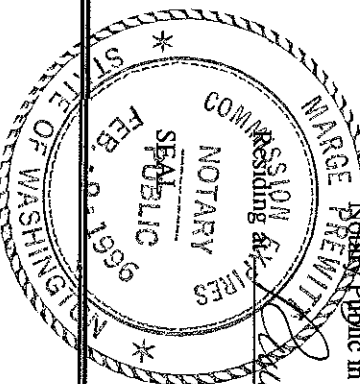
Elizabeth A. Wickel
Principal Clerk

Subscribed and sworn to before me this 23rd day of

March, 19 94

Marge Fawcett
Notary Public in and for the State of Washington

OK 5/24/94
mcs





STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

3601 W. Washington • Yakima, Washington 98903-1164 • (509) 575-2800

May 17, 1994

City of Omak
PO Box 72
Omak WA 98841

RE: Water Application No. CH GWC #446-D

On March 3, 1994, we forwarded to you a notice for publication.

To date, we have not received the original Affidavit of Publication concerning your application. The publishing newspaper should provide you with a notarized original Affidavit of Publication which should be forwarded to our office as soon as possible.

If we do not hear from you within thirty (30) days from the date of this letter, we will assume you are no longer interested in your application and it will be rejected with no further notice.

Sincerely,

Water Resources Program
Central Regional Office

NOTE: PLEASE ADVISE OF ANY ADDRESS CHANGE



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

3601 W. Washington • Yakima, Washington 98903-1164 • (509) 575-2800

March 3, 1994

City of Omak
PO Box 72
Omak, WA 98841

Re: Application for Change Under No. GWC 446-D

We have received your application for change for appropriation of water and it has been assigned the above number. Please refer to it by number in future correspondence.

Please complete the following two steps:

1. Enclosed is a notice of your application for change which must be published once a week for two consecutive weeks in a newspaper published in Okanogan County. The newspaper should have general circulation in the locality where the water is to be diverted and used, and must be qualified as a legal newspaper. Publishing the notice in a remote part of the county, when not necessary, may be cause for you to be required to republish the notice in a designated newspaper.

Publication should start within 30 days from the date of this letter.

To assure accuracy, it is your responsibility to check the notice carefully before having it published. If an error is detected, please contact this office for correction and/or resolution. The actual date of the second printing must appear in both publications.

2. After publication, the publishing newspaper should provide you with a notarized original Affidavit of Publication which should be forwarded to our office as soon as possible.

Sincerely,

Water Resources Program
Central Regional Office

Enclosure(s): ~~XXXXXXXXXX~~
Public Notice
Newspaper List

NOTE: PLEASE ADVISE OF ANY ADDRESS CHANGE



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
YAKIMA, WASHINGTON

NOTICE OF APPLICATION TO ADD FIVE (5) POINTS OF WITHDRAWAL AS
AUTHORIZED UNDER GROUND WATER CERTIFICATE NO. 446-D

TAKE NOTICE:

That on January 3, 1994, the City of Omak, Washington, has applied to add five (5) points of withdrawal as authorized under the above-referenced certificate.

That said certificate authorizes the withdrawal of 800 gallons per minute, 96 acre-feet per year, of water from a pump well from a point located within Block 3 of Omak Addition being within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 26, Township 34 N., Range 26 E.W.M., Okanogan County.

That said water is authorized for the purpose of municipal supply within the City of Omak, Okanogan County.

That the applicant proposes to add five (5) points of withdrawal from five (5) wells located within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 26; the NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 34; and the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35; all within Township 34 N., Range 26 E.W.M., Okanogan County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections; protests must be accompanied by a two dollar (\$2.00) recording fee and filed with the Department of Ecology, 3601 W. Washington Ave., Yakima, WA 98903, within thirty (30) days from:

(last date of publication to be entered above by the publisher)

940203



State of Washington In the Heart of the Okanogan

2 N. Ash
(509) 826-1170

P.O. Box 72
Omak, WA 98841

E. Walt Smith
Mayor

March 1, 1994

Department of Ecology
3601 West Washington
Yakima, WA 98903-1164

ATTENTION: Doug Clausung, Sec. Mgr., Water Resources Program

SUBJECT : City of Omak Water Rights Applications for Change

Dear Mr. Clausung:

Enclosed is a check for \$600.00, as requested in your letter dated February 18, 1994, for the required \$100.00 surcharge per application. We understand that the next step in the "change" of water right process is to publish in our local paper, DOE supplied public notices regarding the applications.

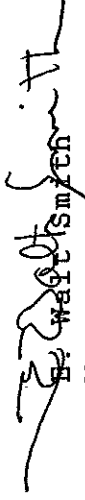
As you are aware, the City of Omak has received Community Economic Revitalization Board (CERB) grant funds and Public Works Trust Fund - Timber Impact Program loan funds for construction of water system improvements related to cooling and re-using water being discharged by Omak Wood Products's power generation plant. Completion of these improvements within a time frame consistent with the funding contracts is critical.

As the submittal of the subject change applications is a provision of DOE's Report of Examination, dated April 22, 1993, and the procurement of the appropriate water rights changes is necessary for the successful completion of the project, the City of Omak respectfully requests that the Department of Ecology process the six (6) subject applications in the most expedient manner.

Should you have any questions or require additional information, please contact Mr. Fred Sheldon, Omak Public Works Director, at (509) 826-1170.

Very truly yours,

CITY OF OMAK


E. Walt Smith
Mayor

EWS/nld

pc: Huibregtse, Louman Associates, Inc.

OK # 18434
\$600.00
-3 1004



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

3601 W. Washington • Yakima, Washington 98903-1164 • (509) 575-2800

February 18, 1994
CERTIFIED MAIL

City of Omak
PO Box 72
Omak, WA 98841

RE: Six Water Right Applications for Change

We are in receipt of six (6) of your water right applications. Please be advised that this year the Legislature passed a new law requiring applicants to pay a \$100 surcharge on all water right applications received between July 1, 1993 and June 30, 1994. This new law applies to your applications. There is a total of \$600.00 due at this time.

Your payment must be postmarked by April 23, 1994. Otherwise your application will be rejected and your priority date will be lost. There will be no further notice regarding payment of the surcharge. Payment must be made by check or money order (not cash) to the Department of Ecology.

If you have any questions regarding the surcharge or the status of your application, please call Myria Autrey Johnson at (509) 575-2800.

Sincerely,

Doug Clausing
Doug Clausing, Section Manager
Water Resources Program

vw
cc: Jeffrey Louman
3800 Summitview Ave Suite 100
Yakima, WA 98902

ap-9a
7/93

Is your RETURN ADDRESS completed on the reverse side?

SENDER: Complete items 1 and/or 2 for additional services.
• Print your name and address on the reverse of this form so that we can return this card to you.
• Attach this form to the front of the mailpiece, or on the back if space does not permit.
• Write "Return Receipt Requested" on the mailpiece below the article number.
• The Return Receipt will show to whom the article was delivered and the date delivered.

3. Article Addressed to:

4a. Article # *P39*
4b. Service ☒ Registered ☒ Certified ☐ Express
7. Date of *FEB 23 1994*
8. Address *City of Omak
P.O. Box 72
Omak WA 98841*
9. Signature (Addressee) *Myria Autrey Johnson*
9. Signature (Agent) *Doug Clausing*
PS Form 3811, December 1991 U.S. GPO: 1992-323-402

Huibregtse, Louman Associates, Inc.

William L. Huibregtse, PE
Jeffrey T. Louman, PE
Theodore W. Pooler, PE
Dennis J. Whitcher, PE
Donald H. Wilton, PLS

3800 Summitview, Suite 100
Yakima, Washington 98902

Phone: 509 / 966-7000
FAX: 509 / 965-3800

December 27, 1993

Department of Ecology
3601 West Washington
Yakima, WA 98903-1164

Attn: Doug Clausing
Section Manager

Re: City of Omak
Applications for Change of Water Right

Dear Mr. Clausing:

As you are aware, the City of Omak is actively pursuing the re-use of water used by Omak Wood Products, (OWP) for power generation at their mill. The Department of Ecology (DOE) issued a "Report of Examination" on April 22, 1993, recommending that the City of Omak be issued a permit authorizing withdrawal of up to 5,000 gpm, 3,500 acre feet per year from the two OWP wells subject to a number of provisions.

Subsequent to the "Report", you attended a meeting at the City's engineering consultants office on May 19, 1993, along with Mr. Fred Rajala, DOE, who authored the report. At the meeting, which included Fred Sheldon, City Public Works Director and our engineering consultants, Bill Huibregtse, PE, and Jeff Louman, PE, you recommended that the City apply for change of water right adding the two OWP wells to Omak's existing water rights. Fred Rajala also suggested adding all City wells to each existing water right thereby tying each well to each existing right in case a particular water right was ever contested in the future.

Enclosed are six (6) "Application For Change Of Water Right" documents and a check for the \$60.00 examination fee. Each application seeks additional points of withdrawal, these being the other City of Omak wells and the two Omak Wood Products wells. Where appropriate, the applications also modify the instantaneous withdrawal rate to coincide with existing pumping capacities at the subject well.

Please contact Mr. Jeff Louman, PE, at telephone number (509) 966-7000 should you have any questions or require additional information.

Very truly yours,


E. Walt Smith
Mayor

EWS/jk
OM4-31

Enclosures

copy: Huibregtse, Louman Associates, Inc.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

APPLICATION FOR CHANGE OF WATER RIGHT

☐ PURPOSE ☐ DIVERSION OR WITHDRAWAL
☐ PLACE ☒ ADDITIONAL POINT OR POINTS

Accepted By: <i>[Signature]</i>
Date: <i>3/1/85</i>
In Field Exam. Required? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Determined By: _____

NAME City of Omak		Bus. Tel. (509) 826-1170
ADDRESS P.O. Box 72		Home Tel. _____
(CITY) Omak	(STATE) WA	Other Tel. _____
APPLICATION NUMBER _____		(ZIP CODE) 98841
PERMIT NUMBER _____	CERTIFICATE NUMBER 446-D	
DECREED RIGHT (TITLE OF CASE) _____		

APPROPRIATIONS MADE (GIVE DATE IF PRIOR TO JUNE 7, 1917 IF SURFACE WATER, OR JUNE 7, 1945 IF GROUND WATER)

IS THE WATER RIGHT RECORDED IN YOUR NAME? ☒ YES ☐ NO IF NO, GIVE NAME RECORDED UNDER

1. RIGHT CONSISTS OF

WATERS USED FROM (STREAM, LAKE, WELL, OR TRENCH, ETC.)
Well
GALLONS PER MINUTE OR CUBIC FEET PER SECOND
800 GPM

WATER CURRENTLY USED FOR
Municipal Water Supply
TIME OF USE
Continuous

2. LOCATION OF PRESENT POINT OF DIVERSION OR WITHDRAWAL

ENTER BELOW THE DISTANCES FROM THE NEAREST SECTION OR PROPERTY CORNER TO THE DIVERSION OR WITHDRAWAL

800 Ft. North and 200 Ft. East of the South 1/4 Corner of Section 26

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION) SW 1/4 of SE 1/4	SECTION 26	TOWNSHIP N. 34	RANGE (E. OR W.) W.M. 26E	COUNTY Okanogan
---	---------------	-------------------	------------------------------	--------------------

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, COMPLETE THIS SECTION

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
-----	-------	------------------------------------

3. LEGAL DESCRIPTION OF LANDS WATER IS USED ON

City of Omak Water System Service Area

SECTION 25, 26, 27, 34, 35 & 36	TOWNSHIP N. 34	RANGE, (E. OR W.) W.M. 26E	COUNTY Okanogan
------------------------------------	-------------------	-------------------------------	--------------------

(ATTACH SEPARATE SHEET IF NECESSARY)

ARE YOU THE LEGAL OWNER OF THE ABOVE DESCRIBED LANDS <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	IF NO, EXPLAIN YOUR INTEREST Municipal Water Purveyor
---	--

REASONS FOR THE PROPOSED CHANGE

Consolidation of all City of Omak wells and existing water rights. Also the

addition of two existing Omak Wood Products wells to City of Omak water rights.

A MINIMUM FEE OF \$10.00 MUST ACCOMPANY THIS APPLICATION

CONTINUE ON REVERSE SIDE

CHANGE

4. CHANGE WATER USE TO _____ CHANGE REQUESTED _____ TIME OF USE _____ GALLONS PER MINUTE OR CUBIC FEET PER SECOND 600 GPM

5. LOCATION OF PROPOSED POINT OF DIVERSION OR WITHDRAWAL
ON ACCOMPANYING SECTION MAPS, ACCURATELY MARK AND IDENTIFY EACH POINT OF DIVERSION. SHOW NORTH-SOUTH AND EAST-WEST DISTANCES FROM NEAREST SECTION CORNER OR PROPERTY CORNER.
ALSO, ENTER BELOW THE DISTANCES FROM THE NEAREST SECTION OR PROPERTY CORNER TO THE DIVERSION OR WITHDRAWAL.
See Attachment

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION) _____ SECTION ____ TOWNSHIP N. ____ RANGE (E. OR W.) W.M. ____ COUNTY ____
6. IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, COMPLETE THIS SECTION
LOT ____ BLOCK ____ OF (GIVE NAME OF PLAT OR ADDITION) _____

ARE YOU THE OWNER OF THE LAND ON WHICH THE PROPOSED POINT OF DIVERSION OR WITHDRAWAL IS TO BE LOCATED
☒ YES ☐ NO With the exception of two Omak Wood Products wells.

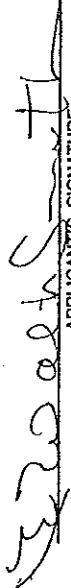
LEGAL DESCRIPTION OF LANDS WATER IS TO BE USED ON

City of Omak Water System Future Service Area
(As defined in the City of Omak Comprehensive
Water System Plan dated February 1990)

SECTION 25, 26, 27, 34, 35 & 36 TOWNSHIP N. 34 RANGE, (E. OR W.) W.M. 26E COUNTY Okanogan

ARE YOU THE LEGAL OWNER OF THE ABOVE DESCRIBED LANDS IF NO, EXPLAIN YOUR INTEREST
☐ YES ☒ NO Municipal Water Purveyor

* PLEASE NOTE LEGAL LAND OWNER SIGNATURE AND APPLICANT SIGNATURE ARE BOTH REQUIRED. IF THE LEGAL LAND OWNER AND APPLICANT ARE THE SAME, PLEASE SIGN IN BOTH PLACES. THANK YOU.

LEGAL LANDOWNER (PLEASE PRINT) _____
APPLICANT'S SIGNATURE 

LEGAL LANDOWNER SIGNATURE (OWNER OF PROPERTY DESCRIBED IN ITEM NUMBER 3)

LEGAL LANDOWNER'S ADDRESS

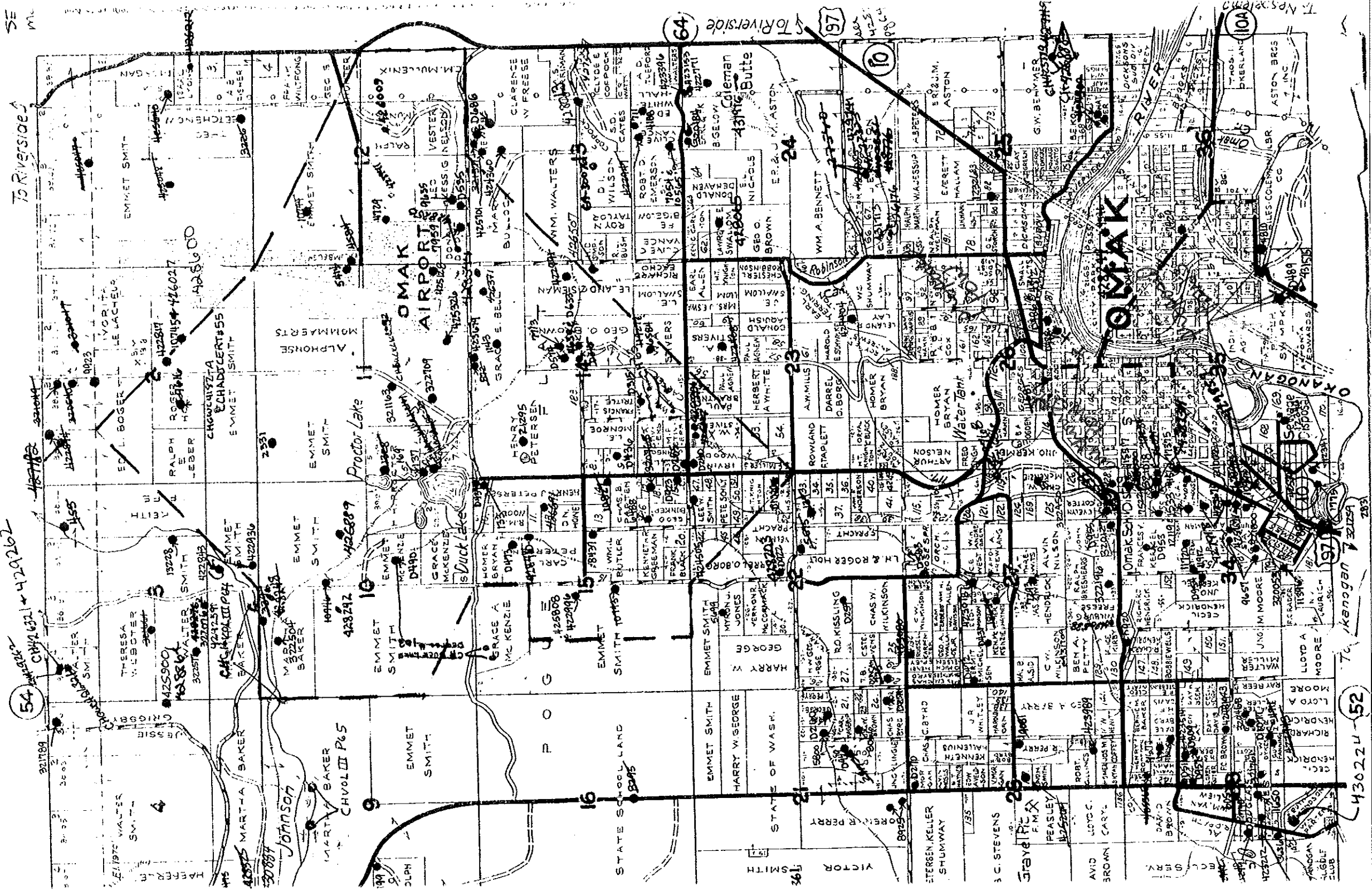
December 27, 1993

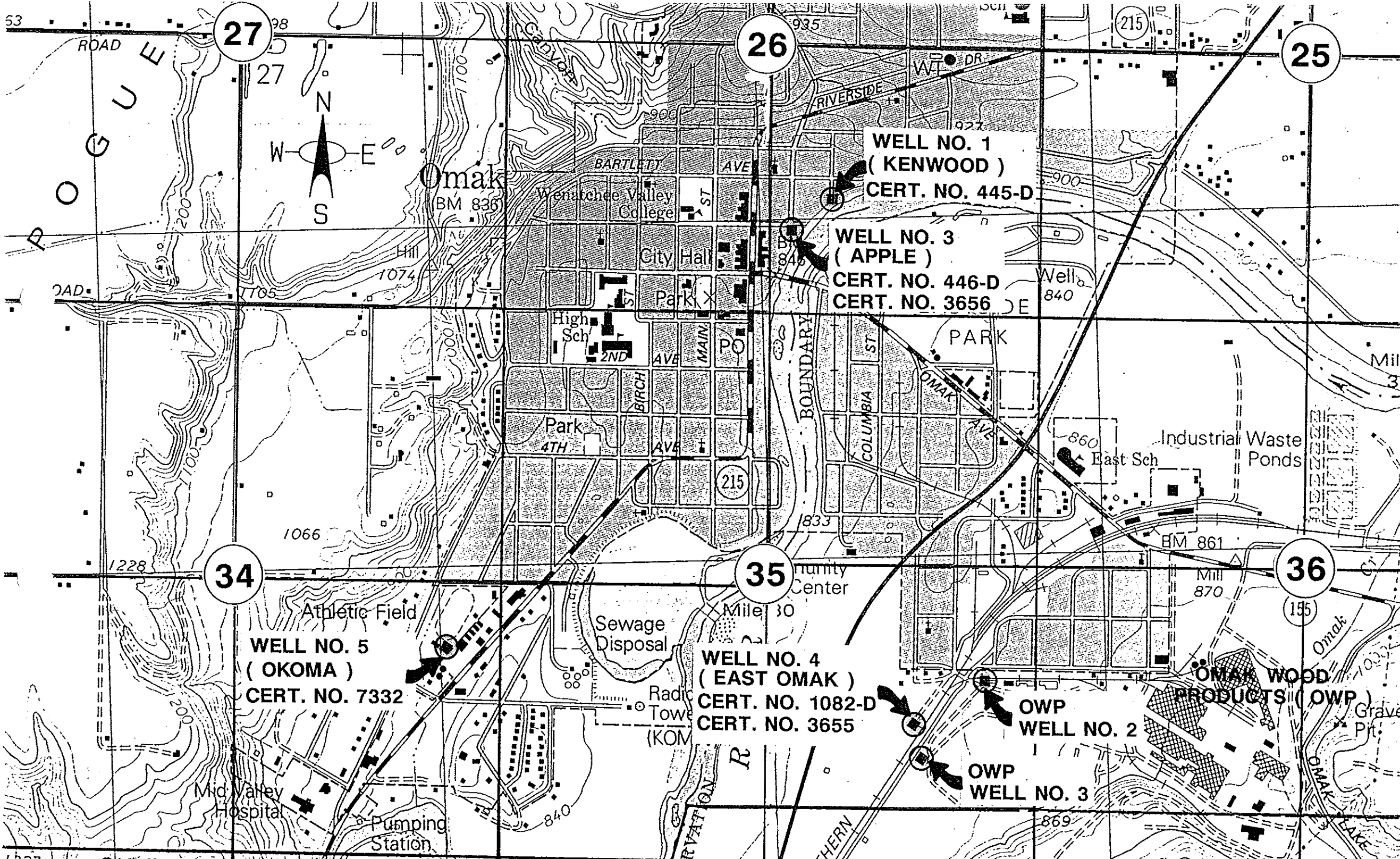
CITY OF OMAK
WELL NO. 3, CERT. NO. 446-D

ADDITIONAL POINTS OF WITHDRAWAL

<u>Source Name</u>	<u>Water Rights Certificate</u>	<u>Current Pump Capacity</u>	<u>Section</u>	<u>Township</u>	<u>Range</u>	<u>Location</u>
City of Omak Well No. 1 (Kenwood)	445-D	550 GPM	26	34N	26E	1,100' North & 600' East of South 1/4 Corner
City of Omak Well No. 4 (East Omak)	1082-D & 3655	2,800 GPM	35	34N	26E	800' North & 1170' West of Southeast Corner
City of Omak Well No. 5 (Okoma)	7332	400 GPM	34	34N	26E	660' South & 520' West of East 1/4 Corner
Omak Wood Products Well No. 2	Claim No. 005741	1,800 GPM	35	34N	26E	1,210' North & 530' West of Southeast Corner
Omak Wood Products No. 3	Claim No. 005741	2,000 GPM	35	34N	26E	470' North & 1,060' West of Southeast Corner

OKANOGAN COUNTY, WASHINGTON





WELL NO. 1
(KENWOOD)
CERT. NO. 445-D

WELL NO. 3
(APPLE)
CERT. NO. 446-D
CERT. NO. 3656

WELL NO. 5
(OKOMA)
CERT. NO. 7332

WELL NO. 4
(EAST OMAK)
CERT. NO. 1082-D
CERT. NO. 3655

OWP
WELL NO. 2

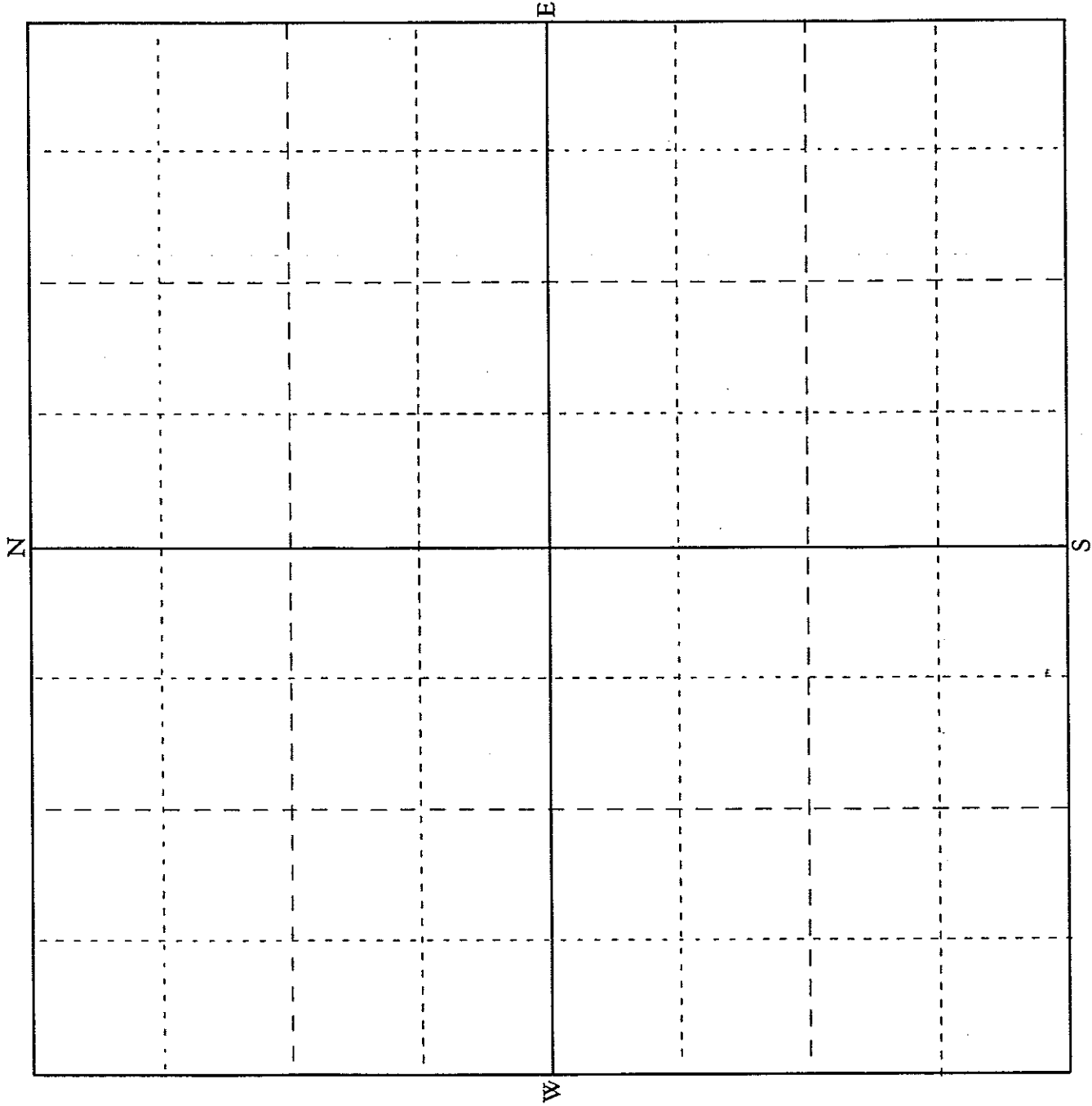
OWP
WELL NO. 3

OMAK WOOD
PRODUCTS (OWP)

SECTION MAP

* SEE ATTACHMENT

Sec. _____ Twp. _____ N. R. _____

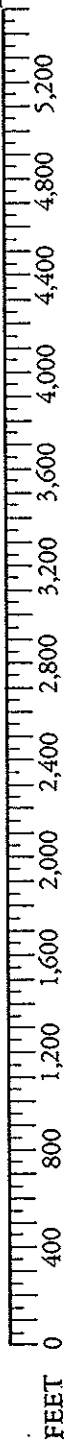


Scale: 1 inch = 800 feet (each small square = 10 acres)

Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source); For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile. Indicate traveling directions from nearest town in space below.

Detach here

Fold along scale



Detach this scale at the perforation, fold excess paper under or cut off excess by cutting along the scale line. This scale corresponds to the SECTION MAP above. You can read feet directly from this scale to outline property and locate points of diversion or withdrawal on the SECTION MAP. Enclose this map along with the application and \$10.00 examination fee.

CERTIFICATE RECORD No. 1 PAGE No. 446-D UNDER DECLARATION OF CLAIM No. 488STATE OF WASHINGTON, COUNTY OF Okanogan**Certificate of Ground Water Right**

Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and the rules and regulations of the State Supervisor of Hydraulics thereunder.

THIS IS TO CERTIFY That CITY OF OMAK WATER DEPARTMENT

of Omak, Washington has filed

in the office of the State Supervisor of Hydraulics of Washington Declaration of Claim No. 488

to withdraw ground waters of the State from a Pump Well

located within Block 3 of Omask Addition, Omak, Washington

for the purpose of Municipal supply

The right to the use of said ground waters has been sustained and approved by the Supervisor of Hydraulics in accordance with Chapter 263, Laws of Washington for 1945, and is hereby entered of record in Volume 1 of Ground Water Certificates at page 446-D; the right approved has a priority of March, 1936; the amount of water which the Declarant is entitled to withdraw for the aforesaid purpose is limited to the amount actually beneficially used and shall not exceed 800 gallons per minute; 96 acre-feet per year; and is appurtenant to the following described lands or place of use:

City of Omak, Okanogan County, Washington

Well #3

The right to the use of the ground water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Hydraulics affixed this 15th day of December, 19 47

RODNEY RYKER

State Supervisor of Hydraulics.

BY

Chas. J. Robinson

CHAS. J. ROBINSON, CLERK

REPORT OF FINDINGS ON GROUND WATER Decl. 488

NAME H. G. Hubbert Water Supt. City of Omak

TYPE OF WORKS: pump well Date of Examination June 26, 1947

Dimensions: 29' x 10' Progress of Works: completed

LOCATION: block 3 of Omak Addition

QUANTITY Claimed OK acre feet
Applied for 800 g.p.m. 500 per year

USE: municipal

Irrigation-acreage: Present Planned Feasible

Municipal: Population 3,320 as of present

Industrial: _____

Time Pump Will Be Operated: _____

Other Water Rights of Applicant: ground water deels. 486, 487 and 489

proximity to existing works, springs or streams: _____

Estimated effect of withdrawal of water on existing water rights: _____

Water Bearing Zone: _____

RECOMMENDATIONS

Approved for 800 g.p.m. 96 acre feet
per year, subject to existing water rights.

This well used 31,263,000 gallons from October 1, 1946 to October 1, 1947 which amounts to 96 acre feet a year.

According to figures sent in by Mr. Hubbert 1,430 acre feet a year are used from the new city well on the Colville Indian Reservation, but as we have no jurisdiction over the two wells there, no findings for these are being sent.

Signed this 3rd day of November, 1947

FRED B. ROBERTS
Ground Water Geologist

CHANGE APPLICATION	PROCESSING CHECKLIST	01-10-91	CC																																
APPLICATION FEES	Minimum \$10.00 fee attached 0-500 cfs = \$2.00/cfs 501-2000 cfs = \$.50/cfs 2001 + cfs = \$.20/cfs																																		
NAME & ADDRESS	Applicants Name, Address, & Phone Number																																		
SIGNATURE	Applicant																																		
GENERAL COMPLETENESS	Quantities, Uses, Legal Descriptions, Maps, etc.																																		
WHAT'S BEING CHANGED?	If change on a Certificate: Identify & Copy from Microfiche If change on a Permit: Pull & use permit file, use left side.																																		
PREPARE FOLDER	Staple Check or Receipt and Action Slip to top of folder Mark Action Slip: approved receipts label advertise folder prepare folder																																		
COMPARE WITH RIGHT	Compare with Cert or Permit, check quantities, POU, POD/W, use, ect.																																		
TOP OF APPLICATION	Initial accepted County WRIA in top left corner, circled																																		
MAPPING	Xerox: Topo & Metsker Map: Authorized & Proposed POU & POD/W																																		
METSKER	Put "CH" in front of old number "S" on Progress Sheet																																		
PREPARE PROGRESS SHEET	Control number at top Purpose of Change Date application received Date fee received if different Authorize Public Notice																																		
PREPARE FIELD PACK	Applicant's Name & WRIA																																		
Copy, Label & put in front of file	<table><thead><tr><th>AGENCY</th><th>APP</th><th>TOPO</th><th>MISC</th></tr></thead><tbody><tr><td>(mult-dom) DOH</td><td>✓</td><td></td><td></td></tr><tr><td>(surface FISH</td><td></td><td></td><td></td></tr><tr><td>water) GAME</td><td></td><td></td><td></td></tr><tr><td>(49, 50, 51, 52, 53, 58, 60, 61)</td><td>✓</td><td>✓</td><td>Don't: 45, 46</td></tr><tr><td>COLV</td><td></td><td></td><td>47, 48</td></tr><tr><td>31, 32, 33, 37, 38, 39, 40) YAKI</td><td></td><td></td><td></td></tr><tr><td>(29, 30 (all) FIELD PACK</td><td>X</td><td>X</td><td>X</td></tr></tbody></table>			AGENCY	APP	TOPO	MISC	(mult-dom) DOH	✓			(surface FISH				water) GAME				(49, 50, 51, 52, 53, 58, 60, 61)	✓	✓	Don't: 45, 46	COLV			47, 48	31, 32, 33, 37, 38, 39, 40) YAKI				(29, 30 (all) FIELD PACK	X	X	X
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COLV			47, 48																																
31, 32, 33, 37, 38, 39, 40) YAKI																																			
(29, 30 (all) FIELD PACK	X	X	X																																
CHANGE BOOK	Record in Book of Change Applications																																		
PUBLIC NOTICE (see examples)	Applicant's Name Purpose of Change Authorized rights - cfs or gpm, POD/W, POU, use Proposed Changes Protest Blurb																																		
AREA MAPS	Concern area - alert someone Hold or Adj. - send letter																																		
WRACTIV	Enter & Stamp entered																																		

PROGRESS SHEET - APPLICATION FOR CHANGE ON:

WRIA 49 CG-4-BWC 446-D@1 **COUNTY** OKANAGAN

NAME: CITY OF OMAK **PHONE:** (509) 826-1170

ADDRESS: P.O. BOX 72 OMAK WA. 98841

PURPOSE OF APPLICATION: ADD POW

Original Right Holder: CITY OF OMAK

Application received: NOVEMBER 24, 1998 Initial \$10.00 fee received: (X) Yes () No

Statement of additional exam fee \$ _____ **Sent** _____ **Received** _____

PUBLICATION:
Approved by: _____ **Date** _____ **Notice Sent** 2-16-99

CONSULTED AGENCIES:
DOH _____ **DOW** _____ **DOF** _____ **USBR** _____ **TRIBES** _____

PROTESTS: [Signature] **By:** _____ **Name** _____

By: _____ **Name** _____

By: _____ **Name** _____

Affidavit received: 3/23/99 **Checked by:** [Signature] **P.P. time expires:** 4/9/99

Report written by: _____ **Date Report Sent:** 12-7-2000

DEVELOPMENT SCHEDULE

Beginning of Construction: 12-1-2001 **Date sent:** 12-7-00 10-22-02 **Date received:** 11-13-02

Completion of Construction: 12-1-2002 **Date sent:** 10-22-02 **Date received:** 11-13-02

Proof of Appropriation: 12-1-2004 **Date sent:** 11-25-02 **Date received:** _____

Date well report(s) received: _____

DATE APPROVED FOR CHANGE: _____ **BY:** _____

- () Superseding Permit
- () Superseding Certificate
- () Certificate of Change (on claims)
Vol. 1-4, Page _____.

Date certificate fees requested: _____ **Date received:** _____

DATE CHANGE ISSUED: _____

REMARKS: _____



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490
November 25, 2002

City of Omak
PO Box 72
Omak WA 98841

Re: Change Authorization No. CG4-GWC446-D@1

We have received your Notice of Beginning and Completion of Construction forms associated with the above-numbered change authorization.

Enclosed is a Proof of Appropriation form which is to be filed when the water has been put to full beneficial use. Full beneficial use means that water is being used in agreement with the terms of the Findings of Fact and Decision. You may complete and file the Proof of Appropriation form for less water than authorized in the decision, if the project is complete, and less water is being used than anticipated.

If you can not put the water to full beneficial use by December 1, 2004, please contact the Department of Ecology. Permit cancellation may result for failing to timely file the Proof of Appropriation form.

If you have any questions or concerns on the above information or any other aspect of your water right permit, please contact this office of the Department of Ecology at (509) 575-2490. Thank you for your attention to this matter.

Sincerely,

A handwritten signature in cursive script that reads "Phil Crane".

Phil Crane
Water Resources Program

PC:TM:eg
021186

Enclosure: Proof of Appropriation form

cs-2.doc

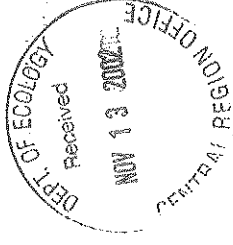
FILE COPY



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CONSTRUCTION NOTICE

BEGINNING OF CONSTRUCTION



NAME OMAK, CITY OF	DATE CONSTRUCTION BEGAN JULY 2, 2001	DATE CONSTRUCTION COMPLETED MAY 10, 2002	CHS AUTH. GROUND WATER PERMIT NO. 664-600446-D01
% EQUIPMENT IN PLACE		% MATERIAL IN PLACE	% EXCAVATED
% CONSTRUCTION NOT COMPLETE, SHOW % COMPLETED AS OF THIS DATE		% STRUCTURE	
IF CONSTRUCTION HAS BEEN ABANDONED			
DATE ABANDONED	REASON ABANDONED		

REMARKS OR ANY ADDITIONAL INFORMATION WHICH MAY TEND TO SHOW GOOD FAITH IN THE PROSECUTION OF THE WORK

GROUND:

DATE:

Well Drilling Started:

JULY 2, 2001

Pump Installed:

OCT. 11, 2001 Installed
APRIL 11, 2002 Activated

Mainline Laid:

MAY 10, 2002 Completed

Does well location agree with permit? (X) Yes () No If no, please

give actual location:

I certify I am the holder of the above permit issued by the Department of Ecology for the State of Washington, and in accordance with the terms of such permit and the limitations endorsed by the Department of Ecology have ☐ begun ☒ completed the actual construction of the work described in the permit.


Signature of Applicant

Po Box 72 0
Present Address

OMAK WA 98841
City, State, Zip Code

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CONSTRUCTION NOTICE

COMPLETION OF CONSTRUCTION



NAME <u>OMAK, CITY OF</u>	SURFACE WATER PERMIT NO. _____	GROUND WATER PERMIT NO. <u>654-GWC446-D01</u>
DATE CONSTRUCTION BEGAN <u>JULY 2, 2001</u>	DATE CONSTRUCTION COMPLETED <u>MAY 10, 2002</u>	DATE COMPLETION EXPECTED _____

A project is considered completed when the facilities are installed to deliver water to the place of use.

Pump: GOULDS 5CLC01564C Horsepower: 20 Operating Pressure at Pump: 180 PSI
Turbine () Submersible (X) Centrifugal () Other ()
Depth of Setting: 283' Bowl Size: 5-1/2" Booster horsepower: N/A
Mainline Size: _____ Length: _____ No. of sprinklers: _____ Nozzle size: _____
Number of sprinklers operated per set: _____ Acres to be irrigated: _____
Location of well or surface water source if different from permit: _____

IF CONSTRUCTION HAS BEEN ABANDONED

DATE ABANDONED	REASON ABANDONED
----------------	------------------

REMARKS OR ANY ADDITIONAL INFORMATION WHICH MAY TEND TO SHOW GOOD FAITH IN THE PROSECUTION OF THE WORK

I certify I am the holder of the above permit issued by the Department of Ecology for the State of Washington, and in accordance with the terms of such permit and the limitations endorsed by the Department of Ecology have completed the actual construction of the work described in the permit.

P.O. Shultz
Signature of Applicant

P.O. Box 72
Present Address

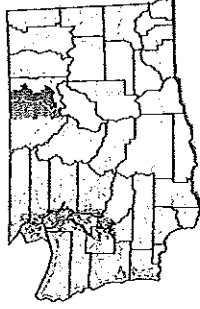
OMAK WA 98841
City, State, Zip Code

Date: 11/12/02
Phone 509 886 1170



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

October 22, 2002
15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490



Your address
is in the
Okanogan
watershed

City of Omak
PO Box 72
Omak WA 98841

RE: Change Authorization No. CG4-GWC446-D@1

We are currently updating our water right permit files regarding construction schedules. On December 7, 2000, the Findings of Facts and Decision was issued for the above change authorization (see enclosed).

This letter serves as a reminder of the construction schedule for the above noted change authorization. Please, complete the relevant form or forms for the status of your project and submit to this office of the Department of Ecology. If you have not begun or completed construction on the project as applied for, please submit in writing a detailed letter with the following information:

- A description of the efforts you have made to begin and/or complete the project.
- A time schedule for completing the project.
- Reasons why the project has not begun or work on the project is not complete.

If you have not begun construction on the project, Ecology will review the submitted information to determine whether an extension of time is in order or whether the change authorization should be cancelled.

Please submit the completed construction forms or the above requested information within thirty (30) days. If you have any questions, please free to call Betty Ann Bickner at (509) 575-2597.

Thank you,

Teresa Mitchell
Water Resources Program

FILE COPY

TM:eg
0210127

Enclosures: Copy of Findings of Fact and Decision
Begin Construction and Complete Construction forms



105760



WATER WELL REPORT

Original & 1st copy - Ecology, 2nd copy - , 3rd copy - driller

Construction/Decommission ("x" in circle)

☒ Construction

☐ Decommission ORIGINAL CONSTRUCTION Notice

CURRENT
Notice of Intent No. -

4135798

Unique Ecology Well ID Tag No. AEC887

Water Right Permit No. CG4-SWC446-D@1

Property Owner Name _____ of Intent Number _____

City of Omak

PROPOSED USE: ☐ Domestic ☐ Industrial ☒ Municipal
☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other

Well Street Address Hwy 97 & Sand Flat

TYPE OF WORK: Owner's number of well (if more than one) _____
☒ New Well ☐ Reconditioned Method: ☐ Dug ☐ Bored ☐ Driven
☐ Deepened ☐ Cable ☐ Rotary ☐ Jetted

City _____ County: Okanogan

Location SE 1/4- 1/4 SE 1/4 Sec 24 Twn 34 R 26 EWM circle
or one WWM

DIMENSIONS: Diameter of well 12 inches, drilled 305 ft.

Lat/Long: Lat Deg _____ Lat Min/Sec _____

Depth of completed well 295 ft.

REQUIRED) Long Deg _____ Long Min/Sec _____

Tax Parcel No. N/A

CONSTRUCTION DETAILS

Casing ☒ Welded 12" Diam. from 0 ft. to 295 ft.
Installed: ☐ Liner installed " Diam. from _____ ft. to _____ ft.
☐ Threaded " Diam. from _____ ft. to _____ ft.

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.
(USE ADDITIONAL SHEETS IF NECESSARY.)

Perforations: ☐ Yes ☒ No
Type of perforator used _____

MATERIAL FROM TO

SIZE of perfs in by in. and no. of perfs from _____ ft. to _____ ft.

Br. sandy loam topsoil 0 6

Screens: ☐ Yes ☐ No K-Pac Location _____

Br. fine-med. sand 6 12

Type of slot _____ Model No. _____

Fine to med. sand some 12 25

Diam. 12" Slot Size .035 from 258 ft. to 282 ft.

Small gravel 3/4" 25

Diam. _____ Slot Size _____ from _____ ft. to _____ ft.

Fine to coarse sand 25

Gravel/Filter packed: ☒ Yes ☐ No ☒ Size of gravel/sand 10X20 ft.

Small to 11/2" gravel 54 54

Materials placed from 200 ft. to 295 ft.

Fine sand to brown silt 54 134

Surface Seal: ☒ Yes ☐ No To what depth? 227 ft

Silty blue clay 134 150

Materials used in seal _____

Br. sandy silt & clay 150 174

Did any strata contain unusable water? ☐ Yes ☒ No

Silty fine to coarse 174

Type of water? _____ Depth of strata _____

sand 5% small gravel 1/2" 214

Method of sealing strata off _____

Gray silty fine sand 214

PUMP: Manufacturer's Name _____ H.P. _____

and water 267

Type: _____

Gray sand gravel and 267

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

water 282

Static level 203 ft. below top of well Date 7-19-01

Fine silty ssnd, gray 282

Artesian pressure _____ lbs. per square inch Date _____

clay and water 286

Artesian water is controlled by _____ (cap. valve, etc.)

Silty gravel water 286 288

WELL TESTS: Drawdown is amount water level is lowered below static level.

Stily gray sand water 288 292

Was a pump test made? ☒ Yes ☐ No If yes, by whom? _____

Gray silty sand water 292 295

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Gray silty sand water 295 305

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

DEPT OF ECOLOGY
RECEIVED
OCT 04 2001
Washington State
Department of Ecology
CENTRAL REGION OFFICE

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Completed Date 7-19-01

Recovery data (time taken as zero when pump turned off)/water level measured from

Start Date 5-7-01

well top to water level) See attached sheet

Water Level _____ Time _____ Water Level _____

Time _____ Water Level _____ Time _____ Water Level _____

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Water Level _____ Time _____ Water Level _____

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

Artesian flow _____ g.p.m. Date _____

Drilling Company Arcadia Drilling Inc.

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

Address 170 SE Walker Park Road

Driller or Trainee License No. 1706

City, State, Zip Shelton WA 98584

Driller/Engineer/Trainee Signature *Dwane Knapp*

Contractor's ARCADDI098K1

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all

Registration No. _____ Date 9-13-01

Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Ecology is an Equal Opportunity Employer. ECV 050-1-20 (Rev 4/01)

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Dwane Knapp

Drilling Company Arcadia Drilling Inc.

Driller/Engineer/Trainee Signature *Dwane Knapp*

Address 170 SE Walker Park Road

Driller or Trainee License No. 1706

City, State, Zip Shelton WA 98584

Signature and License no. _____

Contractor's ARCADDI098K1

If trainee, licensed driller's _____

Registration No. _____ Date 9-13-01

Signature and License no. _____

Ecology is an Equal Opportunity Employer. ECV 050-1-20 (Rev 4/01)

24 hour Pump Test

Customer: City of Omak
PO Box 72

Omak, WA 98841

Contact: Jeff Loutman

Hjibregtse, Loutman Associates, Inc.

801 North 39th Ave.

Yakima, WA 98902

Project: Well # 9 Pump Test

Phone: (509) 966-7000

Home: N/A

Fax: (509) 965-3800

E-mail: jloutman@hlacliv.com

Cell: N/A

Date of Test: 3/7/07

Pump Test Data:

TIME	GPM	feet-10chs LEVEL
10 Sec.	132	
20	132	224.4
30	132	228.8
40	132	
50	132	
60	132	234.2
70	132	238.2
80	132	242.1
90	132	243.6
100	132	243.6
110	132	245.4
2 Min.	132	247.7
2.5	132	251.2
3.0	132	255.4
3.5	132	
4.0	132	258.2
4.5	132	261.6
5 Min.	132	261.2
6	132	263.1
7	132	264.8
8	127	265.1
9	127	265.6
10	127	266.1
11	127	266.7
12	127	267.2
13	126	267.8
14	126	268.2
15 Min.	126	268.6
20	120	267.6
25	120	267.4
30	120	267.3
35	120	267.3
40	120	267.3
45	120	267.4
50 Min.	120	267.4
60	120	267.4
70	120	267.5
80	120	267.5
90	120	267.5
100 Min.	120	267.5
130	120	267.6
160	120	267.7
190	120	267.7
210	120	267.7
250	120	267.8
280	120	267.9
5 Hrs.	120	267.8
6	120	267.3

Static Water Level: 209.4 - feet

Date: 16-Jul-01

Notes:

All Measurements taken 7-feet above grade

Recovery Data:

TIME	feet-10chs LEVEL
10 Sec.	260.2
20.0	254.3
30.0	249.6
40.0	244.4
50.0	241.0
60.0	235.8
70.0	234.7
80.0	229.0
90.0	225.8
100.0	222.9
110.0	220.4
2 Min.	218.6
2.5	213.0
3.0	207.1
3.5	206.9
4.0	207.8
4.5	208.7
5 Min.	209.4
6.0	210.4
7.0	211.0
8.0	211.2
9.0	211.3
10.0	211.3
11.0	211.3
12.0	211.2
13.0	211.2
14.0	211.1
15 Min.	211.1
20.0	210.8
25.0	210.6
30.0	210.5
35.0	210.4
40.0	210.4
45.0	210.4
50 Min.	210.3
60.0	210.3
70.0	210.2
80.0	210.1
90.0	210.0
100 Min.	209.9
120.0	209.8

RECEIVED

OCT 04 2001

Washington State
Department of Ecology

WATER RIGHTS REVIEW ROUTER

- ☐ Report of Exam
☐ Temporary Permit
☐ Preliminary Permit
- ☒ Change Finding
☐ Temporary Change
☐ Seasonal Change

FILE NO. CG4-GWC 448-DQ1

G:\GROUP\PERMIT CITY OF OMAHA

AUTHOR DM (date)

DRAFT SS (by typist)
DM 11/13/2008

FINAL (by typist)

DARRELL _____ date

DOUG _____ date 12/7/00

MAIL OUT DM date

REGULAR MAIL (plain old report)? yes _____

CERTIFIED MAIL (as an order)? yes _____

or if you really need a separate page order, or anticipate trouble:

ORDER: check appropriate one:

- ☐ f-6 Rept of Exam
☐ f-7 Rept of Exam DENIED
☐ f-8 Change Finding
☒ f-9 Change Finding DENIED

Attach FISH SCREENING CRITERIA?
 If so, staple packet to front of file _____

PERMIT FEE \$ _____

Permit Fee Calculation:

CIRCLE APPROPRIATE WRIA:
 (cc Report of Exam to:)

TRIBE	WRIA
Colville	49 50 51 52 53 58 60 61
Yakima	29 30 31 32 33 37 38 39 40
Both	45 46 47 48

CC TO ANYONE ELSE?

SELF

No PROTESTS

MINIMUM FLOWS?

CC CRO Enforcement

CC River Letter List

REMARKS / RELATED FILES (RegTrak started,
 Relinquishments, other applications):

Send Blank Well Log
w/ Permit: _____

GIS (if file has green 'GIS' on folder)
Well or diversion locations changed? [] YES [] NO
Place of use changed? [] YES [] NO
If any boxes are checked 'YES', please route file to GIS before filing.



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

DEC 07 2000

To: Carroll Palmer, Yakama Nation
Gary Passmore, Colville Confederated Tribes

RE: Application for Change CG4-GWC446-D@1

Enclosed is a copy of the Department of Ecology's Report which constitutes our determination and order regarding the above-referenced application. If you have any questions or concerns about any of this information, please call Darrell Monroe of the Department of Ecology at (509) 457-7143.

This Order may be appealed. Your appeal must be filed with the Pollution Control Hearings Board, PO Box 40903, Olympia, WA 98504-0903 within thirty (30) days of the date this Order was mailed by the Department of Ecology. At the same time, a copy of your appeal must be sent to the Department of Ecology, c/o Water Resources Program, Appeal Coordinator, PO Box 47600, Olympia, WA 98504-7600. Your appeal alone will not stay the effectiveness of this Order. Stay requests must be submitted in accordance with RCW 43.21B.320. These procedures are consistent with Chapter 43.21B RCW.

Sincerely,

A handwritten signature in dark ink, appearing to read "R. Barwin", written over a horizontal line.

Robert F. Barwin, Section Manager
Water Resources Program

RFB:gg
001101b

Enclosures: Findings of Fact and Decision

f-10th.doc

FILE COPY

PLACE STICKER AT TOP OF ENVELOPE
TO THE RIGHT OF RETURN ADDRESS.
FOLD AT DOTTED LINE

CERTIFIED MAIL



7000 0520 0200 0000 04E8 E0T2 E200 0250 0000
7000 0520 0200 0000 04E8 E0T2 E200 0250 0000

**U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)**

Postage \$	
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees \$	

Postmark
Here

Recipient's Name (Please Print Clearly) (To be completed by mailer)

City of Omak
Street, Apt. No. or PO Box No.

City, State, ZIP+4

PS Form 3800, February 2000

See Reverse for Instructions

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

1. I also wish to receive the following services (for an extra fee):

- ☐ Addressee's Address
- ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

*City of Omak
P.O. Box 72
Omak WA 98841*

4a. Article Number

2103-8340

4b. Service Type

- ☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

8. Addressee's Address (Only if requested and fee is paid)

CG4-GWC-446-D@1

5. Received By: (Print Name)

6. Signature (Addressee or Agent)

X

PS Form 3811, December 1994

Domestic Return Receipt

Thank you for using Return Receipt Service.

David W. W.



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

DEC 07 2000 15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

CERTIFIED MAIL

City of Omak
PO Box 72
Omak WA 98841

RE: Application for Change No. CG4-GWC446-D@1

Enclosed please find a copy of the Department of Ecology's Report of Findings and Decision. This report constitutes our determination and order regarding the above-referenced application for change. If you have any questions or concerns about any of this information, please call Darrell Monroe of the Department of Ecology at (509) 457-7143.

We are also enclosing a form for filing Notice of Beginning of Construction when you have started work under this authorization. If you cannot begin the change project by December 1, 2001, you must contact this office in writing requesting an extension of time and submit it with check or money order in the amount of \$5.00 made payable to the Department of Ecology. The request should include a description of the problem encountered getting started and your revised schedule for starting construction, completing construction, and putting the water to full beneficial use.

This Order may be appealed. Your appeal must be filed with the Pollution Control Hearings Board, PO Box 40903, Olympia, WA 98504-0903 within thirty (30) days of the date this Order was mailed by the Department of Ecology. At the same time, a copy of your appeal must be sent to the Department of Ecology, Water Resources Program, c/o Appeal Coordinator, PO Box 47600, Olympia, WA 98504-7600. Your appeal alone will not stay the effectiveness of this Order. Stay requests must be submitted in accordance with RCW 43.21B.320. These procedures are consistent with Chapter 43.21B RCW.

Sincerely,

Robert F. Barwin, Section Manager
Water Resources Program

RFB:eg
001101a

Enclosures: Report of Findings and Decisions
Beginning of Construction Form
Ground Water Bulletin No. 1
Flow Meter Requirements

cc: Colville Confederated Tribes
Yakama Nation
Center for Environmental Law & Policy

f-1ch.doc

FILE COPY

State of Washington
Department of Ecology
Yakima Washington

IN THE MATTER OF APPLICATION FOR)
CHANGE OF GROUND WATER) Findings of Fact
CERTIFICATE NO. 446-D@1,) and Decision
FILED BY THE CITY OF OMAK)

BACKGROUND

General:

The state Department of Health has been working with the City to determine their need to increase treatment or replace several of their existing municipal ground water sources. This is in response to water quality risk of Omak's Apple and Kenwood wells, primarily due to their close proximity to the Okanogan River.

All of the City's water rights for potable water are from wells. As a result of the contacts with the Department of Health, on November 24, 1998 Omak filed applications for change(s) to Ground Water Declaration Certificate 445-D, Declaration Certificate 446-D, Declaration Certificate 1082-D, Ground Water Certificate 3655-A, Ground Water Certificate 3656-A, Ground Water Certificate 7332-A, and Superseding Ground Water Permit G4-31525P. Each of these water rights are part of the City of Omak Water System. The proposed new well (#9) is to be located within the SE¼ SE¼ Section 24, T. 34 N. R. 26 E. W.M.

Notice of the intent was published in the Omak-Okanogan County Chronicle, a weekly newspaper, on March 3 and 10, 1999. The 30-day protest period ended April 9, 1999 without formal protest being filed. Even though the public notice was combined, the applications for change will be addressed by each water right separately with the intent to evaluate the response of the aquifer in the vicinity of the proposed new well incrementally. The reasons for this approach should be apparent by the end of the report.

The City was subsequently notified by both Certified and Regular mail from the Department of Health (Health) on August 21, 2000 that the Apple and Kenwood wells were now categorized by Health as being influenced by the Okanogan River. Further investigation by microbiological testing is necessary.

Under Chapter 173-152 Washington Administrative Code (WAC), the replacement of an at-risk public water supply allows the Department of Ecology to take an application out of its normal priority based sequence with respect to other applicants seeking water from the same body of water under applications of earlier priority date. Even though other water rights exist from the Apple well, this report will address only the at-risk public water supply under Declaration Certificate 446-D. The water under this right is withdrawn from the Apple well.

Under WAC 173-152, growth needs do not justify taking applications or applications for change out of sequence. Allocations for growth will not be considered in this report. The other applications for change will be evaluated at a later date, as more information becomes available about the aquifer characteristics near the new well.

There are two tests used to determine if an application for change can be granted or not:

- 1) Is there a water right that can be changed? For changes of point of withdrawal for ground water rights the new water source must be the same body of public ground water.
- 2) Can the authorization and development of the requested change be made without enlargement of the right or impairment to existing rights?

The following information is gathered from:

- Review of Department of Ecology water rights and other records held at Central Region Office, Department of Ecology,
- Public Water System information found in the "SADIE" database maintained by the Department of Health (DOH) Environmental Health Division of Drinking Water,
- the 1998-99 Directory of Washington City and Town Officials prepared by the Municipal Research and Services Center of Washington,
- from discussions and meetings between Ecology Staff, City representatives and their consultant, Jeff Louman of Huibregtse Lounan Associates Inc, Yakima, WA;
- Department of Health staff; and, (f) assistance from the Water Resources Staff of Central Region Office Department of Ecology.

INVESTIGATION

The request herein considered is the application of change to add or replace the well under Declaration Certificate 446-D. The City originally filed the declaration for the vested ground water use of this well under RCW 90.44.090 on July 7, 1947. The water right has a priority date of March 1936 for 800 gallons per minute (gpm), 96 acre-feet per year for municipal supply for the City of Omak from a well located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26 T. 34 N., R. 26 E.W.M. The information in the file shows that the 16 foot deep well was equipped with a 40 horsepower pump sat at 10.4 feet below the land surface and had a discharge of 800 gpm. The well is known as the Apple well or referred to by source number SO2 by DOH. The pumping capacity of the City's Apple well extracted from the City's comprehensive water system plan, dated February 1990, was 500 gpm. The DOH SADIE data shows current capacity at 480 gpm.

Declaration Certificate 446-D represents a primary municipal water right. The City has maintained the facility and used it to the extent allowed by DOH.

Part of the recent group of filings was an application for change to add or replace the well under Certificate 3656-A with priority date of March 20, 1958. This certificate is for 375 gpm, 600 acre-feet per year for municipal supply also from the Apple well located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N. R. 26 E.W.M.

The proposed new well site is up-drainage and is further back from the river than the Apple wells.

Geology and Topography:

The sediment into which the well is to be drilled is a glacial bench with gently rolling relief. The bench is primarily composed of glacial out-wash which is a non-homogeneous mix of sand, silt, clay, and gravel. This area is referred to as Robinson Flat and Sand Flat on the USGS topographic 7.5 minute maps depicting the area (1980 Omak, Washington and 1980 The Pothole, Washington). The bench has an average land surface elevation around 1000 feet mean sea level (msl). Coleman Butte lies to the northwest of the proposed well site. The Okanogan River forms an arc at 1+ mile radius from east to southwest. The river elevation is approximately 850 feet msl.

Ground water development:

Most of the existing wells in the area are completed into these glacial sediments and they range in depth up to 400+ feet without encountering bedrock. Bedrock is encountered at much shallower depths to the north of the proposed well site, near Coleman Butte. The rate of ground water withdrawal for area wells ranges from very low instantaneous quantity to several hundred gpm. The fine grained and non-homogeneous composition of the glacial out-wash results in significant site-specific challenges when trying to obtain water in sufficient quantities to provide for municipal uses or significant areas of irrigated lands.

Initial modeling based upon the characteristics observed in existing wells suggests that the annual withdrawal of 96 acre-feet will create a cone of depression that is steep in close proximity to the well but rapidly flattens within a 1000 foot radius. Information gathered about this aquifer's response to the cities ground water withdrawal of up to 96 acre-ft./yr. will give further indication of how much additional withdrawal can be allowed at this proposed well site. This will help the City in their water system planning and will help Ecology in subsequent analysis of impairment related to additional change applications involving the proposed well site.

Water rights in the vicinity:

Review of the following water right records shows that many of these Certificates were preceded by permits for larger quantities than were ultimately perfected.

Ground Water Certificate G4-26176C describes a well located approximately 1000 feet east and 40 feet N from the SW corner of Section 24 being within the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 24, T. 34 N. R. 26 E. W. M. Water is withdrawn from the well at up to 230 gpm 117 acre-feet primary irrigation of 6 acres and supplemental for 20 acres. The place of use is that part of Section 24 T. 34 N. R. 26 E. W. M. described as follows: the S $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ and that part of the NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ lying south of the L. B. Lateral of the Okanogan Irrigation District and also the NE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 25, T. 34 N. R. 26 E. W. M.

Ground Water Certificate G4-26558C describes a right for a well situated approximately 1310 feet west and 1050 feet north from the south quarter corner Section 24 being within the SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 24, T. 34 N. R. 26 E. W. M. It allows for the withdrawal of up to 19 gpm, .25 acre-feet per year for in-house domestic supply and 7 acre-feet per year to be used within the season from April 1 through October 15 for supplemental irrigation of two acres. The primary right for irrigation is provided by the Okanogan Irrigation District. The place of use is the N $\frac{1}{2}$ of the west 330 feet of the N $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 24, T. 34 N. R. 26 E. W. M. lying south of the County road right of way.

Suncrest Plat Water System:

This system is identified by Department of Health as PWS ID# 85207 and has two water withdrawal authorizations:

Ground Water Certificate G4-23779C is for a well within the NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 25, T. 34 N. R. 26 E. W. M. 300 gpm, 30 acre-feet for community domestic supply for 30 homes located within the east 495 feet of the SE $\frac{1}{4}$ Section 25, T. 34 N. R. 26 E. W. M. An additional point of withdrawal has been authorized through application for change and is located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 25, T. 34 N. R. 26 E. W. M.

The second authorization from the same wells under Ground Water Permit G4-26888P with priority date of July 21, 1980 for two wells within the E $\frac{1}{2}$ Section 25, T. 34 N. R. 26 E. W. M. The permit allows for the withdrawal of 300 gpm, 200 acre-feet for community domestic supply for 200 homes and mobile homes. The place of use is the E $\frac{1}{2}$ E $\frac{1}{2}$ SE $\frac{1}{4}$ and the NW $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 25, T. 34 N. R. 26 E. W. M. The current schedule allows for putting the water to full beneficial use by May 1, 2001.

Sandflat Water Users' Association:

Another community system in the area is the Sandflat Water Users' Association identified by Department of Health as PWS ID# 09064. It is authorized water use under superseding Ground Water Permit G4-26301P with priority date of July 20, 1979 from two (2) wells located within the NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 30, T. 34 N. R. 27 E. W. M. The permit authorizes the withdrawal of ground water at 250 gpm, 220 acre-feet per year for 245 homes (houses, apartments, duplexes, and condominiums).

One well is reported to be drilled 445 feet deep with a 250 gpm capacity and the other is 214 feet deep with 190 gpm capacity.

Irrigation water within the Sandflat place of use is provided from a surface water diversion under authority of Surface Water Permit S4-24234P for diversion of surface water from the Okanogan River subject to instream flows set by WAC 173-549, the water resources program for the Okanogan River Basin, WRIA-49.

Aston Estates:

Another public water system operating under 3 Certificates of water rights is for Aston Estates. The Ground Water Certificates are:
G4-23805C with priority date of January 6, 1975 for a well located within the NE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 31, T. 34 N. R. 27 E. W. M. to serve 60 homes within Aston's First Addition in Government Lots 2 and 3 Section 31, T. 34 N. R. 27 E. W. M. The instantaneous quantity is 40 gpm and annual quantity is 54 acre-feet per year.

G4-23806C with priority date of January 6, 1975 for a well located approximately 875 feet west and 850 feet south of the N $\frac{1}{4}$ corner within the NE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 31, T. 34 N. R. 27 E. W. M. to serve 60 homes within Aston's First Addition in Government Lots 2 and 3 Section 31, T. 34 N. R. 27 E. W. M. The instantaneous quantity is 45 gpm and annual quantity is 54 acre-feet per year. These are the same 60 homes referenced by G4-23805C. The 54 acre-feet per year is the maximum annual quantity under these rights but the instantaneous quantities (40 and 45 gpm) are additive.

City of Omak
CG4-GWC 446-D@1
Change Finding, Page 4

A third well is covered by G4-29424C allows 54.9 acre-feet per year for 61 homes (60 were covered by the earlier two water rights described above) less any annual quantity withdrawn under G4-23805C and G4-23806C. The instantaneous quantity of 90 gpm is additive to the quantities (40 gpm and 45 gpm) under G4-23805C and G4-23806C. This well is located approximately 510 feet west and 650 feet south of the N $\frac{1}{4}$ corner Section 31 being within Government Lot 2 Section 31, T. 34 N. R. 27 E. W.M.

Other ground water interests for the area are expressed through pending applications. Ground Water Application G4-31916 with priority date of February 2, 1994 requests authorization to withdraw 50 gpm from a well located within the SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 24, T. 34 N. R. 26 E. W.M. for public water supply for a managers home and employees and for industrial and commercial use and dust control.

Ground Water Application G4-32307 with priority date of March 30, 1995 requests authorization to withdraw 50 gpm from 2 wells located within the SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 24, T. 34 N. R. 26 E. W.M. for public water supply for a managers home and employees and for industrial and commercial use and dust control.

Findings:

Based upon the state water right record, considering provisions attached to rights at the time of issuance, the author believes that the City has a municipal water right which can be relied upon as a primary supply under Certificate 446-D. The water right has a priority date of March 1936 for 800 gpm, 96 acre-feet per year for municipal supply from a well located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N. R. 26 E. W.M.

The water right can be exercised from a properly constructed well located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 24, T. 34 N. R. 26 E. W.M. without impairment to existing rights. Before the new source can be incorporated into the municipal system it would have to be approved for public water supply by the Washington State Department of Health.

The city should not be required to abandon or decommission the Apple well until all water rights from that well have been changed to and can be exercised from other sources. Treatment alternatives, although expensive, still remain as an option.

Information gathered regarding how the aquifer responds to this development will give the department additional information needed in the consideration of other applications for change proposing to use this new well as a source.

Recommendations:

I, therefore, respectfully recommend that a new well located as described below be approved as an additional point of withdrawal under Declaration Certificate 446-D.

The new well is located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 24, T. 34 N. R. 26 E. W.M. and the original in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N. R. 26 E. W.M.

The combined withdrawal of water from these wells under Certificate 446-D shall not exceed 800 gallons per minute (gpm), 96 acre-feet per year. The other parameters of this water right remain unchanged.

The purpose of use is for municipal supply within the City of Okanogan. The water right has a priority date of March 1936. The recommended approval comes with the following provisions:

All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells). When the City, in consultation with the Department of Health, determines that the Apple well (DOH SO2 pws id# 63750) is to be removed from service, it shall be properly decommissioned as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gage may be installed in addition to the access port.

Flow meters are required on each City well and the supply line from Omak Wood Products.

A suitable measuring device approved by the Department of Ecology shall be installed and maintained in accordance with WAC 508-64-020 through WAC 508-64-040. (Installation, operation and maintenance requirements attached hereto.)

This authorization does not modify the relationship of Declaration Certificate 446-D to other water rights held by the City.

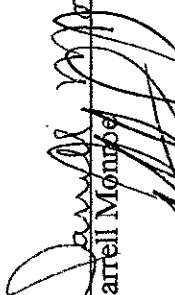
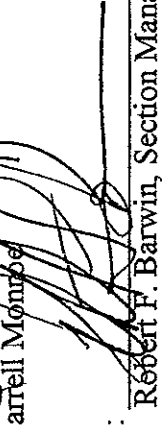
This authorization shall in no way excuse the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations including those administered by other programs of the Department of Ecology and those administered by local and state health departments for public water supplies (2 or more service units).

The water sources and/or water transmission facilities may not be located entirely upon the land owned by the applicant. Therefore, the applicant is advised that issuance of a permit by this department for appropriation of the waters in question does not convey a right of access to, or other right to use, land which the applicant does not legally possess.

A proof inspection will be conducted prior to final certificate issuance. The certificate will reflect the extent of the project perfected within the limitations of the permit. Aspects will include as appropriate the source(s), system instantaneous capacity, beneficial use(s), annual quantity, home services designed, place of use, and satisfaction of provisions.

Development Schedule:

Begin Construction by December 1, 2001
Complete Construction by December 1, 2002
Put to Beneficial Use by December 1, 2004

REPORT BY:  DATE: 12/7/2000
Darrell Moninger
APPROVED BY:  DATE: 12/7/2000
Robert F. Barwin, Section Manager

DM:gg
wr00\001101



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

15 West Yakima, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

April 8, 1999

The Honorable E Walt Smith
Mayor of Omak
PO Box 72
Omak WA 98841-0072

RE: **City of Omak** - No. G4-31525P, and consolidated public notice for changes on files No. CG4-GWC445-D@1, CG4-GWC446-D@1, CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1, and CG4-GWC7332-A@1

In review of the consolidated public notice to add Well #9 to each of 7 water rights, I discovered that Notice of Beginning of Construction (bc) has not been submitted on Ground Water Permit No. G4-31525P. There are notes that there may have been construction problems with a well constructed under that permit. The bc was due May 1, 1995. A request for extension should be submitted and the filing of the bc if appropriate.

Enclosed for your use is a bc form.

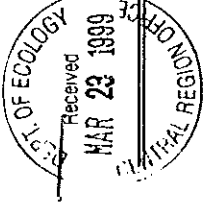
We consider construction started when you have taken steps to develop the source or taken steps to be able to withdraw water from the source and completed if you have installed a system capable of delivering the quantity of water you will be using, (mainline laid, pump installed) for the permitted use to the place of use. Full beneficial use is when the water has been put to the intended use within the limits of the permit.

The letter requesting extension should address:

1. Efforts made since the permit issued to begin and complete construction.
2. An anticipated time schedule for completing construction of the water system.
3. Any additional remarks concerning your project that will assist us in making our decision of whether to keep the permit alive.

The request for extension needs to be accompanied by the extension fee. Submit the fee either by check or money order made payable to the Department of Ecology. The extension fee required to cover from May 1995 to May 1999 for this permit is \$40.00. An additional \$10.00 would be required if you needed an additional year to May 2000 in which to begin construction.

 **FILE COPY** 



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
YAKIMA, WASHINGTON
NOTICE OF APPLICATIONS
FOR CHANGE OF THE OMAK
CITY WATER RIGHTS

TAKE NOTICE:

Consolidated Notices of Applications to Change to change the point of diversion (replace) or add a point of withdrawal (add) under the City of Omak Water Rights detailed below. The City is seeking expedited evaluation under WAC 173-152 for the change proposed for the water rights associated with their Apple and Kenwood wells. The Apple and Kenwood wells are being evaluated by Department of Health for risk of contamination due to influence of surface water.

These seven requests were submitted November 24, 1998. They are part of the City of Omak Water System. The proposed new well (#9) is to be located within the SE 1/4 SE 1/4 Section 24, T. 34 N., R. 26 E., W.M.

Rights and proposed change:

Add or replace well under Certificate No. 445-D with priority date of December 1913 for 500 gpm, 600 acre-feet per year for municipal supply from a well (Kenwood) located in the SW 1/4 SE 1/4 Section 26, T. 34 N., R. 26 E., W.M.

Add or replace well under Certificate No. 446-D with priority date of March 1936 for 800 gpm, 96 acre-feet per year for municipal supply from a well (Apple) located in the SW 1/4 SE 1/4 Section 26, T. 34 N., R. 26 E., W.M.

Add well under Certificate No. 1082-D with priority date of May 1944 for 1630 gallons per minute (gpm), 1430 acre-feet per year for municipal supply from a well (Eastside) located in the SE 1/4 SE 1/4 Section 35, T. 34 N., R. 26 E., W.M.

Add well under Certificate No. 3655-A with priority date of March 20, 1958 for 1300 gpm, 2080 acre-feet per year for municipal supply from a well (Eastside) located in the SE 1/4 SE 1/4 Section 35, T. 34 N., R. 26 E., W.M.

Add or replace well under Certificate No. 3656-A with priority date of March 20, 1958 for 375 gpm, 600 acre-feet per year for municipal supply from a well (Apple) located in the SW 1/4 SE 1/4 Section 26, T. 34 N., R. 26 E., W.M.

Add well under Certificate No. 7332-A with priority date of June 22, 1970 for 600 gpm, 560 acre-feet per year for municipal supply from a well (Eastside) located in the SE 1/4 SE 1/4 Section 35, T. 34 N., R. 26 E., W.M.

Add well under Superceding Ground Water Permit No. G4-31525P with priority date of November 23, 1992 for 5000 gpm, 3500 acre-feet per year for municipal supply from 2 wells (Omak Wood Products) located in the SE 1/4 SE 1/4 Section 35, T. 34 N., R. 26 E., W.M.

Even though the public notices have been combined, each water right change request will be evaluated on its own merits. Protests or objections against the change of any of these rights should be filed separately by a water right, must include a detailed statement of the basis for objections. All letters of protest will become public record. Each protest must be accompanied by a \$2.00 recording fee and filed with the Department of Ecology, 15 W. Yakima Avenue, Suite 200, Yakima, WA 98902, within thirty (30) days from March 10, 1999.

Published by The Omak-Okanogan County Chronicle.

1998-99 Mar 3/10

Affidavit of Publication

STATE OF WASHINGTON ss.
County of Okanogan

The undersigned, being first duly sworn on oath, deposes and says that she is the principal clerk of the Omak-Okanogan County Chronicle, a weekly newspaper, that she is duly authorized to make this affidavit; that said newspaper is a legal newspaper and has been approved as a legal newspaper by order of the Superior Court in the county in which it is published and it is now and has been for more than six months prior to the date of the publications hereinafter referred to, published in the English language continuously as a weekly newspaper in Omak, Okanogan County, Washington, and it is now and during all of said time was printed in an office maintained at 618 Okoma Drive, the place of publication of said newspaper. That the annexed is a true copy of

Notice of Application for Change

as it was published in regular issues (and not in supplement form) of said newspaper once a week for a period of two consecutive weeks, commencing on the 3rd day of March, 1999

and ending on the 10th day of March, 1999, both dates inclusive, and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of \$ 162.00, which amount has been paid in full, at the rate of \$6.00 per column inch.

Charleth B. Wild
Principal Clerk

Subscribed and sworn to before me this 10th day of March, 1999.

Kristin F. Vigoren
Notary Public in and for the State of Washington

Residing at

Omak, WA

KRISTIN F. VIGOREN
STATE OF WASHINGTON
NOTARY --- PUBLIC

SEAL

MY COMMISSION EXPIRES 12-02-02

Ok for Notice, protest
period ends 4/6/99
WRATs updated 4/6/99



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

15 West Yakima, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

April 8, 1999

The Honorable E Walt Smith
Mayor of Omak
PO Box 72
Omak WA 98841-0072

RE: **City of Omak** - No. G4-31525P, and consolidated public notice for changes on files No. CG4-GWC445-D@1, CG4-GWC446-D@1, CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1, and CG4-GWC7332-A@1

In review of the consolidated public notice to add Well #9 to each of 7 water rights, I discovered that Notice of Beginning of Construction (bc) has not been submitted on Ground Water Permit No. G4-31525P. There are notes that there may have been construction problems with a well constructed under that permit. The bc was due May 1, 1995. A request for extension should be submitted and the filing of the bc if appropriate.

Enclosed for your use is a bc form.

We consider construction started when you have taken steps to develop the source or taken steps to be able to withdraw water from the source and completed if you have installed a system capable of delivering the quantity of water you will be using, (mainline laid, pump installed) for the permitted use to the place of use. Full beneficial use is when the water has been put to the intended use within the limits of the permit.

The letter requesting extension should address:

1. Efforts made since the permit issued to begin and complete construction.
2. An anticipated time schedule for completing construction of the water system.
3. Any additional remarks concerning your project that will assist us in making our decision of whether to keep the permit alive.

The request for extension needs to be accompanied by the extension fee. Submit the fee either by check or money order made payable to the Department of Ecology. The extension fee required to cover from May 1995 to May 1999 for this permit is \$40.00. An additional \$10.00 would be required if you needed an additional year to May 2000 in which to begin construction.

 **FILE COPY** 

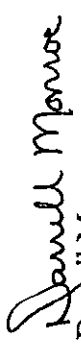
E Walt Smith
RE: City of Omak
Page 2
April 8, 1999

The Department will have to defend its decision to work on your applications for change out of priority date sequence. Please add a discussion as to why there is a critical need for Well #9 when there is a large quantity (5000 gpm) undeveloped permitted pair of wells authorized (assuming an extension is granted) to serve the area.

Thank you in advance for your early attention to this matter.

I hope you find this information of assistance. Feel free to contact me at (509) 457-7143 if you have questions. There is an answering system at that number to cover times when I am away from my desk.

Sincerely,


Darrell Monroe
Water Resources Program

DM:gh
990410

Enclosure: Notice of Beginning of Construction

copy: Jeff Louman

Files: G4-31525P, CG4-GWC445-D@1, CG4-GWC446-D@1, CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1, CG4-GWC7332-A@1



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

15 West Yakima, Suite 200 • Yakima, Washington 98902 • (509) 575-2490

February 16, 1999

City of Omak
PO Box 72
Omak WA 98841-0072

RE: Applications for Change

We have received your applications for appropriation of water. Please complete the following two steps:

1. Enclosed is a notice of your applications, which must be published once a week for two consecutive weeks in a newspaper published in Okanogan County. The newspaper should have general circulation in the locality where the water is to be diverted and used, and must be qualified as a legal newspaper. Publishing the notice in a remote part of the county, when not necessary, may be cause for you to be required to republish the notice in a designated newspaper. The enclosed newspaper list may help you select an appropriate newspaper for the area.

Publication should start within 30 days from the date of this letter.

To assure accuracy, it is your responsibility to check the notice carefully before having it published. If you find an error, please contact this office for correction and/or resolution. If we later find an error in your public notice, you will be required to re-publish an amended notice.

2. After publication, the publishing newspaper should provide you with a notarized original Affidavit of Publication, which should be forwarded to our office as soon as possible. Please do not send a photocopy of the affidavit.

If you have any questions or concerns about any of this information, please call Darrell Monroe at (509) 457-7143. Thank you for your attention to this matter.

Sincerely,

Darrell Monroe

Darrell Monroe
Water Resources Program

DM:gh
990227a

Enclosures: Public Notice
Newspaper List

cc: Jeff Louman

pn-3.doc

FILE COPY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
YAKIMA, WASHINGTON

NOTICE OF APPLICATIONS FOR CHANGE OF THE OMAK CITY WATER
RIGHTS

TAKE NOTICE:

Consolidated Notices of Applications to Change to change the point of diversion (replace) or add a point of withdrawal (add) under the City of Omak Water Rights detailed below. The City is seeking expedited evaluation under WAC 173-152 for the change proposed for the water rights associated with their Apple and Kenwood wells. The Apple and Kenwood wells are being evaluated by Department of Health for risk of contamination due to influence of surface water.

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Add or replace well under Certificate No. 446-D with priority date of March 1936 for 800 gpm, 96 acre-feet per year for municipal supply from a well (Apple) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M.

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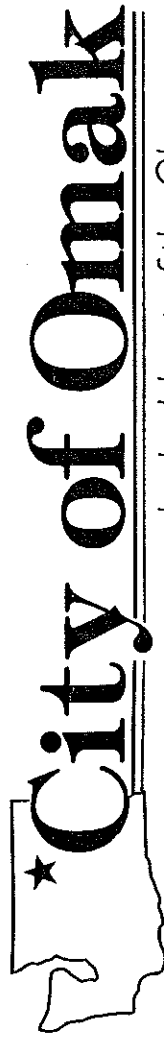
Add well under Certificate No. 7332-A with priority date of June 22, 1970 for 600 gpm, 560 acre-feet per year for municipal supply from May 1 through October 31 from a well (Eastside) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M.

Add well under Superceding Ground Water Permit No. G4-31525P with priority date of November 23, 1992 for 5000 gpm, 3500 acre-feet per year for municipal supply from 2 wells (Omak Wood Products) located in the SE ¼ SE ¼ Section 35, T. 34 N., R. 26 E.W.M.

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(last date of publication to be entered above by the publisher)

990227

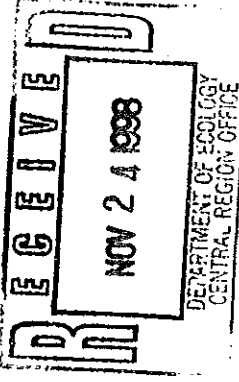


State of Washington

In the Heart of the Okanogan

2 N. Ash
(509) 826-1170

P.O. Box 72
Omak, WA 98841



E. Walt Smith
Mayor

Doc # 1177

\$70.00 TMM

11/24/98

For 7 Application
@ \$10 per Aft

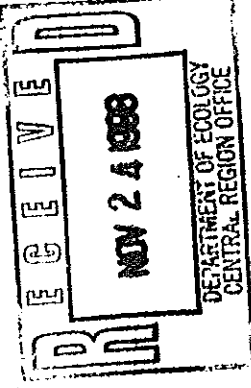
November 23, 1998

Department of Ecology
Water Resources Program
15 West Yakima Avenue, #200
Yakima, WA 98901

Attn: Darryl Monroe

Re: City of Omak
Proposed Well No. 9

Dear Mr. Monroe:



The City of Omak has been attempting for the last two years to secure a new water well source as a replacement for two existing wells near the Okanogan River. These two existing wells, Well No. 2 - Apple, and Well No. 3 - Kenwood, are currently undergoing testing to determine whether they are under the influence of surface water from the Okanogan River. The Washington State Department of Health has encouraged the City to abandon or at least reduce its dependence on these two wells as a domestic supply to Omak's water system.

Recently, the City was approached by Hubbard Well Drilling regarding purchasing an existing well which they constructed in the Fall of 1997. Enclosed is a well log provided by Hubbard Drilling showing the construction of the existing well. It is our understanding the well was drilled with the anticipation of offering it for sale to the City of Omak. Please be advised that the City was not involved at any time with the construction of the well.

On November 17, 1997, you transmitted a letter to Mr. Clinton Watts regarding the unauthorized construction of a municipal well. You had understood at the time that the City of Omak was involved in the drilling activity. The City's engineering consultant, Mr. Jeff Louman, PE, of Huibregtse, Louman Associates, Inc., advised you at that time that Mr. Watts, although a City Councilmember, was not acting on behalf of the City.

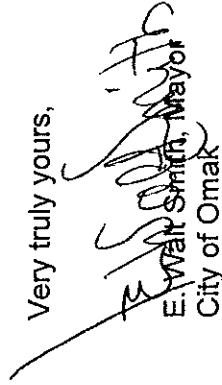
The City originally rejected the offer to purchase this "Hubbard" well, as the price was not acceptable. The City of Omak continued to pursue the possible purchase of other existing wells in the area and the possibility of drilling a new well on its own. The recent offer by Hubbard Well Drilling to sell the well to the City was at an acceptable price. We have determined this new price to be comparable to the City purchasing property and drilling a new well in the same area. It has, therefore, been determined by the Omak City Council that purchasing the "Hubbard" well is in the best interests of the public.

The purchase of the "Hubbard" well is subject to it first being test pumped to determine its capacity. The City of Omak respectfully requests that the Department of Ecology grant its approval to test pump this "Hubbard" well. As the purchase of the well is dependent on this test pumping, we will appreciate any expedited decision so that we can proceed as early as possible. It is planned to have this new well "on-line" in the City's water system by early Summer 1999. Until this new source is in service, the northeast Omak upper pressure zone and new 560,000 gallon reservoir will be without water supply.

Enclosed are seven (7) Applications for Change of Water Rights and the required \$70.00 total application fee. These "Change" applications request adding this proposed new Well No. 9 (Hubbard Well) as an additional point of withdrawal to the City's existing water rights. The City is not requesting additional water rights volumes or withdrawal rates.

Should you have any questions, please contact Mr. Jeff Louman, PE, at telephone number (509) 966-7000. Your earliest consideration will be most appreciated.

Very truly yours,

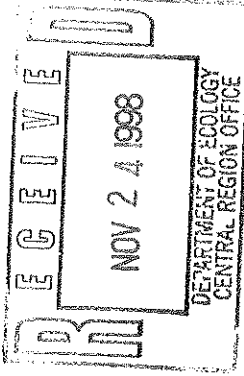


E. Walt Smith, Mayor
City of Omak

EWS/jk
OM6-64

Enclosures

copy: Huibregtse, Louman Associates, Inc.



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

APPLICATION FOR CHANGE OF WATER RIGHT

☐ PURPOSE ☐ DIVERSION OR WITHDRAWAL
☐ PLACE ☒ ADDITIONAL POINT OR POINTS

Accepted By _____
Date _____
Is Field Exam. Required? <input type="checkbox"/> YES <input type="checkbox"/> NO
Determined By _____

NAME City of Omak		Bus. Tel. (509) 826-1170	
Home Tel. _____		Other Tel. _____	
ADDRESS P.O. Box 72	(CITY) Omak	(STATE) WA	(ZIP CODE) 98841
APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER 446-D	
DECREED RIGHT (TITLE OF CASE)			

APPROPRIATIONS MADE (GIVE DATE IF PRIOR TO JUNE 7, 1917 IF SURFACE WATER, OR JUNE 7, 1945 IF GROUND WATER)

IS THE WATER RIGHT RECORDED IN YOUR NAME? ☒ YES ☐ NO IF NO, GIVE NAME RECORDED UNDER

1. RIGHT CONSISTS OF
WATERS USED FROM (STREAM, LAKE, WELL, OR TRENCH, ETC.)
Well No. 2-Apple (Formerly Well No. 3)
GALLONS PER MINUTE OR CUBIC FEET PER SECOND
800 GPM
WATER CURRENTLY USED FOR
Municipal Water Supply
TIME OF USE
Continuous

2. LOCATION OF PRESENT POINT OF DIVERSION OR WITHDRAWAL
ENTER BELOW THE DISTANCES FROM THE NEAREST SECTION OR PROPERTY CORNER TO THE DIVERSION OR WITHDRAWAL
800 ft. North and 200 ft. East of the South 1/4 Corner of Section 26.
LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)
SW 1/4 of SE 1/4
SECTION 26 TOWNSHIP N. 34 RANGE (E. OR W.) W.M. 26 E. COUNTY Okanogan

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, COMPLETE THIS SECTION
LOT BLOCK OF (GIVE NAME OF PLAT OR ADDITION)

3. LEGAL DESCRIPTION OF LANDS WATER IS USED ON

City of Omak Water System Service Area

SECTION 3	TOWNSHIP N. 33	RANGE (E or W) W.M. 26 E.	COUNTY Okanogan
SECTION 19	TOWNSHIP N. 34	RANGE (E or W) W.M. 27 E.	COUNTY Okanogan
SECTION 23, 24, 25, 26, 27, 34, 35, 36	TOWNSHIP N. 34	RANGE (E. OR W.) W.M. 26 E.	COUNTY Okanogan

(ATTACH SEPARATE SHEET IF NECESSARY)
ARE YOU THE LEGAL OWNER OF THE ABOVE DESCRIBED LANDS IF NO, EXPLAIN YOUR INTEREST
☐ YES ☒ NO Municipal Water Purveyor

REASONS FOR THE PROPOSED CHANGE

Addition of one (1) new well to the City's existing water rights. The new well will potentially replace Wells No. 2 and 3 which are under investigation for surface water (Okanogan River) influence.

A MINIMUM FEE OF \$10.00 MUST ACCOMPANY THIS APPLICATION

CONTINUE ON REVERSE SIDE

[illegible]

* PLEASE NOTE LEGAL LAND OWNER SIGNATURE AND APPLICANT SIGNATURE ARE BOTH REQUIRED. IF THE LEGAL LAND OWNER AND APPLICANT ARE THE SAME, PLEASE SIGN IN BOTH PLACES. THANK YOU.

City of Omaha
E. WALT SMITH - MAYOR
LEGAL LANDOWNER (PLEASE PRINT)

LEGAL LANDOWNER (PLEASE PRINT)

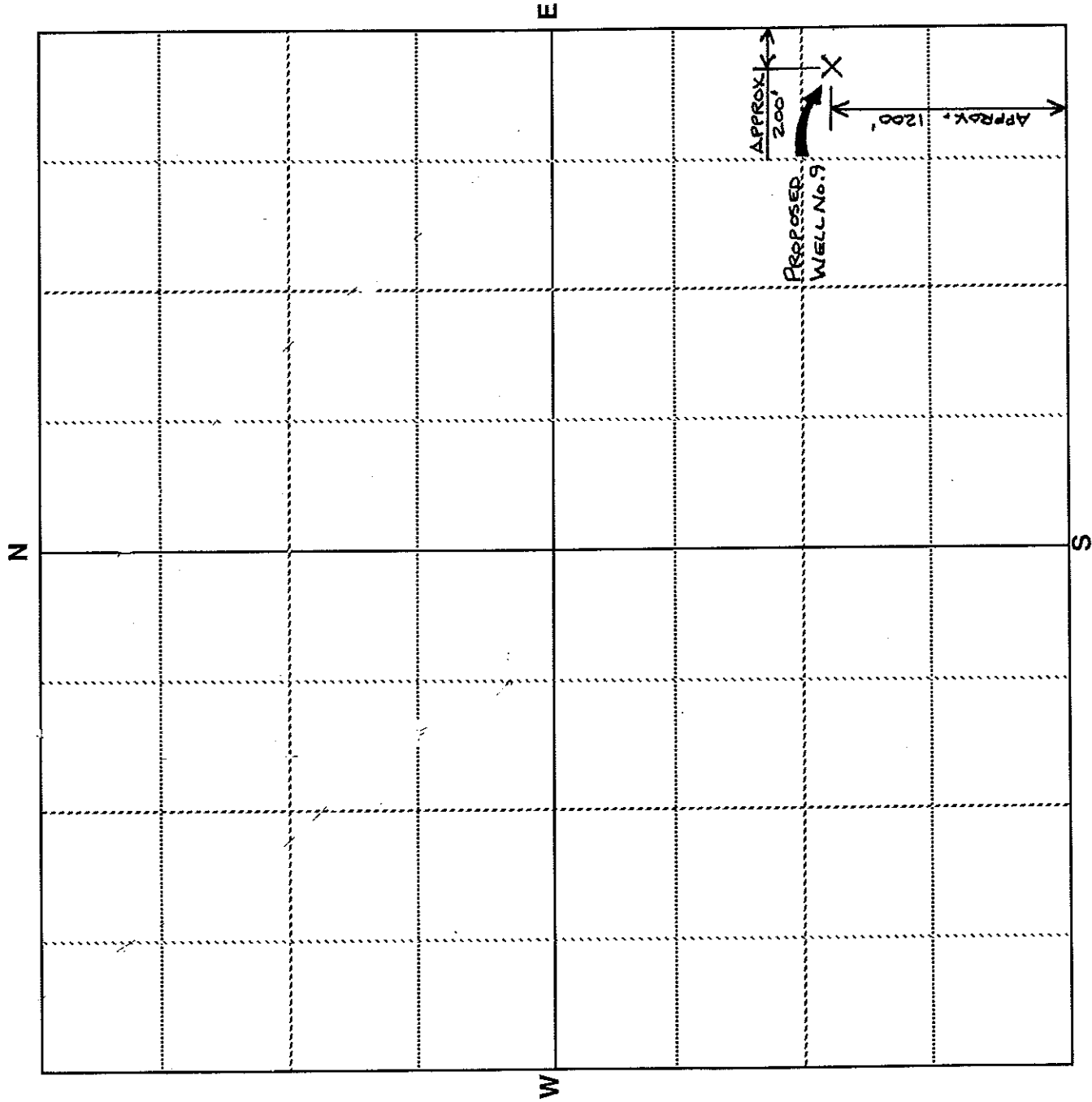
LEGAL LANDOWNER SIGNATURE (OWNER OF PROPERTY DESCRIBED IN ITEM NUMBER 3)

2 North 4th, OMAH, WA. 98841

APPLICANT'S SIGNATURE

SECTION MAP

Sec. 24 Twp. 34 N.R. 26 E.W.M.



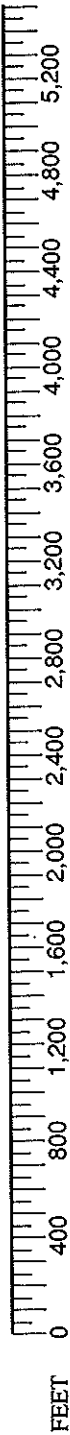
Scale: 1 inch = 800 feet (each small square = 10 acres)

Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source). For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile. Indicate traveling directions from nearest town in space below.

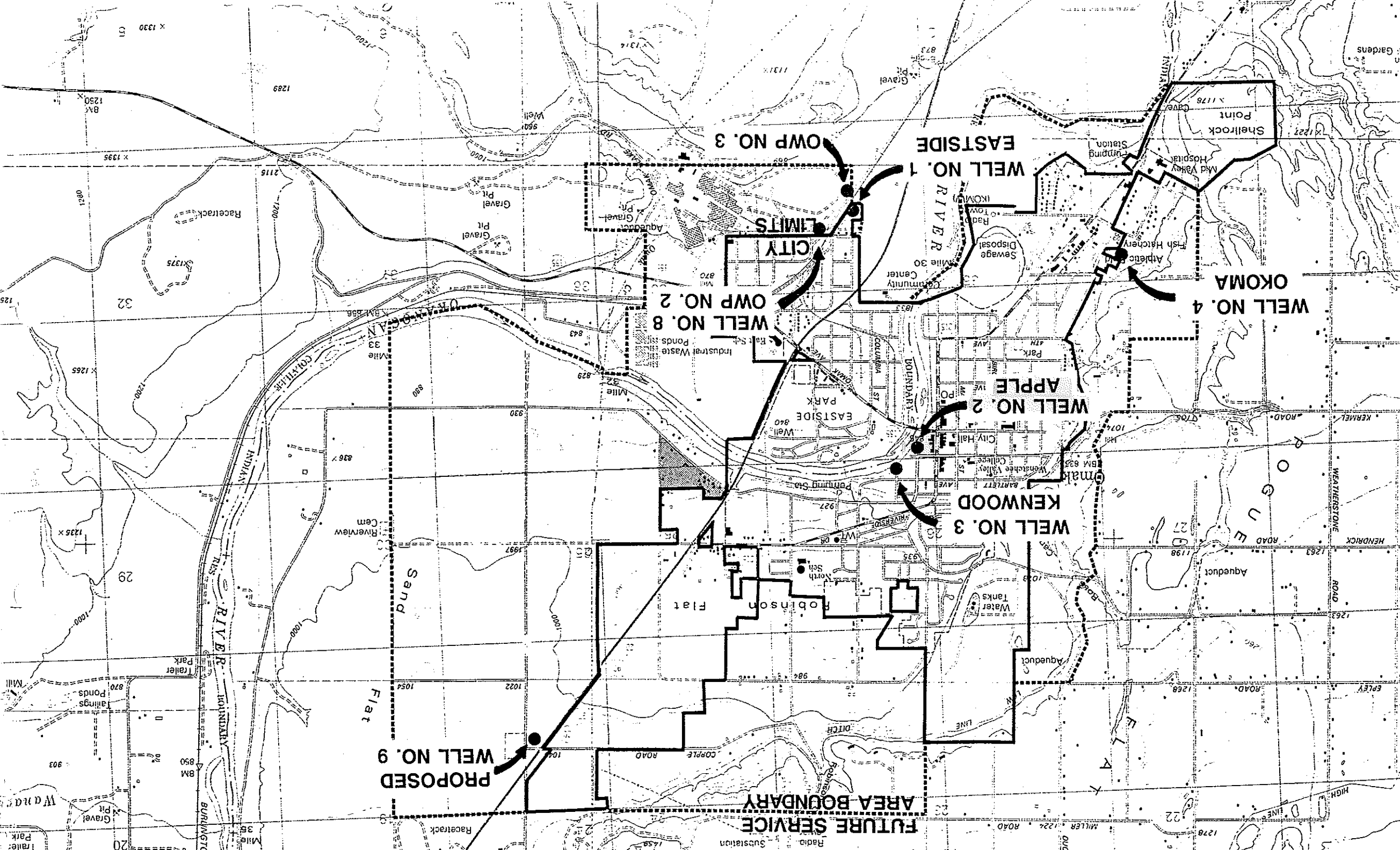
North of the City of Omak along Highway 97. Turn east at the Copple Road/Sand Flats Road intersection with Highway 97. The proposed Well No. 9 is immediately South of Sand Flats Road at the intersection.

Detach here

Fold along scale



Detach this scale at the performance, fold excess paper under or cut off excess by cutting along the scale line. This scale corresponds to the SECTION MAP above. You can read feet directly from this scale to outline property and locate points of diversion or withdrawal on the SECTION MAP. Enclose this map along with the application and \$10.00 examination fee.



STATE OF WASHINGTON, COUNTY OF Okanogan

Certificate of Ground Water Right

Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and the rules and regulations of the State Supervisor of Hydraulics thereunder.

THIS IS TO CERTIFY THAT CITY OF OMAK WATER DEPARTMENT

of Omak, Washington has filed

in the office of the State Supervisor of Hydraulics of Washington Declaration of Claim No. 498

to withdraw ground waters of the State from a Pump Well

located within Block 3 of Omak Addition, Omak, Washington

for the purpose of Municipal supply

The right to the use of said ground waters has been sustained and approved by the Supervisor of Hydraulics in accordance with Chapter 263, Laws of Washington for 1945, and is hereby entered of record in Volume 1 of Ground Water Certificates at page 446-D : the right approved has a priority of March, 1936 ; the amount of water which the Declarant is entitled to withdraw for the aforesaid purpose is limited to the amount actually beneficially used and shall not exceed 800 gals per minute; 96 acre-feet per year; and is appurtenant to the following described lands or place of use:

City of Omak, Okanogan County, Washington

Well #3

The right to the use of the ground water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 5 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Hydraulics affixed this 15th day of December 19 47

PERFORMED CASINGS OR SCREENS:

(Number, size, and size of perforations, or describe screen)

from. to

...from. to

frame, to

from _____ to _____

Loc of Well: (Describe each stratum or formation clearly, indicate if water bearing, and give thickness and depth as indicated.)

[illegible]

(b) INFILTRATION TRENCH: Covered or open.

Dimensions: Length.....ft. Minimum depth.....ft. Maximum depth.....ft.

Bottom width.....ft. Discharge.....g.p.m. Date of test.....

(c) TUNNEL: Type of lining.

Dimensions:

(Length, course, and cross-sectional size)

Position of water bearing stratum with reference to portal of tunnel.

Log of tunnel: (Preceding table for log of well may be used, if desired. Give footage from portal and character of materials, as pertinent.)

WR 10#199909

PROGRESS SHEET - APPLICATION FOR CHANGE ON:

WR1A 49

064-6WC 446-D @3
64*004883WR1S

COUNTY CLANDON

NAME: City of Omak PHONE: (509) 826-1170

ADDRESS: P.O. Box 72 Omak WA 98841-0072

City State ZIP

PURPOSE OF APPLICATION: + Pow's

Original Right Holder: CITY OF OMAK (488 / 446-D)

Application received: August 4, 2004 date

Initial \$10.00 fee received: (4) Yes () No

Statement of additional exam fee \$ Sent date Received date

PUBLICATION:

Approved by: EG/ST Date 825.04 Notice Sent 8.25.04 date

CONSULTED AGENCIES:

DOH date DOW date DOF date USBR date TRIBES date

PROTESTS: date By: Name

 date By: Name

 date By: Name

Affidavit received: 10/7/04 date Checked by: ST P.P. time expires: 10/29/04 date

Report written by: Scott Jurnea Date Report Sent: 08-11-2005

DEVELOPMENT SCHEDULE

Beginning of Construction: 06-01-2006 Date sent: 1-7-08 Date received:
Extensions: 12-31-2011

Completion of Construction: Date sent: Date received:
Extensions:

Proof of Appropriation: Date sent: Date received:
Extensions:

Date well report(s) received:

DATE APPROVED FOR CHANGE: BY:

() Superseding Permit

☒ Superseding Certificate

() Certificate of Change (on claims)
Vol. 1-4, Page

Date certificate fees requested: Date received:

DATE CHANGE ISSUE

City of Omak (six ROFs for Change issued 08/11/2005):
CG4-GWC445D@1, CG4-GWC446-D@3, CG4 GWC1082-D@1,
G4-GWC3655@1, CG4 GWC3656 A@1, CG4-GWC7332-A@1

REMARKS:



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 W Yakima Ave, Ste 200 • Yakima, WA 98902-3452 • (509) 575-2490

January 7, 2008
CERTIFIED MAIL
7006 0100 0002 8191 8256

City of Omak
Attn: Dale Sparber, Mayor
PO Box 72
Omak WA 98841

Re: RE: Water Right Change Authorizations No. CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1, CG4-GWC445-D@1, CG4-GWC7332-A@1, and CG4-GWC446-D@3

In response to your request, you are hereby granted an extension of time in which to begin construction. Your new deadline to begin construction of your water system and submit a completed *Beginning of Construction* form is **December 31, 2011**.

Reason(s) for granting extension:

The City of Omak has shown due diligence toward beginning their project by taking the following steps:

- They have secured a Drinking Water State Revolving Fund (DWSRF) loan to assist with the acquisition of the two authorized wells and new transmission facilities.
- They are actively negotiating a price with one of the land owners for the project and are currently waiting for a counter offer.
- They have tested the wells capacity during the negotiation period.
- They have completed designs of the needed pump house and transmission main for one of the authorized wells.
- They need additional time to complete well purchase negotiations and initiate well construction activities.

You have a right to appeal this decision. To appeal this you must:

- File your appeal with the Pollution Control Hearing Board within 30 days of the "date of receipt" of this document. Filing means actual receipt by the Board during regular office hours.
- Serve your appeal on the Department of Ecology within 30 days of the "date of receipt" of this document. Service may be accomplished by any of the procedures identified in WAC 371-08-305(10). "Date of receipt" is defined at RCW 43.21B.001(2).

Be sure to do the following:

- Include a copy of this document that you are appealing with your Notice of Appeal.
- Serve and file your appeal in paper form; electronic copies are not accepted.



FILE COPY



1. To file your appeal with the Pollution Control Hearings Board:

Mail appeal to:	OR	Deliver your appeal in person to:
The Pollution Control Hearings Board PO Box 40903 Olympia WA 98504-0903		The Pollution Control Hearings Board 4224 - 6th Ave SE Rowe Six, Bldg 2 Lacey WA 98503

2. To serve your appeal on the Department of Ecology:

Mail appeal to:	OR	Deliver your appeal in person to:
The Department of Ecology Appeals Coordinator PO Box 47608 Olympia WA 98504-7608		The Department of Ecology Appeals Coordinator 300 Desmond Dr SE Lacey WA 98503

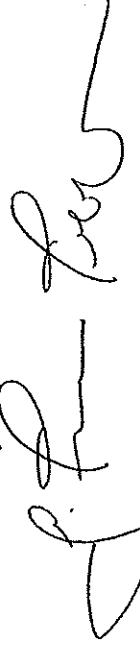
3. And send a copy of your appeal packet to:

G. Thomas Tebb, L.E.G.
The Department of Ecology
Central Region Office
15 W Yakima Ave Ste 200
Yakima WA 98902-3452

*For additional information visit the Environmental Hearings Office Website: <http://www.eho.wa.gov>
To find laws and agency rules visit the Washington State Legislature Website: <http://www.l.leg.wa.gov/CodeReviser>*

If you have any questions or concerns about this information, please call the Department of Ecology at (509) 575-2597.

Sincerely,



G. Thomas Tebb, L.E.G.
Section Manager
Water Resources Program

GTT:ST:gh
080106

Enclosure(s): *Beginning of Construction forms (6)*
"Your Right to Be Heard" Information Sheet

CS-4a.doc

Y900

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or PO Box No. _____

City, State, ZIP+4 _____

PS Form 3800, June 2002 See Reverse for Instructions

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- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

CITY OF OMAK
ATTN: DALE SPARBER MAYOR
PO BOX 72
OMAK WA 98841

WR/gh Nos. CG4-GWC1082-D@1, CG4-GWC3655-A@1,
CG4-GWC3656-A@1, CG4-GWC445-D@1, CG4-GWC7332-A@1,
and CG4-GWC446-D@3

COMPLETE THIS SECTION ON DELIVERY

A. Signature Dan Sealey ☒ Agent ☐ Addressee

B. Received by (Printed Name) Dan Sealey C. Date of Delivery 1-7

D. Is delivery address different from item 1? ☐ Yes ☒ No
If YES, enter delivery address below:

3. Service Type

<input checked="" type="checkbox"/> Certified Mail	<input type="checkbox"/> Express Mail
<input type="checkbox"/> Registered	<input type="checkbox"/> Return Receipt for Merchandise
<input type="checkbox"/> Insured Mail	<input type="checkbox"/> C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes ☒ No

2. Article Number

7006 0100 0002 8191 8256

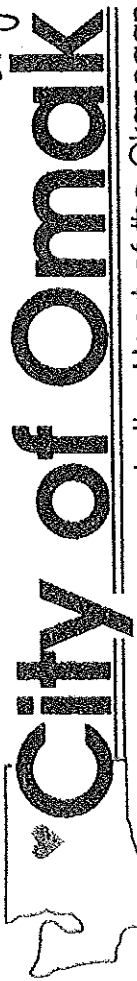
PS Form 3811, February 2004

Domestic Return Receipt

10259-02-M-134

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Ch. 2005
3-5-07
VRF

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MAR 05 2007
CENTRAL REGION OFFICE



State of Washington In the Heart of the Okanogan

February 28, 2007

Washington Department of Ecology
15 West Yakima Avenue, Suite 200
Yakima, WA 98902-3452

Attn: Erin Gutierrez
Water Resources Program

Re: Water Rights Change Application No. CG4-GWC1082-D@1, CG4-
GWC3655-A@1, CG4-GWC3656-A@1, CG4-GWC445-D@1, CG4-
GWC7332-A@1, and CG4-GWC446-D@3

Dear Ms. Gutierrez:

The City of Omak requests that the development schedule for each of the authorized water rights changes referenced above, be extended to December 31, 2011. We have experienced delays in acquiring two existing, privately owned wells that were authorized in the water rights changes.

The City secured a Drinking Water State Revolving Fund (DWSRF) loan from the Public Works Board in 2005 for the construction of several potable water system improvements. Acquisition of two existing wells identified as the "Hicks" and "Dean" wells, and construction of new pumphouse and transmission main improvements were part of the DWSRF project. Unfortunately, we have had difficulty negotiating a price for the wells and properties with the owners. Recently, however, Okanogan County purchased the "Dean" well and surrounding property and, as a condition of annexation, has been required to transfer ownership of the well to the City.

The City has been actively negotiating with the "Hicks" well owner for some time. We had the well and property appraised and made a "fair market" offer. The price was not acceptable to the owner and they initiated their own second appraisal. As of this date we have not received a counter offer price.

During the "Hicks" well negotiation period, we conducted a well capacity pump test and required potable water quality tests. Our engineers have also completed

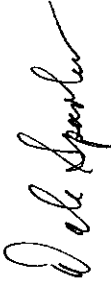
design of the "Hicks" pumphouse and transmission main and are ready to proceed with advertising for bids as soon as the well is acquired.

It is extremely important to the City of Omak to develop additional sources of potable water supply north of the Okanogan River and off the Colville Indian Nation reservation.

We will continue to pursue acquisition of the existing wells and/or drill new wells on nearby property if necessary. A development schedule time extension is needed in order to allow sufficient time to complete well purchase negotiations and to initiate construction activities.

Thank you for your attention in this matter. Should you have any questions or require additional information please contact our engineering consultant, Jeff Louman, PE at (509) 966-7000.

Sincerely,

A handwritten signature in cursive script, appearing to read "Dale Sparber".

Dale Sparber
Mayor



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

February 1, 2007

City of Omak
PO Box 72
Omak WA 98841-0072

RE: Water Right Change Authorizations No. CG4-GWC1082-D@1, CG4-GWC3655-A@1,
CG4-GWC3656-A@1, CG4-GWC445-D@1, CG4-GWC7332-A@1, and
CG4-GWC446-D@3

This letter is to remind you that the development schedule of the authorized changes to your water rights required that you begin construction of the project by June 1, 2006. **You are now out of compliance with the development schedule in your change authorizations.**

When you received your change authorizations, we sent you *Beginning of Construction* (BC) forms so that you could notify us that you had begun construction. We have not received your BC forms. If you have begun construction, additional forms are enclosed for you to fill in and return to us.

If you have not begun construction of your project, you must obtain an extension of the development schedule or your change authorizations may be cancelled. ***Your request must be in writing and include the following information:***

- A description of the efforts you have made to begin the project.
- A schedule for beginning the project.
- Reasons why the project has not begun.
- Any additional information that will assist us in evaluating your request for extension.

To request an extension, a non-refundable fee of \$50 for each change authorization must be submitted along with the extension request. Ecology will review the submitted information to determine whether an extension can be granted. If it is not granted, we will notify you in writing and that decision may be appealed.

Please submit completed *Beginning of Construction* forms or the above-requested information within thirty (30) days. If you are no longer interested in pursuing the project or if your project has changed since the change authorizations were issued, please contact this office in writing. Questions or concerns can be directed to Teresa Mitchell at (509) 575-2597.

Sincerely,

Erin Gutierrez
Erin Gutierrez

Water Resources Program

EG:gh
070201

Enclosure(s): *Beginning of Construction* forms (6)

BC1 for Change.doc

FILE COPY

WATER RIGHTS REVIEW ROUTER

- ☐ Report of Exam (ROE) ☒ ROE for Change
☐ Temporary Permit ☐ Conservancy Board Decision
☐ Preliminary Permit ☐ Short Term Authorization

FILE NO. 664-66C446-DO3

Y:\STAFF\Turner\ONMak\seconded\ONMak 44603

AUTHOR Turner 4-9-05 (date)

8/5/05 95 to JTK
8/4/05 99 to OK

DRAFT 7/21/05 to CM FINAL 8/10/05 95
(by typist) (by typist)

Mark Schuppe 7/14/05 (date)

Phil Crane Carol Mortenson 7/27/05 (date)

Permit Writer _____ (date)

MAIL OUT 98 8/11/05 (date)

GWIS MAPPING REVIEW

(Debra reviews changes BEFORE finalization)

Debra Kroon DKroon 8/5/05 (date)

GWIS Remarks:

good to go

CIRCLE APPROPRIATE WRIA:

TRIBE	WRIA
Colville Confederated Tribes	<u>(49)</u> 50 51 52 53 58 60 61
Yakama Nation	29 30 31 32 33 37 38 39 40
Both Tribes	45 46 47 48

cc TO ANYONE ELSE?

Jeffrey Louman PE
Huibregtse, Louman Associates Inc
801 N 39th Ave
Yakima WA 98902
✓

MINIMUM FLOWS?

cc CRO Enforcement _____

cc River Letter List _____

REMARKS and/or RELATED FILES:

NO PROTESTANTS

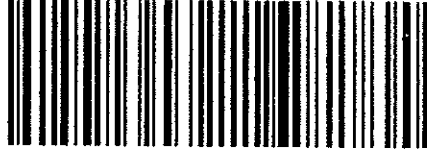
ATTACHMENTS:

- ☒ Your Right to Be Heard
☒ Ground Water Bulletin No. 1
☒ DECE PA forms 6/2006
☒ Water Measurement Requirements
☐ Fish Screening Criteria
☐ Important Information Sheet (Permit)
☐ Other: _____

PERMIT FEE \$

Permit Fee Calculation: _____

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT
OF THE RETURN ADDRESS, FOLD AT DOTTED LINE



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Sent To *City of Omak*

Street, Apt. No.,
or PO Box No.

City, State, Zip+4

PS Form 3811, June 2002

See Reverse for Instructions

SENDER: COMPLETE THIS SECTION

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- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

CITY OF OMAK
PO BOX 72
OMAK WA 98841-0072

WR:SS ROE/KCh
CG4-GW C445D@1, CG4-GW C446-D@3, CG4 GWC1082 D@1
G4-GWC3655@1, CG4 GWC3656 A@1, CG4-GW C7332-A@1

COMPLETE THIS SECTION ON DELIVERY

A. Signature ☒ Agent ☐ Addressee

B. Received by (Printed Name) ☐ C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail ☐ Express Mail

☐ Registered ☐ Return Receipt for Merchandise

☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number
(Transfer from service label)

7004 1160 0002 6156 6713

PS Form 3811, February 2004

Domestic Return Receipt

102555-02-M-1540

original green card is in:

CG4-GWC445D@1



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

August 11, 2005
CERTIFIED MAIL

City of Omak
PO Box 72
Omak WA 98841-0072

**RE: Applications for Change on Nos. CG4-GWC445D@1, CG4-GWC446-D@3,
CG4-GWC1082-D@1, G4-GWC3655-A@1, CG4-GWC3656-A@1, CG4-GWC7332-A@1**

Your applications to change your water rights have been carefully reviewed in accordance with the requirements of the State's water codes. The Applications for Change have been approved, subject to the conditions and limitations described in the Reports of Examination for Change. Please refer to the enclosed Reports of Examination for Change, which summarize our findings and represents our final decision.

You have the right to appeal this decision to the Pollution Control Hearings Board. Pursuant to Chapter 43.21B RCW, your appeal must be filed with the Pollution Control Hearings Board, and served on the Department of Ecology, within thirty (30) days of the date of your receipt of this document.

To appeal this decision, your notice of appeal must contain a copy of the Ecology decision you are appealing.

Your appeal must be filed with:

The Pollution Control Hearings Board
4224 - 6th Avenue SE Rowe Six Bldg 2
PO Box 40903
Lacey WA 98504-0903

Your appeal must also be served on:

The Department of Ecology
Appeals Coordinator
PO Box 47608
Olympia WA 98504-7608

In addition, please send a copy of your appeal to:

Robert F. Barwin
Department of Ecology
15 W Yakima Ave Ste 200
Yakima WA 98902-3452

FILE COPY



Please pay particular attention to the Recommendation section for the terms and conditions of this approval. If you have any questions or concerns about this decision, or we if can otherwise provide further assistance, please call Bryce Bealba of the Department of Ecology at (509) 575-2597.

Sincerely,



Robert F. Barwin, Section Manager
Water Resources Program
Central Region Office

RFB:ST:gg
050814

Enclosure(s): Reports of Examination for Change (6)
"Your Right to Be Heard" Information Sheet
Beginning of Construction Forms (6)
Ground Water Bulletin No. 1
Water Measurement Requirements

cc: Lois Trevino, Water Administrator, Office of Environmental Trust, Colville Confederated Tribes
f-lchgg.doc



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

August 11, 2005

To: Lois Trevino, Water Administrator, Office of Environmental Trust, Colville Confederated Tribes

RE: Reports of Examination for Change on Nos. CG4-GWC445D@1, CG4-GWC446-D@3,
CG4-GWC1082-D@1, G4-GWC3655@1, CG4-GWC3656-A@1, CG4-GWC7332-A@1
(City of Omak, Applicant)

Since you are identified as a party interested in the above water right applications, we are enclosing copies of our Reports of Examination for Change which summarize our findings and represents our final decision.

You have the right to appeal this decision to the Pollution Control Hearings Board. Pursuant to Chapter 43.21B RCW, your appeal must be filed with the Pollution Control Hearings Board, and served on the Department of Ecology, within thirty (30) days of the date of your receipt of this document.

To appeal this decision, your notice of appeal must contain a copy of the Ecology decision you are appealing.

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Your appeal must also be served on:

The Department of Ecology
Appeals Coordinator
PO Box 47608
Olympia WA 98504-7608

In addition, please send a copy of your appeal to:

Robert F. Barwin
Department of Ecology
15 W Yakima Ave Ste 200
Yakima WA 98902-3452

If you have any questions or concerns about these decisions, or we if can otherwise provide further assistance, please call Bryce Bealba of the Department of Ecology at (509) 575-2597.

Sincerely,

Robert F. Barwin, Section Manager
Water Resources Program
Central Region Office

RFB:gg050814a

Enclosures: Reports of Examination for Change (6)

f-10th.doc

FILE COPY





WASHINGTON STATE
DEPARTMENT OF
E C O L O G Y

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION FOR CHANGE
TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON



Surface Water

(Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)



Ground Water

(Issued in accordance with the provisions of Chapter 363, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE December 1913	APPLICATION NUMBER CG4-GWC446-D@3	PERMIT NUMBER	CERTIFICATE NUMBER
NAME City of Omak			
ADDRESS (STREET) PO Box 72		(CITY) Omak	(STATE) WA
		(ZIP CODE) 98841-0072	

PUBLIC WATERS TO BE APPROPRIATED

SOURCE 9 wells		
TRIBUTARY OF (IF SURFACE WATERS)		
MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE 800	MAXIMUM ACRE-FEET PER YEAR 96
QUANTITY, TYPE OF USE, PERIOD OF USE 800 gallons per minute and 96 acre-feet per year continuously for municipal supply.		

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL
Kenwood Well: 1100 feet north and 600 feet east of the south quarter corner of Section 26.
Apple Well: 800 feet north and 200 feet east of the south quarter corner of Section 26.
Okoma Well: 660 feet south and 520 feet west of the east quarter corner of Section 34.
Eastside Well: 800 feet north and 1170 feet west of the southeast corner of Section 35.
OWP No. 2: 1210 feet north and 530 feet west from the southeast corner of Section 35.
Hicks Well: 275 feet south and 1000 feet east from the northwest corner of Section 25.
Powers Well: Being within the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 26.
Well No. 9: 1275 feet north and 100 feet west from the southeast corner of Section 24.
Dean Well: 1625 feet north and 225 feet east of the southwest corner of Section 19.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE (E OR W) W.M.	W.R.L.A.	COUNTY
SW $\frac{1}{4}$ SE $\frac{1}{4}$	26	34	26 E	49	Okanogan
NE $\frac{1}{4}$ SE $\frac{1}{4}$	26				
NE $\frac{1}{4}$ SE $\frac{1}{4}$	34				
SE $\frac{1}{4}$ SE $\frac{1}{4}$	35				
SE $\frac{1}{4}$ SE $\frac{1}{4}$	35				
NW $\frac{1}{4}$ NW $\frac{1}{4}$	25				
NE $\frac{1}{4}$ NE $\frac{1}{4}$	26				
SE $\frac{1}{4}$ SE $\frac{1}{4}$	24				
NW $\frac{1}{4}$ SW $\frac{1}{4}$	19		27 E		

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
-----	-------	------------------------------------

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

The place of use of this water right is the service area described in the most recent Water System Plan approved by the Washington State Department of Health, so long as City of Omak is and remains in compliance with the criteria in RCW 90.03.386(2). RCW 90.03.386 may have the effect of revising the place of use of this water right.

If the criteria in RCW 90.03.386(2) are not met, the place of use of this water right reverts to the last place of use described by the Department of Ecology in a water right authorization.

FILE COPY

DESCRIPTION OF PROPOSED WORKS

The City of Omak's wells pump water through a series of main lines to four reservoir systems (500,000 gallons, 550,000 gallons, 800,000 gallons, and 1,065,000 gallons) sited in various locations around the City. The telemetry system is located at City Hall that controls both the quantities of water pumped and the quantities of water released from the reservoirs to the City's connections.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	WATER PUT TO FULL USE BY THIS DATE
June 2006	June 2011	Good Standing

REPORT

BACKGROUND INFORMATION

On August 4, 2004, the City of Omak, Washington, filed an Application for Change to add three points of withdrawal under Ground Water Declaration Certificate No. G4-GWC446-D. The application was accepted and assigned identifier No. CG4-GWC446-D@3.

This application is part of the second set of two sets of change applications submitted to the Department of Ecology (Ecology) by the City of Omak (the City). The first set, submitted January 3, 1994, requests authorization to consolidate all of the points of withdrawal under six of the City's existing rights. Ecology approved those applications on June 7, 2005.

The City's second set of Applications for Change, submitted November 24, 1998, request the addition of Well No. 9 to each of their existing water rights. This second set of applications were amended on August 4, 2004, requesting to add three wells in addition to Well No. 9, to the City's existing rights.

A Report of Examination issued for Application for Change No. CG4-GWC446-D@1 (Apple Well) approving the use of Well No. 9 on December 7, 2000. Since Change No. CG4-GWC446@1 was authorized, the application could not be amended. Therefore, the current application was needed to add the same three additional wells to Ground Water Declaration Certificate No. 446.

This report will address Ecology's findings of fact and recommendations related to Application for Change No. CG4-GWC446-D@1. Separate reports will address the specific recommendations for each Application for Change. Although many elements of the reports are identical, the evaluation for authorizing four additional points of withdrawal for each water right, including the consideration of the potential for impairing existing rights due to increased pumping rates at each source, will be considered separately.

Attributes of Ground Water Declaration Certificate No. 446-D

Name on Certificate, Claim, Permit:	City of Omak
Priority Date, First Use:	December 1913
Instantaneous Quantity:	800 gallons per minute (gpm)
Annual Quantity:	96 acre-feet per year (acre-ft/yr)
Source:	6 wells
Points of Withdrawal:	Kenwood Well: 1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M. Apple Well: 800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 26, T. 34 N., R. 26 E.W.M. Okoma Well: 660 feet south and 520 feet west of the east quarter corner of Section 34, being within the NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 34, T. 34 N., R. 26 E.W.M. Eastside Well: 800 feet north and 1170 feet west of the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M. OWP No. 2: 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M. Well No. 9: 1275 feet north and 100 feet west from the southeast corner of Section 24, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 24, T. 34 N., R. 26 E.W.M.
Purpose of Use:	Municipal supply for the City of Omak
Period of Use:	Continuously throughout the year
Place of Use:	City of Omak, Okanogan County, Washington

Proposed Change

Name of Applicant:	City of Omak
Application Date:	January 3, 1994
Instantaneous Quantity:	800 gpm
Annual Quantity:	96 acre-ft/yr
Source:	9 wells
Point of Diversion:	<p>Kenwood Well: 1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW$\frac{1}{4}$SE$\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M.</p> <p>Apple Well: 800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW$\frac{1}{4}$SE$\frac{1}{4}$ of Section 26, T. 34 N., R. 26 E.W.M.</p> <p>Okoma Well: 660 feet south and 520 feet west of the east quarter corner of Section 34, being within the NE$\frac{1}{4}$SE$\frac{1}{4}$ of Section 34, T. 34 N., R. 26 E.W.M.</p> <p>Eastside Well: 800 feet north and 1170 feet west of the southeast corner of Section 35, being within the SE$\frac{1}{4}$SE$\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M.</p> <p>OWP No. 2: 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE$\frac{1}{4}$SE$\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M.</p> <p>Hicks Well: 275 feet south and 1000 feet east from the northwest corner of Section 25, being within the NW$\frac{1}{4}$NW$\frac{1}{4}$ of Section 25, T. 34 N., R. 26 E.W.M.</p> <p>Dean Well: 1625 feet north and 225 feet east of the southwest corner of Section 19, being within the NW$\frac{1}{4}$SW$\frac{1}{4}$ of Section 19, T. 34 N., R. 27 E.W.M.</p> <p>Proposed Powers Well: Being within the NE$\frac{1}{4}$NE$\frac{1}{4}$ of Section 26, T. 34 N., R. 26 E.W.M.</p> <p>Well No. 9: 1275 feet north and 100 feet west from the southeast corner of Section 24, being within the SE$\frac{1}{4}$SE$\frac{1}{4}$ of Section 24, T. 34 N., R. 26 E.W.M.</p>
Purpose of Use:	Municipal supply for the City of Omak
Period of Use:	Continuously throughout the year
Place of Use:	City of Omak, Okanogan County, Washington

Public Notice of the application was given in the Omak-Okanogan County Chronicle on September 22 and 29, 2004. There were no protests during the 30 day protest period.

INVESTIGATION

The following information was obtained from a site inspection conducted by Ecology staff Scott Turner and Melissa Nihlsen, with the Assistant Director of Public Works present, on July 28, 2004, research of department records, and conversations with the applicant and department staff. In order to approve the addition of four points of withdrawal under No. GWC 446-D, Ecology must determine:

- The validity and extent of the original water right.
- That the proposed new points of withdrawal tap the same body of public ground water as the authorized wells.
- That the proposed change will not cause impairment to existing water rights or enlarge the original right.
- That the proposed change will not be contrary to the public interest.

Filing of Applications for Change Nos. CG4-GWC445-D@1, CG4-GWC446-D@3, CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1, and CG4-GWC7332-A@1, attempts to increase the City's flexibility in managing its ground water withdrawals for municipal supply. This, in part, came about because Washington State Department of Health (DOH) declared the Apple and Kenwood wells as ground water under the influence of surface water (GUT). As a result, the City currently uses those wells only in an emergency need situation. This presents a need for the City to compensate for the water not produced by these wells through the use of newly acquired wells.

Currently, there are five wells the City operates under municipal water rights. The wells pump water through main lines to four reservoir systems (500,000 gallons, 550,000 gallons, 800,000 gallons, and 1,065,000 gallons) sited in various locations around the City. The telemetry system is located at City Hall, which controls both the quantities of water pumped and the quantities of water released from the reservoirs to the City's connections.

The City of Omak's Existing Municipal Water Rights

The City filed the declarations for the vested water uses under RCW 90.44 090 on July 7, 1947 that resulted in the issuance of Ground Water Declaration Certificate Nos. 445-D, 446-D, and 1082-D, described in more detail below.

The water rights are listed below in priority date sequence.

Ground Water Declaration Certificate No. 445-D has a priority date of December 1913, and certifies the withdrawal of 500 gpm, 600 acre-ft/yr for municipal supply from a well (known as the Kenwood Well) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M. This well has been categorized by DOH as a GUI source. This well was reported to be a standby well in the Report of Finding on Ground Water Declaration Claim No. 486 dated November 3, 1947. This well is identified as source S03 by DOH. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Apple Well, the Eastside Well, the Okoma Well, and Omak Wood Products Well No. 2 (OWP No. 2) under this Certificate.

Ground Water Declaration Certificate No. 446-D has a priority date of March 1936, and certifies the withdrawal of 800 gpm, 96 acre-ft/yr for municipal supply from a well (known as the Apple Well) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M. This well has been categorized by DOH as a GUI source. This well is identified as source S02 by DOH. On December 7, 2000, Ecology approved an Application for Water Right Change authorizing the use of Well No. 9 under this Certificate. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Kenwood Well, the Eastside Well, the Okoma Well and OWP No. 2 under this Certificate.

Ground Water Declaration Certificate No. 1082-D has a priority date of May 1944, and certifies the withdrawal of 630 gpm, 1430 acre-ft/yr for municipal supply from a well (known as the Eastside Well) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M. The well was equipped with three pumps; a 15 horsepower (hp), a 30 hp, and a 40 hp rated at 280 gpm, 550 gpm, and 800 gpm respectively. This well is identified as source S01 by DOH. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Apple Well, the Kenwood Well, the Okoma Well and OWP No. 2 under this Certificate.

Ground Water Certificate No. 3655-A has a priority date of March 20, 1958. It is the second authorization from the Eastside Well (see discussion about the earlier right under Ground Water Declaration Certificate No. 1082-D). It certifies the withdrawal of 1300 gpm, 2080 acre-ft/yr for municipal supply. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Apple Well, the Kenwood Well, the Okoma Well and OWP No. 2 under this Certificate.

Ground Water Certificate No. 3656-A has a priority date of March 20, 1958, and certifies the withdrawal of 375 gpm, 600 acre-ft/yr for municipal supply. This is a second authorization from the Apple Well (see earlier discussion under Ground Water Declaration Certificate No. 446-D) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M. As described earlier, this well has been categorized by DOH as a GUI source. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Kenwood Well, the Eastside Well, the Okoma Well and OWP No. 2 under this Certificate.

Ground Water Certificate No. 7332-A has a priority date of June 22, 1970, and certifies the withdrawal of 600 gpm, 560 acre-ft/yr for municipal supply from May 1 through October 31 from a well (known as the Okoma Well) located in the NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 34, T. 34 N., R. 26 E.W.M. Any water withdrawal by the City in excess of 3456 acre-feet from any municipal source is to be deducted from the annual volume authorized by this right. This well is identified as source S04 by DOH. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Apple Well, the Eastside Well, the Kenwood Well and OWP No. 2 under this Certificate.

Ground Water Permit No. G4-31525P has a priority of November 23, 1992, and authorizes the withdrawal of 5000 gpm, 3500 acre-ft/yr from two wells (interruptible when the Okanogan River drops below minimum instream flows as outlined in the Permit) for municipal supply. The wells described in this Permit are located approximately 1,150 feet west and 500 feet north from the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M. A provision in this Permit states that the annual quantity is not additive to the City's existing rights, and limits all of the City's water rights to 3500 acre-ft/yr.

The source the City believed to be authorized under Ground Water Permit No. G4-31525P (OWP No. 2) is not described on the original Permit. This oversight has resulted in an unauthorized change in point of withdrawal. OWP No. 2 is located approximately 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M., approximately 1,000 feet northeast from the authorized points of withdrawal. OWP No. 2 is actually the authorized source under Certificate of Change No. CCVOL1-4P238, and is identified as source S07 by DOH.

The original Public Notice was given for Ground Water Permit No. G4-31525P on January 13 and 20, 1993, in the Omak-Okanogan County Chronicle. That Public Notice described the proposed sources for Ground Water Permit G4-31525P as being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M. As noted above, OWP No. 2 is also located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M. RCW 90.44.100(3) states "the construction of a replacement or new additional well or wells at the location of the original well or wells (emphasis added) shall be allowed without application to the department for an amendment". On July 27, 2005, the City submitted a Showing of Compliance form stating they have met the criteria stated in RCW 90.44.100(3) in order to legally operate OWP No. 2 under Ground Water Permit No. G4-31525P. The Showing of Compliance form is currently under review by Ecology.

Proposed Additional Sources

The City proposes to add three additional wells, located northeast of the existing municipal wells, under each of the water rights above. Well No. 9 is already authorized under Ground Water Declaration Certificate No. 446-D. The City requests the addition of the following three wells under Ground Water Declaration Certificate No. 446-D:

The Dean Well: Source for Ground Water Certificate No. G4-28873C, described in the **Ground Water Rights within Omak's Urban Growth Area** section of this report. The well is reported to be 312 feet deep, and capable of pumping about 300 gpm. The City would like to increase the capacity of this well to 500 gpm. The City's application requests only to add this well as an additional source under Ground Water Declaration No. 445-D.

The Hicks Well: This well is located within the place of use, but is not the authorized source for Ground Water Certificate No. G4-26176C, described in the **Ground Water Rights within Omak's Urban Growth Area** section of this report. The well is reported to be 247 feet deep with a static water level of 150 feet. The Hicks Well is capable of pumping about 600 gpm, but the City would like to increase the capacity to 700 gpm.

The Powers Well: A source to be drilled in the future. Located within the NE¼NE¼ of Section 26, T. 34 N., R. 26 E.W.M.

Figure 1 illustrates the location of the City's authorized municipal wells, and the location of the proposed additional wells.

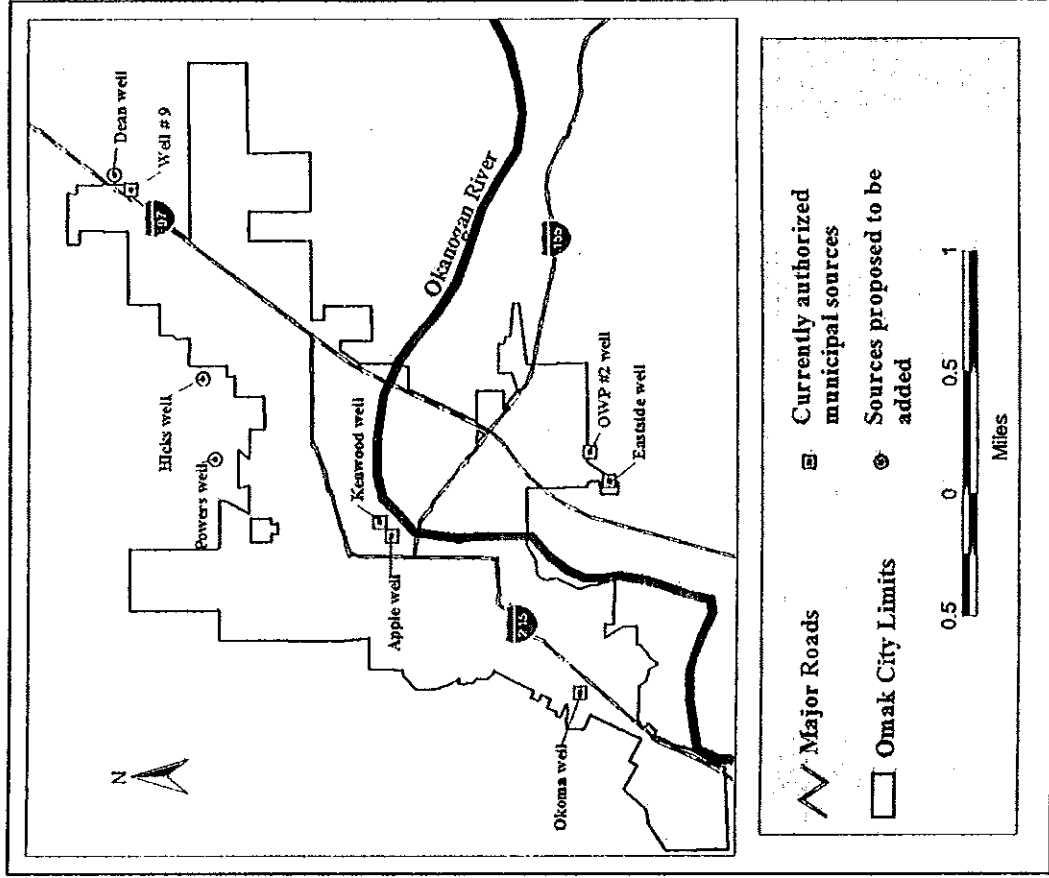


Figure 1. Overview showing the six currently authorized wells, and the four proposed wells.

Ground Water Rights within Omak's Urban Growth Area

Ground Water Certificate No. G4-28873C describes a well located approximately 200 feet east and 1700 feet north of the southwest corner of Section 19, being within NW¼SW¼ of Section 19, T. 34 N., R. 27 E.W.M. That water right issued for a well for quantities up to 288 gpm and 55 acre-ft/yr for the irrigation of 55 acres from April 1 to October 31. The place of use is all of Government Lot 4 and the S½ of Government Lot 3 lying southeasterly of State Hwy 97 in Section 19, T. 34 N., R. 27 E.W.M. During the 2004 site inspection, it was observed that the place of was covered in established sagebrush and appeared not to have been watered within the last five or more years.

Ground Water Certificate No. G4-26176C describes a well located approximately 1000 feet east and 40 feet north from the southwest corner of Section 24 being within the SW¼SW¼ Section 24, T. 34 N., R. 26 E.W.M. Water is withdrawn from the well at up to 230 gpm and 117 acre-ft/yr for primary irrigation of 6 acres and standby reserve for 20 acres. The primary right for irrigation is provided by the Okanogan Irrigation District. The place of use is that part of Section 24, T. 34 N., R. 26 E.W.M. described as follows: the S½SW¼SW¼ and that part of the NW¼SW¼SW¼ lying south of the L. B. Lateral of the Okanogan Irrigation District and also the NE¼NW¼NW¼ Section 25, T. 34 N., R. 26 E.W.M.

Ground Water Certificate No. G4-26558C describes a right for a well situated approximately 1310 feet west and 1050 feet north from the south quarter corner Section 24 being within the SE¼SW¼ Section 24, T. 34 N., R. 26 E.W.M. It allows for the withdrawal of up to 19 gpm, 0.25 acre-ft/yr for in-house domestic supply and 7 acre-ft/yr to be used during the irrigation season from April 1 through October 15 as standby reserve for the irrigation of two acres. The primary right for irrigation is provided by the Okanogan Irrigation District. The place of use is the N½ of the west 330 feet of the N ½SE¼SW¼ Section 24, T. 34 N., R. 26 E.W.M. lying south of the county road right of way.

Suncrest Plat Water System

This system is identified by DOH as PWS ID No. 85207 and has two water rights:

Ground Water Certificate No. G4-23779C is for a well within the NE¼SE¼ Section 25, T. 34 N., R. 26 E.W.M. and certifies the withdrawal for 300 gpm, 30 acre-ft/yr for community domestic supply for 30 homes located within the SE¼SE¼ Section 25, T. 35 N., R. 26 E.W.M.

The second authorization, from the same wells under Ground Water Permit No. G4-26888P with priority date of July 21, 1980, is for two wells within the E½, Section 25, T. 34 N., R. 26 E.W.M. The Permit authorizes the withdrawal of 300 gpm, and 200 acre-ft/yr for community domestic supply for 200 homes and mobile homes. The place of use is the E½E¼SE¼ Section 25, T. 34 N., R. 26 E.W.M.

Sandflat Water Users Association

Another community system in the area is the Sandflat Water Users Association, identified by DOH as PWS No. 09064. It is authorized water use under Superseding Ground Water Permit No. G4-26301P with a priority date of July 20, 1979, from two (2) wells located within the NW $\frac{1}{4}$ SW $\frac{1}{4}$, Section 30, T. 34 N., R. 26 E.W.M. The Permit authorizes the withdrawal of ground water at 250 gpm, and 220 acre-ft/yr for 245 homes (houses, apartments, duplexes, and condominiums). One well is reported to be drilled 445 feet deep with a 250 gpm capacity, and the other is 214 feet deep with 109 gpm capacity.

Irrigation water within the Sandflat place of use is provided from a surface water diversion under authority of Surface Water Permit No. S4-24234P for the diversion of surface water from the Okanogan River subject to instream flows set by Chapter 173-549 WAC, the Water Resources Program for the Okanogan River Basin, WRIA 49.

Aston Estates

Aston Estates is a public water system operating under three Certificates of Water Right.

Certificate No. G4-23805C with priority date of January 6, 1975, certifies the withdrawal of 40 gpm and 54 acre-ft/yr for a well located within the NE $\frac{1}{4}$ NW $\frac{1}{4}$, Section 31, T. 34 N., R. 27 E.W.M., to serve 60 homes within Aston's First Addition in Government Lots 2 and 3, Section 31, T. 34 N., R. 27 E.W.M.

Certificate No. G4-23806C with priority date of January 6, 1975, certifies the withdrawal of 45 gpm and 54 acre-ft/yr from a well located approximately 875 feet west and 850 feet south of the north quarter corner within the NE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 31, T. 34 N., R. 27 E.W.M. to serve 60 homes within Aston's First Addition in Government Lots 2 and 3, Section 31, T. 34 N., R. 27 E.W.M. These are the same 60 homes referenced by Certificate No. G4-23805C. The 54 acre-ft/yr is the maximum annual quantity under both rights, but the instantaneous quantities (40 and 45 gpm) are additive.

A third well is covered by Certificate No. G4-29424C, and authorizes 54.9 acre-ft/yr for 61 homes (60 were covered by the earlier two water rights described above) less any quantity withdrawn under Certificate Nos. G4-23805C and G4-23806C. The instantaneous quantity of 90 gpm is additive to the quantities (40 and 45 gpm) under Certificate Nos. G4-23805C and G4-23806C. This well is located approximately 510 feet west and 650 feet south of the north quarter corner in Section 31 being within Government Lot 2 Section 31, T. 34 N., R. 27 E.W.M.

Water Quantity

Table 1 identifies the Municipal Ground Water Certificates that are included in City of Omak's Water System Plan.

Table 1: Municipal Ground Water Certificates Held by the City of Omak

Certificate No.	Source	Priority date	Qi (gpm)	Qa (acre ft/yr)	Place of use
445-D	Kenwood Well	December 1913	500	600	City of Omak
446-D	Apple Well	March 1936	800	96	City of Omak
3656-A	Apple Well	March 20, 1958	375	600	City of Omak
1082-D	Eastside Well	May 1944	1630	1430	City of Omak
3655-A	Eastside Well	March 20, 1958	1300	2080	City of Omak
7332-A	Okoma Well	June 22, 1970	600	560	City of Omak
G4-31525P	OWP No. 2**	November 23, 1992	5000	3500*	City of Omak

*This annual quantity is not additive to the City's other municipal rights, furthermore this Permit limits the total withdrawal under all of the City's rights not to exceed 3500 acre-ft/yr.

**OWP No. 2 represents an unauthorized change in point of withdrawal described in the City of Omak's Existing Municipal Water Rights section of this report.

Water Demand Forecasting

Historical population and water use reported in the Draft 2004 Water System Plan indicates the extent that the City has continued to develop water use under its water rights. Historical population data included in the plan states that in 1980 the population was 4007 with gradual increases up to 4721 in 2000. This represents a 17.83% increase in the population for that 20 year period. The Water System Plan also contains information on the existing water supply and demand, as well as projections for future water demand and how that relates to the existing supply. The Water System Plan outlines the annual water production for the years of 1998 through 2002. Within that five year period, 1998 was indicated to be the highest production year at approximately 600 million gallons (1841 acre-feet); leaving approximately 1600 acre-feet of the City's total water rights to be developed. The future water demand forecast for the year 2023 predicts that the City's annual water use will be 819.3 million gallons (2514 acre-feet). These data indicate a trend of past growth, and the City's continuing growth into their existing water rights with the flexibility for further growth.

Instantaneous Quantities

Water Right Declaration No. 446-D certifies the withdrawal of 800 gpm. The proposed change would authorize the withdrawal of that 800 gpm from all of the wells listed in Table 2. The City proposed maximum instantaneous quantities of each well as stated on the original Certificates. The maximum Q_i on each of the certificated sources is listed in Table 2.

Table 2: Maximum Q_i placed on all Possible Sources for the City of Omak

Source	Q_i (gpm)
Kenwood Well	500 gpm
Apple Well	1175 gpm
Eastside Well	2930 gpm
Okona Well	600 gpm
OWP No. 2	5000 gpm
Well No. 9	500 gpm*
Dean Well	500 gpm*
Hicks Well	700 gpm*
Proposed Powers Well	500 gpm*

*instantaneous quantities are non-additive to the City's municipal rights.

The voluntary cap on instantaneous quantities was proposed by the City for three reasons:

- 1) The City does not intend on improving any existing well to increase water use beyond the capacities shown in Table 2.
- 2) If there were no caps, all of the instantaneous quantities would have to be cumulatively evaluated for impairment at each source (approximately 5200 gpm at each well), greatly increasing the chance for the proposed changes to impair other water users in the area.
- 3) Adding Well No. 9, the Dean Well, the Hicks Well, and the proposed Powers Well, will increase the City's flexibility in obtaining adequate water production.

Annual Quantities

The water system plan states that during the years of 1998 through 2002 the Apple Well (original source for this water right) was not used. The lack of use in this five year period can be explained because the City currently classifies this well as emergency use only, due to the fact that DOH has recently declared it as GUI. In order to pump the full 96 acre-feet authorized by this water right, the Apple Well would need to withdraw 800 gpm for 27 days. While the data in the City's plan suggest that the City has not put Groundwater Declaration No. 446-D to full beneficial use, it is uncertain whether the Apple Well may have been relied upon to a greater extent historically. It is clear that a portion of the six rights the City proposes to transfer is inchoate and that some of these rights were issued based on Ecology's former "pumps-and-pipes" methodology. Adding the additional sources would allow the City to begin to legally use the annual quantities associated with this water right through sources other than the Apple Well. The authorization of additional sources will not allow a greater annual quantity of water to be withdrawn; the right will be limited to 96 acre-ft/yr from all sources.

Second Engrossed Second Substitute House Bill 1338 (SESSH 1338)

In Department of Ecology v. Theodoratus, 135 Wn.2d 582, 957 P.2d 1241, the Washington Supreme Court held in a scenario that involved a non-municipal water supplier that Ecology's administrative practice of issuing Certificates of Water Right prior to full beneficial use was in error. This created uncertainty with respect to the water rights of Certificate holders, such as the City of Omak, that received Certificates based on system capacity rather than the extent of actual use.

Recent legislative changes have affected municipal water rights. SESH 1338 provided clarification and certainty for municipal water rights documented by Certificates which were issued based on system capacity. RCW 90.03.330 (3) states that:

"This sub-section applies to the water right represented by a Water Right Certificate issued prior to September 9, 2003, for municipal water supply purposes as defined in RCW 90.03.015 where the Certificate was issued based on an administrative policy for issuing such Certificates once works for diverting or withdrawing and distributing water for municipal supply purposes were constructed rather than after the water had been placed to actual beneficial use. Such a water right is a right in good standing."

A licensed Ecology staff hydrogeologist reviewed and stamped a separate technical memorandum which discusses the hydrogeologic analysis for this application. The hydrogeologic interpretations provided below are extracted from this memorandum.

Hydrogeologic Setting

This section describes in general terms the hydrogeology surrounding the City of Omak, Okanogan County, Washington. In this area, the Okanogan River flows in an overall southerly direction, however, through the City of Omak the river takes a 90 degree bend to the west. Consequently, the City spans an area both north and south of the Okanogan River. Glacial terraces, located toward the north and west of the City, are a local remnant left by ancient ice sheets that once scoured the Okanogan River Valley. Sedimentary deposits, largely composed of glacial drift, glacial outwash, glaciolacustrine and more recent alluvial materials along with lesser amounts of glacial till, dune sands, and mass wasting materials, have in filled the ice scoured valley. The City of Omak is located near the western edge of the Okanogan Metamorphic Core Complex.

Gneissic granodiorite, a meta-igneous rock of the Okanogan Core Complex, forms the valley walls to the south and east of the Okanogan River. To the north and west of the river, valley walls are composed of igneous rocks (dacite and quartz monzonite) and metasedimentary rocks of the Cave Mountain Formation. Thick glacial deposits obscure much of the described bedrock in the low lying areas; however, more resistant bedrock knobs protrude through the glacial materials in places along the valley floor.

Well log data on file with Ecology indicates the glacial/alluvial sediments, which form the unconsolidated aquifer, consist of clays, silts, sands, gravels, glacial till, boulders, cobbles and hardpan/cemented gravel. Well log data also indicates this aquifer is bound at depth by bedrock, or what well drillers generally refer to as granite, a geologic description drillers applied to the various rock types that outcrop on both sides of the river. Sediment thicknesses range from approximately 14 feet to as much as 620 feet, with total thicknesses and/or depth to bedrock varying throughout the area. However, it appears that there is a thinning of sediments toward the southwest of Omak (Section 34, T. 34 N., R. 26 E. W.M.), as many wells are completed into the underlying bedrock in this area. Well log data suggests that most wells surrounding the City of Omak encounter a varying sequence of sediments, suggesting sediment layers pinch out and are discontinuous throughout the area. The wide range of sediments and thicknesses contribute to heterogeneous aquifer characteristics; for example, areas in the unconsolidated aquifer where clays and silts are present will likely have lower permeabilities, hydraulic conductivities and well yields than areas encountering mostly sands and gravels. Well logs indicate well yields range from 20 gpm to 1630 gpm for wells utilizing glacial/alluvial materials. This range reflects varied sediments and aquifer characteristics throughout the Omak area. The low range of 20 gpm begins to approach a small but notable difference from bedrock wells that tend to yield approximately 5-10 gpm or less. The unconsolidated aquifer is recharged by precipitation infiltrating into the surficial sediments and from interaction with the Okanogan River. Static water levels for the subject wells and other selected wells on file with Ecology, which are completed into surficial sediments, when corrected for elevation, indicate that ground water head levels correlate with river level elevations. This relationship suggests an exchange of flow between the ground water and surface water. Aquifer recharge and ground water levels tend to fluctuate as the hydrologic system responds to seasonal variations.

Impairment, Qualifying Ground Water Withdrawal Facilities, and Well Interference

There are three concepts that are important when considering whether a withdrawal of water from a well would impair another existing water right. The concepts are defined as follows:

Impairment is an adverse impact on the physical availability of water for a beneficial use that is entitled to protection i.e. water rights that are both senior and junior in priority to the right the applicant seeks to change.

Qualifying ground water withdrawal facilities are defined as those wells which in the opinion of the Department are adequately constructed. An adequately constructed well is one that (a) is constructed in compliance with well construction requirements; (b) fully penetrates the saturated thickness of an aquifer or withdraws water from a reasonable and feasible pumping lift (Chapter 173-150 WAC); (c) the withdrawal facilities must be able to accommodate a reasonable variation in seasonal pumping water levels; and (d) the withdrawal facilities including pumping facilities must be properly sized to the ability of the aquifer to produce water.

Well interference may occur when several wells penetrate and withdraw ground water from the same aquifer. Each pumping well creates a drawdown cone. When several wells pump from the same aquifer, well density, aquifer characteristics, and pumping demand may result in individual drawdown cones that intersect and form a composite drawdown cone. At any point in an aquifer, the composite drawdown caused by pumping wells will be greatly influenced by the transmissivity (T) of the aquifer. In aquifers with high Ts, composite drawdown will generally be much less than in aquifers with similar properties but with low Ts. Transmissivity is related to hydraulic conductivity (K) and the saturated thickness (b) of an aquifer by the relationship $T=Kb$.

An aquifer's hydraulic conductivity (K) is derived from the physical properties of both the fluid and geologic materials that form an aquifer. Once formed, an aquifer's saturated thickness (b) becomes important in evaluating its transmissivity. For regions of similar K in an aquifer, a large saturated thickness will result in a much higher T than a small saturated thickness. As a result, regions of similar K in an aquifer with a large saturated thickness will experience less composite drawdown or well interference than with a small saturated thickness.

Some conditions, however, will increase or steepen composite drawdown in an aquifer. For instance, where characteristics (such as very fine, clay-rich, or poorly sorted sediments) of an unconfined aquifer cause significant drawdown relative to the saturated thickness, the composite drawdown will increase as saturated thickness is reduced and T becomes smaller. Additionally, in regions where negative or no-flow boundaries occur, such as near the edges of a valley fill aquifer where it is bounded by bedrock, composite drawdown will be steeper than in the central part (generally the greatest thickness region) of the aquifer. Consequently, it is commonly understood that the greatest composite drawdown or well interference is more likely to occur in regions of low transmissivities, thin saturated thicknesses and near negative or no-flow boundaries than in regions of high transmissivities, large saturated thicknesses, and away from negative or no-flow boundaries.

Hydrogeologic Analysis of the Site

The City has multiple ground water rights and corresponding wells which collectively constitute their municipal water supply. The City submitted six change applications in 1994, requesting to add each of their existing municipal supply wells (five existing wells) to each one of the following Water Rights: G4-GWC445-D, G4-GWC446-D, G4-GWC1082-D, G4-GWC3655-A, G4-GWC3656-A, and G4-GWC7332-A. The City submitted 6 additional change applications in 1998 requesting to add four proposed wells to each of the above water rights. Both requests would allow for greater flexibility in the City's water system operations. In total, if both sets of change applications are approved, the City would have the ability to withdraw water quantities from up to nine wells from any of the above mentioned water rights, however, each water right

will not be allowed to exceed its historic water quantity. This analysis will address all such 1998 applications. These requests are in part due to two existing City wells, the Apple Well and Kenwood Well, being designated groundwater under the influence of surface water (GWI). As a result, the City currently classifies these two wells as emergency use wells only.

Table 3 below delineates the suite of water rights, existing wells, corresponding annual water quantities, instantaneous water quantities, depth of wells and corresponding static water levels.

Table 3

Well Name	Original Water Right No.	Instantaneous Quantity Qi (gpm)	Annual Quantity Qa (acre-ft/yr)	Depth of Well (ft)	Static Water Level swl (ft)
Kenwood	445-D	500	600	26	16.5
Apple	446-D + 3656-A	1175	696	29	10.0
Eastside	1082-D + 3655-A	2930	3510	40	28.5
Okoma	7332-A	600	560	105	8.75
OWP No.2	G4-31525P**	Interruptible 5000	3500*	69	38.75
Hicks		700		247	150
Dean		500		312	212
No.9 (NE Omak)		500		295	203
Proposed Powers		500			

*This quantity is not additive and furthermore this Permit limits the Qa under all the City's water rights not to exceed 3500 acre-ft/yr.

**OWP No. 2 represents an unauthorized change in point of withdrawal described in the City of Omak's Existing Municipal Water Rights section of this report.

The City voluntarily capped the instantaneous water quantity at each well, to reduce the risk of impairing existing water rights in close proximity. To clarify, the instantaneous quantity at each well is limited to the aforementioned quantity stated in the table. The combined annual water quantity that would be allowed to be withdrawn from any combination of wells, should the change be approved, is 3500 acre-ft/yr, as stated in G4-31525P.

Discussion of Existing Wells

The Kenwood Well is located approximately 1100 feet north and 600 feet east of the south quarter corner of Section 26, T. 34 N., R. 26 E.W.M., and approximately 50 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was designated GUI by DOH. The Kenwood Well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and completed to a depth of 20 feet below ground surface (bgs). However, the well log on file with Ecology indicates the well is 14 feet in diameter and completed to a depth of 26 feet 2 inches bgs. These discrepancies, as well as discrepancies in other well documents described subsequently in the report, are likely the result of information being passed down through comprehensive water plans over the years rather than well alteration (Louman, 2005). The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 16.5 feet was recorded at the time of drilling, December 1913. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 500 gpm and 7 feet of drawdown in the well were also reported. If approved, the proposed changes would allow the Kenwood Well to withdraw up to 500 gpm in emergency situations.

The Apple Well is located approximately 800 feet north and 200 feet east of the south quarter corner of Section 26, T. 34 N., R. 26 E.W.M., and approximately 80 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was also designated GUI by DOH. The Apple Well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 10 feet and completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is completed to 29 feet bgs. The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 10 feet 4 inches was recorded at the time of drilling, February 1936. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 800 gpm and 10 feet 4 inches of drawdown in the well were also reported. If approved, the proposed changes would allow the Apple Well to withdraw up to 1175 gpm, in emergency situations.

The Eastside Well is located approximately 800 feet north and 1170 feet west of the southeast corner of Section 35, T. 34 N., R. 26 E.W.M., and approximately 1900 feet east of the Okanogan River. This well is currently in use by the City and houses 4 turbine pumps which have a combined capacity to pump 2800 gpm. The Eastside Well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is 14 feet in diameter and completed to 40 feet 10 inches bgs. The materials encountered during drilling, as reported on the well log, include soil, rock and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 28 feet 6 inches was recorded during the time of drilling in 1944. However, a static water level of 12.4 feet was recorded by Ecology staff, via the City's real-time telemetry system, during a site visit on July 28, 2004. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. The telemetry system also indicated the Eastside Well was pumping at a rate of 1488 gpm at the time. A yield of 1630 gpm and 1 foot of drawdown in the well was also reported on the well log. Mike Ervin, City of Omak Water Department Chief Operator, indicated during the

site visit that the Easideside Well shuts off when the storage reservoir is full, as opposed to shutting off because the water level in the well has dropped. If approved, the proposed changes would allow the Easideside Well to withdraw up to 2930 gpm.

The Okoma Well is located approximately 660 feet south and 520 feet west of the east quarter corner of Section 34, T. 34 N., R. 26 E. W.M., and approximately 2300 feet west of the Okanogan River. This well is currently in use by the City and is equipped with one turbine pump, which has the capacity to pump 500 gpm. The well log on file with Ecology indicates the Okoma well is 16 inches in diameter, completed to a depth of 105 feet bgs and screened from 55 feet to 90 feet bgs. Materials encountered during drilling include clay, silt, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 8 feet 9 inches was recorded at the time of drilling, winter 1988-1989. However, Mike Ervin informed Ecology staff during the site exam the current static water level is approximately 13 feet bgs and the pumping water level is approximately 32 feet bgs. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A well test performed by the driller and reported on the well log indicated a yield of 350 to 400 gpm with 69.3 feet of drawdown in the well after 13.5 hours. This well is located in an area where the aquifer thins, therefore, the well is producing as expected, meaning it is producing less than other City wells that are located in areas where the aquifer is thicker. The steep drawdown could also be explained in combination with well efficiency, well construction and/or development and the 18 feet of silt with clay encountered in the well. If approved, the proposed changes would allow the Okoma Well to withdraw up to 600 gpm.

The OWP No.2 Well is located approximately 1210 feet north and 530 feet west of the southeast corner of Section 35, T. 34 N., R. 26 E. W.M., and approximately 2600 feet east of the Okanogan River. This well is currently in use by the City, which is leased from Omak Wood Products. The OWP No.2 Well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, is 24 inches in diameter, completed to a depth of 69 feet bgs, cased to a depth of 44 feet bgs and screened from 44 to 60 feet bgs. An additional inner well screen was installed from 46 to 69 feet bgs during well rehabilitation in July of 1996. Materials encountered during drilling include silt, sand, gravel and cobbles, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 38.75 was recorded in a schematic of the well located within the Comprehensive Water Plan, while a static water level of 36.5 feet was recorded during rehabilitation. According to the well log on file with Ecology, a well test was performed during rehabilitation with a maximum yield of 2500 gpm and 3.8 feet of drawdown in the well after 5.5 hours. The City's telemetry system indicated the OWP No.2 Well was pumping at a rate of 1341 gpm at the time of the site visit, July 2004. If approved, the proposed changes would allow the OWP No. 2 Well to withdraw up to 5,000 gpm. Note, the water right associated with this well is interruptible and subject to instream flows on the Okanogan River.

Hydrogeologic Analysis of Proposed Well Sites

The Hicks Well is located approximately 275 feet south and 1000 feet east from the northwest corner of Section 25, T. 34 N., R. 26 E. W.M., and approximately 4000 feet north of the Okanogan River. The City is proposing to acquire this well from the current property owner, Marlene (Hicks) Rawley, during 2005, according to the City of Omak Comprehensive Water Plan (Preliminary) 2004. This well does not appear to be associated with a state issued water right. As indicated by the proposed use on the water well report on file with Ecology, the well was constructed for domestic purposes. The Hicks Well is 8 inches in diameter and completed to a depth of 247 feet bgs. Materials encountered during drilling include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 150 feet was recorded at the time of drilling, April 1998. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A 4-hour spring season pump test performed by Irrigation Technology and Control indicated a pumping rate of 600+ gpm with 8 feet of drawdown in the well after 4 hours. It appears that stabilization occurred quickly during recovery, as the pre-pumping static water level was achieved within 3 seconds of shutting off the pump. If approved, the proposed changes would allow the Hicks Well to withdraw up to 700 gpm.

Well No. 9 also known as the NE Omak Well is located approximately 1275 feet north and 100 feet west of the southeast corner of Section 24, T. 34 N., R. 26 E. W.M., and approximately 5800 feet west of the Okanogan River. This well was authorized as an additional source for Water Right No. GWC-446-D on December 7th, 2000, and is currently in use. The City had the well constructed in July 2001. The well log on file with Ecology indicates the well is 12 inches in diameter, completed to a depth of 295 feet bgs, screened from 268 to 282 feet bgs, and gravel packed from 200 to 295 feet bgs. Materials encountered during drilling include clay, silt, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 203 feet was recorded at the time of drilling, July 2001. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A 24-hour pump test performed by Arcadia Drilling Inc. on July 16, 2001, indicated a pumping rate of 120 – 132 gpm with 59.5 feet of drawdown in the well after 24 hours. It appears that the pre-pumping static water level was achieved within 2 hours of shutting off the pump. Explanations for the steep drawdown in this well could be any combination of the well efficiency, well construction and/or development and the significant quantity of silt and clay materials encountered compared to any of the previously described wells. The City would like to eventually increase the capacity of this well. If approved, the proposed changes would allow Well No. 9 to withdraw up to 500 gpm.

The Dean Well is located approximately 1625 feet north and 225 feet east of the southwest corner of Section 19, T. 34 N., R. 27 E. W.M., and approximately 5400 feet west of the Okanogan River. The City is proposing to acquire this well during 2005 as well. This well appears to be associated with Water Right No. G4-28873C, however, Ecology does not have a water well report on file for this well. The water right documents refer to the dimensions of the Dean (irrigation) Well as being 8 inches in diameter and 312 feet deep. These documents also refer to a domestic well located on the Dean property within approximately 50 feet of the irrigation well, reportedly with a depth of 335 feet deep, however, a water well report is also unavailable for this well. Mr. Dean reported at the time, spring 1987, that the irrigation and domestic wells had the same static water level of 212 feet bgs. When corrected for elevation, the reported static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. The City's NE Omak Well is located approximately 500 feet southwest of the proposed well location and has a depth of 295 feet, a static water level of 203 feet

bgs and encountered clay, silt, sand and gravel materials during drilling. It is likely that the Dean (irrigation) Well penetrates similar materials within the same aquifer, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. If approved, the proposed changes would allow the Dean Well to withdraw up to 500 gpm.

The proposed Powers Well has not been drilled at this time; however, the City has proposed the well be located within the NE $\frac{1}{4}$, NE $\frac{1}{4}$ of Section 26, T. 34 N., R. 26 E. W. M. Note, this location is a $\frac{1}{4}$ section west of the Hicks Well. Well logs on file with Ecology in the same quarter section as the proposed Powers Well, indicate the sediments encountered locally include clay, silt, sand and gravel and the sediments are at least 350 feet deep. The proposed well shall be completed into the glacial/alluvial aquifer to be considered the same body of ground water as the original wells. If approved, the proposed changes would allow the proposed Powers Well to withdraw up to 500 gpm.

Some wells in and around the City of Omak terminate above the bottom of the unconsolidated aquifer and others utilize the full saturated thickness. Water well reports from wells terminating in bedrock (the bottom of the sediment aquifer) indicate a minimum sediment thickness of 38 feet in an area south of the City where the aquifer thins, while water well reports from wells terminating above the bottom of the aquifer suggest a sediment thickness up to 620 feet in areas. However, saturated thicknesses (b) throughout the area are much less than sediment thicknesses and range from approximately 10 feet south of the City where the aquifer thins, to 393 feet north of the City in the area of the proposed well locations. Saturated thickness (b) is 97 feet for the Hicks Well, 92 feet for Well No. 9, and estimated to be 100 feet for the Dean Well. Since all these values approach 100 feet, the saturated thickness (b) for the subject wells will subsequently be referred to as 100 feet. In the area of the proposed wells, well reports indicate that the majority of wells terminate above the bottom of the aquifer and do not utilize the aquifer's full saturated thickness. Drillers have estimated yields for wells completed into the unconsolidated glacial/alluvial sediment aquifer to be between 20 and 1630 gpm. Based on the results of the pumping tests on the Hicks Well and Well No. 9, specific capacity was determined to be approximately 75 gpm per foot of drawdown and 2.7 gpm per foot of drawdown respectively. This noticeable difference is further evidence that the wide range of sediments and thicknesses contribute to heterogeneous aquifer characteristics. As noted above, Well No. 9 encountered significantly more silts and clays than the Hicks Well, likely contributing to its lower well yield and specific capacity. Transmissivities (T) also vary greatly due to the heterogeneous nature of the aquifer and are estimated to range from approximately 4,000 gallons per day per foot (gpd/ft) to 115,000 gpd/ft. Hydraulic conductivities (K), then, for a saturated thickness of 100 feet would range between 40 gallons per day per square foot (gpd/ft²) and 1150 gpd/ft².

Evaluation by Theis non-equilibrium equation coupled with image well theory to simulate aquifer boundary conditions at the Hicks and Powers Well locations, using the upper value of hydraulic conductivity, indicates that at approximately 50 feet from a subject well, aquifer drawdown due to the maximum instantaneous pumping rate of 700 gpm (Hicks Well) at 182 days, will be about 4 feet or less. However, a more conservative analysis to simulate boundary conditions at well No. 9 and the Dean Well locations, using a mid-range hydraulic conductivity of 600 gpd/ft², indicates that at approximately 50 feet from a subject well, aquifer drawdown due to maximum instantaneous pumping rate of 500 gpm at 182 days, will be about 10 feet or less. A mid-range K value was used in the analysis because 600 gpd/ft² is still a conservative value when compared to literature K values of 1 to 5,000 gpd/ft² for silty sand, the materials being utilized in Well No. 9, (Freeze & Cherry, 1979). The analyses were run at 182 days (half a year) under the assumption that the proposed wells would not be running for 365 days (a full year) continuously. If a subject well is pumped in cycles or if it is pumped at less than the maximum instantaneous quantity, the predicted effect(s) would be reduced. Total annual water quantities will not be increasing from the aquifer, however by adding the proposed wells to the suite of water rights, the overall pumping effects will be spread over a broader area within the aquifer. With the closest known well located approximately 50 feet from the Dean Well and even further distances from the other subject wells, composite drawdown/well interference which may occur is not expected to be significant.

Relationship between the Original Source and Proposed Source

In order to transfer or add a well to an existing water right, "the additional or replacement well or wells shall tap the same body of public ground water as the original well or wells," as stated in Chapter 90.44.100(2a) RCW. The subject wells tap the unconsolidated glacial/alluvial sediment aquifer and are not separated from each other or the original wells by a hydraulic barrier, such as a fault. Therefore, all four subject wells are considered to utilize the same body of ground water as the original five wells.

FINDINGS

- In accordance with Chapter 90.44 RCW and Chapter 90.03 RCW, the author makes a tentative determination that Ground Water Declaration Certificate No. 446-D is a valid right, with an instantaneous quantity of 800 gpm and an annual quantity of 96 acre-ft/yr, and is eligible for change. Although the City of Omak has not put the full certificated amount of water to beneficial use, the inchoate portion is in good standing and may be developed by the City consistent with the intent of the original Certificate.
- The three additional points of withdrawal tap the same body of public ground water as the authorized wells.
- Approval of this change request will not cause impairment of existing rights or will not enlarge the original right.
- Approval of this change will not be detrimental to the public interest.

RECOMMENDATIONS

Water Use

Based on the above facts and findings, it is recommended that the requested additional 3 points of withdrawal under Ground Water Declaration No. 446-D be authorized as follows:

Purpose of Use

800 gpm and 96 acre-ft/yr for year round municipal supply purposes.

Points of Withdrawal

Kenwood Well: 1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW¼SE¼ Section 26, T. 34 N., R. 26 E.W.M.

Apple Well: 800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW¼SE¼ of Section 26, T. 34 N., R. 26 E.W.M.

Okoma Well: 660 feet south and 520 feet west of the east quarter corner of Section 34, being within the NE¼SE¼ of Section 34, T. 34 N., R. 26 E.W.M.

Eastside Well: 800 feet north and 1170 feet west of the southeast corner of Section 35, being within the SE¼SE¼ of Section 35, T. 34 N., R. 26 E.W.M.

OWP No. 2 Well: 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE¼SE¼ of Section 35, T. 34 N., R. 26 E.W.M.

Hicks Well: 275 feet south and 1000 feet east from the northwest corner of Section 25, being within the NW¼NW¼ of Section 25, T. 34 N., R. 26 E.W.M.

Dean Well: 1625 feet north and 225 feet east of the southwest corner of Section 19, being within the NW¼SW¼ of Section 19, T. 34 N., R. 27 E.W.M.

Proposed Powers Well: being within the NE¼NE¼ of Section 26, T. 34 N., R. 26 E.W.M.

Well No. 9: 1275 feet north and 100 feet west from the southeast corner of Section 24, being within the SE¼SE¼ of Section 24, T. 34 N., R. 26 E.W.M.

Place of Use

The place of use of this water right is the service area described in the most recent Water System Plan approved by the Washington State Department of Health, so long as City of Omak is and remains in compliance with the criteria in RCW 90.03.386(2). RCW 90.03.386 may have the effect of revising the place of use of this water right.

If the criteria in RCW 90.03.386(2) are not met, the place of use of this water right reverts to the last place of use described by Ecology in a water right authorization.

Construction Schedule

Begin Construction by:	June 2006
Complete Construction by:	June 2011
Apply water to full beneficial use by:	Good Standing

PROVISIONS

A Certificate of Change will not be issued until a proof inspection is conducted and a final investigation is made. The Certificate of Change will reflect the extent of the project perfected within the limitations of the authorization. Aspects of the investigation will include, as appropriate, the source, system instantaneous capacity, beneficial use, annual quantity, acreage, place of use, and satisfaction of provisions. Final determination will be calculated based on the best information available to Ecology, including metering data and/or water duty analysis.

The amount of water granted is a maximum limit that shall not be exceeded.

The City's maximum instantaneous quantities for each well are as follows:

<u>Kenwood Well:</u>	<u>500 gpm</u>
<u>Apple Well:</u>	<u>1175 gpm</u>
<u>Eastside Well:</u>	<u>2930 gpm</u>
<u>Okoma Well:</u>	<u>600 gpm</u>
<u>OWP No. 2:</u>	<u>5000 gpm</u>
<u>Well No. 9:</u>	<u>500 gpm</u>
<u>Dean Well:</u>	<u>500 gpm</u>
<u>Hicks Well:</u>	<u>700 gpm</u>
<u>Proposed Powers Well:</u>	<u>500 gpm</u>

The total instantaneous withdrawal between all of the City of Omak's municipal water rights is 10205 gpm. Ground Water Permit No. G4-32525P (5000 gpm) is subject to curtailment when instream flows in the Okanogan River are below those set in Chapter 173-549 WAC. In the event the Okanogan River drops below the set minimum flows, the total instantaneous withdrawal from all sources shall not be more than 5205 gpm (10205gpm - 5000gpm = 5205gpm).

The total annual withdrawal under all rights shall not exceed 3500 acre-ft/yr.

This authorization shall in no way excuse the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations including those administered by other programs of the Department of Ecology.

Well Construction

All newly constructed wells shall be constructed into the unconsolidated glacial/alluvial sediment aquifer.

All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gage may be installed in addition to the access port.

Metering

An approved measuring device shall be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", Chapter 173-173 WAC.

Water use data shall be recorded weekly. The maximum rate of withdrawal and the annual total volume shall be submitted to Ecology by January 31st of each calendar year.

The following information shall be included with each submittal of water use data: owner, contact name if different, mailing address, daytime phone number, WRIA, Certificate, number of service connections, source name, Washington State Department of Health number, annual quantity used including units of measure, maximum rate of withdrawal including units of measure, monthly meter readings including unit of measures, purpose of use, and period of use. In the future, Ecology may require additional parameters to be reported or more frequent reporting. Ecology prefers web based data entry, but does accept hard copies. Ecology will provide forms and electronic data entry information.

Chapter 173-173 WAC describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition Ecology for modifications to some of the requirements. Installation, operation and maintenance requirements are enclosed as a document entitled "Water Measurement Device Installation and Operation Requirements".

Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the records of water use that are kept to meet the above conditions, and to inspect at reasonable times any measuring device used to meet the above conditions.

Report by: [Signature] 8-10-05
Scott Turner, Water Resources Program Date

FINDINGS OF FACT AND DECISION

Upon reviewing the above report, I find all facts relevant and material to the subject application have been thoroughly investigated. Furthermore, I find the change of water right as recommended will not be detrimental to existing rights and is not detrimental to the public welfare.

Therefore, I ORDER the additional points of withdrawal under Ground Water Application No. CG4-GWC446-D@3 be approved, subject to the existing rights and provisions specified in the foregoing report.

Signed at Yakima, Washington, this 11th day of August 2005.

[Signature]
Robert F. Barwin, Section Manager
Water Resources Program
Central Region Office



State of Washington

Dale Sparber, Mayor

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Fax: 509-826-6531
info@omakcity.com



April 6, 2005

Department of Ecology
Water Resources Program
15 West Yakima Avenue, #200
Yakima, WA 98901

Attn: Phil Crane
Water Resource Program

Re: Ground Water Permit No. G4-3152P
OWP Well 2005 Usage

Dear Mr. Crane:

Enclosed for the Department of Ecology's review and action is an Application for Change/Transfer of Water Rights requesting "temporary" rights allowing the OWP Well to be used as an additional point of withdrawal to existing East Omak Well water rights. The East Omak Well water rights allow a 2,930 gpm instantaneous withdrawal rate and a 3,500 acre foot annual volume. City records show that over the last five years, the maximum daily withdrawal from the East Omak Well and the OWP Well combined was 2,765 gpm on July 31, 2000.

The City has previously submitted six (6) Change of Water Rights applications in December 1993 requesting that each City well and the two OWP wells be added as an "additional point of withdrawal" to each other's water rights. As of this date, we are aware that DOE is currently considering these applications.

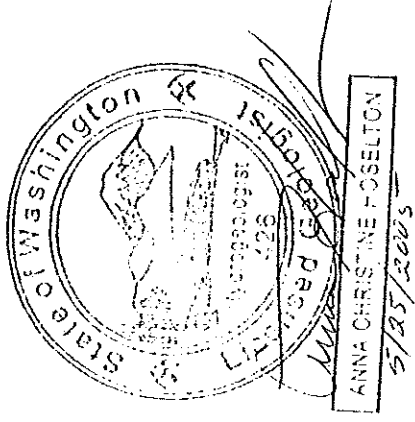
As the combined historical use of the East Omak Well and the OWP Well are within the existing East Omak Well water rights, the City is requesting permission to continue using the OWP Well through this year's low Okanogan River flow period. Your earliest consideration of the enclosed application would be very much appreciated.

Should you have any questions, please contact the City's engineering consultant, Jeffrey T. Louman, PE, at (509) 966-700.

Sincerely,

Mayor Dale Sparber

Enclosure



MEMORANDUM

Date: May 19th, 2005

To: File

From: Melissa Downes

Re: Hydrogeologic analysis for water right change applications by the City of Omak, file numbers CG4-GWC445-D@1, CG4-GWC446-D@3, CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1 and CG4-GWC7332-A@1. Analysis by Melissa Downes and reviewed by Anna Hoselton.

Original located in

CG4-GWC445-D@1

Hydrogeologic Setting:

This section describes in general terms the hydrogeology surrounding the City of Omak, Okanogan County, Washington. In this area, the Okanogan River flows in an overall southerly direction, however through the City of Omak the river takes a 90 degree bend to the west. Consequently, the City spans an area both north and south of the Okanogan River. Glacial terraces, located toward the north and west of the City, are a local remnant left by ancient ice sheets that once scoured the Okanogan River Valley. Sedimentary deposits, largely composed of glacial drift, glacial outwash, glaciolacustrine and more recent alluvial materials along with lesser amounts of glacial till, dune sands, and mass wasting materials, have in filled the ice scoured valley. The City of Omak is located near the western edge of the Okanogan Metamorphic Core Complex. Gneissic granodiorite, a meta-igneous rock of the Okanogan Core Complex, forms the valley walls to the south and east of the Okanogan River. To the north and west of the river, valley walls are composed of igneous rocks (dacite and quartz monzonite) and metasedimentary rocks of the Cave Mountain Formation. Thick glacial deposits obscure much of the described bedrock in the low lying areas; however more resistant bedrock knobs protrude through the glacial materials in places along the valley floor.

Well log data on file with Ecology indicates the glacial/alluvial sediments, which form the unconsolidated aquifer, consist of clays, silts, sands, gravels, glacial till, boulders, cobbles and hardpan/cemented gravel. Well log data also indicates this aquifer is bound at depth by bedrock, or what well drillers generally refer to as granite, a geologic description drillers applied to the various rock types that outcrop on both sides of the river. Sediment thicknesses range from approximately 14 feet to as much as 620 feet, with total thicknesses and/or depth to bedrock varying throughout the area. However, it appears that there is a thinning of sediments toward the southwest of Omak (section 34, T 34N, R26E), as many wells are completed into the underlying bedrock in this area. Well log data suggests that most wells surrounding the City of Omak encounter a varying sequence of sediments, suggesting sediment layers pinch out and are discontinuous throughout the area. The wide range of sediments and thicknesses contribute to heterogeneous aquifer characteristics; For example, areas in the unconsolidated aquifer where clays and silts are present will likely have lower permeabilities, hydraulic conductivities and well yields than areas encountering mostly sands and gravels. Well logs indicate well yields range from 20 gpm to 1630 gpm for wells utilizing glacial/alluvial materials. This range reflects varied sediments and aquifer characteristics throughout the Omak area. The low range of 20 gpm

begins to approach a small but notable difference from bedrock wells that tend to yield approximately 5-10 gpm or less. The unconsolidated aquifer is recharged by precipitation infiltrating into the surficial sediments and from interaction with the Okanogan River. Static water levels for the subject wells and other selected wells on file with Ecology, which are completed into surficial sediments, when corrected for elevation, indicate that ground water head levels correlate with river level elevations. This relationship suggests an exchange of flow between the ground water and surface water. Aquifer recharge and ground water levels tend to fluctuate as the hydrologic system responds to seasonal variations.

Impairment, Qualifying Ground Water Withdrawal Facilities, and Well Interference:

There are three concepts that are important when considering whether a withdrawal of water from a well would impair another existing water right. The concepts are defined as follows:

Impairment is an adverse impact on the physical availability of water for a beneficial use that is entitled to protection i.e. water rights that are both senior and junior in priority to the right the applicant seeks to change.

Qualifying ground water withdrawal facilities are defined as those wells which in the opinion of the Department are adequately constructed. An adequately constructed well is one that (a) is constructed in compliance with well construction requirements; (b) fully penetrates the saturated thickness of an aquifer or withdraws water from a reasonable and feasible pumping lift (WAC 173-150); (c) the withdrawal facilities must be able to accommodate a reasonable variation in seasonal pumping water levels; and (d) the withdrawal facilities including pumping facilities must be properly sized to the ability of the aquifer to produce water.

Well interference may occur when several wells penetrate and withdraw ground water from the same aquifer. Each pumping well creates a drawdown cone. When several wells pump from the same aquifer, well density, aquifer characteristics, and pumping demand may result in individual drawdown cones that intersect and form a composite drawdown cone. At any point in an aquifer, the composite drawdown caused by pumping wells will be greatly influenced by the transmissivity (T) of the aquifer. In aquifers with high Ts, composite drawdown will generally be much less than in aquifers with similar properties but with low Ts. Transmissivity is related to hydraulic conductivity (K) and the saturated thickness (b) of an aquifer by the relationship $T=Kb$.

An aquifer's hydraulic conductivity (K) is derived from the physical properties of both the fluid and geologic materials that form an aquifer. Once formed, an aquifer's saturated thickness (b) becomes important in evaluating its transmissivity. For regions of similar K in an aquifer, a large saturated thickness will result in a much higher T than a small saturated thickness. As a result, regions of similar K in an aquifer with a large saturated thickness will experience less composite drawdown or well interference than with a small saturated thickness.

Some conditions, however, will increase or steepen composite drawdown in an aquifer. For instance, where characteristics (such as very fine, clay-rich, or poorly sorted sediments) of an unconfined aquifer cause significant drawdown relative to the saturated thickness, the composite drawdown will increase as saturated thickness is reduced and T becomes smaller. Additionally,

in regions where negative or no-flow boundaries occur, such as near the edges of a valley fill aquifer where it is bounded by bedrock, composite drawdown will be steeper than in the central part (generally the greatest thickness region) of the aquifer. Consequently, it is commonly understood that the greatest composite drawdown of well interference is more likely to occur in regions of low transmissivities, thin saturated thicknesses and near negative or no-flow boundaries than in regions of high transmissivities, large saturated thicknesses, and away from negative or no-flow boundaries.

Hydrogeologic Analysis of the Site:

The City of Omak has multiple ground water rights and corresponding wells which collectively constitute their municipal water supply. The City submitted 6 change applications in 1994, requesting to add each of their existing municipal supply wells (5 existing wells) to each one of the following water rights G4-GWC445-D, G4-GWC446-D, G4-GWC1082-D, G4-GWC3655-A, G4-GWC3656-A and G4-GWC7332-A. The City submitted 6 additional change applications in 1998 requesting to add 4 proposed wells to each of the above water rights. Both requests would allow for greater flexibility in the City's water system operations. In total, if both sets of change applications are approved, the City would have the ability to withdraw water quantities from up to 9 wells from any of the above mentioned water rights, however each water right will not be allowed to exceed its historic water quantity. This analysis will address all six 1998 applications. These requests are in part due to two existing city wells, the Apple Well and Kenwood Well, being designated groundwater under the influence of surface water (GUI). As a result, the City currently classifies these two wells as emergency use wells only.

The table below delineates the suite of water rights, existing wells, corresponding annual water quantities, instantaneous water quantities, depth of wells and corresponding static water levels.

Well Name	Original Water Right No.	Instantaneous Quantity Qi (gpm)	Annual Quantity Qa (afy)	Depth of Well (ft)	Static Water Level swl (ft)
Kenwood	445-D	500	600	26	16.5
Apple	446-D + 3656-A	1175	696	29	10.0
Eastside	1082-D + 3655-A	2930	3510	40	28.5
Okoma	7332-A	600	560	105	8.75
OWP #2	G4-31525P	Interruptible 5000	3500*	69	38.75
Hicks		700		247	150
Dean		500		312	212
#9 (NE Omak)		500		295	203
Proposed Powers		500			
* This quantity is not additive and furthermore this permit limits the Qa under all the city's water rights not to exceed 3500 afy.					

The City voluntarily capped the instantaneous water quantity at each well, to reduce the risk of impairing existing water rights in close proximity. To clarify, the instantaneous quantity at each

well is limited to the aforementioned quantity stated in the table. The combined annual water quantity that would be allowed to be withdrawn from any combination of wells, should the change be approved, is 3500 afy, as stated in G4-31525P.

Discussion of Existing Wells:

The Kenwood well is located approximately 1100 feet north and 600 feet east of the south quarter corner of Section 26, T34N, R26E, and approximately 50 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was designated GUI by the Washington State Department of Health (DOH). The Kenwood well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 20 feet below ground surface (bgs). However the well log on file with Ecology indicates the well is 14 feet in diameter and completed to a depth of 26 feet 2 inches bgs. These discrepancies, as well as discrepancies in other well documents described subsequently in the report, are likely the result of information being passed down through comprehensive water plans over the years rather than well alteration (Louman, 2005). The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 16.5 feet was recorded at the time of drilling, December 1913. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 500 gallons per minute (gpm) and 7 feet of drawdown in the well were also reported. If approved the proposed changes would allow the Kenwood well to withdraw up to 500 gpm, in emergency situations.

The Apple well is located approximately 800 feet north and 200 feet east of the south quarter corner of Section 26, T34N, R26E, and approximately 80 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was also designated GUI by DOH. The Apple well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 10 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is completed to 29 feet bgs. The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 10 feet 4 inches was recorded at the time of drilling, February 1936. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 800 gpm and 10 feet 4 inches of drawdown in the well were also reported. If approved, the proposed changes would allow the Apple well to withdraw up to 1175 gpm, in emergency situations.

The Eastside well is located approximately 800 feet north and 1170 feet west of the southeast corner of Section 35, T34N, R26E, and approximately 1900 feet east of the Okanogan River. This well is currently in use by the City and houses 4 turbine pumps which have a combined capacity to pump 2,800 gpm. The Eastside well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is 14 feet in diameter and completed to 40 feet 10 inches bgs. The materials encountered during drilling, as reported on the well log, include soil, rock and gravel, suggesting the well is completed into the

unconsolidated glacial/alluvial sediment aquifer. A static water level of 28 feet 6 inches was recorded during the time of drilling in 1944. However, a static water level of 12.4 feet was recorded by Ecology staff, via the City's real-time telemetry system, during a site visit on July 28, 2004. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. The telemetry system also indicated the Eastside well was pumping at a rate of 1488 gpm at the time. A yield of 1630 gpm and 1 foot of drawdown in the well was also reported on the well log. Mike Ervin, City of Omak Water Department Chief Operator, indicated during the site visit that the Eastside well shuts off when the storage reservoir is full, as opposed to shutting off because the water level in the well has dropped. If approved, the proposed changes would allow the Eastside well to withdraw up to 2930 gpm.

The Okoma well is located approximately 660 feet south and 520 feet west of the east quarter corner of Section 34, T34N, R26E, and approximately 2300 feet west of the Okanogan River. This well is currently in use by the City and is equipped with one turbine pump, which has the capacity to pump 500 gpm. The well log on file with Ecology indicates the Okoma well is 16 inches in diameter, completed to a depth of 105 feet bgs and screened from 55 feet to 90 feet bgs. Materials encountered during drilling include clay, silt, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 8 feet 9 inches was recorded at the time of drilling, winter 1988-1989. However, Mike Ervin informed Ecology staff during the site exam the current static water level is approximately 13 feet bgs and the pumping water level is approximately 32 feet bgs. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A well test performed by the driller and reported on the well log indicated a yield of 350 to 400 gpm with 69.3 feet of drawdown in the well after 13.5 hours. This well is located in an area where the aquifer thins, therefore the well is producing as expected, meaning it is producing less than other city wells which are located in areas where the aquifer is thicker. The steep drawdown could also be explained in combination with well efficiency, well construction and/or development and the 18 feet of silt with clay encountered in the well. If approved, the proposed changes would allow the Okoma well to withdraw up to 600 gpm.

The OWP#2 well is located approximately 1210 feet north and 530 feet west of the southeast corner of Section 35, T34N, R26E, and approximately 2600 feet east of the Okanogan River. This well is currently in use by the City, which is leased from Omak Wood Products. The OWP#2 well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, is 24 inches in diameter, completed to a depth of 69 feet bgs, cased to a depth of 44 feet bgs and screened from 44 to 60 feet bgs. An additional inner well screen was installed from 46 to 69 feet bgs during well rehabilitation in July of 1996. Materials encountered during drilling include silt, sand, gravel and cobbles, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 38.75 was recorded in a schematic of the well located within the Comprehensive Water Plan, while a static water level of 36.5 feet was recorded during rehabilitation. According to the well log on file with Ecology, a well test was performed during rehabilitation with a maximum yield of 2500 gpm and 3.8 feet of drawdown in the well after 5.5 hours. The City's telemetry system indicated the OWP#2 well was pumping at a rate of 1341 gpm at the time of the site visit, July 2004. If approved, the proposed changes

would allow the OWP#2 well to withdraw up to 5,000 gpm. Note, the water right associated with this well is interruptible and subject to instream flows on the Okanogan River.

Hydrogeologic Analysis of Proposed Well Sites: -

The Hicks well is located approximately 275 feet south and 1000 feet east from the northwest corner of Section 25, T34N, R26E, and approximately 4000 feet north of the Okanogan River. The City is proposing to acquire this well from the current property owner, Marlene (Hicks) Rawley, during 2005, according to the City of Omak Comprehensive Water Plan (Preliminary) 2004. This well does not appear to be associated with a state issued water right. As indicated by the proposed use on the water well report on file with Ecology, the well was constructed for domestic purposes. The Hicks well is 8 inches in diameter and completed to a depth of 247 feet bgs. Materials encountered during drilling include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 150 feet was recorded at the time of drilling, April 1998. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A 4-hour spring season pump test performed by Irrigation. Technology and Control indicated a pumping rate of 600+ gpm with 8 feet of drawdown in the well after 4 hours. It appears that stabilization occurred quickly during recovery, as the pre-pumping static water level was achieved within 3 seconds of shutting off the pump. If approved, the proposed changes would allow the Hicks well to withdraw up to 700 gpm.

The #9 well also known as the NE Omak well is located approximately 1275 feet north and 100 feet west of the southeast corner of Section 24, T34N, R26E, and approximately 5800 feet west of the Okanogan River. This well was authorized as an additional source for water right no. GWC-446-D on December 7th, 2000, and is currently in use. The City had the well constructed in July 2001. The well log on file with Ecology indicates the well is 12 inches in diameter, completed to a depth of 295 feet bgs, screened from 268 to 282 feet bgs, and gravel packed from 200 to 295 feet bgs. Materials encountered during drilling include clay, silt, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 203 feet was recorded at the time of drilling, July 2001. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A 24-hour pump test performed by Arcadia Drilling Inc. on July 16, 2001, indicated a pumping rate of 120 – 132 gpm with 59.5 feet of drawdown in the well after 24 hours. It appears that the pre-pumping static water level was achieved within 2 hours of shutting off the pump. Explanations for the steep drawdown in this well could be any combination of the well efficiency, well construction and/or development and the significant quantity of silt and clay materials encountered compared to any of the previously described wells. The city would like to eventually increase the capacity of this well. If approved, the proposed changes would allow well #9 to withdraw up to 500 gpm.

The Dean well is located approximately 1625 feet north and 225 feet east of the southwest corner of Section 19, T34N, R27E, and approximately 5400 feet west of the Okanogan River. The City is proposing to acquire this well during 2005 as well. This well appears to be associated with water right no. G4-28873C, however, Ecology does not have a water well report on file for this well. The water right documents refer to the dimensions of the Dean (irrigation) well as being 8

inches in diameter and 312 feet deep. These documents also refer to a domestic well located on the Dean property within approximately 50 feet of the irrigation well, reportedly with a depth of 335 feet deep, however a water well report is also unavailable for this well. Mr. Dean reported at the time, spring 1987, that the irrigation and domestic wells had the same static water level of 212 feet bgs. When corrected for elevation, the reported static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. The City of Omak's NE Omak well is located approximately 500 feet southwest of the proposed well location and has a depth of 295 feet, a static water level of 203 feet bgs and encountered clay, silt, sand and gravel materials during drilling. It is likely that the Dean (irrigation) well penetrates similar materials within the same aquifer, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. If approved, the proposed changes would allow the Dean well to withdraw up to 500 gpm.

The proposed Powers well has not been drilled at this time; however the City has proposed the well be located within the NE $\frac{1}{4}$, NE $\frac{1}{4}$ of Section 26, T34N, R26E. Note, this location is a $\frac{1}{4}$ section west of the Hicks well. Well logs on file with Ecology in the same quarter section as the proposed Powers well, indicate the sediments encountered locally include clay, silt, sand and gravel and the sediments are at least 350 feet deep. The proposed well shall be completed into the glacial/alluvial aquifer to be considered the same body of ground water as the original wells. If approved, the proposed changes would allow the proposed Powers well to withdraw up to 500 gpm.

Some wells in and around the City of Omak terminate above the bottom of the unconsolidated aquifer and others utilize the full saturated thickness. Water well reports from wells terminating in bedrock (the bottom of the sediment aquifer) indicate a minimum sediment thickness of 38 feet in an area south of the City where the aquifer thins, while water well reports from wells terminating above the bottom of the aquifer suggest a sediment thickness up to 620 feet in areas. However, saturated thicknesses (b) throughout the area are much less than sediment thicknesses and range from approximately 10 feet south of the city where the aquifer thins, to 393 feet north of the city in the area of the proposed well locations. Saturated thickness (b) is 97 feet for the Hicks well, 92 feet for well #9 and estimated to be 100 feet for the Dean well. Since all these values approach 100 feet, the saturated thickness (b) for the subject wells will subsequently be referred to as 100 feet. In the area of the proposed wells, well reports indicate that the majority of wells terminate above the bottom of the aquifer and do not utilize the aquifer's full saturated thickness. Drillers have estimated yields for wells completed into the unconsolidated glacial/alluvial sediment aquifer to be between 20 and 1630 gpm. Based on the results of the pumping tests on the Hicks well and well #9, specific capacity was determined to be approximately 75 gpm per foot of drawdown and 2.7 gpm per foot of drawdown respectively. This noticeable difference is further evidence that the wide range of sediments and thicknesses contribute to heterogeneous aquifer characteristics. As noted above, well #9 encountered significantly more silts and clays than the Hicks well, likely contributing to its lower well yield and specific capacity. Transmissivities (T) also vary greatly due to the heterogeneous nature of the aquifer and are estimated to range from approximately 4,000 gallons per day per foot (gpd/ft) to 115,000 gpd/ft. Hydraulic conductivities (K), then, for a saturated thickness of 100 feet would range between 40 gallons per day per square foot (gpd/ft²) and 1150 gpd/ft².

Evaluation by Theis non-equilibrium equation coupled with image well theory to simulate aquifer boundary conditions at the Hicks and Powers well locations, using the upper value of hydraulic conductivity, indicates that at approximately 50 feet from a subject well, aquifer drawdown due to the maximum instantaneous pumping rate of 700 gpm (Hicks well) at 182 days, will be about 4 feet or less. However a more conservative analysis to simulate boundary conditions at well #9 and the Dean well locations, using a mid-range hydraulic conductivity of 600 gpd/ft², indicates that at approximately 50 feet from a subject well, aquifer drawdown due to maximum instantaneous pumping rate of 500 gpm at 182 days, will be about 10 feet or less. A mid-range K value was used in the analysis because 600 gpd/ft² is still a conservative value when compared to literature K values of 1 to 5,000 gpd/ft² for silty sand, the materials being utilized in well #9, (Freeze & Cherry, 1979). The analyses were run at 182 days (half a year) under the assumption that the proposed wells would not be running for 365 days (a full year) continuously. If a subject well is pumped in cycles or if it is pumped at less than the maximum instantaneous quantity, the predicted effect(s) would be reduced. Total annual water quantities will not be increasing from the aquifer, however by adding the proposed wells to the suite of water rights, the overall pumping effects will be spread over a broader area within the aquifer. With the closest known well located approximately 50 feet from the Dean well and even further distances from the other subject wells, composite drawdown/well interference which may occur is not expected to be significant

Relationship between the Original Source and Proposed Source:

In order to transfer or add a well to an existing water right, "the additional or replacement well or wells shall tap the same body of public ground water as the original well or wells," as stated in Chapter 90.44.100(2a) RCW. The subject wells tap the unconsolidated glacial/alluvial sediment aquifer and are not separated from each other or the original wells by a hydraulic barrier, such as a fault. Therefore, all four subject wells are considered to utilize the same body of ground water as the original five wells.

References:

- Freeze, R.A. and Cherry, J.A. 1979. Groundwater. Upper Saddle River, NJ: Prentice Hall.
- Gulick, C.W. and Korosec, M.A. 1990. Geologic Map of the Omak 1:100,000 Quadrangle, Washington. Washington Division of Geology and Earth Resources. Open File Report 90-12.
- Huibregtse, Louman Associates, Inc. 2004. City of Omak Comprehensive Water Plan (Preliminary), Project No. 03018. Ecology received date September 28, 2004.
- Louman, Jeff (with Huibregtse, Louman Associates, Inc, the City of Omak's consulting engineers). 2005. Personal Communication May 3, 2005.

United States Department of Interior, Bureau of Reclamation. 1989. Seismotectonic Evaluation, Northwest Rocky Mountains – Okanogan Uplands Geomorphic Province.



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

October 28, 2004

Dale Sparber
City of Omak
P.O. Box 72
Omak, Washington 98841-0072

Re: Ground Water Application Nos. CG4-GWC445-D@1, CG4-GWC446-D@3,
CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1 and
CG4-GWC7332-A@1

We acknowledge receipt of affidavit of publication of notice in connection with the above numbered applications.

The water codes require that no action be taken until after the expiration of a thirty (30) day period from the last date of publication. This time period allows concerned citizens to file any protests or objections to your proposed water use.

An examination of your applications will be made along with other applications located in your vicinity. It may be some time before this is done, due to the large backlog of applications. Please be aware that you are not authorized to proceed with development of your proposed water system until you receive written authorization from this office.

If you have any questions or concerns about any of this information, please call Scott Turner of the Department of Ecology at (509) 457-7106.

Sincerely,

Erin C. Gutierrez

Erin Gutierrez
Water Resources Program

EG:hd
041053

PLEASE ADVISE THIS OFFICE OF ANY ADDRESS CHANGE

pn-12.doc





State of Washington — In the Heart of the Okanogan

Dale Sparber, Mayor
2 North Ash
(509) 826-1170
P.O. Box 72
Omak, WA 98841
Fax: 509-826-6531
info@omakcity.com

October 6, 2004

Department of Ecology
Erin Gutierrez
15 West Yakima Avenue
Suite 200
Yakima, WA. 98902-3452

Re: Applications for Change No. CG4-GWC445-D@1, CG4-GWC446-D@3,
CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1,
CG4-GWC7332-A@1

Enclosed is the notarized original Affidavit of Publication the amended notice of application for change of the Omak City water rights. This publication was published in two consecutive weeks 9/22/04 and 9/29/04.

If you have further questions, please contact our office at 509-826-1170.

Sincerely,

Connie Thomas
Utility Billing Clerk

enclosure



Note: changes were made to
PN from what was mailed to
City of Omak 8/25/04 - Permit
writer Scott Turner okay'd
the aff. of Pub.

EG-10-27.04

(2004-369 Sept. 22 & 29)
STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
YAKIMA, WASHINGTON

**AMENDED NOTICE OF AP-
PLICATIONS FOR
CHANGE OF THE OMAK
CITY WATER RIGHTS**

TAKE NOTICE:

Consolidated Notices of Applications to Change to change the point of diversion (replace) or add a point of withdrawal (add) under the City of Omak Water Rights detailed below. These requests were submitted November 24, 1998 except for change to Certificate No. 446-D which was submitted August 4, 2004. They are part of the City of Omak Water System. The proposed wells are to be located within the SE1/4SE1/4 of Section 24, NW1/4NW1/4 of Section 25, and NW1/4SW1/4 of Section 19 NE1/4 4NE1/4 of Section 26, all in T. 34 N., R. 26 E.W.M.

Rights and proposed change:

Add or replace wells under Certificate No. 445-d with priority date of December 1913 for 500 gpm, 600 acre-feet per year for municipal supply from a well (Kenwood) located in the SW1/4SE1/4 Section 26, T. 34 N., R. 26 E.W.M.

Add or replace wells under Certificate No. 446-d with priority date of March 1936 as changed by Change Authorization No. CG4-GWC446-D@1 for 800 gpm, 96 acre-feet per year for municipal supply from a well (Apple) located in the SW1/4SE1/4 of Section 26, and the new well located within the SE1/4SE1/4 of Section 24, T. 34 N., R. 26 E.W.M.

Add wells under Certificate No. 1082-D with priority date of May 1944 for 1630 gallons per minute (gpm), 1430 acre-feet per year for municipal supply from a well (Eastside) located in the SE1/4SE1/4 Section, 35, T. 34 N., 26 E.W.M.

Add wells under Certificate No. 3655-A with priority date of March 20, 1958 for 1300 gpm, 2080 acre-feet per year for municipal supply from a well (Eastside) located in the SE 1/4SE1/4 Section 35, T. 34 N., R. 26 E.W.M.

Add or replace wells under Certificate No. 3656-A with priority date of March 20, 1958 for 375 gpm, 600 acre-feet per year for municipal supply from a well (Apple) located in the SW 1/4SE1/4 Section 26, T. 34 N., R. 26 E.W.M.

Add wells under Certificate No. 7332-A with priority date of June 22, 1970 for 600 gpm, 560 acre-feet per year for municipal supply from May 1 through October 31 from a well (Eastside) located in the SE1/4SE1/4 Section 35, T. 34 N., R. 26 E.W.M.

Even though the public notices have been combined, each water right change request will be evaluated on its own merits. Protests or objections against the rights should be filed separately by water right, must include a detailed statement of the basis for objections. All letters of protest will become public record. Each protest must be accompanied by a \$2.00 recording fee (check or money order only) and filed with the Department of Ecology, 15 W. Yakima Avenue, Suite 200, Yakima, WA 98902-3452, within thirty (30) days from: September 29, 2004.
Published by The Omak-Okanogan County Chronicle.

Affidavit of Publication

STATE OF WASHINGTON ss.
County of Okanogan

The undersigned, being duly sworn on oath, deposes and says that she is the principal clerk of the Omak-Okanogan County Chronicle, a weekly newspaper, that she is duly authorized to make this affidavit; that said newspaper is a legal newspaper and has been approved as a legal newspaper by order of the Superior Court in the county in which it is published and it is now and has been for more than six months prior to the date of publications hereinafter referred to, published in the English language continuously as a weekly newspaper in Omak, Okanogan County, Washington, and it is now and during all of said time was printed in an office maintained at 618 Okoma Drive, the place of publication of said newspaper. That the annexed is a true copy of

Amended Notice applicati

as it was published in regular issues (and not in supplement form) of said newspaper on the following dates:

09/22/04, 09/29/04

and that such newspaper was regularly distributed to its subscribers during all of said period. The full amount of the fee charged for the foregoing publication is the sum of \$ 245.40 at the rate of \$7.95 per column inch.

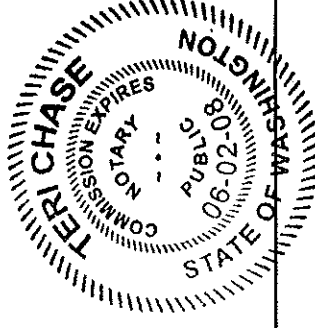
Elizabeth B. Avidel

Principal Clerk

Subscribed and sworn to before me 9-29-04

Steve Chase
Notary Public in and for the State of Washington
Residing at May Washington

SEAL



OK
10-27-04

RECEIVED

SEP 30 2004

CITY OF OMAK



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

August 25, 2004

Dale Sparber
City of Omak
PO Box 72
Omak WA 98841-0072

RE: Applications for Change No. CG4-GWC445-D@1, CG4-GWC446-D@3, CG4-GWC1082-D@1,
CG4-GWC3655-A@1, CG4-GWC3656-A@1, CG4-GWC7332-A@1

This letter is regarding your applications for change for appropriation of water. Please refer to the above-assigned application numbers if you contact us as it will help us serve you more quickly.

Please complete the following two steps:

1. Enclosed is a combined notice of your applications for change, which must be published once a week for two consecutive weeks in a newspaper published in Okanogan County. The newspaper should have general circulation in the locality where the water is to be diverted and used, and must be qualified as a legal newspaper. Publishing the notice in a remote part of the county, when not necessary, may be cause for you to be required to republish the notice in a designated newspaper. The enclosed newspaper list may help you select an appropriate newspaper for the area.

Publication should start within 30 days from the date of this letter.

To assure accuracy, it is your responsibility to check the notice carefully before having it published. If an error is detected, please contact this office for correction and/or resolution. If we later find an error in your public notice, you will be required to re-publish an amended notice.

2. After publication, the publishing newspaper should provide you with a notarized original Affidavit of Publication, which should be forwarded to our office as soon as possible. Please do not send a photocopy of the affidavit.

If you do not wish to proceed with the project, please let us know and we will reject the application. If your plans have changed from what is described in the public notice, you may need to file a new change and, in some cases, arrange for a site visit.

If you have questions or concerns about this information, please call Scott Turner at (509) 457-7106. Thank you for your attention to this matter.

Sincerely,

Erin C. Gutierrez

Erin Gutierrez
Water Resources Program

040816/eg

Enclosures: Public Notice
Newspaper List

pn-3 WRIA

FILE COPY



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
YAKIMA, WASHINGTON

AMENDED NOTICE OF APPLICATIONS FOR CHANGE OF THE OMAK CITY WATER RIGHTS

TAKE NOTICE:

Consolidated Notices of Applications to Change to change the point of diversion (replace) or add a point of withdrawal (add) under the City of Omak Water Rights detailed below. These requests were submitted November 24, 1998 except for change to Certificate No. 446-D which was submitted August 4, 2004. They are part of the City of Omak Water System. The proposed wells are to be located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 24, NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 25, and SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 19, all in T. 34 N., R. 26 E.W.M.

Rights and proposed change:

Add or replace wells under Certificate No. 445-D with priority date of December 1913 for 500 gpm, 600 acre-feet per year for municipal supply from a well (Kenwood) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M.

Add or replace wells under Certificate No. 446-D with priority date of March 1936 as changed by Change Authorization No. CG4-GWC446-D@1 for 800 gpm, 96 acre-feet per year for municipal supply from a well (Apple) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 26, and the new well located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 24, T. 34 N., R. 26 E.W.M.

Add wells under Certificate No. 1082-D with priority date of May 1944 for 1630 gallons per minute (gpm), 1430 acre-feet per year for municipal supply from a well (Eastside) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M.

Add wells under Certificate No. 3655-A with priority date of March 20, 1958 for 1300 gpm, 2080 acre-feet per year for municipal supply from a well (Eastside) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M.

Add or replace wells under Certificate No. 3656-A with priority date of March 20, 1958 for 375 gpm, 600 acre-feet per year for municipal supply from a well (Apple) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M.

Add wells under Certificate No. 7332-A with priority date of June 22, 1970 for 600 gpm, 560 acre-feet per year for municipal supply from May 1 through October 31 from a well (Eastside) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M.

Even though the public notices have been combined, each water right change request will be evaluated on its own merits. Protests or objections against the change of any of these rights should be filed separately by water right, must include a detailed statement of the basis for objections. All letters of protest will become public record. Each protest must be accompanied by a \$2.00 recording fee (check or money order only) and filed with the Department of Ecology, 15 W. Yakima Avenue, Suite 200, Yakima, WA 98902-3452, within thirty (30) days from:

(last date of publication to be entered above by the publisher)



STATE OF WASHINGTON
**APPLICATION FOR CHANGE/TRANSFER
OF WATER RIGHT**

For filing with Ecology or with County Conservancy Boards

A MINIMUM FEE OF \$10.00 PAYABLE TO ECOLOGY MUST ACCOMPANY THIS APPLICATION

- (Check all that apply.)
- ☐ Change purpose(s) of use
 - ☐ Add purpose(s) of use
 - ☐ Change point(s) of diversion/withdrawal
 - ☒ Add point(s) of diversion/withdrawal
 - ☐ Change/transfer place of use
 - ☐ Other (i.e. consolidation, intertie, trust water)

Explain: _____

FOR OFFICE USE ONLY

CHANGE No. _____ WRIA _____

DATE ACCEPTED ____/____/____ BY ____

FEE \$ _____ REC'D ____/____/____

CHECK No. _____

SEPA: ☐ Exempt ☐ Not exempt

****IF MORE SPACE IS NEEDED, ATTACH ADDITIONAL SHEETS (PLEASE PRINT OR TYPE CLEARLY)****

1. Applicant Information:

APPLICANT/BUSINESS NAME	PHONE NO.	FAX NO.
City of Omak	(509) 826-1170	(509) 826-6531
ADDRESS		
P.O. Box 72		
CITY	STATE	ZIP CODE
Omak	WA	98841

CONTACT NAME (IF DIFFERENT FROM ABOVE)	PHONE NO.	FAX NO.
	() ()	()
ADDRESS		
CITY	STATE	ZIP CODE

2. Water Right Information:

WATER RIGHT OR CLAIM NUMBER	RECORDED NAME(S)
3655 & 1082-D	City of Omak
DO YOU OWN THE RIGHT TO BE CHANGED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
IF NO, PROVIDE OWNER(S) NAME: _____	
HAS THE WATER BEEN PUT TO BENEFICIAL USE IN THE LAST FIVE (5) YEARS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	

Please attach copies of any documentation that demonstrates consistent, historical use of water since the right was established. Also, if you have a water system plan or conservation plan, please include a copy with your application. A copy of the City of Omak's Comprehensive Water Plan (Dec 1996) which includes a Conservation Plan should be on file with the Department of Ecology Central Regional Office.

FOR OFFICE USE ONLY

APP. NO. _____ PERMIT NO. _____ CERT. NO. _____ CERT. OF CHANGE NO. _____

3. Point(s) of Diversion/Withdrawal:

A. Existing

SOURCE	NO.	¼	¼	SEC.	TWP.	RGE.	PARCEL #	WELL TAG #
Eastside Well		SE		35	34	26E		

B. Proposed

SOURCE	NO.	¼	¼	SEC.	TWP.	RGE.	PARCEL #	WELL TAG #
OWP Well #2		SE		35	34	26E		

DO YOU OWN THE EXISTING AND PROPOSED POINT(S) OF DIVERSION/WITHDRAWAL?

EXISTING: ☒ YES ☐ NO PROPOSED: ☐ YES ☒ NO -- IF NO, PROVIDE OWNER(S) NAME: Omak Wood Products

Please include copies of all water well reports involved with this proposal. Also, if you know the distances from the nearest section corner to the above point(s) of diversion/withdrawal, please include that information in item No. 6 (remarks) or as an attachment.

4. Purpose of Use:

A. Existing

PURPOSE OF USE	GPM or CFS	ACRE-FT/YR	PERIOD OF USE
Municipal Water Supply	2,930 GPM	3,510	continuous throughout the year

B. Proposed

PURPOSE OF USE	GPM or CFS	ACRE-FT/YR	PERIOD OF USE
Municipal Water Supply	2,930 GPM	3,510	continuous throughout the year

5. Place of Use:

A. Existing

LEGAL DESCRIPTION OF LANDS WHERE WATER IS PRESENTLY USED:
City of Omak Water System Service Area

X	X	SEC.	TWP.	RGE.	COUNTY	PARCEL #	# OF ACRES
25, 26	27, 34	35, 36	34	26E	Okanogan		approx. 3,850

DO YOU OWN ALL THE LANDS IN THE EXISTING PLACE OF USE? ☐ YES ☐ NO -- IF NO, PROVIDE OWNER(S) NAME:
Various owners within the City of Omak Water System Service Area.

B. Proposed

LEGAL DESCRIPTION OF LANDS WHERE NEW USE IS PROPOSED:
City of Omak Water System Service Area

X	X	SEC.	TWP.	RGE.	COUNTY	PARCEL #	# OF ACRES
25, 26	27, 34	35, 36	34	26E	Okanogan		approx. 3,850

DO YOU OWN ALL THE LANDS IN THE PROPOSED PLACE OF USE? ☐ YES ☐ NO -- IF NO, PROVIDE OWNER(S) NAME:
Various owners within the City of Omak Water System Service Area.

Attach a detailed map of your proposed change/transfer. The map should show existing and proposed point(s) of diversion/withdrawal, place of use and any other features involved with this application. If platted property, please include a certified copy of the plat map.

Are there any ADDITIONAL WATER rights OR CLAIMS RELATED to the same property as the ONE PROPOSED FOR CHANGE/TRANSFER?
☐ YES ☐ NO - IF YES, PROVIDE THE WATER RIGHT/CLAIM NUMBER(S):

6. Remarks and Other Relevant Information:

This change application is submitted to allow the OWP Well, Ground Water Permit No. G4-31525P to be used by the City during this year's anticipated below average Okanogan River flows. The City has previously submitted change applications in December 1993 requesting the OWP Well be added as an additional point of withdrawal to the City's existing water rights. These applications have not been acted on to our knowledge.

IF FOR SEASONAL OR TEMPORARY, START DATE 06 / 01 / 05 END DATE 12 / 31 / 05

7. Signatures:

I certify that the information above is true and accurate to the best of my knowledge. I understand that in order to process my application, I am hereby granting staff from the Department of Ecology or the County Conservancy Board access to the above site(s) for inspection and monitoring purposes. If assisted in the preparation of the above application, I understand that all responsibility for the accuracy of the information rests with me.

Wally Sparker (Applicant) 4 / 11 / 05 (Date)

Wally Sparker (Water Right Holder) 4 / 11 / 05 (Date)

(Land Owner(s) of Existing Place of Use) _____ (Date)

IMPORTANT! APPLICATION FILING INFORMATION IS PROVIDED ON THE NEXT PAGE.

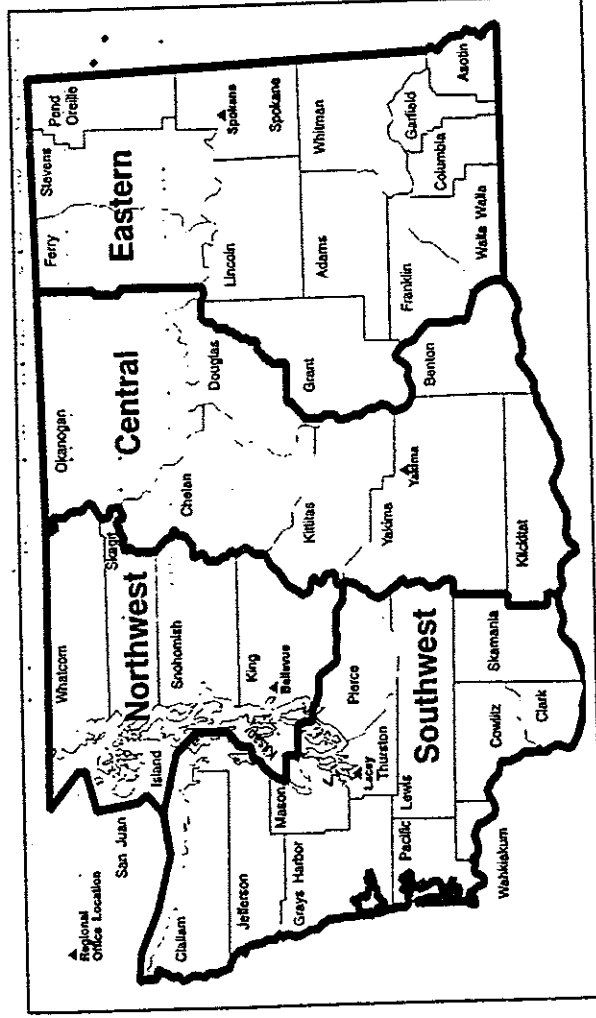
WE ARE RETURNING YOUR APPLICATION FOR THE FOLLOWING REASON(S):

- ☐ APPLICATION FEE NOT ENCLOSED ☐ MAP NOT INCLUDED or INCOMPLETE
☐ ADDITIONAL SIGNATURES REQUIRED ☐ SECTION _____ IS INCOMPLETE
☐ OTHER/EXPLANATION: _____

STAFF: _____ DATE: ____ / ____ / ____

IMPORTANT!

Submit your application to Ecology at the regional office for the area of proposed or existing water use or at a Conservancy Board with jurisdiction. Below is a map of the State of Washington, with outlines of the four Ecology regional offices. If you have questions about your application or whether a County Conservancy Board with jurisdiction exists, contact the Water Resources program at the regional office in which your project is located.



Department of Ecology
Central Regional Office
15 W. Yakima Avenue, Suite 200
Yakima, WA 98902
Telephone: (509) 575-2490

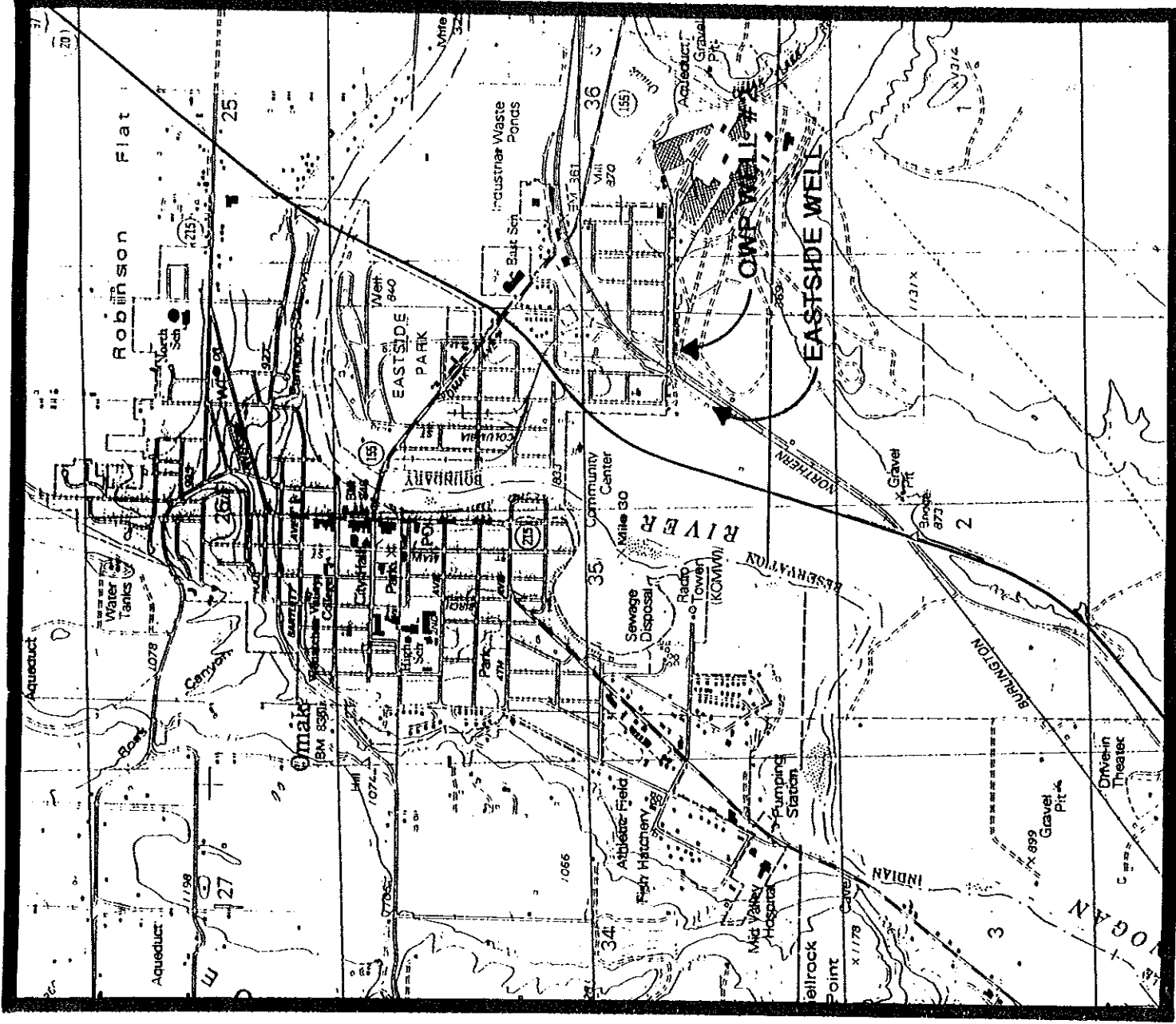
Department of Ecology
Eastern Regional Office
N. 4601 Monroe, Suite 202
Spokane, WA 99205-1295
Telephone: (509) 456-2926

Department of Ecology
Northwest Regional Office
3190 - 160th Avenue SE
Bellevue, WA 98008-5452
Telephone: (425) 649-7000

Department of Ecology
Southwest Regional Office
PO Box 47775
Olympia, WA 98504-7775
Telephone: (360) 407-6300

Persons of disability needing assistance in the application process or those needing this application in an alternate format, may call (360) 407-6607 (voice) or (360) 407-6006 (TDD).

Ecology is an Equal Opportunity and Affirmative Action employer...



CITY OF OMAK
EASTSIDE WELL and OWP WELL #2

EASTSIDE WELL

STATE OF WASHINGTON, COUNTY OF Okanogan

1655-A

Certificate of Ground Water Right

Issued in accordance with the provisions of Chapter 222, Laws of Washington for 1948, and amendments thereto, and the rules and regulations of the State Supervisor of Water Resources.

THIS IS TO CERTIFY THAT CITY OF OMAH, WASHINGTON

to the satisfaction of the State Supervisor of Water Resources of Washington, of a right to the use of the ground waters of a well located within SE4

Sec. 34, Twp. 34, N., R. 26 E., W. 4, for the purpose of municipal supply

under and subject to provisions contained in Ground Water Permit No. 4957, issued by the State Supervisor of Water Resources and that said right to the use of said ground waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the State Supervisor of Water Resources of Washington and entered of record in Volume 8 at page 3655-A that the right hereby confirmed dates from March 20, 1958; that the quantity of ground water under the right hereby confirmed for the purposes aforesaid, is limited to an amount actually beneficially used for said purposes, and shall not exceed 1300 gallons per minute at 2050 acfm-feet per year for municipal supply.

Special provisions required by the Supervisor of Water Resources:

A description of the lands to which such ground water right is appurtenant:

City of Omah, Okanogan County, Washington.

The right to the use of the ground water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Water Resources of Washington this 30th day of June, 1960.

STATE OF WASHINGTON

State Supervisor of Water Resources

M. Walker

EASTSIDE WELL

3. 2. No. 1234-1000-1

CERTIFICATE No.

2. PAGE No. 1012-1. UNDER DECLARATION OF CLAIM No. 4179

STATE OF WASHINGTON, COUNTY OF OLYMPIA

Certificate of Ground Water Right

Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1913, and its rules and regulations of the State Supervisor of Hydraulics, Department.

THIS IS TO CERTIFY THAT THE CITY OF OLYMPIA, WASHINGTON

has filed

in the office of the State Supervisor of Hydraulics of Washington Declaration of Claim No. 4179

to withdraw ground waters of the State from a well

located within the S.E. 1/4, sec. 35, T. 34 N., R. 26 E.,

for the purpose of municipal supply.

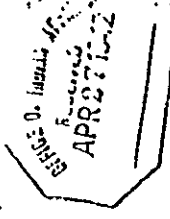
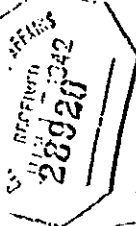
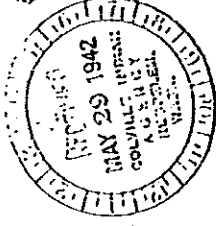
The right to the use of said ground waters has been sustained and approved by the Supervisor of Hydraulics in accordance with Chapter 263, Laws of Washington for 1913, and is hereby entered of record in Volume 2 of Ground Water Certificates at page 10 2-1; the right approved has a priority of May, 1914

; the amount of water which the Declarant is entitled to withdraw for the aforesaid purpose is limited to the amount actually beneficially used and shall not exceed 2 30 gallons per minute; 1430 acre-feet per year; and is appurtenant to the following interest which is the place of use:

City of Olympia, Washington County, Washington.

The right to the use of the ground water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 263, Laws of 1913.

WITNESS the seal and signature of the State Supervisor of Hydraulics at this 11th day of March, 1914.



8-183

INDIAN DEED INHERITED LANDS

THIS INDENTURE, Made and entered into this 22nd day of April
one thousand nine hundred and ~~forty-two~~ 1942, by and between
Theresa Swimpethin, a widow, 1/6; Nancy Swimpethin, a single woman, 1/6; Frank Swimpethin,
a single man, 1/6; Nathan Swimpethin, 1/6, and his spouse, Hazel Williams Swimpethin,
of Omak, Washington
heirs of PETER SWIMPETHIN, DEC., COLVILLE ALLOTTEE S-793, PRO. 19213-27, C&I, and 7337-41 WB.
deceased, a COLVILLE Indian, parties of the first part, and
THE CITY OF OMAK
of WASHINGTON party of the second part:

WITNESSETH, That said parties of the first part, for and in consideration of the sum of
*****FIVE HUNDRED THIRTY-FOUR AND 00/100*****(\$94.00) ***** dollars,
in hand paid, the receipt of which is hereby acknowledged, do hereby grant, bargain, sell, and convey
unto said party of the second part the following-described real estate and premises situated in

OKANOGAN County, STATE OF WASHINGTON to wit:
BEGINNING AT THE IRON POST MONUMENT IN THE CENTER OF THE INTERSECTION OF FOURTH STREET EAST
AND EIGHTH AVENUE, AND RUNNING THENCE S 0° 18' W. 87 FEET TO THE SOUTH LINE OF THE PLAT OF
THE TOWNSHIP OF OMAK, ON THE COLVILLE INDIAN RESERVATION, THENCE S. 89° 54' W. 10 FEET TO TRUE
POINT OF BEGINNING; THENCE S. 0° 18' W. 275.7 FEET; THENCE N. 89° 42' W. 266.7 FEET; THENCE
S. 0° 18' W. 400 FEET; THENCE S. 89° 42' E. 200 FEET TO THE RIGHT OF WAY LINE OF THE GREAT
NORTHWESTERN RAILWAY, THENCE N. 79° 52' E. 611.58 FEET ALONG SAID RIGHT-OF-WAY LINE TO ITS INTERSEC-
TION WITH SAID SOUTH LINE OF THE TOWNSHIP OF OMAK; THENCE S. 89° 54' W. 383.4 FEET ALONG
SAID TOWNSHIP LINE TO POINT OF BEGINNING. ALL IN THE SE 1/4 OF SECTION 35, TOWNSHIP 34 NORTH OF
RANGE 26 EAST-WILMETTE MERIDIAN. THE TRACT DESCRIBED CONTAINING 4.67 ACRES, MORE OR LESS
AND BEING A PART OF THE ALLOTMENT OF PETER SWIMPETHIN, DEC. COLVILLE ALLOTTEE S-793.
LIQUOR CLAUSE: "It is hereby covenanted and agreed that no malt, spirituous or vinous
liquor shall be sold or introduced or kept or manufactured on such premises, by the grantees
herein named, their heirs, executors, or assigns. Provided: That this clause may be modified
or released by the Secretary of the Interior in his discretion when such action is formally
recommended and requested by the then owner of the land or any sub-division thereof, and by
the Commissioner of Indian Affairs or his successor in office."

together with all the improvements thereon and the appurtenances thereto belonging. And the said
parties of the first part, for themselves and their heirs, executors, and administrators,
do hereby covenant, promise, and agree to and with the said party of the second part,
their heirs and assigns, that they will forever warrant and defend the said premises against the
claim of all persons, claiming or to claim by, through, or under them only.

To have and to hold said described premises unto the said parties of the second part, their heirs,
executors, administrators, and assigns, forever.

IN WITNESS WHEREOF, The said parties of the first part have hereunto set their hands and
seals the day and year first-above written.

WITNESSES:
3/6 Theresa Swimpethin (SEAL) Mark
1/6 Nancy Swimpethin (SEAL)
1/6 Frank Swimpethin (SEAL)
1/6 Nathan Swimpethin (SEAL)
1/6 Hazel Williams Swimpethin (SEAL)

SUPERSEDING PERMIT

TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

SL. JACOB'S PERMIT ISSUED AUGUST 17, 1993

☐ Surface Water
 ☒ Ground Water
 Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1987, and amendments thereto, and the rules and regulations of the Department of Ecology.
☒ Ground Water

Issued in accordance with the provisions of Chapter 353, Laws of Washington for 1986, and amendments thereto, and the rules and regulations of the Department of Ecology.

PERMIT DATE November 23, 1992	APPLICATION NUMBER G4-31525	PERMIT NUMBER G4-31525P	CERTIFICATE NUMBER
----------------------------------	--------------------------------	----------------------------	--------------------

NAME City of Omak	CITY Omak	STATE Washington	ZIP CODE 98841-0072
ADDRESS (STREET) PO Box 72			

The applicant is, pursuant to the Report of Examination which has been accepted by the applicants, hereby granted a permit to appropriate the following described public waters of the State of Washington, subject to existing rights and to the limitations and provisions set out herein.

PUBLIC WATERS TO BE APPROPRIATED			
SOURCE 2 wells			
TERRITORY OF (IF SURFACE WATERS)			
MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRES-FEET PER YEAR	
	5,000	3,500	
QUANTITY, TYPE OF USE, PERIOD OF USE			

Continuous municipal supply (including water used by Omak Wood Products if subsequently received by the City of Omak).

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL LOCATION OF DIVERSION/WITHDRAWAL

Both wells approximately 1,150 feet west and 500 feet north from the southeast corner of Section 35.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION) SE 1/4 SE 1/4	SECTION 35	TOWNSHIP N 34	RANGE E OR W 26 E	WALLA 49	COUNTY Okanogan
RECORDED PLATTED PROPERTY					
LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)			
LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED					

The future service area, approved by the Department of Ecology, within the current Comprehensive Water System Plan approved by the Department of Health.

SUPERSEDING PERMIT

DESCRIPTION OF PROPOSED WORKS

Cooling water received from Omak Wood Products and/or water pumped directly from two City of Omak wells, will be used for municipal purposes.

DEVELOPMENT SCHEDULE		
REIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	WATER PUT TO FULL USE BY THIS DATE
May 1, 1995	May 1, 2014	May 1, 2015

PROVISIONS

This authorization is not additive to existing rights with respect to annual volumes of appropriation. The total withdrawal under all rights shall not exceed 3,500 acre-feet per year.

An updated comprehensive water system plan and a water conservation plan shall be prepared which is to the approved by the Department of Health.

The place of use of this authorization is intended to be the future service area of the comprehensive water system plan in effect at any given time, such that when the plan is updated, the authorization reflects any changes in service area: PROVIDED that Ecology must approve any changes in service area to determine that it results in an appropriate use of this authorization and will not be injurious to the rights of others.

The actual extent to which this permit may be exercised shall be limited to the rate of withdrawal and annual volumes which are determined to be required to meet municipal demand by the updated comprehensive water system plan or the maximum yield of the authorized wells, which ever is less, not to exceed the maximum limitations of this permit, less any water withdrawn from the City's other sources.

Water well reports for the authorized wells must be submitted to this office prior to development (construction) of the system be regarded as complete.

The City shall evaluate its municipal water use under existing water rights and provide to this office an acceptable plan for maximizing the beneficial use of those rights. The submitted plan will include modifications to existing rights through change applications or modifications to well capacities that result in agreement between the authorized pumping rate and the capacity of the sources; and general agreement between the priority of the City's rights and the degree of, or order of, reliance placed upon the source to meet to City's water demands.

The City will attempt to acquire existing rights which are displaced by the extension of the municipal water system. The City will propose plans to this office for the disposition of any acquired water rights through the filing of change applications to modify the right to suit a municipal purpose or, if of no use to the City, the right shall be voluntarily relinquished or otherwise accounted for to the satisfaction of the Department of Ecology to update the water right record.

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gage may be installed in addition to the access port.

Flow meters are required on each City well and the supply line from Omak Wood Products.

Provisions continued on page 3.

This permit shall be subject to cancellation should the permittee fail to comply with the above development schedule and/or fail to give notice to the Department of Ecology on forms provided by that Department documenting such compliance.

this 18th day of July 1994.

Given under my hand and the seal of this office at Yakima, Washington,

Department of Ecology

ENGINEERING DATA
OK
18x108 FR-gh

by 
Doug Clausen, Section Manager

SUPERCEDING PERMIT

All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

This authorization is issued without minimum instream flow provisions under Chapter 173-549 WAC for a period of two (2) years from the date of issuance. After two years, the permit shall be subject to the following flow provisions:

This authorization is subject to the provisions of Chapter 173-549 WAC as adopted in Olympia, Washington, August 14, 1976, and revised effective July 19, 1984, and the general rules of the Department of Ecology as specified under Chapter 173-500 WAC.

Instream flows as established at monitoring station 12.4472.00 at river mile 17.0, Section 9, T. 32 N., R. 25 E., W.M., and as presented in the table below shall be maintained by regulation of diversions as set forth in said WAC 173-549.

Instream flow hydrographs, as represented in WAC 173-549-900, shall be used for definition of instream flows on those days not specifically identified in WAC 173-549-920(2). Instream flows at Station 12.4472.00.

Primary Control Station: 12.4472.00 (Lower Okanogan)
River Mile: 17.0

Instream Flows in the Okanogan River
(instantaneous cubic feet per second)

	Lower Okanogan	Middle Okanogan	Upper Okanogan	Similkameen
STATION:	12.4472.00	12.4450.00	12.4395.00	12.4425.00
RIVER MILE:	(17.0)	(50.8)	(77.3)	(15.8)
Jan 1	860	800	320	400
Jan 15	830	800	320	400
Feb 1	820	800	320	400
Feb 15	850	800	320	400
Mar 1	880	800	320	425
Mar 15	900	800	320	450
Apr 1	925	910	330	510
Apr 15	1100	1070	340	640
May 1	1750	1200	350	1100
May 15	3800	3800	500	3400
Jun 1	3800	3800	500	3400
Jun 15	3800	3800	500	3400
Jul 1	2100	2150	420	1900
Jul 15	1200	1200	350	1070
Aug 1	800	840	320	690
Aug 15	600	600	300	440
Sep 1	620	600	300	400
Sep 15	700	600	300	400
Oct 1	750	730	330	450
Oct 15	960	900	370	500
Nov 1	950	900	370	500
Nov 15	950	900	320	500
Dec 1	930	900	320	500
Dec 15	900	850	320	450

No diversion of water under this authorization shall take place when the stream flow at this station is below the above flows.

Water available under this authorization will not provide a firm supply throughout each year.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CONSTRUCTION NOTICE

BEGINNING OF CONSTRUCTION

NAME			GROUND WATER PERMIT NO. 64-31525P
DATE CONSTRUCTION BEGAN	DATE CONSTRUCTION COMPLETED	DATE COMPLETION EXPECTED	
IF CONSTRUCTION NOT COMPLETE, SHOW % COMPLETED AS OF THIS DATE			
% EQUIPMENT IN PLACE	% MATERIAL IN PLACE	% EXCAVATED	% STRUCTURE
IF CONSTRUCTION HAS BEEN ABANDONED			
DATE ABANDONED	REASON ABANDONED		
REMARKS OR ANY ADDITIONAL INFORMATION WHICH MAY TEND TO SHOW GOOD FAITH IN THE PROSECUTION OF THE WORK			
GROUND: DATE:			
Well Drilling Started:			
Pump Installed:			
Mainline Laid:			
Does well location agree with permit? () Yes () No If no, please			
give actual location:			

I certify I am the holder of the above permit issued by the Department of Ecology for the State of Washington, and in accordance with the terms of such permit and the limitations endorsed by the Department of Ecology have ☐ begun ☐ completed the actual construction of the work described in the permit.

Signature of Applicant

Present Address

City, State, Zip Code

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGYREPORT OF EXAMINATION
TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON☐ Surface Water

Based in accordance with the provisions of Chapter 115, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.

☒ Ground Water

Based in accordance with the provisions of Chapter 305, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.

PROPERTY DATE November 23, 1992	APPLICATION NUMBER G4-31525	PERMIT NUMBER	CERTIFICATE NUMBER
------------------------------------	--------------------------------	---------------	--------------------

NAME City of Omak	CITY Omak	STATE Washington	ZIP CODE 98841-0072
ADDRESS (PERMIT) PO Box 72			

PUBLIC WATERS TO BE APPROPRIATED			
SOURCE 2 wells			
TREATMENT OF IF SURFACE WATER			
MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR	
	5,000	3,500	
QUANTITY, TYPE OF USE, PERIOD OF USE			

Continuous municipal supply (including water used by Omak Wood Products if subsequently received by the City of Omak).

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL	LOCATION OF DIVERSION/WITHDRAWAL
--	----------------------------------

Both wells approximately 1,150 feet west and 500 feet north from the southeast corner of Section 36.

LOCATED WITHIN QUALLEST LEGAL SUBDIVISION SE 1/4	SECTION 36	TOWNSHIP N. 34	RANGE, E. OR W.3 W.4 26 E.	W.4.4 49	COUNTY Okanogan
RECORDED PLATTED PROPERTY OF FIVE NAME OF PLAT OR ADDITION					
LOT	BLOCK	LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED			

The future service area, approved by the Department of Ecology, within the current Comprehensive Water System Plan approved by the Department of Health.

DESCRIPTION OF PROPOSED WORKS

Cooling water received from Omak Wood Products and/or water pumped directly from two City of Omak wells, will be used for municipal purposes.

DEVELOPMENT SCHEDULE		
FROM PROJECT TO DATE:	COMPLETE PROJECT BY THE DATE	WATER PUT TO FULL USE BY THE DATE:
May 1, 1995	May 1, 2014	May 1, 2015
REPORT		

Background

On November 13, 1992, the City of Omak (the City) filed an application to appropriate public ground water. The application was accepted, assigned No. G4-31525, and public notice was made with no protests or objections being filed to the application.

Investigation

The following information was obtained through information provided with the application, discussions with Fred Sheldon and Fred Stouder both representing the City, and a meeting between representatives of Omak Wood Products (OWP), the City, the Colville Indian Nation, and the author on March 23, 1993.

The City proposes to withdraw up to 5,000 gallons per minute (gpm) from 2 wells located at the OWP facility, east of the Okanogan River, adjacent to the City of Omak, on the Colville Indian Reservation.

The City has issued a Determination of Non-significance in compliance with the provisions of the State Environmental Policy Act (SEPA).

The wells are currently used by OWP for steam generation of electricity and other uses in the processing of timber products. Cooling water used at the plant has been discharged to the Omak Creek and the Okanogan River drainages after use, but due to the high temperature of the water, the Environmental Protection Agency has ordered that practice stopped. The expense involved for OWP to treat its discharge water is considered substantial enough to threaten the continued operation of the plant.

A predecessor to OWP, Biles-Coleman Lumber Company, had filed Water Right Claim No. 005741 in response to the claims registration provisions of Chapter 90.14 RCW. The claim asserts a right to withdraw 5,000 gallons per minute, 8,065 acre-feet per year from a well located 540 feet north and 1120 feet west from the southeast corner of Section 35 for use within the company property located within Sections 35 and 36, T. 34 N., R. 26 E.W.M. The claimed date of first use is stated as "prior to 1945."

According to the Report of Examination within the Certificate No. 7332 file, Biles-Coleman Lumber Company established its plant at Omak during the 1920's.

While the author believes that Water Right Claim No. 005741 documents a valid water right, it is noted that the claimed annual volume of 8,065 acre-feet is equal to a continuous pumping of water at the rate of 5,000 gallons per minute for a year's time. The author believes it is improbable that such a continuous water withdrawal is or has been made. Therefore the historic extent of water use under this right is probably less than that claimed.

To afford greater security to the water rights of OWP, which are documented only by the above described claim; the author proposes that, for the purpose of this authorization, the water withdrawn, used by the OWP plant then delivered through the proposed cooling towers to the City be considered a part of the proposed municipal purpose. In so doing, the author believes that should a flaw be revealed in the assertions made through Water Right Claim No. 005741, which would call into question its validity, OWP could continue to use water for many of its purposes under this City of Omak permit (G4-31525).

Report Continued

The single large diameter well which was used for many years by Biles-Coleman and formed the basis of their claim has been replaced by 2 wells, both located within the SE $\frac{1}{4}$ Section 35. Office records include 3 water well reports for test wells which were constructed by Crown Zellerbach, then owner of the property, during 1981.

Test well No. 1, located within the SE $\frac{1}{4}$ of Section 35, is an 8-inch diameter well constructed to a depth of 100 feet. It penetrated sand, gravel, and silt throughout the depth and was estimated to yield greater than 200 gallons per minute.

Test well No. 3, located within the SE $\frac{1}{4}$ of Section 35, is an 8-inch diameter well constructed to the depth of 79 feet below the surface. The well penetrated sand, gravel, and clay and is estimated to produce 200 to 250 gallons per minute.

Test well No. 2, located within the SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 36, penetrated sand, silt, and clay but did not encounter a water bearing zone. No record of abandonment of the well is within office records.

The author is not certain whether test wells No. 1 and No. 3 were converted to production wells or if additional work was done on the basis of the test results. The test wells are not estimated to yield the 5,000 gallons per minute proposed by the subject application.

The wells are in continuity with the Okanogan River.

OWP should file a change application to change the point of withdrawal from the original well to the 2 wells which are currently used. This change application would be associated with Water Right Claim No. 005741.

Approximately 600 area residents are employed by OWP and the local economy is heavily dependant upon the plant.

The City proposes that it construct cooling towers and pipe the water discharged from OWP into the City's domestic water system. Water will also be required for municipal purposes when not used by the plant. An agreement has been reached between the City and OWP such that water withdrawn from the wells may continue to be used by the City even in the event that OWP ceases operations.

The OWP cooling water is of sufficient quality to satisfy applicable health regulations, with only cooling required.

Water Demand Forecasting

The City completed a comprehensive water system plan dated February 1990, which has been approved by the State Department of Health. The 1990 plan does not identify the OWP cooling water as a component of their future water supply.

The plan indicates that between the years from 1975 to 1985 the population of the City had decreased from 4400 to 3910, while the number of households increased. The population of the City was projected to increase at a rate of about 1 percent over the next 20 years to 4,500 persons by the year 2000.

Legislation, during the past few years which is designed to result in better planning by local government as well as more efficient and compact growth of urban areas, may tend to create incentives for development to occur within the City which might have otherwise occurred within the unincorporated county. Additionally, recent commercial development and more stringent standards for drinking water supplies may draw growth to the City.

Through Ecology's rule making powers to protect instream values, tributary streams to the Okanogan River are seasonally closed. Within many tributary drainages, it is difficult to obtain water that is not in continuity with surface water. In addition, growth management legislation may lead Okanogan County, through determinations of water availability related to its building permit and planning authority, and Ecology through its water appropriation permit system to discourage development in remote areas.

The City has had a moratorium against adding connections to the municipal system and has for several years limited outside water use by the City's residents to reduce peak demands and lessen the impact on storage.

Report Continued

The City recognizes that the comprehensive water system plan must be updated to reflect the water source proposed by the subject application, a changing development situation, and to address conservation strategies and accomplishments not addressed within the February 1990, plan.

The City has identified a service area within the comprehensive water system plan which differs from the existing corporate boundaries primarily by including lands to the north and east of the City. Consideration is also being given to adjusting the service areas somewhat to accommodate additional parties interested in municipal services.

There are existing privately owned water rights within the future service area. The extension of the municipal water system may result in some of those existing rights being unused in favor of municipal service. Water rights, if unused without sufficient cause for a period of five consecutive years are relinquished as provided by Sections 90.14.130 through 90.14.180 of the Revised Code of Washington (RCW). A sufficient cause for which relinquishment would not occur is if the right is claimed for municipal water supply purposes under 90.03 RCW (RCW 90.14.140 (2)(d)).

To maximize the beneficial use of existing water rights, the City should attempt to acquire existing water rights from within the future service area which will no longer be used and, when they are required, propose such modifications through the Department of Ecology change application process to authorize exercising the right for municipal purposes.

Water Rights Appurtenant to the City

Existing water rights of the City are listed within the plan but differ from the author's evaluation of the state water right record.

The author's review of the state water right record reveals the following (all the City's rights are from wells):

Certificates of Water Right:

Certificate No.	Priority Date	Pumping Rate (gpm)	Annual Volume (ac-ft)	Well*
Municipal Purposes ¹ :				
445-D	Dec. 1913	500	600	1
1081-D	May 1930	500	200	2
446-D	March 1936	800	96	3
1082-D	May 1944	1,630	1,430	4
3655	Mar. 20, 1958	1,300	2,080**	4
3656	Mar. 20, 1958	375	600**	3
7332	June 22, 1970	600	560***	5

¹ Rights associated with Certificates No. 445-D and No. 1081-D authorize emergency standby uses from wells, as such they would not be routinely used and shouldn't be added to the total withdrawal authorization of the system. The well authorized through Certificate No. 1081 has since been removed from the City water system. The current validity of the right embodied within Certificate No. 1081 has not been determined, however the right may have been abandoned.

Report Continued

- The City's wells were identified by number in some water right records and have been identified by location in other records as follows:

Well No. 1 = "Kenwood Street well" in the SE $\frac{1}{4}$ Section 26

Well No. 2 = out of service, in the NE $\frac{1}{4}$ Section 35

Well No. 3 = "Apple Street well" in the SE $\frac{1}{4}$ Section 26

Well No. 4 = "East Omak well" in the SE $\frac{1}{4}$ Section 35

Well No. 5 = "Okoma well" in the SE $\frac{1}{4}$ Section 34

All located within T. 34 N., R. 26 E.W.M.

- These rights assumed a 1970 population of 5,500 people and limited the annual withdrawal from all rights to 4,300 acre-feet.

- This right assumed a 1985 population of 6,000 people and issued for use during the period from May 1 to October 31 each year. Any water withdrawal by the City in excess of 3,456 acre-feet from any municipal water source was to be deducted from the annual volume authorized by this right.

All of the City's rights authorize use within the City as it existed at the time of certificate issuance.

Other Certificated Rights:

Certificate No.	Priority Date	Pumping Rate (gpm)	Annual Volume (ac-ft)	Use
5041	Oct. 9, 1959	10	16	Airport
6412	Mar. 28, 1967 (24 ac-ft to irrigate 8 acres; 1 ac-ft for 1 home)	70	25	Cemetery
6530	Mar. 28, 1968	400	185	Eastside Omak Park
(180 ac-ft to irrigate 60 acres; 5 ac-ft for continuous domestic)				

The following additional permit has issued to the City:

Permit No. G4-28244P, priority date June 24, 1983, authorizes the withdrawal of 500 gpm; 278 acre-feet per year from the "Eastside Omak Park well" located within the NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M. The purposes of use, all within the Eastside Omak Park are:

Irrigation of 90 acres from April 1 to October 1 (allocated 270 acre-feet per year with 180 acre-feet being supplemental to withdrawals under Certificate No. 6530);

Municipal supply from April 1 to October 1 (allocated 8 acre-feet with 5 acre-feet being supplemental to withdrawals under Certificate No. 6530).

An additional application is on file:

Application No. G4-29859, filed December 1, 1988, proposes to withdraw an additional 1,000 gpm from the Okoma well for the purpose of Municipal supply within the City. This application will be evaluated for permit after the subject application, G4-31525, at the agreement of Fred Sheldon, for the City, and the author.

Report Continued

Based upon the state water right record, considering provisions attached to rights at the time of issuance, the author believes that the City has the following municipal water rights which can be relied upon as a primary supply:

Water Right No.	Pumping Rate (gpm)	Annual Volume (ac/ft)
Certificate 446-D	800	96
Certificate 1082-D	1,630	1,430
Certificate 3655	1,300	2,080
Certificate 3656	375	600
Certificate 7332****	600	560
TOTAL RIGHTS:		
Valid the entire year	4,105	2,940
May 1 to October 31	600	560
Total municipal supply rights		3,500 ²

**** Certificate No. 7332 authorizes water use only during the period from May 1 to October 31.

The current pumping capacity of the wells authorized for pumping water as a primary source for general municipal supply is approximately 3,800 gpm (the Kenwood Street well is capable of producing 550 to 600 gpm, but the author interprets the right to be for a standby purpose only).

The pumping capacity of the City's wells is extracted from the City's comprehensive water system plan, dated February, 1990 and is compared to the City's water rights in the tabulation below:

Well No.	Well Name	Pumping Capacity	Authorized Pumping Rate
1	Kenwood Street Well	550-600	500 (standby)
3	Apple Avenue Well	500	1,175
4	East Omak Well	2,800-3,000	2,930
5	Okoma Well	380	600
TOTAL CAPACITY		4,230-4,480	4,705
PRIMARY SUPPLY CAPACITY		3,680-3,880	4,205

² The total annual withdrawal was limited by provisions associated with Certificates No. 3655 and No. 3656 to 4,300 acre-feet per year. This volume included the authorizations for standby wells. Since a standby well would not provide water to meet normal demand, the author has deducted the volumes authorized by those rights from the total.

Report Continued

If the comprehensive plan accurately reflects well pumping capacity, the City might consider the transfer of rights from wells which are lower in capacity than the authorized withdrawal to wells from which the right could be exercised.

According to the comprehensive water system plan dated February, 1990, additional water supply above existing water right authorizations is not required. The water demand for the City for the year 2000 was estimated to be about 2,900 acre-feet per year. The historic peak annual demand occurred during 1987 when 2,440 acre-feet were used.

The City has expanded its future service area and recent commercial development may make these estimates, which relied upon an average 1 percent growth rate, conservative.

The City will be updating its comprehensive water system plan to consider the addition of the subject well and other changes as required.

The installation of service meters has been occurring within the City and other steps are being taken to encourage conservation. These must be discussed as a part of the updated comprehensive plan.

Instream Flow Considerations

Chapter 173-549 of the Washington Administrative Code, the Water Resources Program In The Okanogan River Basin, establishes minimum flows for the reach of the mainstem Okanogan River at the City of Omak. When these flows are not met, any rights to appropriate water which were authorized after the effective date of the regulation are to cease appropriating water. Flows are not met during long periods of the year during the summer season in some years and occasionally are not met during the remainder of the year.

Provisioning the permit to issue to this application with minimum flows as established within Chapter 173-549 would prevent this project from being developed, since its goals could not be met.

To accomplish the goals of increasing the reliably available water supply of the City and assist in the improvement of the water quality of Omak Creek and the Okanogan River, the City must be able to receive water whenever OWP is using water throughout the year and in response to municipal demand.

Section 173-549-080 WAC of the Basin Plan provides that permits may be issued which conflict with the basin plan as provided by Section 90.54.020 (3)(a) of the Revised Code of Washington (RCW). Permits may issue which conflict with the basin plan only in those situations where it is clear that overriding considerations of public interest would be served.

Conclusions

The author concludes that the proposed project is a beneficial use of available water and is not contrary to the public interest including the minimum flows of the Okanogan River. The author further concludes that the issuance of a permit will not impair the rights of others.

The author's conclusions are based upon provisions being placed upon the permit which is proposed to issue under the subject application. Provisions are described within the Recommendations Section of this report.

The author also concludes that modification of the City's existing rights should occur to reflect current pumping capacities of the authorized wells, to change rights to existing wells, and to clarify the sequencing of reliance upon the wells incorporated within the City's municipal system.

The City of Omak has provided compelling justification for the issuance of a permit to this application. The project will resolve a cost prohibitive problem for a major employer within the Central Okanogan County area (which includes the Cities of Omak and Okanogan) and will relieve a water shortage during peak demand periods despite the findings of the 1990 comprehensive water plan.

Report Continued

The author concludes that the City of Omak must be able to receive water from OWP regardless of the measured flows of the Okanogan River. On an interim basis, this can be accomplished by exempting the permit proposed to issue to this application from the flow provisions of Chapter 173-549 WAC. The author proposes that this interim exemption exist for a period not to exceed two (2) years. During that time, the City of Omak must change existing water right which is not subject to instream flow provisions to the OWP wells to continue receiving water when minimum flows are not met.

The further need for this permit shall be evaluated during the process to change existing rights.

Recommendations

The author respectfully recommends that a permit issue to the City of Omak authorizing the withdrawal of up to 5,000 gallons per minute, 3,500 acre-feet per year, from 2 wells for the purpose of continuous municipal supply.

The authorization is subject to the following provisions:

This authorization is not additive to existing rights with respect to annual volumes of appropriation. The total withdrawal under all rights shall not exceed 3,500 acre-feet per year.

An updated comprehensive water system plan and a water conservation plan shall be prepared which is to the approved by the Department of Health.

The place of use of this authorization is intended to be the future service area of the comprehensive water system plan in effect at any given time, such that when the plan is updated, the authorization reflects any changes in service area: PROVIDED that Ecology must approve any changes in service area to determine that it results in an appropriate use of this authorization and will not be injurious to the rights of others.

The actual extent to which this permit may be exercised shall be limited to the rate of withdrawal and annual volumes which are determined to be required to meet municipal demand by the updated comprehensive water system plan or the maximum yield of the authorized wells, which ever is less, not to exceed the maximum limitations of this permit, less any water withdrawn from the City's other sources.

Water well reports for the authorized wells must be submitted to this office prior to development (construction) of the system be regarded as complete.

The City shall evaluate its municipal water use under existing water rights and provide to this office an acceptable plan for maximizing the beneficial use of those rights. The submitted plan will include modifications to existing rights through change applications or modifications to well capacities that result in agreement between the authorized pumping rate and the capacity of the source; and general agreement between the priority of the City's rights and the degree of, or order of, reliance placed upon the source to meet to City's water demands.

The City will attempt to acquire existing rights which are displaced by the extension of the municipal water system. The City will propose plans to this office for the disposition of any acquired water rights through the filing of change applications to modify the right to suit a municipal purpose or, if of no use to the City, the right shall be voluntarily relinquished or otherwise accounted for to the satisfaction of the Department of Ecology to update the water right record.

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gate may be installed in addition to the access port.

Flow meters are required on each City well and the supply line from Omak Wood Products.

All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

Report Continued

This authorization is issued without minimum instream flow provisions under Chapter 173-549 WAC for a period of two (2) years from the date of issuance. After two years, the permit shall be subject to the following flow provisions:

This authorization is subject to the provisions of Chapter 173-549 WAC as adopted in Olympia, Washington, August 14, 1976, and revised effective July 19, 1984, and the general rules of the Department of Ecology as specified under Chapter 173-500 WAC.

Instream flows as established at monitoring station 12.4472.00 at river mile 17.0, Section 9, T. 32 N., R. 25 E., W.M., and as presented in the table below shall be maintained by regulation of diversions as set forth in said WAC 173-549.

Instream flow hydrographs, as represented in WAC 173-549-900, shall be used for definition of instream flows on those days not specifically identified in WAC 173-549-020(2). Instream flows at Station 12.4472.00.

Primary Control Station: 12.4472.00 (Lower Okanogan)
River Mile: 17.0

Instream Flows in the Okanogan River
(Instantaneous cubic feet per second)

	Lower Okanogan	Middle Okanogan	Upper Okanogan	Similkameen
STATION:	12.4472.00	12.4450.00	12.4395.00	12.4425.00
RIVER MILE:	(17.0)	(50.8)	(77.3)	(15.8)
Jan 1	860	800	320	400
Jan 15	830	800	320	400
Feb 1	820	800	320	400
Feb 15	850	800	320	400
Mar 1	880	800	320	425
Mar 15	900	800	320	450
Apr 1	925	910	330	510
Apr 15	1100	1070	340	640
May 1	1750	1200	350	1100
May 15	3800	3800	500	3400
Jun 1	3800	3800	500	3400
Jun 15	3800	3800	500	3400
Jul 1	2100	2150	420	1900
Jul 15	1200	1200	350	1070
Aug 1	800	840	320	690
Aug 15	600	600	300	440
Sep 1	620	600	300	400
Sep 15	700	600	300	400
Oct 1	750	730	330	450
Oct 15	960	900	370	500
Nov 1	950	900	370	500
Nov 15	950	900	320	500
Dec 1	930	900	320	500
Dec 15	900	850	320	450

No diversion of water under this authorization shall take place when the stream flow at this station is below the above flows.

Report Continued

Based on projections of water availability for this location on the Okanogan River, it appears that a firm supply (defined as that flow level at which the instream flows are exceeded 9 out of every 10 years) will not be available during extended periods of the year.

Therefore, water shortages and regulations should be expected at least one year out of ten, but probably more often.

This water right (when perfected) shall carry the following advisory reference:

Water available under this authorization will not provide a firm supply throughout each year.

REPORT BY:

Fred Rajala
Fred Rajala

DATE: 4-22-93

APPROVED BY:

Doug Clausen
Doug Clausen, Section Manager

DATE: 4/22/1993

18x108gh/ska



State of Washington In the Heart of the Okanogan

Dale Sparber, Mayor

2 North Ash
(509) 826-1170
P.O. Box 72
Omak, WA 98841
Fax: 509-826-6531
info@omakcity.com

July 29, 2004

Washington Department of Ecology
Water Resources Program
15 West Yakima Avenue, Suite 200
Yakima, WA 98902-3452

Attn: Phil Crane
Water Resources Program

Re: City of Omak
Water Rights Change Application - Additional Points of Withdrawal

Dear Mr. Crane:

The City of Omak requests that the following water rights change applications, previously submitted to W.D.O.E. in November 1998, be amended with the addition of two additional points of withdrawal:

CG4-GWC445-D@1
CG4-GWC1082-D@1
CG4-GWC3655-A@1
CG4-GWC3656-A@1
CG4-GWC7332-A@1

The two additional points of withdrawal are identified as the "Hicks Well", located in the Northwest Quarter, Northwest Quarter Section 25, Township 34 North, Range 26 East, W.M. and the "Dean Well", located in the Southwest Quarter, Southwest Quarter Section 19, Township 34 North, Range 26 East, W.M.

Additionally, the City is submitting the enclosed new Application for Change/Transfer of Water Right requesting the addition of the Hicks Well" and the "Dean Well" as additional points of withdrawal to Ground Water Rights Certificate 446-D.

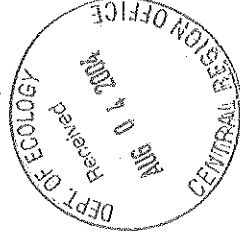
Thank you for your consideration of these water rights changes. Should you have any questions, please contact the City's engineering consultant, Mr. Jeffrey T. Lourman, PE at (509) 966-7000.

Very truly yours,

Dale Sparber
Mayor, City of Omak

Enclosure: Application for Change of Water Right (Additional Points of Withdrawal)

CG# 11647
10/8/04
To: [unclear]

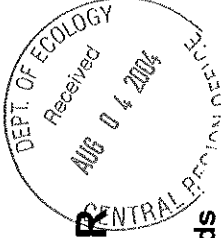




STATE OF WASHINGTON

APPLICATION FOR CHANGE/TRANSFER OF WATER RIGHT

For filing with Ecology or with County Conservancy Boards



A MINIMUM FEE OF \$10.00 PAYABLE TO ECOLOGY MUST ACCOMPANY THIS APPLICATION

(Check all that apply.)

- ☐ Change purpose(s) of use
☐ Add purpose(s) of use
☐ Change point(s) of diversion/withdrawal
☒ Add point(s) of diversion/withdrawal
☐ Change/transfer place of use
☐ Other (i.e. consolidation, intertie, trust water)

Explain: _____

FOR OFFICE USE ONLY	
CHANGE No. <u>C646w 446-D @3 WRIA 49</u>	
DATE ACCEPTED <u>08/12/04</u> BY <u>[Signature]</u>	
FEE \$ <u>10.00</u> REC'D <u>8,4104</u>	
CHECK No. <u>11647</u>	
SEPA: <input type="checkbox"/> Exempt <input type="checkbox"/> Not exempt	<u>Yes</u>

****IF MORE SPACE IS NEEDED, ATTACH ADDITIONAL SHEETS (PLEASE PRINT OR TYPE CLEARLY)****

1. Applicant Information:

APPLICANT/BUSINESS NAME City of Omak	PHONE NO. (509) 826-1170	FAX NO. (509) 826-6531
ADDRESS P.O. Box 72		
CITY Omak	STATE Washington	ZIP CODE 98841-0072

CONTACT NAME (IF DIFFERENT FROM ABOVE)

PHONE NO. ()	FAX NO. ()
------------------	----------------

ADDRESS

CITY

STATE

ZIP CODE

2. Water Right Information:

WATER RIGHT OR CLAIM NUMBER 446-D	RECORDED NAME(S) City of Omak
DO YOU OWN THE RIGHT TO BE CHANGED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
IF NO, PROVIDE OWNER(S) NAME:	
HAS THE WATER BEEN PUT TO BENEFICIAL USE IN THE LAST FIVE (5) YEARS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	

Please attach copies of any documentation that demonstrates consistent, historical use of water since the right was established. Also, if you have a water system plan or conservation plan, please include a copy with your application.

FOR OFFICE USE ONLY

APP. NO. 488 PERMIT NO. 446-D CERT. NO. 446-D CERT. OF CHANGE NO. _____

C646w 446-D @3

C646w 446-D @3

3. Point(s) of Diversion/Withdrawal:

A. Existing

SOURCE	NO.	¼	¼	SEC.	TWP.	RGE.	PARCEL #	WELL TAG #
Apple Well		SW	SE	26	34N	26E		

B. Proposed

SOURCE	NO.	¼	¼	SEC.	TWP.	RGE.	PARCEL #	WELL TAG #
Hicks Well		NW	NW	25	34N	26E		
Dean Well		SW	SW	19	34N	26E		

DO YOU OWN THE EXISTING AND PROPOSED POINT(S) OF DIVERSION/WITHDRAWAL?

EXISTING: ☒ YES ☐ NO PROPOSED: ☐ YES ☒ NO - IF NO, PROVIDE OWNER(S) NAME:

Hicks Well - Marlene J. Rawley, Owner Dean Well - Alan Gann, Owner

Please include copies of all water well reports involved with this proposal. Also, if you know the distances from the nearest section corner to the above point(s) of diversion/withdrawal please include that information in Item No. 6 (remarks) or as an attachment.

4. Purpose of Use:

A. Existing

PURPOSE OF USE	GPM or CFS	ACRE-FT
Municipal Water Supply	800	96

No parcels in the name of Gann in the SW SW Sect 19
Parcel in SW SW is in the 19th Sect.

B. Proposed

PURPOSE OF USE	GPM or CFS	ACRE-FT/YR	PERIOD OF USE
Municipal Water Supply	800	96	

5. Place of Use:

A. Existing

LEGAL DESCRIPTION OF LANDS WHERE WATER IS PRESENTLY USED:
City of Omak Water Service Area.

¼	¼	SEC.	TWP.	RGE.	COUNTY	PARCEL #	# OF ACRES
25, 26	27, 34	35, 36	34N	26E	Okanogan		approx 3,850

DO YOU OWN ALL THE LANDS IN THE EXISTING PLACE OF USE? ☐ YES ☐ NO - IF NO, PROVIDE OWNER(S) NAME:
Various owners within the City of Omak Water System Service Area.

B. Proposed

LEGAL DESCRIPTION OF LANDS WHERE NEW USE IS PROPOSED:
City of Omak Water System Service Area.

¼	¼	SEC.	TWP.	RGE.	COUNTY	PARCEL #	# OF ACRES
25, 26	27, 34	35, 36	34N	26E	Okanogan		approx 3,850

DO YOU OWN ALL THE LANDS IN THE PROPOSED PLACE OF USE? ☐ YES ☐ NO - IF NO, PROVIDE OWNER(S) NAME:
Various owners within the City of Omak Water System Service Area.

Attach a detailed map of your proposed change/transfer. The map should show existing and proposed point(s) of diversion/withdrawal, place of use and any other features involved with this application. If platted property, please include a certified copy of the plat map.

Are there any ADDITIONAL water rights OR CLAIMS RELATED to the same property as the ONE PROPOSED FOR CHANGE/TRANSFER?
☐ YES ☐ NO – IF YES, PROVIDE THE WATER RIGHT/CLAIM NUMBER(S):

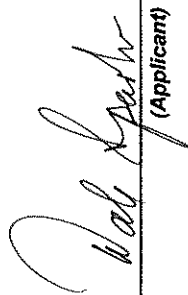
6. Remarks and Other Relevant Information:

Two City of Omak primary source wells, Apple and Kenwood, with a combined capacity of 1,050 GPM or 1.512 MGD, are available to the City under emergency-only conditions due to their designation as groundwater under influence (GWI) of surface water (Okanogan River). The City is planning to add two new source wells (existing, privately owned wells that the owners are willing to sell to the City) and adding additional points of withdrawal from Apple and Kenwood to the two new wells. Omak has previously submitted water rights change applications to the Washington Department of Ecology (WDOE) requesting that each existing City well be added to the other wells' water rights. This will allow an individual well to withdraw water under any of the existing water right certificates held by the City.

IF FOR SEASONAL OR TEMPORARY, START DATE ____/____/____ END DATE ____/____/____

7. Signatures:

I certify that the information above is true and accurate to the best of my knowledge. I understand that in order to process my application, I am hereby granting staff from the Department of Ecology or the County Conservancy Board access to the above site(s) for inspection and monitoring purposes. If assisted in the preparation of the above application, I understand that all responsibility for the accuracy of the information rests with me.

_____
(Applicant) 7/28/04
(Date)

(Water Right Holder) ____/____/____
(Date)

(Land Owner(s) of Existing Place of Use) ____/____/____
(Date)

IMPORTANT! APPLICATION FILING INFORMATION IS PROVIDED ON THE NEXT PAGE.

WE ARE RETURNING YOUR APPLICATION FOR THE FOLLOWING REASON(S):

- ☐ APPLICATION FEE NOT ENCLOSED ☐ MAP NOT INCLUDED or INCOMPLETE
- ☐ ADDITIONAL SIGNATURES REQUIRED ☐ SECTION ____ IS INCOMPLETE
- ☐ OTHER/EXPLANATION: _____

STAFF: _____ DATE: ____/____/____

CERTIFICATE RECORD No. 1 PAGE No. 446-D UNDER DECLARATION OF CLAIM No. 488
 STATE OF WASHINGTON, COUNTY OF Okanogan

Certificate of Ground Water Right

Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and the rules and regulations of the State Supervisor of Hydraulics thereunder.

THIS IS TO CERTIFY THAT CITY OF OMAK WATER DEPARTMENT
 of Omak, Washington has filed
 in the office of the State Supervisor of Hydraulics of Washington Declaration of Claim No. 488
 to withdraw ground waters of the State from a Pump Well
 located within Block 3 of Omak Addition, Omak, Washington

for the purpose of Municipal supply

The right to the use of said ground waters has been sustained and approved by the Supervisor of Hydraulics in accordance with Chapter 263, Laws of Washington for 1945, and is hereby entered of record in Volume 1 of Ground Water Certificates at page 446-D; the right approved has a priority of March, 1936; the amount of water which the Declarant is entitled to withdraw for the aforesaid purpose is limited to the amount actually beneficially used and shall not exceed 800 gallons per minute: 96 acre-feet per year; and is appurtenant to the following described lands or place of use:

City of Omak, Okanogan County, Washington

Well #3

The right to the use of the ground water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Hydraulics affixed this 15th day of December, 1947

RODNEY RYKER
 State Supervisor of Hydraulics
 By Charles J. Ryker
 CHAS. J. RYKER, Secretary

REPORT OF FINDINGS ON GROUND WATER Decl. 488

NAME H. G. Hubbert Water Supt. City of Omak

DATE OF WORKS: pump well Date of Examination June 26, 1947

Dimensions: 29' x 10' Progress of Works: completed

LOCATION: back 30' Omak Addition

QUANTITY CLAIMED OK acre feet
Applied for 800 g.p.m. 500 per year

USE: municipal

Irrigation-acreage: Present Planned Feasible

Municipal: Population 3,320 as of present

Industrial: _____

Time Pump Will Be Operated: _____

Other Water Rights of Applicant: ground water deels. 486, 487 and 489

Proximity to existing works, springs or streams: _____

Estimated effect of withdrawal of water on existing water rights: _____

Water Bearing Zone: _____

RECOMMENDATIONS

Approved for 800 g.p.m. 96 acre feet
per year, subject to existing water rights.

This well used 31,263,000 gallons from October 1, 1946 to October 1, 1947 which amounts to 96 acre feet a year.

According to figures sent in by Mr. Hubbert 1,430 acre feet a year are used from the new city well on the Colville Indian Reservation, but as we have no jurisdiction over the two wells there, no findings for these are being sent.

Signed this 3rd day of November, 1947

FRED B. ROBERTS
Ground Water Geologist

PROGRESS SHEET - APPLICATION FOR CHANGE ON:

WRIA 49 CG-4-GWC 3656-A@1 COUNTY OKANOGANNAME: CITY OF OMAK PHONE: (509) 926-1170ADDRESS: P.O. BOX 72 OMAK WA. 98841PURPOSE OF APPLICATION: ADD POW (4812/4958/3656)Original Right Holder: CITY OF OMAK 64-04812CWR15Application received: NOVEMBER 24, 1999 Initial \$10.00 fee received: (X) Yes () No

Statement of additional exam fee \$ _____ Sent _____ Received _____

PUBLICATION: amended EGIST Date _____ Notice Sent amended 8-25-04
Approved by: _____ date _____ 2-16-99CONSULTED AGENCIES:
DOH _____ DOW _____ DOF _____ USBR _____ TRIBES _____

PROTESTS: _____ By: _____ Name _____

_____ By: _____ Name _____

_____ By: _____ Name _____

Affidavit received: 3/23/99 Checked by: DM P.P. time expires: 4/9/99
amended rec'd 10/7/04 date _____ checked by: ST P.P. expires 10/29/04 date _____Report written by: Scott Turner Date Report Sent: 08-11-2005

DEVELOPMENT SCHEDULE

Beginning of Construction: Date sent: 1-7-08 Date received: _____
Extensions: 12-31-2011Completion of Construction: Date sent: _____ Date received: _____
Extensions: _____Proof of Appropriation: Date sent: _____ Date received: _____
Extensions: _____

Date well report(s) received: _____

DATE APPROVED FOR CHANGE: _____ BY: _____

- () Superseding Permit
☒ Superseding Certificate
() Certificate of Change (on claims)
Vol. 1-4, Page _____

Date certificate fees requested: _____ Date received: _____

DATE CHANGE ISSUED: _____

City of Omak (six ROEs for Change issued 08/11/2005):
CG4-GWC445D@1, CG4-GWC446-D@3, CG4 GWC1082-D@1,
G4-GWC3655@1, CG4-GWC3656 A@1, CG4-GWC7332-A@1

REMARKS: _____



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
15 W Yakima Ave, Ste 200 • Yakima, WA 98902-3452 • (509) 575-2490

January 7, 2008
CERTIFIED MAIL
7006 0100 0002 8191 8256

City of Omak
Attn: Dale Sparber, Mayor
PO Box 72
Omak WA 98841

Re: RE: Water Right Change Authorizations No. CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1, CG4-GWC445-D@1, CG4-GWC7332-A@1, and CG4-GWC446-D@3

In response to your request, you are hereby granted an extension of time in which to begin construction. Your new deadline to begin construction of your water system and submit a completed *Beginning of Construction* form is **December 31, 2011**.

Reason(s) for granting extension:

1. To file your appeal with the Pollution Control Hearings Board:

Mail appeal to:	OR	Deliver your appeal in person to:
The Pollution Control Hearings Board PO Box 40903 Olympia WA 98504-0903		The Pollution Control Hearings Board 4224 - 6th Ave SE Rowe Six, Bldg 2 Lacey WA 98503

2. To serve your appeal on the Department of Ecology:

Mail appeal to:	OR	Deliver your appeal in person to:
The Department of Ecology Appeals Coordinator PO Box 47608 Olympia WA 98504-7608		The Department of Ecology Appeals Coordinator 300 Desmond Dr SE Lacey WA 98503

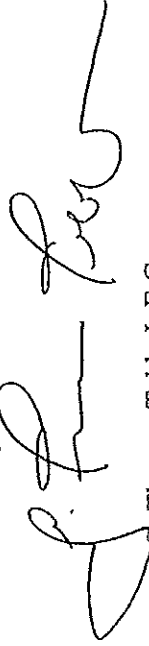
3. And send a copy of your appeal packet to:

G. Thomas Tebb, L.E.G.
The Department of Ecology
Central Region Office
15 W Yakima Ave Ste 200
Yakima WA 98902-3452

*For additional information visit the Environmental Hearings Office Website: <http://www.eho.wa.gov>
To find laws and agency rules visit the Washington State Legislature Website: <http://www1.leg.wa.gov/CodeReviser>*

If you have any questions or concerns about this information, please call the Department of Ecology at
(509) 575-2597.

Sincerely,



G. Thomas Tebb, L.E.G.
Section Manager
Water Resources Program

GTT:ST:gh
080106

Enclosure(s): *Beginning of Construction forms (6)*
"Your Right to Be Heard" Information Sheet

CS-4a.doc

Y900



9528 7678 2000 0010 9002
9528 7678 2000 0010 9002

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Total Postage & Fees \$	

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1-07-03

Sent To City of Omak

Street, Apt. No., or PO Box No.

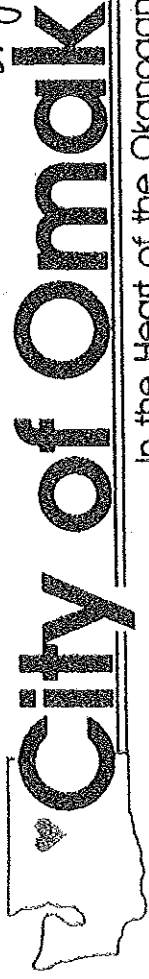
City, State, ZIP+4

PS Form 3800, June 2002 See Reverse for Instructions

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>1. Article Addressed to:</p> <p>CITY OF OMAK ATTN: DALE SPARBER MAYOR PO BOX 72 OMAK WA 98841</p> <p>WR/gh Nos. CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1, CG4-GWC445-D@1, CG4-GWC7332-A@1, and CG4-GWC446-D@3</p>		<p>A. Signature <u>Dale Sparber</u> <input checked="" type="checkbox"/> Agent <input type="checkbox"/></p> <p>B. Received by (Printed Name) <u>Dale Sparber</u> C. Date of Delivery <u>1-8</u></p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, enter delivery address below:</p>	
<p>2. Article Number</p> <p>7006 0100 0002 8191 8256</p> <p>PS Form 3811, February 2004 Domestic Return Receipt</p>		<p>3. Service Type</p> <p><input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	

6 300.
Ch 2005
3-5-07
VRF

RECEIVED
MAR 05 2007
CENTRAL REGION OFFICE



State of Washington In the Heart of the Okanogan

February 28, 2007

Washington Department of Ecology
15 West Yakima Avenue, Suite 200
Yakima, WA 98902-3452

Attn: Erin Gutierrez
Water Resources Program

Re: Water Rights Change Application No. CG4-GWC1082-D@1, CG4-
GWC3655-A@1, CG4-GWC3656-A@1, CG4-GWC445-D@1, CG4-
GWC7332-A@1, and CG4-GWC446-D@3

Dear Ms. Gutierrez:

The City of Omak requests that the development schedule for each of the authorized water rights changes referenced above, be extended to December 31, 2011. We have experienced delays in acquiring two existing, privately owned wells that were authorized in the water rights changes.

The City secured a Drinking Water State Revolving Fund (DWSRF) loan from the Public Works Board in 2005 for the construction of several potable water system improvements. Acquisition of two existing wells identified as the "Hicks" and "Dean" wells, and construction of new pumphouse and transmission main improvements were part of the DWSRF project. Unfortunately, we have had difficulty negotiating a price for the wells and properties with the owners. Recently, however, Okanogan County purchased the "Dean" well and surrounding property and, as a condition of annexation, has been required to transfer ownership of the well to the City.

The City has been actively negotiating with the "Hicks" well owner for some time. We had the well and property appraised and made a "fair market" offer. The price was not acceptable to the owner and they initiated their own second appraisal. As of this date we have not received a counter offer price.

During the "Hicks" well negotiation period, we conducted a well capacity pump test and required potable water quality tests. Our engineers have also completed

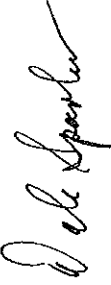
design of the "Hicks" pumphouse and transmission main and are ready to proceed with advertising for bids as soon as the well is acquired.

It is extremely important to the City of Omak to develop additional sources of potable water supply north of the Okanogan River and off the Colville Indian Nation reservation.

We will continue to pursue acquisition of the existing wells and/or drill new wells on nearby property if necessary. A development schedule time extension is needed in order to allow sufficient time to complete well purchase negotiations and to initiate construction activities.

Thank you for your attention in this matter. Should you have any questions or require additional information please contact our engineering consultant, Jeff Louman, PE at (509) 966-7000.

Sincerely,

A handwritten signature in cursive script, appearing to read "Dale Sparber".

Dale Sparber
Mayor



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

February 1, 2007

City of Omak
PO Box 72
Omak WA 98841-0072

RE: Water Right Change Authorizations No. CG4-GWC1082-D@1, CG4-GWC3655-A@1,
CG4-GWC3656-A@1, CG4-GWC445-D@1, CG4-GWC7332-A@1, and
CG4-GWC446-D@3

This letter is to remind you that the development schedule of the authorized changes to your water rights required that you begin construction of the project by June 1, 2006. **You are now out of compliance with the development schedule in your change authorizations.**

When you received your change authorizations, we sent you *Beginning of Construction* (BC) forms so that you could notify us that you had begun construction. We have not received your BC forms. If you have begun construction, additional forms are enclosed for you to fill in and return to us.

If you have not begun construction of your project, you must obtain an extension of the development schedule or your change authorizations may be cancelled. ***Your request must be in writing and include the following information:***

- A description of the efforts you have made to begin the project.
- A schedule for beginning the project.
- Reasons why the project has not begun.
- Any additional information that will assist us in evaluating your request for extension.

To request an extension, a non-refundable fee of \$50 for each change authorization must be submitted along with the extension request. Ecology will review the submitted information to determine whether an extension can be granted. If it is not granted, we will notify you in writing and that decision may be appealed.

Please submit completed *Beginning of Construction* forms or the above-requested information **within thirty (30) days**. If you are no longer interested in pursuing the project or if your project has changed since the change authorizations were issued, please contact this office in writing. Questions or concerns can be directed to Teresa Mitchell at (509) 575-2597.

Sincerely,

Erin Gutierrez

Erin Gutierrez
Water Resources Program

EG:gh
070201

Enclosure(s): *Beginning of Construction* forms (6)

BC1 for Change.doc

FILE COPY

WATER RIGHTS REVIEW ROUTER

- ☒ Report of Exam (ROE) ☒ ROE for Change
☐ Temporary Permit ☐ Conservancy Board Decision
☐ Preliminary Permit ☐ Short Term Authorization

FILE NO. 664-GWC 365601

Y:\STAFF\Turner\NWA\sewer\sd\Mark 365601

AUTHOR Turner 6-9-05
8/5/05 99 to JTK (date)
8/4/05 99 to OK

DRAFT 7/22/05 to CM FINAL 8/10/05 98
 (by typist) (by typist)

Mark Schuppe ALC Schuppe 7/14/05
 (date)

Phil Crane Carol Motson 7/27/05
 (date)

Permit Writer _____ (date)

MAIL OUT 88 8/11/05
 (date)

GWIS MAPPING REVIEW
 (Debra reviews changes BEFORE finalization)

Debra Kroon AK Kroon 8/5/05
 (date)

GWIS Remarks: TYPO on page 1 of alk

Corrected 8/5/02 98

377 gpm short

66 375 gpm 9/4/05

CIRCLE APPROPRIATE WRIA:

TRIBE	WRIA
Colville Confederated Tribes	<u>(49)</u> 50 51 52 53 58 60 61
Yakama Nation	29 30 31 32 33 37 38 39 40
Both Tribes	45 46 47 48

cc TO ANYONE ELSE?

ECT
Jeffrey Lounan, PE

MINIMUM FLOWS?

cc CRO Enforcement _____
 cc River Letter List _____

REMARKS and/or RELATED FILES:

No Protestants

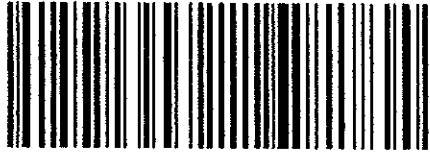
ATTACHMENTS:

- ☐ Your Right to Be Heard
☐ Ground Water Bulletin No. 1
☒ BO CC PA forms 6/22/04 6/2006
☐ Water Measurement Requirements
☐ Fish Screening Criteria
☐ Important Information Sheet (Permit)
☐ Other: _____

PERMIT FEE \$ _____

Permit Fee Calculation: _____

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT
OF THE RETURN ADDRESS, FOLD AT DOTTED LINE



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City of Omak

Street Apt. No.,
or PO Box No.

City, State, Zip+4

PS Form 3800, June 2002

See Reverse for Instructions

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

CITY OF OMAK
PO BOX 72
OMAK WA 98841-0072

WR:SS ROES/Ch
CG4-GWC445D@1, CG4-GWC446-D@3, CG4 GWC1082 D@1
G4-GWC3655@1, CG4 GWC3656 A@1, CG4-GWC7332-A@1

COMPLETE THIS SECTION ON DELIVERY

A. Signature

☒ X

☐ Agent

☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail

☐ Express Mail

☐ Registered

☐ Return Receipt for Merchandise

☐ Insured Mail

☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number

(Transfer from service label)

7004 1160 0002 6156 6713

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

original green card is in:
CG4-GWC445D@1



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

August 11, 2005
CERTIFIED MAIL

City of Omak
PO Box 72
Omak WA 98841-0072

RE: Applications for Change on Nos. CG4-GWC445D@1, CG4-GWC446-D@3,
CG4-GWC1082-D@1, G4-GWC3655-A@1, CG4-GWC3656-A@1, CG4-GWC7332-A@1

Your applications to change your water rights have been carefully reviewed in accordance with the requirements of the State's water codes. The Applications for Change have been approved, subject to the conditions and limitations described in the Reports of Examination for Change. Please refer to the enclosed Reports of Examination for Change, which summarize our findings and represents our final decision.

You have the right to appeal this decision to the Pollution Control Hearings Board. Pursuant to Chapter 43.21B RCW, your appeal must be filed with the Pollution Control Hearings Board, and served on the Department of Ecology, within thirty (30) days of the date of your receipt of this document.

To appeal this decision, your notice of appeal must contain a copy of the Ecology decision you are appealing.

Your appeal must be filed with:

The Pollution Control Hearings Board
4224 - 6th Avenue SE Rowe Six Bldg 2
PO Box 40903
Lacey WA 98504-0903

Your appeal must also be served on:

The Department of Ecology
Appeals Coordinator
PO Box 47608
Olympia WA 98504-7608

In addition, please send a copy of your appeal to:

Robert F. Barwin
Department of Ecology
15 W Yakima Ave Ste 200
Yakima WA 98902-3452

FILED



City of Omak
August 11, 2005
Page 2 of 2

Please pay particular attention to the Recommendation section for the terms and conditions of this approval. If you have any questions or concerns about this decision, or we if can otherwise provide further assistance, please call Bryce Bealba of the Department of Ecology at (509) 575-2597.

Sincerely,



Robert F. Barwin, Section Manager
Water Resources Program
Central Region Office

RFB-ST:gg
050814

Enclosure(s): Reports of Examination for Change (6)
"Your Right to Be Heard" Information Sheet
Beginning of Construction Forms (6)
Ground Water Bulletin No. 1
Water Measurement Requirements

cc: Lois Trevino, Water Administrator, Office of Environmental Trust, Colville Confederated Tribes

f-1chgg.doc



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

August 11, 2005

To: Lois Trevino, Water Administrator, Office of Environmental Trust, Colville Confederated Tribes

RE: Reports of Examination for Change on Nos. CG4-GWC445D@1, CG4-GWC446-D@3,
CG4-GWC1082-D@1, G4-GWC3655@1, CG4-GWC3656-A@1, CG4-GWC7332-A@1
(City of Omak, Applicant)

Since you are identified as a party interested in the above water right applications, we are enclosing copies of our Reports of Examination for Change which summarize our findings and represents our final decision.

You have the right to appeal this decision to the Pollution Control Hearings Board. Pursuant to Chapter 43.21B RCW, your appeal must be filed with the Pollution Control Hearings Board, and served on the Department of Ecology, within thirty (30) days of the date of your receipt of this document.

To appeal this decision, your notice of appeal must contain a copy of the Ecology decision you are appealing.

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PO Box 47608
Olympia WA 98504-7608

In addition, please send a copy of your appeal to:

Robert F. Barwin
Department of Ecology
15 W Yakima Ave Ste 200
Yakima WA 98902-3452

If you have any questions or concerns about these decisions, or we if can otherwise provide further assistance, please call Bryce Bealba of the Department of Ecology at (509) 575-2597.

Sincerely,

Robert F. Barwin, Section Manager
Water Resources Program
Central Region Office

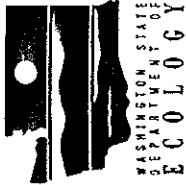
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Enclosures: Reports of Examination for Change (6)

f-10th.doc

FILE COPY





STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION FOR CHANGE
TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

☐

Surface Water

(Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒

Ground Water

(Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
March 20, 1958	CG4-GWC3656-A@1		
NAME			
City of Omak			
ADDRESS (STREET)		(CITY)	(STATE)
PO Box 72		Omak	WA
			(ZIP CODE)
			98841-0072

PUBLIC WATERS TO BE APPROPRIATED

SOURCE		
9 wells		
TRIBUTARY OF (IF SURFACE WATERS)		

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE- FEET PER YEAR
	375	600

QUANTITY, TYPE OF USE, PERIOD OF USE
375 gallons per minute and 600 acre-feet per year continuously for municipal supply.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL
✓ Kenwood Well: 1100 feet north and 600 feet east of the south quarter corner of Section 26.
✓ Apple Well: 800 feet north and 200 feet east of the south quarter corner of Section 26.
✓ Okoma Well: 660 feet south and 520 feet west of the east quarter corner of Section 34.
✓ Eastside Well: 800 feet north and 1170 feet west of the southeast corner of Section 35.
✓ OWP No. 2: 1210 feet north and 530 feet west from the southeast corner of Section 35.
✓ Hicks Well: 275 feet south and 1000 feet east from the northwest corner of Section 25.
✓ Powers Well: Being within the NE¼NE¼ of Section 26.
✓ Well No. 9: 1275 feet north and 100 feet west from the southeast corner of Section 24.
✓ Dean Well: 1625 feet north and 225 feet east of the southwest corner of Section 19.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE (E OR W.) W.M.	W.P.A.	COUNTY
SW¼SE¼	26	34	26 E	49	Okanogan
SW¼SE¼	26				
NE¼SE¼	34				
SE¼SE¼	35				
SE¼SE¼	35				
NW¼NW¼	25				
NE¼NE¼	26				
SE¼SE¼	24				
NW¼SW¼	19		27 E		

RECORDED PLATTED PROPERTY	
LOT	BLOCK
	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

The place of use of this water right is the service area described in the most recent Water System Plan approved by the Washington State Department of Health, so long as City of Omak is and remains in compliance with the criteria in RCW 90.03.386(2). RCW 90.03.386 may have the effect of revising the place of use of this water right.

If the criteria in RCW 90.03.386(2) are not met, the place of use of this water right reverts to the last place of use described by Ecology in a water right authorization.

FILE COPY

DESCRIPTION OF PROPOSED WORKS

The City of Omak's wells pump water through a series of main lines to four reservoir systems (500,000 gallons, 550,000 gallons, 800,000 gallons, and 1,065,000 gallons) sited in various locations around the City. The telemetry system is located at City Hall which controls both the quantities of water pumped and the quantities of water released from the reservoirs to the City of Omak's connections.

DEVELOPMENT SCHEDULE		
BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER PUT TO FULL USE BY THIS DATE:
June 2006	June 2011	Good Standing

REPORT

BACKGROUND INFORMATION

On November 24, 1998, the City of Omak, Washington, filed an application for change to add one point of withdrawal under Ground Water Certificate No. 3656-A. In late 2004, the City of Omak (the City) requested to amend that application to add an additional three points of withdrawal for a total of four additional points of withdrawal. The application was accepted and assigned identifier No. CG4-GWC3656-A@1.

This application is part of the second set of two sets of change applications submitted to the Department of Ecology (Ecology) by the City. The first set, submitted January 3, 1994, requests authorization to consolidate all of the points of withdrawal under six of the City's existing rights. Ecology approved those applications on June 7, 2005.

The City's second set of Applications for Change, submitted November 24, 1998, request the addition of Well No. 9 to each of their existing water rights. A Report of Examination issued for Application for Change No. CG4-GWC446-D@1 (Apple well) approving the use of Well No. 9 on December 7, 2000. The second set of applications were amended on August 4, 2004, requesting to add three wells in addition to Well No. 9, to the City's existing rights.

This report will address Ecology's findings of fact and recommendations related to Application for Change No. CG4-GWC3656-A@1. Separate reports will address the specific recommendations for each Application for Change. Although many elements of the reports are identical, the evaluation for authorizing four additional points of withdrawal for each water right, including the consideration of the potential for impairing existing rights due to increased pumping rates at each source, will be considered separately.

Attributes of Ground Water Certificate No. G4-GWC3656-A

Name on Certificate, Claim, Permit:	City of Omak
Priority Date, First Use:	May 20, 1958
Instantaneous Quantity:	375 gallons per minute (gpm)
Annual Quantity:	600 acre-feet per year (acre-ft/yr)
Source:	5 wells
Point of Withdrawal:	Kenwood Well: 1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW ¹ / ₄ SE ¹ / ₄ Section 26, T. 34 N., R. 26 E.W.M. Apple Well: 800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW ¹ / ₄ SE ¹ / ₄ of Section 26, T. 34 N., R. 26 E.W.M. Okoma Well: 660 feet south and 520 feet west of the east quarter corner of Section 34, being within the NE ¹ / ₄ SE ¹ / ₄ of Section 34, T. 34 N., R. 26 E.W.M. Eastside Well: 800 feet north and 1170 feet west of the southeast corner of Section 35, being within the SE ¹ / ₄ SE ¹ / ₄ of Section 35, T. 34 N., R. 26 E.W.M. OWP No. 2: 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE ¹ / ₄ SE ¹ / ₄ of Section 35, T. 34 N., R. 26 E.W.M.
Purpose of Use:	Municipal supply for the City of Omak
Period of Use:	Continuously throughout the year
Place of Use:	City of Omak, Okanogan County, Washington

Proposed Change

Name of Applicant:	City of Omak
Application Date:	January 3, 1994; Amended August 4, 2004
Instantaneous Quantity:	375 gpm
Annual Quantity:	600 acre-ft/yr
Source:	9 wells
Point of Diversion:	<p>Kenwood Well: 1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW$\frac{1}{4}$SE$\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M.</p> <p>Apple Well: 800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW$\frac{1}{4}$SE$\frac{1}{4}$ of Section 26, T. 34 N., R. 26 E.W.M.</p> <p>Okoma Well: 660 feet south and 520 feet west of the east quarter corner of Section 34, being within the NE$\frac{1}{4}$SE$\frac{1}{4}$ of Section 34, T. 34 N., R. 26 E.W.M.</p> <p>Eastside Well: 800 feet north and 1170 feet west of the southeast corner of Section 35, being within the SE$\frac{1}{4}$SE$\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M.</p> <p>OWP No. 2: 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE$\frac{1}{4}$SE$\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M.</p> <p>Hicks Well: 275 feet south and 1000 feet east from the northwest corner of Section 25, being within the NW$\frac{1}{4}$NW$\frac{1}{4}$ of Section 25, T. 34 N., R. 26 E.W.M.</p> <p>Dean Well: 1625 feet north and 225 feet east of the southwest corner of Section 19, being within the NW$\frac{1}{4}$SW$\frac{1}{4}$ of Section 19, T. 34 N., R. 27 E.W.M.</p> <p>Proposed Powers Well: Being within the NE$\frac{1}{4}$NE$\frac{1}{4}$ of Section 26, T. 34 N., R. 26 E.W.M.</p> <p>Well No. 9: 1275 feet north and 100 feet west from the southeast corner of Section 24, being within the SE$\frac{1}{4}$SE$\frac{1}{4}$ of Section 24, T. 34 N., R. 26 E.W.M.</p>
Purpose of Use:	Municipal supply for the City of Omak
Period of Use:	Continuously throughout the year
Place of Use:	City of Omak, Okanogan County, Washington

Public Notice of the application was given in the Omak-Okanogan County Chronicle on March 3 and 10, 1999. An Amended Public Notice of application was given in the Omak-Okanogan County Chronicle on September 22 and 29, 2004. There were no protests during either 30 day protest period.

INVESTIGATION

The following information was obtained from a site inspection conducted by Ecology staff Scott Turner and Melissa Nihsen, with the Assistant Director of Public Works present, on July 28, 2004; research of department records, and conversations with the applicant and department staff. In order to approve the addition of four points of withdrawal under No. GWC3656-A, Ecology must determine:

- The validity and extent of the original water right.
- That the proposed new points of withdrawal tap the same body of public ground water as the authorized wells.
- That the proposed change will not cause impairment to existing water rights or enlarge the original right.
- That the proposed change will not be contrary to the public interest.

Filing of Applications for Change Nos. CG4-GWC445-D@1, CG4-GWC446-D@3, CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1, and CG4-GWC7332-A@1, attempts to increase the City's flexibility in managing its ground water withdrawals for municipal supply. This in part came about because Washington State Department of Health (DOH) declared the Apple and Kenwood wells as ground water under the influence of surface water (GUJ). As a result, the City currently uses those wells only in an emergency need situation. This presents a need for the City to compensate for the water not produced by these wells through the use of newly acquired wells.

Currently, there are five wells that the City operates under municipal water rights. The wells pump water through main lines to four reservoir systems (500,000 gallons, 550,000 gallons, 800,000 gallons, and 1,065,000 gallons) sited in various locations around the City. The telemetry system is located at City Hall, that controls both the quantities of water pumped and the quantities of water released from the reservoirs to the City's connections.

The City of Omak's Existing Municipal Water Rights

The City filed the declarations for the vested water uses under RCW 90.44 090 on July 7, 1947, that resulted in the issuance of Ground Water Declaration Certificate Nos. 445-D, 446-D, and 1082-D described in more detail below.

The water rights are listed below in priority date sequence.

Ground Water Declaration Certificate No. 445-D has a priority date of December 1913, and certifies the withdrawal of 500 gpm, 600 acre-ft/yr for municipal supply from a well (known as the Kenwood Well) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M. This well has been categorized by DOH as a GUI source. This well was reported to be a standby well in the Report of Finding on Ground Water Declaration Claim No. 486 dated November 3, 1947. This well is identified as source S03 by DOH. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Apple Well, the Eastside Well, the Okoma Well, and Omak Wood Products Well No. 2 (OWP No. 2), under this Certificate.

Ground Water Declaration Certificate No. 446-D has a priority date of March 1936, and certifies the withdrawal of 800 gpm, 96 acre-ft/yr for municipal supply from a well (known as the Apple Well) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M. This well has been categorized by DOH as a GUI source. This well is identified as source S02 by DOH. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Kenwood Well, the Eastside Well, the Okoma Well, and OWP No. 2, under this Certificate.

Ground Water Declaration Certificate No. 1082-D has a priority date of May 1944, and certifies the withdrawal of 630 gpm, 1430 acre-ft/yr for municipal supply from a well (known as the Eastside Well) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M. The well was equipped with three pumps: a 15 horsepower (hp), a 30 hp, and a 40 hp rated at 280 gpm, 550 gpm, and 800 gpm respectively. This well is identified as source S01 by DOH. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Apple Well, the Kenwood Well, the Okoma Well, and OWP No. 2, under this Certificate.

Ground Water Certificate No. 3655-A has a priority date of March 20, 1958. It is the second authorization from the Eastside Well (see discussion about the earlier right under Ground Water Declaration Certificate No. 1082-D). It certifies the withdrawal of 1300 gpm, 2080 acre-ft/yr for municipal supply. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Apple Well, the Kenwood Well, the Okoma Well, and OWP No. 2, under this Certificate.

Ground Water Certificate No. 3656-A has a priority date of March 20, 1958, and certifies the withdrawal of 375 gpm, 600 acre-ft/yr for municipal supply. This is a second authorization from the Apple Well (see earlier discussion under Ground Water Declaration Certificate No. 446-D) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M. As described earlier, this well has been categorized by DOH as a GUI source. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Kenwood Well, the Eastside Well, the Okoma Well, and OWP No. 2, under this Certificate.

Ground Water Certificate No. 7332-A has a priority date of June 22, 1970, and certifies the withdrawal of 600 gpm, 560 acre-ft/yr for municipal supply from May 1 through October 31 from a well (known as the Okoma Well) located in the NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 34, T. 34 N., R. 26 E.W.M. Any water withdrawal by the City in excess of 3456 acre-feet from any municipal source is to be deducted from the annual volume authorized by this right. This well is identified as source S04 by DOH. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Apple Well, the Eastside Well, the Kenwood Well, and OWP No. 2, under this Certificate.

Ground Water Permit No. G4-31525P has a priority of November 23, 1992, and authorizes the withdrawal of 5000 gpm, 3500 acre-ft/yr from two wells (interruptible when the Okanogan River drops below minimum instream flows as outlined in the Permit) for municipal supply. The wells described in this Permit are located approximately 1,150 feet west and 500 feet north from the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M. A provision in this Permit states that the annual quantity is not additive to the City's existing rights, and limits all of the City's water rights to 3500 acre-ft/yr.

The source the City believed to be authorized under Ground Water Permit No. G4-31525P (OWP No. 2) is not described on the original Permit. This oversight has resulted in an unauthorized change in point of withdrawal. OWP No. 2 is located approximately 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M., approximately 1,000 feet northeast from the authorized points of withdrawal. OWP No. 2 is actually the authorized source under Certificate of Change CCVOL1-4P238, and is identified as source S07 by DOH.

The original Public Notice was given for Ground Water Permit No. G4-31525P on January 13 and 20, 1993, in the Omak-Okanogan County Chronicle. That Public Notice described the proposed sources for Ground Water Permit No. G4-31525P as being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M. As noted above, OWP No. 2 is also located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M. RCW 90.44.100(3) states "the construction of a replacement or new additional well or wells at the location of the original well or wells (emphasis added) shall be allowed without application to the department for an amendment". On July 27, 2005, the City submitted a Showing of Compliance form stating they have met the criteria stated in RCW 90.44.100(3) in order to legally operate OWP No. 2 under Ground Water Permit No. G4-31525P. The Showing of Compliance form is currently under review by Ecology.

Proposed Additional Sources

The City proposes to add four additional wells, located northeast of the existing municipal wells, under each of the water rights above. The City is requesting the addition of the following four wells to each of their municipal water rights:

- **The Dean Well:** Source for Ground Water Certificate No. G4-28873C, described in the **Ground Water Rights within Omak's Urban Growth Area** section of this report. The well is reported to be 312 feet deep, and capable of pumping about 300 gpm. The City would like to increase the capacity of this well to 500 gpm. The City's application requests only to add this well as an additional source under Ground Water Certificate No. 3656-A.
- **The Hicks Well:** This well is located within the place of use, but is not the authorized source for Ground Water Certificate No. G4-26176C, described in the **Ground Water Rights within Omak's Urban Growth Area** section of this report. The well is reported to be 247 feet deep with a static water level of 150 feet. The Hicks Well is capable of pumping about 600 gpm, but the City would like to increase the capacity to 700 gpm.
- **The Powers Well:** A source to be drilled in the future. Located within the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 26, T. 34 N., R. 26 E.W.M.

- **Well No. 9:** This well is identified as source SO8 by DOH. Authorized as an additional source for Ground Water Declaration Certificate No. 446-D (Apple Well) on December 7, 2000. This well is 305 feet deep with a static water level of 203 feet. Well No. 9 is equipped with a pump capable of producing about 100 gpm, but the City would like to increase the capacity to 500 gpm.

Figure 1 illustrates the location of the City's authorized municipal wells, and the location of the proposed additional wells.

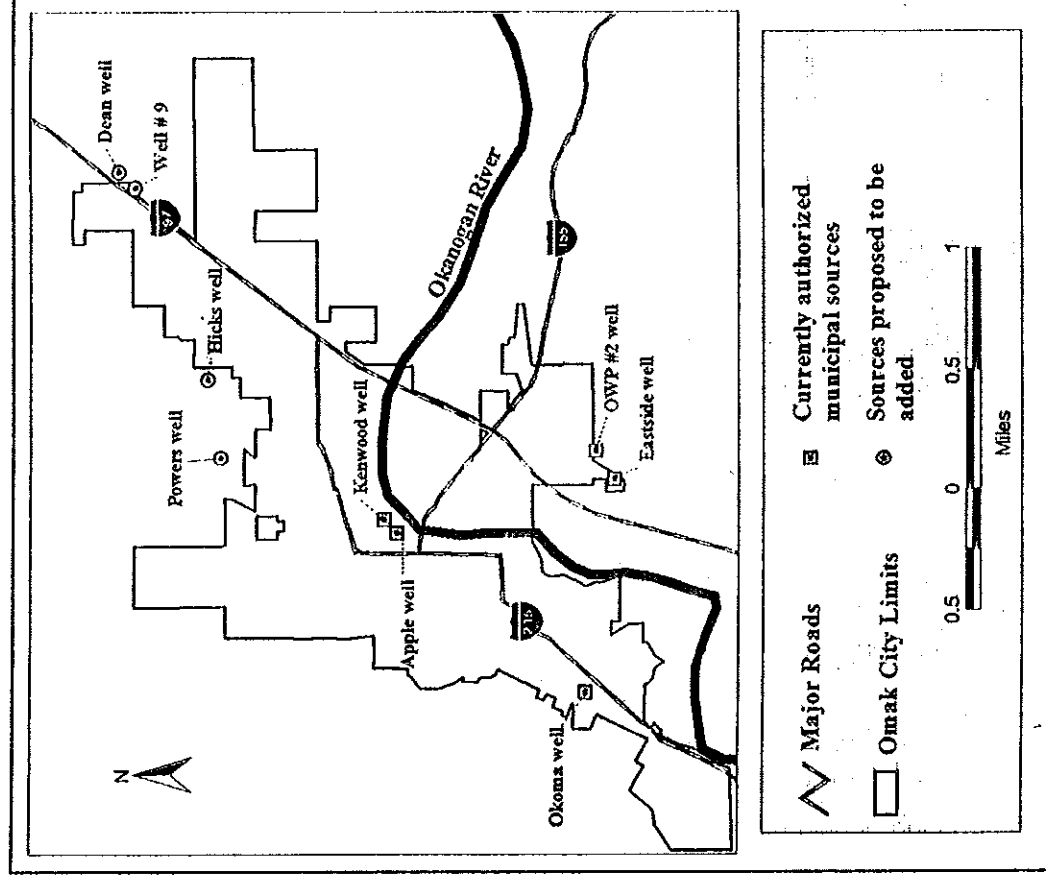


Figure 1. Overview showing the five currently authorized wells and the four proposed wells.

Ground Water Rights within Omak's Urban Growth Area

Ground Water Certificate No. G4-28873C describes a well located approximately 200 feet east and 1700 feet north of the southwest corner of Section 19, being within NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 19, T. 34 N., R. 27 E.W.M. That water right issued for a well for quantities up to 288 gpm and 55 acre-ft/yr for the irrigation of 55 acres from April 1 to October 31. The place of use is all of Government Lot 4 and the S $\frac{1}{2}$ of Government Lot 3 lying southeasterly of State Hwy 97 in Section 19, T. 34 N., R. 27 E.W.M. During the 2004 site inspection, it was observed that the place of use was covered in established sagebrush and appeared not to have been watered within the last five or more years.

Ground Water Certificate No. G4-26176C describes a well located approximately 1000 feet east and 40 feet north from the southwest corner of Section 24 being within the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 24, T. 34 N., R. 26 E.W.M. Water is withdrawn from the well at up to 230 gpm and 117 acre-ft/yr for primary irrigation of 6 acres and standby reserve for 20 acres. The primary right for irrigation of the 20 acres is provided by the Okanogan Irrigation District. The place of use is that part of Section 24, T. 34 N., R. 26 E.W.M. described as follows: the S $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ and that part of the NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ lying south of the L. B. Lateral of the Okanogan Irrigation District and also the NE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 25, T. 34 N., R. 26 E.W.M.

Ground Water Certificate No. G4-26558C describes a right for a well situated approximately 1310 feet west and 1050 feet north from the south quarter corner Section 24 being within the SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 24, T. 34 N., R. 26 E.W.M. It allows for the withdrawal of up to 19 gpm, 0.25 acre-ft/yr for in-house domestic supply and 7 acre-ft/yr to be used during the irrigation season from April 1 through October 15 as standby reserve for the irrigation of two acres. The primary right for irrigation is provided by the Okanogan Irrigation District. The place of use is the N $\frac{1}{2}$ of the west 330 feet of the N $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 24, T. 34 N., R. 26 E.W.M. lying south of the county road right of way.

Suncrest Plat Water System

This system is identified by DOH as PWS ID No. 85207 and has two water rights:

Ground Water Certificate No. G4-23779C is for a well within the NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 25, T. 34 N., R. 26 E.W.M. and certifies the withdrawal for 300 gpm, 30 acre-ft/yr for community domestic supply for 30 homes located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 25, T. 35 N., R. 26 E.W.M.

Report Continued

The second authorization, from the same wells under Ground Water Permit No. G4-26068P with priority date of July 21, 1980, is for two wells within the E½ Section 25, T. 34 N., R. 26 E.W.M. The Permit authorizes the withdrawal of 300 gpm, and 200 acre-ft/yr for community domestic supply for 200 homes and mobile homes. The place of use is the E½E½SE¼ Section 25, T. 34 N., R. 26 E.W. M.

Sandflat Water Users Association

Another community system in the area is the Sandflat Water Users Association, identified by DOH as PWS No. 09064. It is authorized water use under Superseding Ground Water Permit No. G4-26301P with a priority date of July 20, 1979, from two wells located within the NW¼SW¼ Section 30, T. 34 N., R. 26 E.W.M. The Permit authorizes the withdrawal of ground water at 250 gpm, and 220 acre-ft/yr for 245 homes (houses, apartments, duplexes, and condominiums). One well is reported to be drilled 445 feet deep with a 250 gpm capacity, and the other is 214 feet deep with 109 gpm capacity.

Irrigation water within the Sandflat place of use is provided from a surface water diversion under authority of Surface Water Permit No. S4-24234P for the diversion of surface water from the Okanogan River subject to instream flows set by Chapter 173-549 WAC, the Water Resources Program for the Okanogan River Basin, WRIA 49.

Aston Estates

Aston Estates is a public water system operating under three Certificates of Water Right.

Certificate No. G4-23805C with priority date of January 6, 1975, certifies the withdrawal of 40 gpm and 54 acre-ft/yr for a well located within the NE¼NW¼ Section 31, T. 34 N., R. 27 E.W.M. to serve 60 homes within Aston's First Addition in Government Lots 2 and 3, Section 31, T. 34 N., R. 27 E.W.M.

Certificate No. G4-23806C with priority date of January 6, 1975, certifies the withdrawal of 45 gpm and 54 acre-ft/yr from a well located approximately 875 feet west and 850 feet south of the N quarter corner within the NE¼NW¼ of Section 31, T. 34 N., R. 27 E.W.M., to serve 60 homes within Aston's First Addition in Government Lots 2 and 3, Section 31, T. 34 N., R. 27 E.W.M. These are the same 60 homes referenced by Certificate No. G4-23805C. The 54 acre-ft/yr is the maximum annual quantity under both rights, but the instantaneous quantities (40 and 45 gpm) are additive.

A third well is covered by Certificate No. G4-29424C, and authorizes 54.9 acre-ft/yr for 61 homes (60 were covered by the earlier two water rights described above) less any quantity withdrawn under Certificate Nos. G4-23805C and G4-23806C. The instantaneous quantity of 90 gpm is additive to the quantities (40 and 45 gpm) under Certificate Nos. G4-23805C and G4-23806C. This well is located approximately 510 feet west and 650 feet south of the north quarter corner in Section 31 being within Government Lot 2 Section 31, T. 34 N., R. 27 E.W.M.

Water Quantity

Table 1 identifies the Municipal Ground Water Certificates that are included in City of Omak's Water System Plan.

Table 1: Municipal Ground Water Certificates Held by the City of Omak

Certificate No.	Source	Priority date	Qi (gpm)	Qa (acre ft/yr)	Place of use
445-D	Kenwood Well	December 1913	500	600	City of Omak
446-D	Apple Well	March 1936	800	96	City of Omak
3656-A	Apple Well	March 20, 1958	375	600	City of Omak
1082-D	Eastside Well	May 1944	1630	1430	City of Omak
3655-A	Eastside Well	March 20, 1958	1300	2080	City of Omak
7332-A	Okoma Well	June 22, 1970	600	560	City of Omak
G4-31525P	OWP No. 2**	November 23, 1992	5000	3500*	City of Omak

*This annual quantity is not additive to the City's other municipal rights, furthermore this Permit limits the total withdrawal under all of the City's rights not to exceed 3500 acre-ft/yr.

**OWP No. 2 represents an unauthorized change in point of withdrawal described in the City of Omak's Existing Municipal Water Rights section of this report.

Water Demand Forecasting

Historical population and water use reported in the Draft 2004 Water System Plan indicates the extent that the City has continued to develop water use under its water rights. Historical population data included in the plan states that in 1980 the population was 4007 with gradual increases up to 4721 in 2000. This represents a 17.83% increase in the population for that 20 year period. The Water System Plan also contains information on the existing water supply and demand, as well as projections for future water demand and how that relates to the existing supply. The Water System Plan outlines the annual water production for the years of 1998 through 2002. Within that five year period, 1998 was indicated to be the highest production year at approximately 600 million gallons (1841 acre-feet); leaving approximately 1600 acre-feet of the City's total water rights to be developed. The future water demand forecast for the year 2023 predicts that the City's annual water use will be 819.3 million gallons (2514 acre-feet). These data indicate a trend of past growth, and the City's continuing growth into their existing water rights with the flexibility for further growth.

Instantaneous Quantities

Water Right Certificate No. 3656-A certifies the withdrawal of 375 gpm. The proposed change would authorize the withdrawal of that 375 gpm from all of the wells listed in Table 2. The City proposed maximum instantaneous quantities of each well. The maximum Qi for each source submitted by the City is listed in Table 2.

Table 2: Maximum Qi placed on all Possible Sources for the City of Omak

Source	Qi (gpm)
Kenwood Well	500 gpm
Apple Well	1175 gpm
Eastside Well	2930 gpm
Okoma Well	600 gpm
OWP No. 2	5600 gpm
Well No. 9	500 gpm*
Dean Well	500 gpm*
Hicks Well	700 gpm*
Proposed Powers well	500 gpm*

*Instantaneous quantities are non-additive to the City's municipal rights.

The voluntary cap on instantaneous quantities was proposed by the City for three reasons:

- 1) The City does not intend on improving any existing well to increase water use beyond the capacities shown in Table 2.
- 2) If there were no caps, all of the instantaneous quantities would have to be cumulatively evaluated for impairment at each source (approximately 5200 gpm at each well), greatly increasing the chance for the proposed changes to impair other water users in the area.
- 3) Adding Well No. 9, the Dean Well, the Hicks Well, and the proposed Powers well will increase the City's flexibility in obtaining adequate water production.

Annual Quantities

The water system plan states that during the years of 1998 through 2002 the Apple Well (original source for this water right) was not used. The lack of use in this five year period can be explained because the City currently classifies this well as emergency use only, due to the fact that DOH has recently declared it as GUL. In order to pump the full 600 acre-feet authorized by this water right, the Apple Well would need to withdraw 375 gpm for 362 days. While the data in the City's plan suggest that the City has not put Groundwater Certificate No. 3656-A to full beneficial use, it is uncertain whether the Apple Well may have been relied upon to a greater extent historically. It is clear that a portion of the six rights the City proposes to transfer is inchoate and that some of these rights issued based on Ecology's former "pumps-and-pipes" methodology. Adding the additional sources would allow the City to begin to legally use the annual quantities associated with this water right through sources other than the Apple Well. The authorization of additional sources will not allow a greater annual quantity of water to be withdrawn; the right will be limited to 600 acre-ft/yr from all sources.

Second Engrossed Second Substitute House Bill 1338 (SESSHB 1338)

In Department of Ecology v. Theodoratus, 135 Wn.2d 582, 957 P.2d 1241, the Washington Supreme Court held in a scenario that involved a non-municipal water supplier that Ecology's administrative practice of issuing Certificates of Water Right prior to full beneficial use was in error. This created uncertainty with respect to the water rights of Certificate holders, such as the City of Omak, that received Certificates based on system capacity rather than the extent of actual use.

Recent legislative changes have affected municipal water rights. SESSHB 1338 provided clarification and certainty for municipal water rights documented by Certificates that were issued based on system capacity. RCW 90.03.330 (3) states that:

"This sub-Section applies to the water right represented by a Water Right Certificate issued prior to September 9, 2003, for municipal water supply purposes as defined in RCW 90.03.015 where the Certificate was issued based on an administrative policy for issuing such Certificates once works for diverting or withdrawing and distributing water for municipal supply purposes were constructed rather than after the water had been placed to actual beneficial use. Such a water right is a right in good standing."
withdrawing and distributing water for municipal supply purposes were constructed rather than after the water had been placed to actual beneficial use. Such a water right is a right in good standing."

A licensed Ecology staff hydrogeologist reviewed and stamped a separate technical memorandum that discusses the hydrogeologic analysis for this application. The hydrogeologic interpretations provided below are extracted from this memorandum.

Hydrogeologic Setting

This section describes in general terms the hydrogeology surrounding the City of Omak, Okanogan County, Washington. In this area, the Okanogan River flows in an overall southerly direction, however, through the City of Omak the river takes a 90 degree bend to the west. Consequently, the City spans an area both north and south of the Okanogan River. Glacial terraces, located toward the north and west of the City, are a local remnant left by ancient ice sheets that once scoured the Okanogan River Valley. Sedimentary deposits, largely composed of glacial drift, glacial outwash, glaciolacustrine and more recent alluvial materials along with lesser amounts of glacial till, dune sands, and mass wasting materials, have in filled the

ice scoured valley. The City of Omak is located near the western edge of the Okanogan Metamorphic Core Complex. Gneissic granodiorite, a meta-igneous rock of the Okanogan Core Complex, forms the valley walls to the south and east of the Okanogan River. To the north and west of the river, valley walls are composed of igneous rocks (dacite and quartz monzonite) and metasedimentary rocks of the Cave Mountain Formation. Thick glacial deposits obscure much of the described bedrock in the low lying areas; however, more resistant bedrock knobs protrude through the glacial materials in places along the valley floor.

Well log data on file with Ecology indicates the glacial/alluvial sediments, which form the unconsolidated aquifer, consist of clays, silts, sands, gravels, glacial till, boulders, cobbles and hardpan/cemented gravel. Well log data also indicates this aquifer is bound at depth by bedrock, or what well drillers generally refer to as granite, a geologic description drillers applied to the various rock types that outcrop on both sides of the river. Sediment thicknesses range from approximately 14 feet to as much as 620 feet, with total thicknesses and/or depth to bedrock varying throughout the area. However, it appears that there is a thinning of sediments toward the southwest of Omak (Section 34, T. 34 N., R. 26 E. W.M.), as many wells are completed into the underlying bedrock in this area. Well log data suggests that most wells surrounding the City of Omak encounter a varying sequence of sediments, suggesting sediment layers pinch out and are discontinuous throughout the area. The wide range of sediments and thicknesses contribute to heterogeneous aquifer characteristics; for example, areas in the unconsolidated aquifer where clays and silts are present will likely have lower permeabilities, hydraulic conductivities and well yields than areas encountering mostly sands and gravels. Well logs indicate well yields range from 20 gpm to 1630 gpm for wells utilizing glacial/alluvial materials. This range reflects varied sediments and aquifer characteristics throughout the Omak area. The low range of 20 gpm begins to approach a small but notable difference from bedrock wells that tend to yield approximately 5-10 gpm or less. The unconsolidated aquifer is recharged by precipitation infiltrating into the surficial sediments and from interaction with the Okanogan River. Static water levels for the subject wells and other selected wells on file with Ecology, which are completed into surficial sediments, when corrected for elevation, indicate that ground water head levels correlate with river level elevations. This relationship suggests an exchange of flow between the ground water and surface water. Aquifer recharge and ground water levels tend to fluctuate as the hydrologic system responds to seasonal variations.

Impairment, Qualifying Ground Water Withdrawal Facilities, and Well Interference

There are three concepts that are important when considering whether a withdrawal of water from a well would impair another existing water right. The concepts are defined as follows:

Impairment is an adverse impact on the physical availability of water for a beneficial use that is entitled to protection i.e. water rights that are both senior and junior in priority to the right the applicant seeks to change.

Qualifying ground water withdrawal facilities are defined as those wells which in the opinion of the Department are adequately constructed. An adequately constructed well is one that (a) is constructed in compliance with well construction requirements; (b) fully penetrates the saturated thickness of an aquifer or withdraws water from a reasonable and feasible pumping lift (Chapter 173-150 WAC); (c) the withdrawal facilities must be able to accommodate a reasonable variation in seasonal pumping water levels; and (d) the withdrawal facilities including pumping facilities must be properly sized to the ability of the aquifer to produce water.

Well interference may occur when several wells penetrate and withdraw ground water from the same aquifer. Each pumping well creates a drawdown cone. When several wells pump from the same aquifer, well density, aquifer characteristics, and pumping demand may result in individual drawdown cones that intersect and form a composite drawdown cone. At any point in an aquifer, the composite drawdown caused by pumping wells will be greatly influenced by the transmissivity (T) of the aquifer. In aquifers with high Ts, composite drawdown will generally be much less than in aquifers with similar properties but with low Ts. Transmissivity is related to hydraulic conductivity (K) and the saturated thickness (b) of an aquifer by the relationship $T=Kb$.

An aquifer's hydraulic conductivity (K) is derived from the physical properties of both the fluid and geologic materials that form an aquifer. Once formed, an aquifer's saturated thickness (b) becomes important in evaluating its transmissivity. For regions of similar K in an aquifer, a large saturated thickness will result in a much higher T than a small saturated thickness. As a result, regions of similar K in an aquifer with a large saturated thickness will experience less composite drawdown or well interference than with a small saturated thickness.

Some conditions, however, will increase or steepen composite drawdown in an aquifer. For instance, where characteristics (such as very fine, clay-rich, or poorly sorted sediments) of an unconfined aquifer cause significant drawdown relative to the saturated thickness, the composite drawdown will increase as saturated thickness is reduced and T becomes smaller. Additionally, in regions where negative or no-flow boundaries occur, such as near the edges of a valley fill aquifer where it is bounded by bedrock, composite drawdown will be steeper than in the central part (generally the greatest thickness region) of the aquifer. Consequently, it is commonly understood that the greatest composite drawdown or well interference is more likely to occur in regions of low transmissivities, thin saturated thicknesses and near negative or no-flow boundaries than in regions of high transmissivities, large saturated thicknesses, and away from negative or no-flow boundaries.

Hydrogeologic Analysis of the Site

The City of Omak has multiple ground water rights and corresponding wells which collectively constitute their municipal water supply. The City submitted six change applications in 1994, requesting to add each of their existing municipal supply wells (5 existing wells) to each one of the following Water Rights: G4-GWC445-D, G4-GWC446-D, G4-GWC1082-D, G4-GWC3655-A, G4-GWC3656-A and G4-GWC7332-A. The City submitted six additional change applications in 1998 requesting to add four proposed wells to each of the above water rights. Both requests would allow for greater flexibility in the City's water system operations. In total, if both sets of change applications are approved, the City would have the ability

to withdraw water quantities from up to nine wells from any of the above mentioned water rights, however, each water right will not be allowed to exceed its historic water quantity. This analysis will address all six 1998 applications. These requests are in part due to two existing city wells, the Apple Well and Kenwood Well, being designated groundwater under the influence of surface water (GWI). As a result, the City currently classifies these two wells as emergency use wells only.

Table 3 below delineates the suite of water rights, existing wells, corresponding annual water quantities, instantaneous water quantities, depth of wells and corresponding static water levels.

Table 3

Well Name	Original Water Right No.	Instantaneous Quantity Qi (gpm)	Annual Quantity Qa (acre-ft/yr)	Depth of Well (ft)	Static Water Level swl (ft)
Kenwood	445-D	500	600	26	16.5
Apple	446-D + 3656-A	1175	696	29	10.0
Eastside	1082-D + 3655-A	2930	3510	40	28.5
Okoma	7332-A	600	560	105	8.75
OWP No.2	G4-31525P**	Interruptible 5000	3500*	69	38.75
Hicks		700		247	150
Dean		500		312	212
No.9 (NE Omak)		500		295	203
Proposed Powers		500			

*This quantity is not additive and furthermore this Permit limits the Qa under all the City's water rights not to exceed 3500 acre-ft/yr.

**OWP No. 2 represents an unauthorized change in point of withdrawal described in the City of Omak's Existing Municipal Water Rights section of this report.

The City voluntarily capped the instantaneous water quantity at each well, to reduce the risk of impairing existing water rights in close proximity. To clarify, the instantaneous quantity at each well is limited to the aforementioned quantity stated in the table. The combined annual water quantity that would be allowed to be withdrawn from any combination of wells, should the change be approved, is 3500 acre-ft/yr, as stated in G4-31525P.

Discussion of Existing Wells

The Kenwood Well is located approximately 1100 feet north and 600 feet east of the south quarter corner of Section 26, T. 34 N., R. 26 E.W.M., and approximately 50 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was designated GUI by the Washington State Department of Health (DOH). The Kenwood Well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 20 feet below ground surface (bgs). However, the well log on file with Ecology indicates the well is 14 feet in diameter and completed to a depth of 26 feet 2 inches bgs. These discrepancies, as well as discrepancies in other well documents described subsequently in the report, are likely the result of information being passed down through comprehensive water plans over the years rather than well alteration (Louman, 2005). The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 16.5 feet was recorded at the time of drilling, December 1913. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 500 gallons per minute (gpm) and 7 feet of drawdown in the well were also reported. If approved the proposed changes would allow the Kenwood Well to withdraw up to 500 gpm, in emergency situations.

The Apple Well is located approximately 800 feet north and 200 feet east of the south quarter corner of Section 26, T. 34 N., R. 26 E.W.M., and approximately 80 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was also designated GUI by DOH. The Apple Well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 10 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is completed to 29 feet bgs. The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 10 feet 4 inches was recorded at the time of drilling, February 1936. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 800 gpm and 10 feet 4 inches of drawdown in the well were also reported. If approved, the proposed changes would allow the Apple Well to withdraw up to 1175 gpm, in emergency situations.

The Eastside Well is located approximately 800 feet north and 1170 feet west of the southeast corner of Section 35, T. 34 N., R. 26 E.W.M., and approximately 1900 feet east of the Okanogan River. This well is currently in use by the City and houses 4 turbine pumps which have a combined capacity to pump 2,800 gpm. The Eastside Well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is 14 feet in diameter and completed to 40 feet 10 inches bgs. The materials encountered during drilling, as reported on the well log, include soil, rock and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 28 feet 6 inches was recorded during the time of drilling in 1944. However, a static water level of 12.4 feet was recorded by Ecology staff, via the City's real-time telemetry system, during a site visit on July 28, 2004. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. The telemetry system also indicated the Eastside Well was pumping at a rate of 1488 gpm at the time. A yield of 1630 gpm and 1 foot of drawdown in

the well was also reported on the well. Mike Ervin, City of Omak Water Department Chief Operator, indicated during the site visit that the Eastside Well shuts off when the storage reservoir is full, as opposed to shutting off because the water level in the well has dropped. If approved, the proposed changes would allow the Eastside Well to withdraw up to 2930 gpm.

The Okoma Well is located approximately 660 feet south and 520 feet west of the east quarter corner of Section 34, T. 34 N., R. 26 E.W.M., and approximately 2300 feet west of the Okanogan River. This well is currently in use by the City and is equipped with one turbine pump, which has the capacity to pump 500 gpm. The well log on file with Ecology indicates the Okoma well is 16 inches in diameter, completed to a depth of 105 feet bgs and screened from 55 feet to 90 feet bgs. Materials encountered during drilling include clay, silt, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 8 feet 9 inches was recorded at the time of drilling, winter 1988-1989. However, Mike Ervin informed Ecology staff during the site exam the current static water level is approximately 13 feet bgs and the pumping water level is approximately 32 feet bgs. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A well test performed by the driller and reported on the well log indicated a yield of 350 to 400 gpm with 69.3 feet of drawdown in the well after 13.5 hours. This well is located in an area where the aquifer thins, therefore, the well is producing as expected, meaning it is producing less than other city wells which are located in areas where the aquifer is thicker. The steep drawdown could also be explained in combination with well efficiency, well construction and/or development and the 18 feet of silt with clay encountered in the well. If approved, the proposed changes would allow the Okoma Well to withdraw up to 600 gpm.

The OWP No.2 Well is located approximately 1210 feet north and 530 feet west of the southeast corner of Section 35, T. 34 N., R. 26 E.W.M., and approximately 2600 feet east of the Okanogan River. This well is currently in use by the City, which is leased from Omak Wood Products. The OWP No.2 Well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, is 24 inches in diameter, completed to a depth of 69 feet bgs, cased to a depth of 44 feet bgs and screened from 44 to 60 feet bgs. An additional inner well screen was installed from 46 to 69 feet bgs during well rehabilitation in July of 1996. Materials encountered during drilling include silt, sand, gravel and cobbles, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 38.75 was recorded in a schematic of the well located within the Comprehensive Water Plan, while a static water level of 36.5 feet was recorded during rehabilitation. According to the well log on file with Ecology, a well test was performed during rehabilitation with a maximum yield of 2500 gpm and 3.8 feet of drawdown in the well after 5.5 hours. The City's telemetry system indicated the OWP No.2 Well was pumping at a rate of 1341 gpm at the time of the site visit, July 2004. If approved, the proposed changes would allow the OWP No. 2 Well to withdraw up to 5,000 gpm. Note, the water right associated with this well is interruptible and subject to instream flows on the Okanogan River.

Hydrogeologic Analysis of Proposed Well Sites

The Hicks Well is located approximately 275 feet south and 1000 feet east from the northwest corner of Section 25, T. 34 N., R. 26 E.W.M., and approximately 4000 feet north of the Okanogan River. The City is proposing to acquire this well from the current property owner, Marlene (Hicks) Rawley, during 2005, according to the City of Omak Comprehensive Water Plan (Preliminary) 2004. This well does not appear to be associated with a state issued water right. As indicated by the proposed use on the water well report on file with Ecology, the well was constructed for domestic purposes. The Hicks Well is 8 inches in diameter and completed to a depth of 247 feet bgs. Materials encountered during drilling include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 150 feet was recorded at the time of drilling, April 1998. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A 4-hour spring season pump test performed by Irrigation. Technology and Control indicated a pumping rate of 600- gpm with 8 feet of drawdown in the well after 4 hours. It appears that stabilization occurred quickly during recovery, as the pre-pumping static water level was achieved within 3 seconds of shutting off the pump. If approved, the proposed changes would allow the Hicks Well to withdraw up to 700 gpm.

Well No. 9, also known as the NE Omak Well, is located approximately 1275 feet north and 100 feet west of the southeast corner of Section 24, T. 34 N., R. 26 E.W.M., and approximately 5800 feet west of the Okanogan River. This well was authorized as an additional source for Water Right No. GWC-446-D on December 7th, 2000, and is currently in use. The City had the well constructed in July 2001. The well log on file with Ecology indicates the well is 12 inches in diameter, completed to a depth of 295 feet bgs, screened from 268 to 282 feet bgs, and gravel packed from 200 to 295 feet bgs. Materials encountered during drilling include clay, silt, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 203 feet was recorded at the time of drilling, July 2001. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A 24-hour pump test performed by Arcadia Drilling Inc. on July 16, 2001, indicated a pumping rate of 120 - 132 gpm with 59.5 feet of drawdown in the well after 24 hours. It appears that the pre-pumping static water level was achieved within 2 hours of shutting off the pump. Explanations for the steep drawdown in this well could be any combination of the well efficiency, well construction and/or development and the significant quantity of silt and clay materials encountered compared to any of the previously described wells. The City would like to eventually increase the capacity of this well. If approved, the proposed changes would allow Well No. 9 to withdraw up to 500 gpm.

The Dean Well is located approximately 1625 feet north and 225 feet east of the southwest corner of Section 19, T. 34 N., R. 27 E.W.M., and approximately 5400 feet west of the Okanogan River. The City is proposing to acquire this well during 2005 as well. This well appears to be associated with Water Right No. G4-28873C, however, Ecology does not have a water well report on file for this well. The water right documents refer to the dimensions of the Dean (irrigation) Well as being 8 inches in diameter and 312 feet deep. These documents also refer to a domestic well located on the Dean property within approximately 50 feet of the irrigation well, reportedly with a depth of 335 feet deep, however, a water well report is also unavailable for this well. Mr. Dean reported at the time, spring 1987, that the irrigation and domestic wells had the same static water level of 212 feet bgs. When corrected for elevation, the reported static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. The City of Omak's NE Omak Well is located approximately 500 feet southwest of the proposed well location and has a depth of 295 feet, a static water level of 203 feet

bgs and encountered clay, silt, sand and gravel materials during drilling. It is likely that Dean (irrigation) Well penetrates similar materials within the same aquifer, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. If approved, the proposed changes would allow the Dean Well to withdraw up to 500 gpm.

The proposed Powers Well has not been drilled at this time; however, the City has proposed the well be located within the NE¼, NE¼ of Section 26, T. 34 N., R. 26 E.W.M. Note this location is a ¼ section west of the Hicks Well. Well logs on file with Ecology in the same quarter section as the proposed Powers Well, indicate the sediments encountered locally include clay, silt, sand and gravel and the sediments are at least 350 feet deep. The proposed well shall be completed into the glacial/alluvial aquifer to be considered the same body of ground water as the original wells. If approved, the proposed changes would allow the proposed Powers Well to withdraw up to 500 gpm.

Some wells in and around the City of Omak terminate above the bottom of the unconsolidated aquifer and others utilize the full saturated thickness. Water well reports from wells terminating in bedrock (the bottom of the sediment aquifer) indicate a minimum sediment thickness of 38 feet in an area south of the City where the aquifer thins, while water well reports from wells terminating above the bottom of the aquifer suggest a sediment thickness up to 620 feet in areas. However, saturated thicknesses (b) throughout the area are much less than sediment thicknesses and range from approximately 10 feet south of the City where the aquifer thins, to 393 feet north of the City in the area of the proposed well locations. Saturated thickness (b) is 97 feet for the Hicks Well, 92 feet for Well No. 9 and estimated to be 100 feet for the Dean Well. Since all these values approach 100 feet, the saturated thickness (b) for the subject wells will subsequently be referred to as 100 feet. In the area of the proposed wells, well reports indicate that the majority of wells terminate above the bottom of the aquifer and do not utilize the aquifer's full saturated thickness. Drillers have estimated yields for wells completed into the unconsolidated glacial/alluvial sediment aquifer to be between 20 and 1630 gpm. Based on the results of the pumping tests on the Hicks Well and Well No. 9, specific capacity was determined to be approximately 75 gpm per foot of drawdown and 2.7 gpm per foot of drawdown respectively. This noticeable difference is further evidence that the wide range of sediments and thicknesses contribute to heterogeneous aquifer characteristics. As noted above, Well No. 9 encountered significantly more silts and clays than the Hicks Well, likely contributing to its lower well yield and specific capacity. Transmissivities (T) also vary greatly due to the heterogeneous nature of the aquifer and are estimated to range from approximately 4,000 gallons per day per foot (gpd/ft) to 115,000 gpd/ft. Hydraulic conductivities (K), then, for a saturated thickness of 100 feet would range between 40 gallons per day per square foot (gpd/ft²) and 1150 gpd/ft².

Evaluation by Theis non-equilibrium equation coupled with image well theory to simulate aquifer boundary conditions at the Hicks and Powers Well locations, using the upper value of hydraulic conductivity, indicates that at approximately 50 feet from a subject well, aquifer drawdown due to the maximum instantaneous pumping rate of 700 gpm (Hicks Well) at 182 days, will be about 4 feet or less. However, a more conservative analysis to simulate boundary conditions at well No. 9 and the Dean Well locations, using a mid-range hydraulic conductivity of 600 gpd/ft², indicates that at approximately 50 feet from a subject well, aquifer drawdown due to maximum instantaneous pumping rate of 500 gpm at 182 days, will be about 10 feet or less. A mid-range K value was used in the analysis because 600 gpd/ft² is still a conservative value when compared to literature K values of 1 to 5,000 gpd/ft² for silty sand, the materials being utilized in Well No. 9, (Freeze & Cherry, 1979). The analyses were run at 182 days (half a year) under the assumption that the proposed wells would not be running for 365 days (a full year) continuously. If a subject well is pumped in cycles or if it is pumped at less than the maximum instantaneous quantity, the predicted effect(s) would be reduced. Total annual water quantities will not be increasing from the aquifer, however by adding the proposed wells to the suite of water rights, the overall pumping effects will be spread over a broader area within the aquifer. With the closest known well located approximately 50 feet from the Dean Well and even further distances from the other subject wells, composite drawdown/well interference which may occur is not expected to be significant.

Relationship Between the Original Source and Proposed Source

In order to transfer or add a well to an existing water right, "the additional or replacement well or wells shall tap the same body of public ground water as the original well or wells," as stated in Chapter 90.44.100(2a) RCW. The subject wells tap the unconsolidated glacial/alluvial sediment aquifer and are not separated from each other or the original wells by a hydraulic barrier, such as a fault. Therefore, all four subject wells are considered to utilize the same body of ground water as the original five wells.

FINDINGS

- In accordance with Chapter 90.44 RCW and Chapter 90.03 RCW, the author makes a tentative determination that No. GWC3656-A is a valid right, with an instantaneous quantity of 375 gpm and an annual quantity of 600 acre-ft/yr, and is eligible for change. Although the City of Omak has not put the full certificated amount of water to beneficial use, the inchoate portion is in good standing and may be developed by the City consistent with the intent of the original Certificate.
- The four additional points of withdrawal tap the same body of public ground water as the authorized wells.
- Approval of this change request will not cause impairment of existing rights or will not enlarge the original right.
- Approval of this change will not be detrimental to the public interest.

RECOMMENDATIONS

Water Use

Based on the above facts and findings, it is recommended that the requested additional 4 points of withdrawal under Ground Water Declaration No. 3656-A be authorized as follows:

Purpose of Use

375 gpm and 600 acre-ft/yr for year round municipal supply purposes.

Points of Withdrawal

Kenwood Well: 1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW¹/₄SE¹/₄ Section 26, T. 34 N., R. 26 E.W.M.

Apple Well: 800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW¹/₄SE¹/₄ of Section 26, T. 34 N., R. 26 E.W.M.

Okoma Well: 660 feet south and 520 feet west of the east quarter corner of Section 34, being within the NE¹/₄SE¹/₄ of Section 34, T. 34 N., R. 26 E.W.M.

Eastside Well: 800 feet north and 1170 feet west of the southeast corner of Section 35, being within the SE¹/₄SE¹/₄ of Section 35, T. 34 N., R. 26 E.W.M.

OWP No. 2 Well: 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE¹/₄SE¹/₄of Section 35, T. 34 N., R. 26 E.W.M.

Hicks Well: 275 feet south and 1000 feet east from the northwest corner of Section 25, being within the NW¹/₄NW¹/₄ of Section 25, T. 34 N., R. 26 E.W.M.

Dean Well: 1625 feet north and 225 feet east of the southwest corner of Section 19, being within the NW¹/₄SW¹/₄of Section 19, T. 34 N., R. 27 E.W.M.

Proposed Powers Well: being within the NE¹/₄NE¹/₄of Section 26, T. 34 N., R. 26 E.W.M.

Well No. 9: 1275 feet north and 100 feet west from the southeast corner of Section 24, being within the SE¹/₄SE¹/₄of Section 24, T. 34 N., R. 26 E.W.M.

Place of Use

The place of use of this water right is the service area described in the most recent Water System Plan approved by the Washington State Department of Health, so long as City of Omak is and remains in compliance with the criteria in RCW 90.03.386(2). RCW 90.03.386 may have the effect of revising the place of use of this water right.

If the criteria in RCW 90.03.386(2) are not met, the place of use of this water right reverts to the last place of use described by Ecology in a water right authorization.

Construction Schedule

Begin Construction by:	June 2006
Complete Construction by:	June 2011
Apply water to full beneficial use by:	Good Standing

PROVISIONS

A Certificate of Change will not be issued until a proof inspection is conducted and a final investigation is made. The Certificate of Change will reflect the extent of the project perfected within the limitations of the authorization. Aspects of the investigation will include, as appropriate, the source, system instantaneous capacity, beneficial use, annual quantity, acreage, place of use, and satisfaction of provisions. Final determination will be calculated based on the best information available to Ecology, including metering data and/or water duty analysis.

The amount of water granted is a maximum limit that shall not be exceeded.

The City's maximum instantaneous quantities for each well are as follows:

<u>Kenwood Well:</u>	<u>500 gpm</u>
<u>Apple Well:</u>	<u>1175 gpm</u>
<u>Eastside Well:</u>	<u>2930 gpm</u>
<u>Okoma Well:</u>	<u>600 gpm</u>
<u>OWP No. 2:</u>	<u>5000 gpm</u>
<u>Well No. 9:</u>	<u>500 gpm</u>
<u>Dean Well:</u>	<u>500 gpm</u>
<u>Hicks Well:</u>	<u>700 gpm</u>
<u>Proposed Powers Well:</u>	<u>500 gpm</u>

Report Continued

The total instantaneous withdrawal between all of the City's municipal water rights is 10205 gpm. Ground Water Permit No. G4-32525P (5000 gpm) is subject to curtailment when instream flows in the Okanogan River are below those set in Chapter 173-549 WAC. In the event the Okanogan River drops below the set minimum flows, the total instantaneous withdrawal from all sources shall not be more than 5205 gpm (10205 gpm - 5000 gpm = 5205 gpm)

The total annual withdrawal under all rights shall not exceed 3500 acre-ft/vr.

This authorization shall in no way excuse the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations including those administered by other programs of the Department of Ecology.

Well Construction

All newly constructed wells shall be constructed into the unconsolidated glacial/alluvial sediment aquifer.

All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells.

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gage may be installed in addition to the access port.

Metering

An approved measuring device shall be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", Chapter 173-173 WAC.

Water use data shall be recorded weekly. The maximum rate of withdrawal and the annual total volume shall be submitted to Ecology by January 31st of each calendar year.

The following information shall be included with each submittal of water use data: owner, contact name if different, mailing address, daytime phone number, WRIA, Certificate number of service connections, source name, Washington State Department of Health number, annual quantity used including units of measure, maximum rate of withdrawal including units of measure, monthly meter readings including unit of measures, purpose of use, and period of use. In the future, Ecology may require additional parameters to be reported or more frequent reporting. Ecology prefers web based data entry, but does accept hard copies. Ecology will provide forms and electronic data entry information.

Chapter 173-173 WAC describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition Ecology for modifications to some of the requirements. Installation, operation and maintenance requirements are enclosed as a document entitled "Water Measurement Device Installation and Operation Requirements".

Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the records of water use that are kept to meet the above conditions, and to inspect at reasonable times any measuring device used to meet the above conditions.

Report by: John C. Date: 8-10-55

Scott Turner, Water Resources Program

FINDINGS OF FACT AND DECISION

Upon reviewing the above report, I find all facts relevant and material to the subject application have been thoroughly investigated. Furthermore, I find the change of water right as recommended will not be detrimental to existing rights and is not detrimental to the public welfare.

Therefore, I ORDER the additional points of withdrawal under Ground Water Application No. CG4-GWC3656-A@1 be approved, subject to the existing rights and provisions specified in the foregoing report.

Signed at Yakima, Washington, this 11th day of August 2005.

John F. Barwin
Robert F. Barwin, Section Manager
Water Resources Program
Central Region Office

Date: May 19th, 2005

To: File

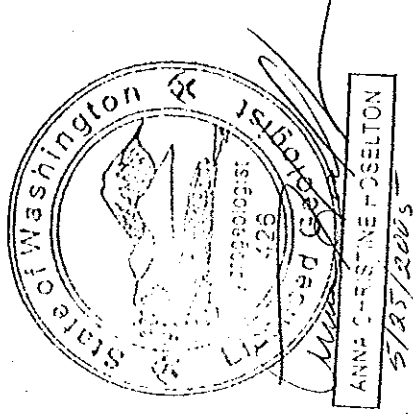
From: Melissa Downes

Re: Hydrogeologic analysis for water right change applications by the City of Omak, file numbers CG4-GWC445-D@1, CG4-GWC446-D@3, CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1 and CG4-GWC7332-A@1. Analysis by Melissa Downes and reviewed by Anna Hoselton.

Hydrogeologic Setting:

This section describes in general terms the hydrogeology surrounding the City of Omak, Okanogan County, Washington. In this area, the Okanogan River flows in an overall southerly direction, however through the City of Omak the river takes a 90 degree bend to the west. Consequently, the City spans an area both north and south of the Okanogan River. Glacial terraces, located toward the north and west of the City, are a local remnant left by ancient ice sheets that once scoured the Okanogan River Valley. Sedimentary deposits, largely composed of glacial drift, glacial outwash, glaciolacustrine and more recent alluvial materials along with lesser amounts of glacial till, dune sands, and mass wasting materials, have in filled the ice scoured valley. The City of Omak is located near the western edge of the Okanogan Metamorphic Core Complex. Gneissic granodiorite, a meta-igneous rock of the Okanogan Core Complex, forms the valley walls to the south and east of the Okanogan River. To the north and west of the river, valley walls are composed of igneous rocks (dacite and quartz monzonite) and metasedimentary rocks of the Cave Mountain Formation. Thick glacial deposits obscure much of the described bedrock in the low lying areas; however more resistant bedrock knobs protrude through the glacial materials in places along the valley floor.

Well log data on file with Ecology indicates the glacial/alluvial sediments, which form the unconsolidated aquifer, consist of clays, silts, sands, gravels, glacial till, boulders, cobbles and hardpan/cemented gravel. Well log data also indicates this aquifer is bound at depth by bedrock, or what well drillers generally refer to as granite, a geologic description drillers applied to the various rock types that outcrop on both sides of the river. Sediment thicknesses range from approximately 14 feet to as much as 620 feet, with total thicknesses and/or depth to bedrock varying throughout the area. However, it appears that there is a thinning of sediments toward the southwest of Omak (section 34, T 34N, R26E), as many wells are completed into the underlying bedrock in this area. Well log data suggests that most wells surrounding the City of Omak encounter a varying sequence of sediments, suggesting sediment layers pinch out and are discontinuous throughout the area. The wide range of sediments and thicknesses contribute to heterogeneous aquifer characteristics; For example, areas in the unconsolidated aquifer where clays and silts are present will likely have lower permeabilities, hydraulic conductivities and well yields than areas encountering mostly sands and gravels. Well logs indicate well yields range from 20 gpm to 1630 gpm for wells utilizing glacial/alluvial materials. This range reflects varied sediments and aquifer characteristics throughout the Omak area. The low range of 20 gpm



begins to approach a small but notable difference from bedrock wells that tend to yield approximately 5-10 gpm or less. The unconsolidated aquifer is recharged by precipitation infiltrating into the surficial sediments and from interaction with the Okanogan River. Static water levels for the subject wells and other selected wells on file with Ecology, which are completed into surficial sediments, when corrected for elevation, indicate that ground water head levels correlate with river level elevations. This relationship suggests an exchange of flow between the ground water and surface water. Aquifer recharge and ground water levels tend to fluctuate as the hydrologic system responds to seasonal variations.

Impairment, Qualifying Ground Water Withdrawal Facilities, and Well Interference:

There are three concepts that are important when considering whether a withdrawal of water from a well would impair another existing water right. The concepts are defined as follows:

Impairment is an adverse impact on the physical availability of water for a beneficial use that is entitled to protection i.e. water rights that are both senior and junior in priority to the right the applicant seeks to change.

Qualifying ground water withdrawal facilities are defined as those wells which in the opinion of the Department are adequately constructed. An adequately constructed well is one that (a) is constructed in compliance with well construction requirements; (b) fully penetrates the saturated thickness of an aquifer or withdraws water from a reasonable and feasible pumping lift (WAC 173-150); (c) the withdrawal facilities must be able to accommodate a reasonable variation in seasonal pumping water levels; and (d) the withdrawal facilities including pumping facilities must be properly sized to the ability of the aquifer to produce water.

Well interference may occur when several wells penetrate and withdraw ground water from the same aquifer. Each pumping well creates a drawdown cone. When several wells pump from the same aquifer, well density, aquifer characteristics, and pumping demand may result in individual drawdown cones that intersect and form a composite drawdown cone. At any point in an aquifer, the composite drawdown caused by pumping wells will be greatly influenced by the transmissivity (T) of the aquifer. In aquifers with high Ts, composite drawdown will generally be much less than in aquifers with similar properties but with low Ts. Transmissivity is related to hydraulic conductivity (K) and the saturated thickness (b) of an aquifer by the relationship $T=Kb$.

An aquifer's hydraulic conductivity (K) is derived from the physical properties of both the fluid and geologic materials that form an aquifer. Once formed, an aquifer's saturated thickness (b) becomes important in evaluating its transmissivity. For regions of similar K in an aquifer, a large saturated thickness will result in a much higher T than a small saturated thickness. As a result, regions of similar K in an aquifer with a large saturated thickness will experience less composite drawdown or well interference than with a small saturated thickness.

Some conditions, however, will increase or steepen composite drawdown in an aquifer. For instance, where characteristics (such as very fine, clay-rich, or poorly sorted sediments) of an unconfined aquifer cause significant drawdown relative to the saturated thickness, the composite drawdown will increase as saturated thickness is reduced and T becomes smaller. Additionally,

in regions where negative or no-flow boundaries occur, such as near the edges of a valley fill aquifer where it is bounded by bedrock, composite drawdown will be steeper than in the central part (generally the greatest thickness region) of the aquifer. Consequently, it is commonly understood that the greatest composite drawdown of well interference is more likely to occur in regions of low transmissivities, thin saturated thicknesses and near negative or no-flow boundaries than in regions of high transmissivities, large saturated thicknesses, and away from negative or no-flow boundaries.

Hydrogeologic Analysis of the Site:

The City of Omak has multiple ground water rights and corresponding wells which collectively constitute their municipal water supply. The City submitted 6 change applications in 1994, requesting to add each of their existing municipal supply wells (5 existing wells) to each one of the following water rights G4-GWC445-D, G4-GWC446-D, G4-GWC1082-D, G4-GWC3655-A, G4-GWC3656-A and G4-GWC7332-A. The City submitted 6 additional change applications in 1998 requesting to add 4 proposed wells to each of the above water rights. Both requests would allow for greater flexibility in the City's water system operations. In total, if both sets of change applications are approved, the City would have the ability to withdraw water quantities from up to 9 wells from any of the above mentioned water rights, however each water right will not be allowed to exceed its historic water quantity. This analysis will address all six 1998 applications. These requests are in part due to two existing city wells, the Apple Well and Kenwood Well, being designated groundwater under the influence of surface water (GUI). As a result, the City currently classifies these two wells as emergency use wells only.

The table below delineates the suite of water rights, existing wells, corresponding annual water quantities, instantaneous water quantities, depth of wells and corresponding static water levels.

Well Name	Original Water Right No.	Instantaneous Quantity Qi (gpm)	Annual Quantity Qa (afy)	Depth of Well (ft)	Static Water Level swl (ft)
Kenwood	445-D	500	600	26	16.5
Apple	446-D + 3656-A	1175	696	29	10.0
Eastside	1082-D + 3655-A	2930	3510	40	28.5
Okoma	7332-A	600	560	105	8.75
OWP #2	G4-31525P	Interruptible 5000	3500*	69	38.75
Hicks		700		247	150
Dean		500		312	212
#9 (NE Omak)		500		295	203
Proposed Powers		500			
* This quantity is not additive and furthermore this permit limits the Qa under all the city's water rights not to exceed 3500 afy.					

The City voluntarily capped the instantaneous water quantity at each well, to reduce the risk of impairing existing water rights in close proximity. To clarify, the instantaneous quantity at each

well is limited to the aforementioned quantity stated in the table. The combined annual water quantity that would be allowed to be withdrawn from any combination of wells, should the change be approved, is 3500 afy, as stated in G4-31525P.

Discussion of Existing Wells:

The Kenwood well is located approximately 1100 feet north and 600 feet east of the south quarter corner of Section 26, T34N, R26E, and approximately 50 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was designated GUI by the Washington State Department of Health (DOH). The Kenwood well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 20 feet below ground surface (bgs). However the well log on file with Ecology indicates the well is 14 feet in diameter and completed to a depth of 26 feet 2 inches bgs. These discrepancies, as well as discrepancies in other well documents described subsequently in the report, are likely the result of information being passed down through comprehensive water plans over the years rather than well alteration (Louman, 2005). The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 16.5 feet was recorded at the time of drilling, December 1913. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 500 gallons per minute (gpm) and 7 feet of drawdown in the well were also reported. If approved the proposed changes would allow the Kenwood well to withdraw up to 500 gpm, in emergency situations.

The Apple well is located approximately 800 feet north and 200 feet east of the south quarter corner of Section 26, T34N, R26E, and approximately 80 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was also designated GUI by DOH. The Apple well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 10 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is completed to 29 feet bgs. The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 10 feet 4 inches was recorded at the time of drilling, February 1936. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 800 gpm and 10 feet 4 inches of drawdown in the well were also reported. If approved, the proposed changes would allow the Apple well to withdraw up to 1175 gpm, in emergency situations.

The Eastside well is located approximately 800 feet north and 1170 feet west of the southeast corner of Section 35, T34N, R26E, and approximately 1900 feet east of the Okanogan River. This well is currently in use by the City and houses 4 turbine pumps which have a combined capacity to pump 2,800 gpm. The Eastside well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is 14 feet in diameter and completed to 40 feet 10 inches bgs. The materials encountered during drilling, as reported on the well log, include soil, rock and gravel, suggesting the well is completed into the

unconsolidated glacial/alluvial sediment aquifer. A static water level of 28 feet 6 inches was recorded during the time of drilling in 1944. However, a static water level of 12.4 feet was recorded by Ecology staff, via the City's real-time telemetry system, during a site visit on July 28, 2004. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. The telemetry system also indicated the Eastside well was pumping at a rate of 1488 gpm at the time. A yield of 1630 gpm and 1 foot of drawdown in the well was also reported on the well log. Mike Ervin, City of Omak Water Department Chief Operator, indicated during the site visit that the Eastside well shuts off when the storage reservoir is full, as opposed to shutting off because the water level in the well has dropped. If approved, the proposed changes would allow the Eastside well to withdraw up to 2930 gpm.

The Okoma well is located approximately 660 feet south and 520 feet west of the east quarter corner of Section 34, T34N, R26E, and approximately 2300 feet west of the Okanogan River. This well is currently in use by the City and is equipped with one turbine pump, which has the capacity to pump 500 gpm. The well log on file with Ecology indicates the Okoma well is 16 inches in diameter, completed to a depth of 105 feet bgs and screened from 55 feet to 90 feet bgs. Materials encountered during drilling include clay, silt, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 8 feet 9 inches was recorded at the time of drilling, winter 1988-1989. However, Mike Ervin informed Ecology staff during the site exam the current static water level is approximately 13 feet bgs and the pumping water level is approximately 32 feet bgs. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A well test performed by the driller and reported on the well log indicated a yield of 350 to 400 gpm with 69.3 feet of drawdown in the well after 13.5 hours. This well is located in an area where the aquifer thins, therefore the well is producing as expected, meaning it is producing less than other city wells which are located in areas where the aquifer is thicker. The steep drawdown could also be explained in combination with well efficiency, well construction and/or development and the 18 feet of silt with clay encountered in the well. If approved, the proposed changes would allow the Okoma well to withdraw up to 600 gpm.

The OWP#2 well is located approximately 1210 feet north and 530 feet west of the southeast corner of Section 35, T34N, R26E, and approximately 2600 feet east of the Okanogan River. This well is currently in use by the City, which is leased from Omak Wood Products. The OWP#2 well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, is 24 inches in diameter, completed to a depth of 69 feet bgs, cased to a depth of 44 feet bgs and screened from 44 to 60 feet bgs. An additional inner well screen was installed from 46 to 69 feet bgs during well rehabilitation in July of 1996. Materials encountered during drilling include silt, sand, gravel and cobbles, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 38.75 was recorded in a schematic of the well located within the Comprehensive Water Plan, while a static water level of 36.5 feet was recorded during rehabilitation. According to the well log on file with Ecology, a well test was performed during rehabilitation with a maximum yield of 2500 gpm and 3.8 feet of drawdown in the well after 5.5 hours. The City's telemetry system indicated the OWP#2 well was pumping at a rate of 1341 gpm at the time of the site visit, July 2004. If approved, the proposed changes

would allow the OWP#2 well to withdraw up to 5,000 gpm. Note, the water right associated with this well is interruptible and subject to instream flows on the Okanogan River.

Hydrogeologic Analysis of Proposed Well Sites: -

The Hicks well is located approximately 275 feet south and 1000 feet east from the northwest corner of Section 25, T34N, R26E, and approximately 4000 feet north of the Okanogan River. The City is proposing to acquire this well from the current property owner, Marlene (Hicks) Rawley, during 2005, according to the City of Omak Comprehensive Water Plan (Preliminary) 2004. This well does not appear to be associated with a state issued water right. As indicated by the proposed use on the water well report on file with Ecology, the well was constructed for domestic purposes. The Hicks well is 8 inches in diameter and completed to a depth of 247 feet bgs. Materials encountered during drilling include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 150 feet was recorded at the time of drilling, April 1998. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A 4-hour spring season pump test performed by Irrigation, Technology and Control indicated a pumping rate of 600+ gpm with 8 feet of drawdown in the well after 4 hours. It appears that stabilization occurred quickly during recovery, as the pre-pumping static water level was achieved within 3 seconds of shutting off the pump. If approved, the proposed changes would allow the Hicks well to withdraw up to 700 gpm.

The #9 well also known as the NE Omak well is located approximately 1275 feet north and 100 feet west of the southeast corner of Section 24, T34N, R26E, and approximately 5800 feet west of the Okanogan River. This well was authorized as an additional source for water right no. GWC-446-D on December 7th, 2000, and is currently in use. The City had the well constructed in July 2001. The well log on file with Ecology indicates the well is 12 inches in diameter, completed to a depth of 295 feet bgs, screened from 268 to 282 feet bgs, and gravel packed from 200 to 295 feet bgs. Materials encountered during drilling include clay, silt, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 203 feet was recorded at the time of drilling, July 2001. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A 24-hour pump test performed by Arcadia Drilling Inc. on July 16, 2001, indicated a pumping rate of 120 - 132 gpm with 59.5 feet of drawdown in the well after 24 hours. It appears that the pre-pumping static water level was achieved within 2 hours of shutting off the pump. Explanations for the steep drawdown in this well could be any combination of the well efficiency, well construction and/or development and the significant quantity of silt and clay materials encountered compared to any of the previously described wells. The city would like to eventually increase the capacity of this well. If approved, the proposed changes would allow well #9 to withdraw up to 500 gpm.

The Dean well is located approximately 1625 feet north and 225 feet east of the southwest corner of Section 19, T34N, R27E, and approximately 5400 feet west of the Okanogan River. The City is proposing to acquire this well during 2005 as well. This well appears to be associated with water right no. G4-28873C, however, Ecology does not have a water well report on file for this well. The water right documents refer to the dimensions of the Dean (irrigation) well as being 8

inches in diameter and 312 feet deep. These documents also refer to a domestic well located on the Dean property within approximately 50 feet of the irrigation well, reportedly with a depth of 335 feet deep, however a water well report is also unavailable for this well. Mr. Dean reported at the time, spring 1987, that the irrigation and domestic wells had the same static water level of 212 feet bgs. When corrected for elevation, the reported static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. The City of Omak's NE Omak well is located approximately 500 feet southwest of the proposed well location and has a depth of 295 feet, a static water level of 203 feet bgs and encountered clay, silt, sand and gravel materials during drilling. It is likely that the Dean (irrigation) well penetrates similar materials within the same aquifer, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. If approved, the proposed changes would allow the Dean well to withdraw up to 500 gpm.

The proposed Powers well has not been drilled at this time; however the City has proposed the well be located within the NE $\frac{1}{4}$, NE $\frac{1}{4}$ of Section 26, T34N, R26E. Note, this location is a $\frac{1}{4}$ section west of the Hicks well. Well logs on file with Ecology in the same quarter section as the proposed Powers well, indicate the sediments encountered locally include clay, silt, sand and gravel and the sediments are at least 350 feet deep. The proposed well shall be completed into the glacial/alluvial aquifer to be considered the same body of ground water as the original wells. If approved, the proposed changes would allow the proposed Powers well to withdraw up to 500 gpm.

Some wells in and around the City of Omak terminate above the bottom of the unconsolidated aquifer and others utilize the full saturated thickness. Water well reports from wells terminating in bedrock (the bottom of the sediment aquifer) indicate a minimum sediment thickness of 38 feet in an area south of the City where the aquifer thins, while water well reports from wells terminating above the bottom of the aquifer suggest a sediment thickness up to 620 feet in areas. However, saturated thicknesses (b) throughout the area are much less than sediment thicknesses and range from approximately 10 feet south of the city where the aquifer thins, to 393 feet north of the city in the area of the proposed well locations. Saturated thickness (b) is 97 feet for the Hicks well, 92 feet for well #9 and estimated to be 100 feet for the Dean well. Since all these values approach 100 feet, the saturated thickness (b) for the subject wells will subsequently be referred to as 100 feet. In the area of the proposed wells, well reports indicate that the majority of wells terminate above the bottom of the aquifer and do not utilize the aquifer's full saturated thickness. Drillers have estimated yields for wells completed into the unconsolidated glacial/alluvial sediment aquifer to be between 20 and 1630 gpm. Based on the results of the pumping tests on the Hicks well and well #9, specific capacity was determined to be approximately 75 gpm per foot of drawdown and 2.7 gpm per foot of drawdown respectively. This noticeable difference is further evidence that the wide range of sediments and thicknesses contribute to heterogeneous aquifer characteristics. As noted above, well #9 encountered significantly more silts and clays than the Hicks well, likely contributing to its lower well yield and specific capacity. Transmissivities (T) also vary greatly due to the heterogeneous nature of the aquifer and are estimated to range from approximately 4,000 gallons per day per foot (gpd/ft) to 115,000 gpd/ft. Hydraulic conductivities (K), then, for a saturated thickness of 100 feet would range between 40 gallons per day per square foot (gpd/ft²) and 1150 gpd/ft².

Evaluation by Theis non-equilibrium equation coupled with image well theory to simulate aquifer boundary conditions at the Hicks and Powers well locations, using the upper value of hydraulic conductivity, indicates that at approximately 50 feet from a subject well, aquifer drawdown due to the maximum instantaneous pumping rate of 700 gpm (Hicks well) at 182 days, will be about 4 feet or less. However a more conservative analysis to simulate boundary conditions at well #9 and the Dean well locations, using a mid-range hydraulic conductivity of 600 gpd/ft², indicates that at approximately 50 feet from a subject well, aquifer drawdown due to maximum instantaneous pumping rate of 500 gpm at 182 days, will be about 10 feet or less. A mid-range K value was used in the analysis because 600 gpd/ft² is still a conservative value when compared to literature K values of 1 to 5,000 gpd/ft² for silty sand, the materials being utilized in well #9, (Freeze & Cherry, 1979). The analyses were run at 182 days (half a year) under the assumption that the proposed wells would not be running for 365 days (a full year) continuously. If a subject well is pumped in cycles or if it is pumped at less than the maximum instantaneous quantity, the predicted effect(s) would be reduced. Total annual water quantities will not be increasing from the aquifer, however by adding the proposed wells to the suite of water rights, the overall pumping effects will be spread over a broader area within the aquifer. With the closest known well located approximately 50 feet from the Dean well and even further distances from the other subject wells, composite drawdown/well interference which may occur is not expected to be significant

Relationship between the Original Source and Proposed Source:

In order to transfer or add a well to an existing water right, "the additional or replacement well or wells shall tap the same body of public ground water as the original well or wells," as stated in Chapter 90.44.100(2a) RCW. The subject wells tap the unconsolidated glacial/alluvial sediment aquifer and are not separated from each other or the original wells by a hydraulic barrier, such as a fault. Therefore, all four subject wells are considered to utilize the same body of ground water as the original five wells.

References:

- Freeze, R.A. and Cherry, J.A. 1979. Groundwater. Upper Saddle River, NJ: Prentice Hall.
- Gulick, C.W. and Korosec, M.A. 1990. Geologic Map of the Omak 1:100,000 Quadrangle, Washington. Washington Division of Geology and Earth Resources. Open File Report 90-12.
- Huibregtse, Louman Associates, Inc. 2004. City of Omak Comprehensive Water Plan (Preliminary), Project No. 03018. Ecology received date September 28, 2004.
- Louman, Jeff (with Huibregtse, Louman Associates, Inc, the City of Omak's consulting engineers). 2005. Personal Communication May 3, 2005.
- United States Department of Interior, Bureau of Reclamation. 1989. Seismotectonic Evaluation, Northwest Rocky Mountains – Okanogan Uplands Geomorphic Province.



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

October 28, 2004

Dale Sparber
City of Omak
P.O. Box 72
Omak, Washington 98841-0072

Re: Ground Water Application Nos. CG4-GWC445-D@1, CG4-GWC446-D@3,
CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1 and
CG4-GWC7332-A@1

We acknowledge receipt of affidavit of publication of notice in connection with the above numbered applications.

The water codes require that no action be taken until after the expiration of a thirty (30) day period from the last date of publication. This time period allows concerned citizens to file any protests or objections to your proposed water use.

An examination of your applications will be made along with other applications located in your vicinity. It may be some time before this is done, due to the large backlog of applications. Please be aware that you are not authorized to proceed with development of your proposed water system until you receive written authorization from this office.

If you have any questions or concerns about any of this information, please call Scott Turner of the Department of Ecology at (509) 457-7106.

Sincerely,

Erin C. Gutierrez

Erin Gutierrez
Water Resources Program

EG:hd
041053

PLEASE ADVISE THIS OFFICE OF ANY ADDRESS CHANGE

pn-12.doc





State of Washington — In the Heart of the Okanogan

Dale Sparber, Mayor
2 North Ash
(509) 826-1170
P.O. Box 72
Omak, WA 98841
Fax: 509-826-6531
info@omakcity.com

October 6, 2004


Department of Ecology
Erin Gutierrez
15 West Yakima Avenue
Suite 200
Yakima, WA. 98902-3452

Re: Applications for Change No. CG4-GWC445-D@1, CG4-GWC446-D@3,
CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1,
CG4-GWC7332-A@1

Enclosed is the notarized original Affidavit of Publication the amended notice of application for change of the Omak City water rights. This publication was published in two consecutive weeks 9/22/04 and 9/29/04.

If you have further questions, please contact our office at 509-826-1170.

Sincerely,


Connie Thomas
Utility Billing Clerk

enclosure



Note: changes were made to
PN from what was mailed to
City of Omak 8/25/04 - Permit
writer Scott Turner okay'd
the aff. of Pub.

EG-10-27-04

(2004-369 Sept. 22 & 29)
STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
YAKIMA, WASHINGTON

AMENDED NOTICE OF APPLICATIONS FOR CHANGE OF THE OMAK CITY WATER RIGHTS

TAKE NOTICE:

Consolidated Notices of Applications to Change to change the point of diversion (replace) or add a point of withdrawal (add) under the City of Omak Water Rights detailed below. These requests were submitted November 24, 1998 except for change to Certificate No. 446-D which was submitted August 4, 2004. They are part of the City of Omak Water System. The proposed wells are to be located within the SE1/4SE1/4 of Section 24, NW1/4NW1/4 of Section 25, and NW1/4SW1/4 of Section 19 NE1/4 4NE1/4 of Section 26, all in T. 34 N., R. 26 E.W.M.

Rights and proposed change:

Add or replace wells under Certificate No. 445-d with priority date of December 1913 for 500 gpm, 600 acre-feet per year for municipal supply from a well (Kenwood) located in the SW1/4SE1/4 Section 26, T. 34 N., R. 26 E.W.M.

Add or replace wells under Certificate No. 446-d with priority date of March 1936 as changed by Change Authorization No. CG4-GWC446-D@1 for 800 gpm, 96 acre-feet per year for municipal supply from a well (Apple) located in the SW1/4SE1/4 of Section 26, and the new well located within the SE1/4SE1/4 of Section 24, T. 34 N., R. 26 E.W.M.

Add wells under Certificate No. 1082-D with priority date of May 1944 for 1630 gallons per minute (gpm), 1430 acre-feet per year for municipal supply from a well (Eastside) located in the SE1/4SE1/4 Section 35, T. 34 N., 26 E.W.M.

Add wells under Certificate No. 3655-A with priority date of March 20, 1958 for 1300 gpm, 2080 acre-feet per year for municipal supply from a well (Eastside) located in the SE 1/4SE1/4 Section 35, T. 34 N., R. 26 E.W.M.

Add or replace wells under Certificate No. 3656-A with priority date of March 20, 1958 for 375 gpm, 600 acre-feet per year for municipal supply from a well (Apple) located in the SW 1/4SE1/4 Section 26, T. 34 N., R. 26 E.W.M.

Add wells under Certificate No. 7332-A with priority date of June 22, 1970 for 600 gpm, 560 acre-feet per year for municipal supply from May 1 through October 31 from a well (Eastside) located in the SE1/4SE1/4 Section 35, T. 34 N., R. 26 E.W.M.

Even though the public notices have been combined, each water right change request will be evaluated on its own merits. Protests or objections against the rights should be filed separately by water right, must include a detailed statement of the basis for objections. All letters of protest will become public record. Each protest must be accompanied by a \$2.00 recording fee (check or money order only) and filed with the Department of Ecology, 15 W. Yakima Avenue, Suite 200, Yakima, WA 98902-3452, within thirty (30) days from: September 29, 2004.

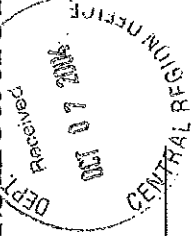
Published by The Omak-Okanogan County Chronicle.

Affidavit of Publication

STATE OF WASHINGTON

ss.

County of Okanogan



The undersigned, being duly sworn on oath, deposes and says that she is the principal clerk of the Omak-Okanogan County Chronicle, a weekly newspaper, that she is duly authorized to make this affidavit; that said newspaper is a legal newspaper and has been approved as a legal newspaper by order of the Superior Court in the county in which it is published and it is now and has been for more than six months prior to the date of publications hereinafter referred to, published in the English language continuously as a weekly newspaper in Omak, Okanogan County, Washington, and it is now and during all of said time was printed in an office maintained at 618 Okoma Drive, the place of publication of said newspaper. That the annexed is a true copy of

Amended Notice applicati

as it was published in regular issues (and not in supplement form) of said newspaper on the following dates:

09/22/04, 09/29/04

and that such newspaper was regularly distributed to its subscribers during all of said period. The full amount of the fee charged for the foregoing publication is the sum of \$ 246.40 at the rate of \$7.95 per column inch.

Elizabeth B. Wickel

Principal Clerk

Subscribed and sworn to before me

9-29-04

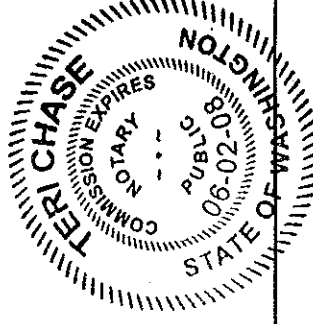
Teri Chase

Notary Public in and for the State of Washington

Residing at

May Washington

SEAL



OK
10-27-04

RECEIVED

SEP 30 2004

CITY OF OMAK



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

August 25, 2004

Dale Sparber
City of Omak
PO Box 72
Omak WA 98841-0072

RE: Applications for Change No. CG4-GWC445-D@1, CG4-GWC446-D@3, CG4-GWC1082-D@1,
CG4-GWC3655-A@1, CG4-GWC3656-A@1, CG4-GWC7332-A@1

This letter is regarding your applications for change for appropriation of water. Please refer to the above-assigned application numbers if you contact us as it will help us serve you more quickly.

Please complete the following two steps:

1. Enclosed is a combined notice of your applications for change, which must be published once a week for two consecutive weeks in a newspaper published in Okanogan County. The newspaper should have general circulation in the locality where the water is to be diverted and used, and must be qualified as a legal newspaper. Publishing the notice in a remote part of the county, when not necessary, may be cause for you to be required to republish the notice in a designated newspaper. The enclosed newspaper list may help you select an appropriate newspaper for the area.

Publication should start within 30 days from the date of this letter.

To assure accuracy, it is your responsibility to check the notice carefully before having it published. If an error is detected, please contact this office for correction and/or resolution. If we later find an error in your public notice, you will be required to re-publish an amended notice.

2. After publication, the publishing newspaper should provide you with a notarized original Affidavit of Publication, which should be forwarded to our office as soon as possible. Please do not send a photocopy of the affidavit.

If you do not wish to proceed with the project, please let us know and we will reject the application. If your plans have changed from what is described in the public notice, you may need to file a new change and, in some cases, arrange for a site visit.

If you have questions or concerns about this information, please call Scott Turner at (509) 457-7106. Thank you for your attention to this matter.

Sincerely,

Erin C. Gutierrez

Erin Gutierrez
Water Resources Program

040816/eg
Enclosures: Public Notice
Newspaper List

pn-3 WRIA



FILE COPY



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
YAKIMA, WASHINGTON

AMENDED NOTICE OF APPLICATIONS FOR CHANGE OF THE OMAK CITY WATER RIGHTS

TAKE NOTICE:

Consolidated Notices of Applications to Change to change the point of diversion (replace) or add a point of withdrawal (add) under the City of Omak Water Rights detailed below. These requests were submitted November 24, 1998 except for change to Certificate No. 446-D which was submitted August 4, 2004. They are part of the City of Omak Water System. The proposed wells are to be located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 24, NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 25, and SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 19, all in T. 34 N., R. 26 E.W.M.

Rights and proposed change:

Add or replace wells under Certificate No. 445-D with priority date of December 1913 for 500 gpm, 600 acre-feet per year for municipal supply from a well (Kenwood) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M.

Add or replace wells under Certificate No. 446-D with priority date of March 1936 as changed by Change Authorization No. CG4-GWC446-D@1 for 800 gpm, 96 acre-feet per year for municipal supply from a well (Apple) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 26, and the new well located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 24, T. 34 N., R. 26 E.W.M.

Add wells under Certificate No. 1082-D with priority date of May 1944 for 1630 gallons per minute (gpm), 1430 acre-feet per year for municipal supply from a well (Eastside) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M.

Add wells under Certificate No. 3655-A with priority date of March 20, 1958 for 1300 gpm, 2080 acre-feet per year for municipal supply from a well (Eastside) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M.

Add or replace wells under Certificate No. 3656-A with priority date of March 20, 1958 for 375 gpm, 600 acre-feet per year for municipal supply from a well (Apple) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M.

Add wells under Certificate No. 7332-A with priority date of June 22, 1970 for 600 gpm, 560 acre-feet per year for municipal supply from May 1 through October 31 from a well (Eastside) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M.

Even though the public notices have been combined, each water right change request will be evaluated on its own merits. Protests or objections against the change of any of these rights should be filed separately by water right, must include a detailed statement of the basis for objections. All letters of protest will become public record. Each protest must be accompanied by a \$2.00 recording fee (check or money order only) and filed with the Department of Ecology, 15 W. Yakima Avenue, Suite 200, Yakima, WA 98902-3452, within thirty (30) days from:

(last date of publication to be entered above by the publisher)



State of Washington In the Heart of the Okanogan

Dale Sparber, Mayor

2 North Ash
(509) 826-1170
P.O. Box 72
Omak, WA 98841
Fax: 509-826-6631
info@omakcity.com

July 29, 2004

Washington Department of Ecology
Water Resources Program
15 West Yakima Avenue, Suite 200
Yakima, WA 98902-3452

Attn: Phil Crane
Water Resources Program

Re: City of Omak
Water Rights Change Application - Additional Points of Withdrawal

Dear Mr. Crane:

The City of Omak requests that the following water rights change applications, previously submitted to W.D.O.E. in November 1998, be amended with the addition of two additional points of withdrawal:

CG4-GWC445-D@1
CG4-GWC1082-D@1
CG4-GWC3655-A@1
CG4-GWC3656-A@1
CG4-GWC7332-A@1

The two additional points of withdrawal are identified as the "Hicks Well", located in the Northwest Quarter, Northwest Quarter Section 25, Township 34 North, Range 26 East, W.M. and the "Dean Well", located in the Southwest Quarter, Southwest Quarter Section 19, Township 34 North, Range 26 East, W.M.

Additionally, the City is submitting the enclosed new Application for Change/Transfer of Water Right requesting the addition of the Hicks Well" and the "Dean Well" as additional points of withdrawal to Ground Water Rights Certificate 446-D.

Thank you for your consideration of these water rights changes. Should you have any questions, please contact the City's engineering consultant, Mr. Jeffrey T. Louman, PE at (509) 966-7000.

Very truly yours,

Dale Sparber

Dale Sparber
Mayor, City of Omak

Enclosure: Application for Change of Water Right (Additional Points of Withdrawal)



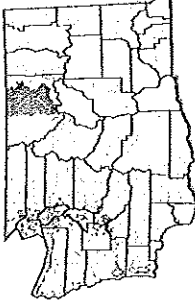
CG4-GWC445-D@1
CG4-GWC1082-D@1
CG4-GWC3655-A@1
CG4-GWC3656-A@1
CG4-GWC7332-A@1



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

January 12, 2004



Your address
is in the
Okanogan
watershed

City of Omak
PO Box 72
Omak WA 98841-0072

Dear Applicant:

RE: Water Right Change Applications No. CG4-GWC445-D, CG4-GWC446-D,
CG4-GWC1082-D, CG4-GWC3655-A, CG4-GWC3656-A, CG4-GWC7332-A,
CG4-GWC445-D@1, CG4-GWC1082-D@1, CG4-GWC3655-A@1,
CG4-GWC3656-A@1, CG4-GWC7332-A@1, CG4-31525

This letter is regarding water right change applications that you submitted to the Department of Ecology. The Department is beginning to process water right change applications within Okanogan County (Water Resource Inventory Area 49).

Enclosed are copies of the public notices for the change applications that you submitted. Due to the time lag in our processing these applications, we would like to verify your interest in proceeding with the projects as described in the public notices.

If you do not wish to proceed with the projects, please let us know and we will reject the applications. If your plans have changed from what was described in the public notices, you may need to file new change applications. Ecology staff will be contacting you to discuss the proposed changes and, in some cases, arrange for a site visit.

To contact us, you may call Bryce Bealba in this office at (509) 575-2597.

Sincerely,

Randall Doneen
Unit Supervisor
Water Resources Program

RD:TM:eg
040118

Enclosures: Copies of Affidavits of Public Notice

FILE COPY





STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

April 8, 1999

The Honorable E Walt Smith
Mayor of Omak
PO Box 72
Omak WA 98841-0072

RE: **City of Omak** - No. G4-31525P, and consolidated public notice for changes on files No. CG4-GWC445-D@1, CG4-GWC446-D@1, CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1, and CG4-GWC7332-A@1

In review of the consolidated public notice to add Well #9 to each of 7 water rights, I discovered that Notice of Beginning of Construction (bc) has not been submitted on Ground Water Permit No. G4-31525P. There are notes that there may have been construction problems with a well constructed under that permit. The bc was due May 1, 1995. A request for extension should be submitted and the filing of the bc if appropriate.

Enclosed for your use is a bc form.

We consider construction started when you have taken steps to develop the source or taken steps to be able to withdraw water from the source and completed if you have installed a system capable of delivering the quantity of water you will be using, (mainline laid, pump installed) for the permitted use to the place of use. Full beneficial use is when the water has been put to the intended use within the limits of the permit.

The letter requesting extension should address:

1. Efforts made since the permit issued to begin and complete construction.
2. An anticipated time schedule for completing construction of the water system.
3. Any additional remarks concerning your project that will assist us in making our decision of whether to keep the permit alive.

The request for extension needs to be accompanied by the extension fee. Submit the fee either by check or money order made payable to the Department of Ecology. The extension fee required to cover from May 1995 to May 1999 for this permit is \$40.00. An additional \$10.00 would be required if you needed an additional year to May 2000 in which to begin construction.

 **FILE COPY** 

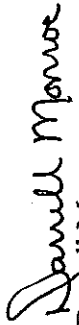
E Walt Smith
RE: City of Omak
Page 2
April 8, 1999

The Department will have to defend its decision to work on your applications for change out of priority date sequence. Please add a discussion as to why there is a critical need for Well #9 when there is a large quantity (5000 gpm) undeveloped permitted pair of wells authorized (assuming an extension is granted) to serve the area.

Thank you in advance for your early attention to this matter.

I hope you find this information of assistance. Feel free to contact me at (509) 457-7143 if you have questions. There is an answering system at that number to cover times when I am away from my desk.

Sincerely,

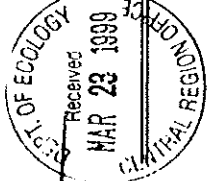

Darrell Monroe
Water Resources Program

DM:gh
990410

Enclosure: Notice of Beginning of Construction

copy: Jeff Louman

Files: G4-31525P, CG4-GWC445-D@1, CG4-GWC446-D@1, CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1, CG4-GWC7332-A@1



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
YAKIMA, WASHINGTON
NOTICE OF APPLICATIONS
FOR CHANGE OF THE OMAK
CITY WATER RIGHTS

TAKE NOTICE:

Consolidated Notices of Applications to Change to change the point of diversion (replace) or add a point of withdrawal (add) under the City of Omak Water Rights detailed below. The City is seeking expedited evaluation under WAC 173-152 for the change proposed for the water rights associated with their Apple and Kenwood wells. The Apple and Kenwood wells are being evaluated by Department of Health for risk of contamination due to influence of surface water.

These seven requests were submitted November 24, 1998. They are part of the City of Omak Water System. The proposed new well (#9) is to be located within the SE 1/4 SE 1/4 Section 24, T. 34 N., R. 26 E., W.M.

Rights and proposed change:
Add or replace well under Certificate No. 445-D with priority date of December 1913 for 500 gpm, 600 acre-feet per year for municipal supply from a well (Kenwood) located in the SW 1/4 SE 1/4 Section 26, T. 34 N., R. 26 E., W.M.

Add or replace well under Certificate No. 446-D with priority date of March 1936 for 800 gpm, 96 acre-feet per year for municipal supply from a well (Apple) located in the SW 1/4 SE 1/4 Section 26, T. 34 N., R. 26 E., W.M.

Add well under Certificate No. 1082-D with priority date of May 1944 for 1630 gallons per minute (gpm), 1430 acre-feet per year for municipal supply from a well (Eastside) located in the SE 1/4 SE 1/4 Section 35, T. 34 N., R. 26 E., W.M.

Add well under Certificate No. 3655-A with priority date of March 20, 1958 for 1300 gpm, 2080 acre-feet per year for municipal supply from a well (Eastside) located in the SE 1/4 SE 1/4 Section 35, T. 34 N., R. 26 E., W.M.

Add or replace well under Certificate No. 3656-A with priority date of March 20, 1958 for 375 gpm, 600 acre-feet per year for municipal supply from a well (Apple) located in the SW 1/4 SE 1/4 Section 26, T. 34 N., R. 26 E., W.M.

Add well under Certificate No. 7332-A with priority date of June 22, 1970 for 600 gpm, 560 acre-feet per year for municipal supply from May 1 through October 31 from a well (Eastside) located in the SE 1/4 SE 1/4 Section 35, T. 34 N., R. 26 E., W.M.

Add well under Superceding Ground Water Permit No. G4-31525P with priority date of November 23, 1992 for 5000 gpm, 3500 acre-feet per year for municipal supply from 2 wells (Omak Wood Products) located in the SE 1/4 SE 1/4 Section 35, T. 34 N., R. 26 E., W.M.

Even though the public notices have been combined, each water right change request will be evaluated on its own merits. Protests or objections against the change of any of these rights should be filed separately by water right, must include a detailed statement of the basis for objections. All letters of protest will become public record. Each protest must be accompanied by a \$2.00 recording fee and filed with the Department of Ecology, 15 W. Yakima Avenue, Suite 200, Yakima, WA 98902, within thirty (30) days from March 10, 1999.

Published by The Omak-Okanogan County Chronicle.

98-92 May 330

Affidavit of Publication

STATE OF WASHINGTON ss.
County of Okanogan

The undersigned, being first duly sworn on oath, deposes and says that she is the principal clerk of the Omak-Okanogan County Chronicle, a weekly newspaper, that she is duly authorized to make this affidavit; that said newspaper is a legal newspaper and has been approved as a legal newspaper by order of the Superior Court in the county in which it is published and it is now and has been for more than six months prior to the date of the publications hereinafter referred to, published in the English language continuously as a weekly newspaper in Omak, Okanogan County, Washington, and it is now and during all of said time was printed in an office maintained at 618 Okoma Drive, the place of publication of said newspaper. That the annexed is a true copy of

Notice of Application for Change

as it was published in regular issues (and not in supplement form) of said newspaper once a week for a period of two consecutive weeks, commencing on the 3rd day of March, 1999 and ending on the 10th day of March, 1999 both dates inclusive, and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of \$ 162.00, which amount has been paid in full, at the rate of \$6.00 per column inch.

Charlotta B. Wick Principal Clerk

Subscribed and sworn to before me this 11th day of

March, 1999

Kristin Vigoren Notary Public in and for the State of Washington

Residing at Omak, WA

KRISTIN F. VIGOREN
STATE OF WASHINGTON
NOTARY -- PUBLIC

MY COMMISSION EXPIRES 12-31-02

SEAL

OK for notice
Protest Period end 4/6/99
WRATs updated 4/6/99



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

15 West Yakima, Suite 200 • Yakima, Washington 98902 • (509) 575-2490

February 16, 1999

City of Omak
PO Box 72
Omak WA 98841-0072

RE: Applications for Change

We have received your applications for appropriation of water. Please complete the following two steps:

1. Enclosed is a notice of your applications, which must be published once a week for two consecutive weeks in a newspaper published in Okanogan County. The newspaper should have general circulation in the locality where the water is to be diverted and used, and must be qualified as a legal newspaper. Publishing the notice in a remote part of the county, when not necessary, may be cause for you to be required to republish the notice in a designated newspaper. The enclosed newspaper list may help you select an appropriate newspaper for the area.

Publication should start within 30 days from the date of this letter.

To assure accuracy, it is your responsibility to check the notice carefully before having it published. If you find an error, please contact this office for correction and/or resolution. If we later find an error in your public notice, you will be required to re-publish an amended notice.

2. After publication, the publishing newspaper should provide you with a notarized original Affidavit of Publication, which should be forwarded to our office as soon as possible. Please do not send a photocopy of the affidavit.

If you have any questions or concerns about any of this information, please call Darrell Monroe at (509) 457-7143. Thank you for your attention to this matter.

Sincerely,

Darrell Monroe

Darrell Monroe
Water Resources Program

DM:gh
990227a

Enclosures: Public Notice
Newspaper List

cc: Jeff Louman

pn-3.doc

FILE COPY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
YAKIMA, WASHINGTON

NOTICE OF APPLICATIONS FOR CHANGE OF THE OMAK CITY WATER
RIGHTS

TAKE NOTICE:

Consolidated Notices of Applications to Change to change the point of diversion (replace) or add a point of withdrawal (add) under the City of Omak Water Rights detailed below. The City is seeking expedited evaluation under WAC 173-152 for the change proposed for the water rights associated with their Apple and Kenwood wells. The Apple and Kenwood wells are being evaluated by Department of Health for risk of contamination due to influence of surface water.

These seven requests were submitted November 24, 1998. They are part of the City of Omak Water System. The proposed new well (#9) is to be located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 24, T. 34 N., R. 26 E.W.M.

Rights and proposed change:

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Add or replace well under Certificate No. 446-D with priority date of March 1936 for 800 gpm, 96 acre-feet per year for municipal supply from a well (Apple) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M.

Add well under Certificate No. 1082-D with priority date of May 1944 for 1630 gallons per minute (gpm), 1430 acre-feet per year for municipal supply from a well (Eastside) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M.

Add well under Certificate No. 3655-A with priority date of March 20, 1958 for 1300 gpm, 2080 acre-feet per year for municipal supply from a well (Eastside) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M.

Add or replace well under Certificate No. 3656-A with priority date of March 20, 1958 for 375 gpm, 600 acre-feet per year for municipal supply from a well (Apple) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M.

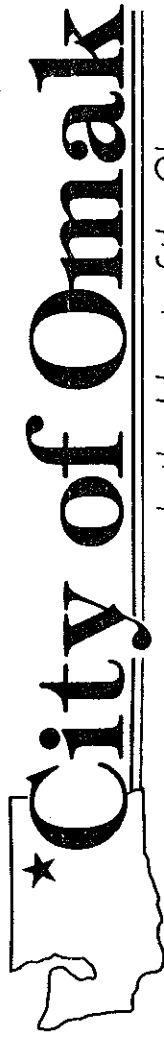
Add well under Certificate No. 7332-A with priority date of June 22, 1970 for 600 gpm, 560 acre-feet per year for municipal supply from May 1 through October 31 from a well (Eastside) located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M.

Add well under Superceding Ground Water Permit No. G4-31525P with priority date of November 23, 1992 for 5000 gpm, 3500 acre-feet per year for municipal supply from 2 wells (Omak Wood Products) located in the SE ¼ SE ¼ Section 35, T. 34 N., R. 26 E.W.M.

Even though the public notices have been combined, each water right change request will be evaluated on its own merits. Protests or objections against the change of any of these rights should be filed separately by water right, must include a detailed statement of the basis for objections. All letters of protest will become public record. Each protest must be accompanied by a \$2.00 recording fee and filed with the Department of Ecology, 15 W. Yakima Avenue, Suite 200, Yakima, WA 98902, within thirty (30) days from:

(last date of publication to be entered above by the publisher)

990227

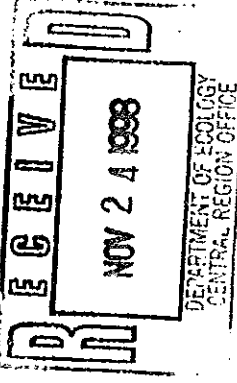


State of Washington

In the Heart of the Okanogan

2 N. Ash
(509) 826-1170

P.O. Box 72
Omak, WA 98841



E. Walt Smith
Mayor

November 23, 1998

Department of Ecology
Water Resources Program
15 West Yakima Avenue, #200
Yakima, WA 98901

Attn: Darryl Monroe

Re: City of Omak
Proposed Well No. 9

Dear Mr. Monroe:

The City of Omak has been attempting for the last two years to secure a new water well source as a replacement for two existing wells near the Okanogan River. These two existing wells, Well No. 2 - Apple, and Well No. 3 - Kenwood, are currently undergoing testing to determine whether they are under the influence of surface water from the Okanogan River. The Washington State Department of Health has encouraged the City to abandon or at least reduce its dependence on these two wells as a domestic supply to Omak's water system.

Recently, the City was approached by Hubbard Well Drilling regarding purchasing an existing well which they constructed in the Fall of 1997. Enclosed is a well log provided by Hubbard Drilling showing the construction of the existing well. It is our understanding the well was drilled with the anticipation of offering it for sale to the City of Omak. Please be advised that the City was not involved at any time with the construction of the well.

On November 17, 1997, you transmitted a letter to Mr. Clinton Watts regarding the unauthorized construction of a municipal well. You had understood at the time that the City of Omak was involved in the drilling activity. The City's engineering consultant, Mr. Jeff Louman, PE, of Huibregtse, Louman Associates, Inc., advised you at that time that Mr. Watts, although a City Councilmember, was not acting on behalf of the City.

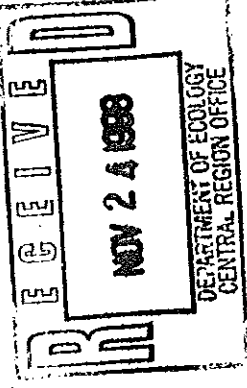
The City originally rejected the offer to purchase this "Hubbard" well, as the price was not acceptable. The City of Omak continued to pursue the possible purchase of other existing wells in the area and the possibility of drilling a new well on its own. The recent offer by Hubbard Well Drilling to sell the well to the City was at an acceptable price. We have determined this new price to be comparable to the City purchasing property and drilling a new well in the same area. It has, therefore, been determined by the Omak City Council that purchasing the "Hubbard" well is in the best interests of the public.

Order # 1177

\$70.00 TMM

11/24/98

For 7 Applications
@ \$10 per / Ap

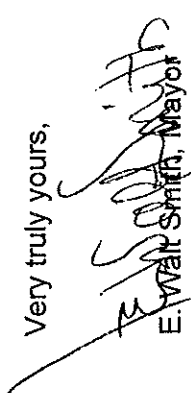


The purchase of the "Hubbard" well is subject to it first being test pumped to determine its capacity. The City of Omak respectfully requests that the Department of Ecology grant its approval to test pump this "Hubbard" well. As the purchase of the well is dependent on this test pumping, we will appreciate any expedited decision so that we can proceed as early as possible. It is planned to have this new well "on-line" in the City's water system by early Summer 1999. Until this new source is in service, the northeast Omak upper pressure zone and new 560,000 gallon reservoir will be without water supply.

Enclosed are seven (7) Applications for Change of Water Rights and the required \$70.00 total application fee. These "Change" applications request adding this proposed new Well No. 9 (Hubbard Well) as an additional point of withdrawal to the City's existing water rights. The City is not requesting additional water rights volumes or withdrawal rates.

Should you have any questions, please contact Mr. Jeff Louman, PE, at telephone number (509) 966-7000. Your earliest consideration will be most appreciated.

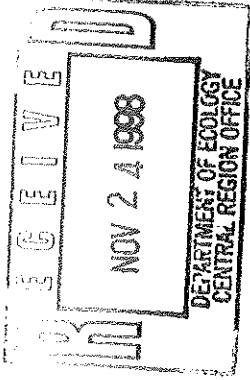
Very truly yours,


E. Walt Smith, Mayor
City of Omak

EWS/jk
OM6-64

Enclosures

copy: Huibregtse, Louman Associates, Inc.



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

APPLICATION FOR CHANGE OF WATER RIGHT

☐ PURPOSE ☐ DIVERSION OR WITHDRAWAL
☐ PLACE ☒ ADDITIONAL POINT OR POINTS

Accepted By _____	Date _____
Is Field Exam. Required? <input type="checkbox"/> YES <input type="checkbox"/> NO	
Determined By _____	

NAME City of Omak		Bus. Tel. (509) 826-1170	
		Home Tel. _____	
		Other Tel. _____	
ADDRESS P.O. Box 72		(CITY) Omak	(STATE) WA
		(ZIP CODE) 98841	
APPLICATION NUMBER		PERMIT NUMBER	CERTIFICATE NUMBER
			3656
DECREED RIGHT (TITLE OF CASE)			

APPROPRIATIONS MADE (GIVE DATE IF PRIOR TO JUNE 7, 1917 IF SURFACE WATER, OR JUNE 7, 1945 IF GROUND WATER)

IS THE WATER RIGHT RECORDED IN YOUR NAME? IF NO, GIVE NAME RECORDED UNDER
☒ YES ☐ NO

1. RIGHT CONSISTS OF			
WATERS USED FROM (STREAM, LAKE, WELL, OR TRENCH, ETC.)		GALLONS PER MINUTE OR CUBIC FEET PER SECOND	
Well No. 2-Apple (Formerly Well No. 3)		375 GPM	
WATER CURRENTLY USED FOR		TIME OF USE	
Municipal Water Supply		Continuous	
2. LOCATION OF PRESENT POINT OF DIVERSION OR WITHDRAWAL			
ENTER BELOW THE DISTANCES FROM THE NEAREST SECTION OR PROPERTY CORNER TO THE DIVERSION OR WITHDRAWAL.			
800 ft. North and 200 ft. East of the South 1/4 Corner of Section 26.			
LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)		SECTION	TOWNSHIP N.
SW 1/4 of SE 1/4		26	34
		RANGE (E. OR W.)	W.M.
		26 E.	Okanogan
IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, COMPLETE THIS SECTION			
LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)	

3. LEGAL DESCRIPTION OF LANDS WATER IS USED ON

City of Omak Water System Service Area

SECTION 3	TOWNSHIP N. 33	RANGE (E or W) W.M. 26 E.	COUNTY Okanogan
SECTION 19	TOWNSHIP N. 34	RANGE (E or W) W.M. 27 E.	COUNTY Okanogan
SECTION 23, 24, 25, 26, 27, 34, 35, 36	TOWNSHIP N. 34	RANGE (E. OR W.) W.M. 26 E.	COUNTY Okanogan
(ATTACH SEPARATE SHEET IF NECESSARY)			
ARE YOU THE LEGAL OWNER OF THE ABOVE DESCRIBED LANDS		IF NO, EXPLAIN YOUR INTEREST	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		Municipal Water Purveyor	

REASONS FOR THE PROPOSED CHANGE

Addition of one (1) new well to the City's existing water rights. The new well will potentially replace Wells No. 2 and 3 which are under investigation for surface water (Okanogan River) influence.

A MINIMUM FEE OF \$10.00 MUST ACCOMPANY THIS APPLICATION

CONTINUE ON REVERSE SIDE

CHANGE

4. CHANGE WATER USE TO				CHANGE REQUESTED		GALLONS PER MINUTE OR CUBIC FEET PER SECOND	
				TIME OF USE		1000	
				Continuous			
5. LOCATION OF PROPOSED POINT OF DIVERSION OR WITHDRAWAL							
ON ACCOMPANYING SECTION MAPS, ACCURATELY MARK AND IDENTIFY EACH POINT OF DIVERSION. SHOW NORTH-SOUTH AND EAST-WEST DISTANCES FROM NEAREST SECTION CORNER OR PROPERTY CORNER.							
ALSO, ENTER BELOW THE DISTANCES FROM THE NEAREST SECTION OR PROPERTY CORNER TO THE DIVERSION OR WITHDRAWAL.							
Approximately 1,200 ft North and 200 ft West of the Southeast Corner of Section 24.							
LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)				SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.	COUNTY
SE 1/4 of SE 1/4				24	34	26 E.	Okanogan
6. IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, COMPLETE THIS SECTION							
LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)					

ARE YOU THE OWNER OF THE LAND ON WHICH THE PROPOSED POINT OF DIVERSION OR WITHDRAWAL IS TO BE LOCATED
☒ YES ☐ NO The property is being acquired as part of the well purchase.

LEGAL DESCRIPTION OF LANDS WATER IS USED ON

City of Omak Water System Future Service Area as defined in the City of Omak
Comprehensive Water Plan.

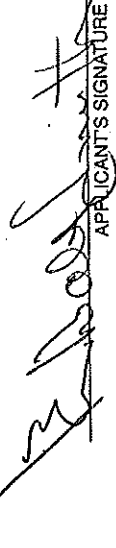
SECTION 3	TOWNSHIP N. 33	RANGE (E or W) W.M. 26 E.	COUNTY Okanogan
SECTION 19	TOWNSHIP N. 34	RANGE (E or W) W.M. 27 E.	COUNTY Okanogan
SECTION 23, 24, 25, 26, 27, 34, 35, 36	TOWNSHIP N. 34	RANGE (E. OR W.) W.M. 26 E.	COUNTY Okanogan
(ATTACH SEPARATE SHEET IF NECESSARY)			
ARE YOU THE LEGAL OWNER OF THE ABOVE DESCRIBED LANDS		IF NO, EXPLAIN YOUR INTEREST	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		Municipal Water Purveyor	

* PLEASE NOTE LEGAL LAND OWNER SIGNATURE AND APPLICANT SIGNATURE ARE BOTH REQUIRED. IF THE LEGAL LAND OWNER AND APPLICANT ARE THE SAME, PLEASE SIGN IN BOTH PLACES. THANK YOU.

City of Omak

E. WALT SMITH - MAYOR

LEGAL LANDOWNER (PLEASE PRINT)



APPLICANT'S SIGNATURE



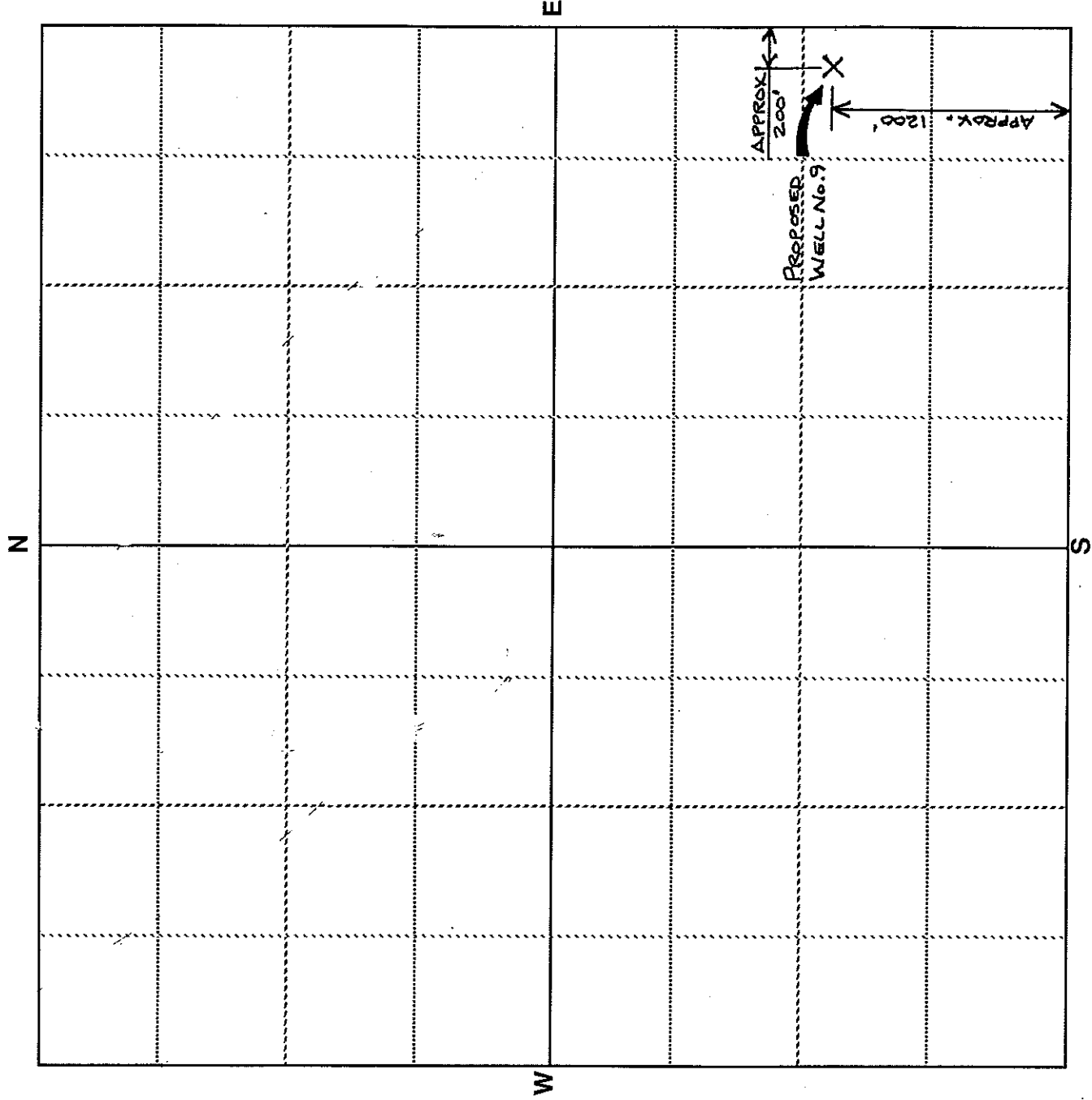
LEGAL LANDOWNER SIGNATURE (OWNER OF PROPERTY DESCRIBED IN ITEM NUMBER 3)

2 North Ash - Omak, Wa. 98841

LEGAL LANDOWNER'S ADDRESS

SECTION MAP

Sec. 24 Twp. 34 N.R. 26 E.W.M.



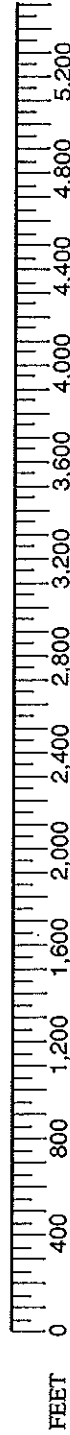
Scale: 1 inch = 800 feet (each small square = 10 acres)

Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source). For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile. Indicate traveling directions from nearest town in space below.

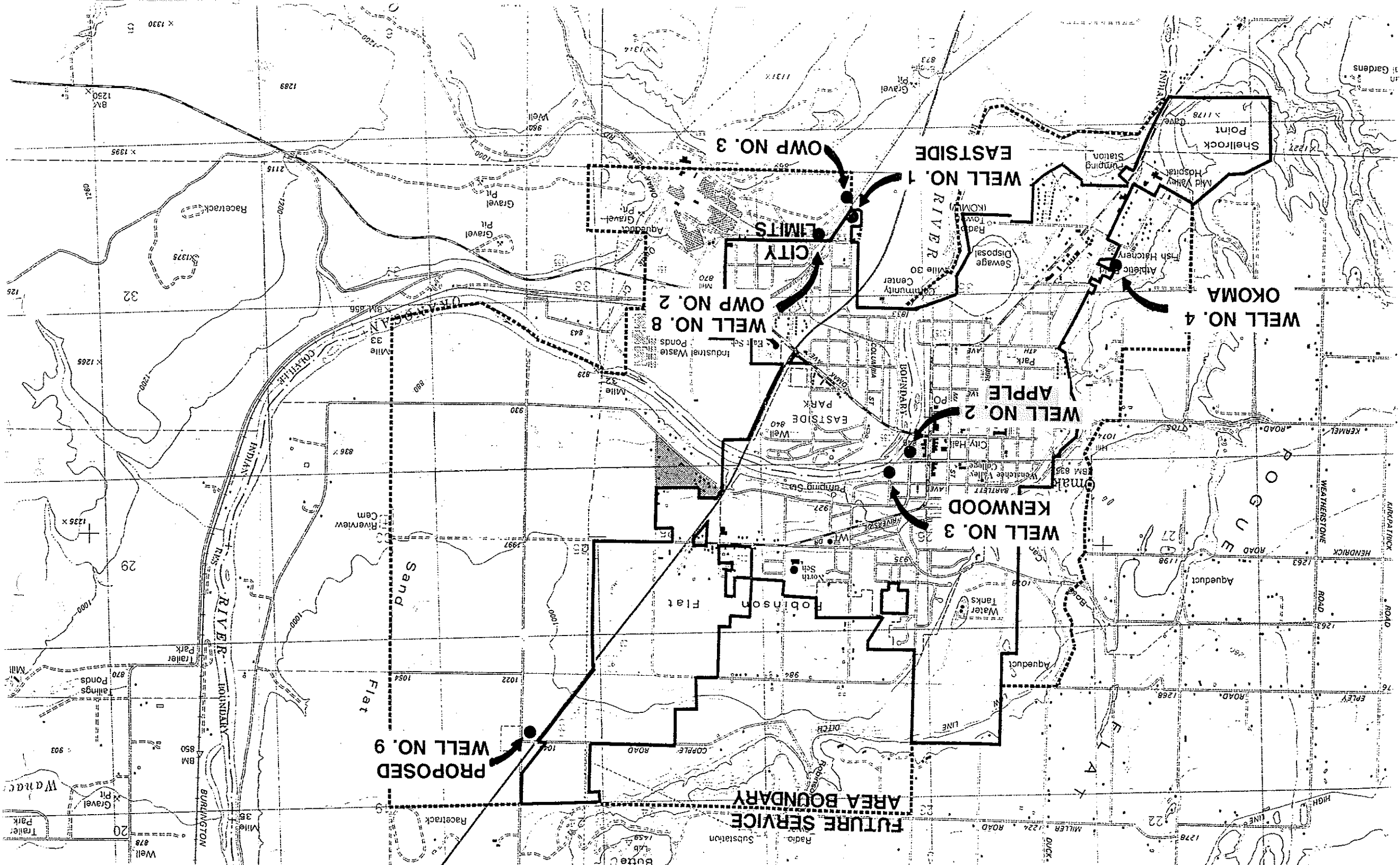
North of the City of Omak along Highway 97. Turn east at the Copple Road/Sand Flats Road intersection with Highway 97. The proposed Well No. 9 is immediately South of Sand Flats Road at the intersection.

Detach here

Fold along scale



Detach this scale at the performance, fold excess paper under or cut off excess by cutting along the scale line. This scale corresponds to the SECTION MAP above. You can read feet directly from this scale to outline property and locate points of diversion or withdrawal on the SECTION MAP. Enclose this map along with the application and \$10.00 examination fee.



CERTIFICATE RECORD NO. 8 PAGE NO. 3 -A-STATE OF WASHINGTON, COUNTY OF OKANOGAN**Certificate of Ground Water Right**

Issued in accordance with the provisions of the Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the State Supervisor of Water Resources thereunder.

THIS IS TO CERTIFY That CITY OF OMAK, WASHINGTONof, has made proof

to the satisfaction of the State Supervisor of Water Resources of Washington, of a right to the use of the ground waters of a well

located within Omak Addition, City of OmakSec. 26, Twp 34 N., R. 26 E. W. M.,for the purpose of municipal supply

under and subject to provisions contained in Ground Water Permit No. 4958 issued by the State Supervisor of Water Resources and that said right to the use of said ground waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the State Supervisor of Water Resources of Washington and entered of record in Volume 8 at page 3656-4 that the right hereby confirmed dates from March 20, 1958; that the quantity of ground water under the right hereby confirmed for the purposes aforesaid, is limited to an amount actually beneficially used for said purposes, and shall not exceed 37½ gallons per minute; 600 acre-feet per year for municipal supply.

Special provisions required by the Supervisor of Water Resources:

A description of the lands to which such ground water right is appurtenant:

City of Omak, Okanogan County, Washington.

The right to the use of the ground water aforesaid hereby conferred is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Water Resources affixed this

30th day of June, 1960.W. B. Walker



RECEIVED

JAN 08 2003

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

CITY OF OMAK

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

January 6, 2003

Mayor Dale Sparber
City of Omak
PO Box 72
Omak WA 98841

file w/ water rights

RE: Ground Water Permit No. G4-31525P

The intent of this letter is to encourage a review of the status of Ground Water Permit No. G4-31525P.

Superseding Ground Water Permit No. G4-31525P issued July 18, 1994, with a priority date of November 23, 1992 for the withdrawal of 5000 gallons per minute (gpm), 3500 acre-feet per year for continuous municipal supply (including water that would be used by Omak Wood Products if subsequently received by the City of Omak). The two wells authorized are located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M. Development schedule allowed until May 1, 2014, for completing the source and distribution system and file Completion of Construction form and until May 1, 2015, to perfect the water to full beneficial use and file Proof of Appropriation form.

A Proof of Appropriation form is a notarized statement by the permittee that the water use authorized in the permit is perfected to the maximum extent intended. A Proof of Appropriation form was filed by Mayor Smith on March 28, 2000 for a well equipped with a 150 horse power pump and for 1650 gpm.

With the rather large difference between the permit and the Proof of Appropriation form, and the time allowed in the permit for full development, this filing of proof may have been intended by Mayor Smith as a status report and not the intended end of development.

Please advise this office whether or not the proof was intended to represent the maximum development under the permit.

I hope you find this information of assistance. Feel free to contact me at (509) 457-7143 if you have questions. There is an answering system at that number to cover when I am away from my desk.

Sincerely,

Darrell Monroe
Darrell Monroe
Water Resources Program

DM:gg
030102





STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PROOF OF APPROPRIATION OF WATER

APPLICATION NUMBER		PERMIT NUMBER G4-31525P	
NAME OF PERMITTEE City of Omak			
POST OFFICE ADDRESS P.O. Box 72		(CITY) Omak	(STATE) WA (ZIP CODE) 98841
ACTUAL SOURCE OF APPROPRIATION Groundwater Well			
PURPOSE OR PURPOSES WATER IS USED FOR Municipal Water Supply			
DATE WATER WAS COMPLETELY APPLIED TO PERMITTED USE August 6, 1996		IF USED FOR IRRIGATION: NUMBER OF ACRES ACTUALLY IRRIGATED	
IF SOURCE IS A WELL, IS AN ACCESS PORT NOW INSTALLED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		MONTHS DURING WHICH WATER IS USED Year - round supply	
PUMP SIZE Worthington 14HH220, 3 Stage, 150 HP			
ACTUAL AMOUNT WITHDRAWN OR DIVERTED FROM PERMANENT SYSTEM 1,650 <input checked="" type="checkbox"/> GPM <input type="checkbox"/> CFS			
HAVE ALL PROVISIONS AS REQUIRED BY PERMIT BEEN ACCOMPLISHED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		IF NO, EXPLAIN	

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS USED (USE ADDITIONAL SHEET IF NECESSARY)

City of Omak Water System Service Area

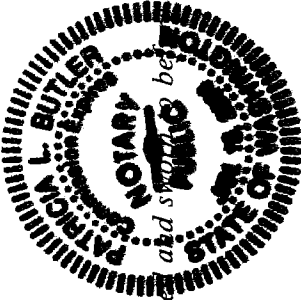
HAS AN APPROPRIATE FLOW METER BEEN INSTALLED?
☒ YES ☐ NO

HAS A DEPARTMENT OF FISH AND WILDLIFE APPROVED FISH SCREEN BEEN INSTALLED?
☐ YES ☐ NA ☐ NO

STATE OF WASHINGTON,
County of Okanogan } ss.

I, E. WALT SMITH, being first duly sworn, depose and say that I have read the above and foregoing proof of appropriation; that I know the contents thereof; and that the facts therein stated are true.

IN WITNESS WHEREOF, I have hereunto set my hand this 28 day of March, 19 2000



Patricia L. Butler
Notary Public

Subscribed and sworn to before me this 28 day of March, 19 2000
Patricia L. Butler
Notary Public

FINAL Contract

AGREEMENT TO CONVEY RIGHT TO RECAPTURE
AND REUSE WATER

THIS AGREEMENT, made this 23 day of April, 1993, by and between OMAK WOOD PRODUCTS, INC., a Delaware corporation with principal place of business in Omak, Okanogan County, Washington, hereinafter referred to as "OWP", and the CITY OF OMAK, a municipal corporation of the State of Washington, located in Okanogan County, State of Washington, hereinafter referred to as "City",

R E C I T A L S

OWP, as part of its wood products operation, runs a steam powered electrical generating facility, hereinafter referred to as the "Generator". The water used by this Generator is obtained from two wells owned by OWP and from which OWP has a right of water use.

The United States Environmental Protection Agency, hereinafter referred to as "EPA", has determined that OWP has been discharging effluent, in the form of heated water, into Omak Creek and the Okanogan River from the Generator (the "Effluent"). Pursuant to authority granted it by the Clean Water Act (the "Act") to protect the water and the environment, EPA has ordered OWP to reduce the Effluent to meet effluent limitations and monitoring requirements as provided by the Act.

The City has an insufficient supply of water to provide for its needs and those of its water customers, now and in the future.

OWP is willing to convey to the City a right of use to the Effluent. The City is willing to accept the Effluent and to take

all actions necessary so that the Effluent can safely be introduced into the City's water system.

OWP and the City enter into this agreement to better protect the environment by eliminating the Effluent and to provide the City with a sufficient water supply to meet its present and future needs.

NOW, THEREFORE, the parties, for the mutual consideration to be received and the covenants and agreements hereinafter contained, do hereby mutually covenant and agree as follows:

1. Right of Recapture and Reuse of Water. For the mutual benefits to be derived by the parties, OWP agrees to allow the City the right of recapture and reuse of water obtained from groundwater wells described in State of Washington, Department of Ecology Water Right Claim No. 005741, and amendments thereto, but only after it has been discharged from OWP's Generator. The conveyance from OWP to the City shall be subject to all existing water rights, conditions and laws and shall be subordinate to OWP's rights to put these waters to their present beneficial use, however, OWP shall not put these waters to any new or different use that would jeopardize the availability of water for recapture and reuse by the city. A condition precedent to all obligations under this contract shall be the approval by the Washington State Department of Health, and the granting by Washington State Department of Ecology, and to the extent necessary the Colville Tribe, of water right permits acceptable to the City and OWP.

2. Quantity of Effluent. Subject to the provisions set forth herein, OWP agrees to provide, and the City agrees to accept the Effluent discharged from the Generator; provided, however, that OWP shall not discharge less than 1,250 gallons of Effluent per minute nor more than 3,500 gallons of Effluent per minute. Notwithstanding the foregoing, OWP shall not be liable for any failure to deliver or discharge effluent under the terms of the agreement as a result of acts of God, failures in the well pump system and/or pipelines, where the aforementioned wells, due to acts of nature, are unable to supply sufficient Effluent, or where the effect and/or enforcement of superior water rights prevents the Effluent, or any portion thereof, from being available for recapture or reuse. Neither party has actual knowledge of any such right superior to those of OWP. In the event of mechanical breakdown, OWP shall undertake reasonable efforts to make repairs promptly. During planned annual maintenance and repair of the power generating facility, OWP shall continue delivery of effluent in quantities set forth above.

3. Quality of Effluent. The City hereby acknowledges that the Effluent is water used by OWP in the generation of electricity, and OWP does not guarantee that the Effluent is of a quality safe for human consumption. OWP agrees that it shall not intentionally contaminate any of the aforementioned waters to be utilized and discharged from the Generator with harmful or otherwise toxic substances, and that said water shall not have a temperature higher

than 110 degrees at the point where the water enters the City's cooling plant.

4. Point of Delivery. The point of delivery of the Effluent shall be at the point where the Effluent is discharged from the Generator as of the date of this agreement.

5. Effluent Processing Facility. OWP will sell to the City the real property described in Exhibit A, for the construction, operation, and maintenance of facilities necessary from the pumping, cooling, storage and filtration of the Effluent for safe introduction into the municipal water supply.

The City shall pay OWP the fair market value for said real property as determined by an appraiser selected by and agreed upon by both parties. Closing on the sale of the real property shall take place on or before July 1, 1993. At closing, and upon receipt of the purchase price, OWP shall deliver to the closing agent a warranty deed for the real property.

6. Easements. OWP will grant the City necessary perpetual easements over and across OWP land for the construction, maintenance and replacement of underground pipelines and pumping facilities necessary for the operation of the above-mentioned treatment facility (the "Easements"). The location of the Easements shall be determined by the initial placement of the pipelines before any pipelines are laid, and, provided further, that the location of the pipelines shall not interfere with OWP's operation. The easements may not be expanded, moved or extended

after they are granted without the written consent of OWP. The City shall be liable to OWP for any costs and damages resulting from the City's installation, maintenance and replacement of the pipelines associated with the easements.

7. Access to Easements. The City shall have a right of access at all times to all of the easements by its personnel and agents for the installation, repair and replacement of pipelines necessary for utilization of the aforementioned treatment facility.

8. Ownership of Facilities. The Effluent treatment facility, including but not limited to the pumping, cooling and filtration plants, all pipelines and other necessary facilities, shall be owned, installed, maintained and operated by the City at the City's expense.

9. Commencement of Effluent Delivery. The City shall install and complete Phase I of the Effluent treatment facility and associated pipelines with 3,500 g.p.m. capacity no later than June 1, 1994. OWP agrees to deliver the Effluent on or about said date.

10. Available Water in the Event of Generator or Millsite Shutdown. In the event OWP discontinues operations of the Generator or mill on either a temporary or permanent basis, OWP (or its successor in interest) shall make available water, in lieu of the Effluent, in the minimum quantity set forth in Paragraph 2 above for delivery to the treatment facility utilizing existing pumps and pipelines. In the event of permanent closure of the

Generator or the mill, it shall be the City's duty to run, maintain and repair said pumps and pipelines at its own expense.

11. Conditions Precedent. In addition to the condition precedent set forth in paragraph 1 hereinabove, OWP's, and the City's obligations to perform under this agreement shall be subject to and conditioned upon the following:

(a) U.S. Bank of Washington's consent to this agreement.

(b) If necessary, EPA's agreement to extend certain deadlines in OWP's NPDES permit to June 1, 1994;

(c) the City's ability to obtain satisfactory acquisition and construction financing;

(d) the granting by DOE and the Colville Tribe, if necessary, of water rights to the City to allow the City continued and uninterrupted supply of water from existing wells on OWP property in the event of Generator or mill shutdown as set forth in paragraph 10 above; and

(e) the filing of covenants in conjunction with all deeds necessary to convey the subject water rights and the land for the Effluent treatment facility. These covenants shall be acceptable to the City in form and substance and shall be executed for the purpose of establishing that the City's water rights, obtained pursuant to this agreement, will run with the land and bind and obligate all successors and assigns of OWP.

The City will assist OWP in seeking extensions of deadlines under OWP's NPDES permit.

12. Duration. The rights and obligations herein, including the term of the easements to be granted pursuant to paragraph 6, shall be perpetual.

13. Failure to Accept the Effluent. In the event the city is unable for any reason to accept the Effluent up to a maximum of 3,500 g.p.m., the city shall indemnify and hold OWP harmless from any and all fines, penalties, damage, loss or injury resulting from OWP's subsequent need to discharge the Effluent into Omak Creek and/or the Okanogan River.

14. Successors and Assigns. This agreement shall bind, burden and inure to the benefit of the successors and assigns of the parties hereto.

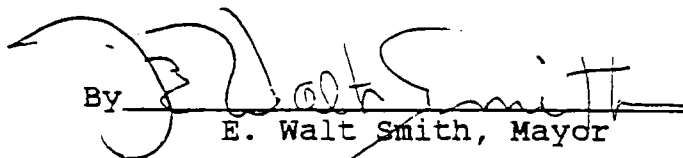
15. Governing Law and Venue. This agreement shall be governed by and construed under the laws of the State of Washington and venue of any action hereunder shall be in any court of competent jurisdiction in Okanogan County, Washington.

16. Attorney's Fees. In the event that any action is filed in relation to this agreement, the prevailing party shall be entitled to attorney's fees and costs, in addition to any and all damages or equitable relief granted or assessed.


IN WITNESS WHEREOF, the parties have executed this agreement at Omak, Okanogan County, Washington, the day and year first above written.

CITY OF OMAK, a municipal corporation:

By



E. Walt Smith, Mayor

Attest



Trish Sieker, Clerk/Treasurer

OMAK WOOD PRODUCTS, INC., a Delaware corporation:

By


President

By


Secretary

STATE OF WASHINGTON)
 : SS
County of Okanogan)

On this day personally appeared before me E. WALT SMITH and TRISH SIEKER, to me known to be the Mayor and Clerk/Treasurer respectively of the City of Omak, the municipal corporation described in the foregoing instrument, and acknowledged that they were authorized to sign the said instrument for the uses and purposes therein mentioned.

GIVEN under my hand and official seal this _____ day of _____, 1993.

Notary Public in and for the State of
Washington residing at _____.
My appointment expires _____.

STATE OF WASHINGTON)
 : SS
County of Okanogan)

On this day personally appeared before me Mike Askea and Kevin Curtis, to me known to be the President and Secretary respectively of Omak Wood Products, the Delaware corporation described in the foregoing instrument, and acknowledged that they were authorized to sign the said instrument for the uses and purposes therein mentioned.

GIVEN under my hand and official seal this 23rd day of April, 1993.

Sh M. Carr

Notary Public in and for the State of
Washington residing at Spokane.
My appointment expires 12-1-95.

MAR-24-93 WED 14:45 CITY OF OMAK

P. 01

City of Omak

September 17, 1992

Project No. 92030

LEGAL DESCRIPTION

That portion of the South Half of Section 36, Township 34 North, Range 26 East, W.M., described as follows:

Commencing at the Northwest Quarter of the Northwest Quarter of the Northwest Quarter of the Northwest Quarter of the Southeast Quarter of said Section 36; thence North $89^{\circ}56'36''$ East, reference bearing, along the North line of said subdivision, 235.39 feet to the point of beginning; thence South $89^{\circ}56'36''$ West, 235.39 feet, to the Northwest corner of said subdivision; thence South $89^{\circ}56'36''$ East, along the North line of the Northeast Quarter of the Southwest Quarter of said Section 36, a distance of 132.40 feet; thence South $0^{\circ}17'$ West, 376.38 feet, to the centerline of SR 155; thence South $78^{\circ}28'52''$ East, along said centerline 306.34 feet to a point which bears South $0^{\circ}17'$ East of the point of beginning; thence North $0^{\circ}17'$ West, 437.96 feet to the point of beginning.

EXCEPT that portion thereof lying Northerly of the Southerly right-of-way line of the Old Riverside Highway.

RECEIVED
APR 30 1993
CITY OF OMAK

April 23, 1993

City of Omak
PO Box 72
Omak WA 98841-0072


RE: Ground Water Application No. G4-31525

Your application has been approved and a permit will be issued in accordance with the enclosed Report of Examination upon payment of the statutory fee of \$20.00. Please make your check payable to the Department of Ecology.

This letter and enclosed Report of Examination constitute our determination and order. You have the right to obtain review of this order. Request for review must be made, within thirty (30) days of receipt of this order, to the Washington Pollution Control Hearings Board, PO Box 40903, Olympia, Washington 98504-0903. Concurrently, a copy of the request must be sent to the Department of Ecology, PO Box 47600, Olympia, Washington 98504-7600. These procedures are consistent with the provisions of Chapter 43.21B RCW and the rules and regulations adopted thereunder.

Please send your permit fee within 30 days.

Sincerely,


Doug Clausing, Section Manager
Water Resources Program
Central Regional Office

DC:FR:ska

Enclosure(s): Report of Examination
Ground Water Bulletin No. 1

cc: Colville Indians

f-2:Form
(08/13/92)

REPORT OF EXAMINATION

TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

- ☐ Surface Water (issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)
- ☒ Ground Water (issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
November 23, 1992	G4-31525		

NAME	(CITY)	(STATE)	(ZIP CODE)
City of Omak	Omak	Washington	98841-0072
ADDRESS (STREET)			
PO Box 72			

SOURCE	PUBLIC WATERS TO BE APPROPRIATED		
2 wells			
TRIBUTARY OF (IF SURFACE WATERS)			

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	5,000	3,500
QUANTITY, TYPE OF USE, PERIOD OF USE		

Continuous municipal supply (including water used by Omak Wood Products if subsequently received by the City of Omak).

APPROXIMATE LOCATION OF DIVERSION--WITHDRAWAL	LOCATION OF DIVERSION/WITHDRAWAL
---	----------------------------------

Both wells approximately 1,150 feet west and 500 feet north from the southeast corner of Section 36.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)		SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
SE1/4SE1/4		36	34	26 E.	49	Okanogan
RECORDED PLATTED PROPERTY						
LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)				
LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED						

The future service area, approved by the Department of Ecology, within the current Comprehensive Water System Plan approved by the Department of Health.

DESCRIPTION OF PROPOSED WORKS

Cooling water received from Omak Wood Products and/or water pumped directly from two City of Omak wells, will be used for municipal purposes.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER PUT TO FULL USE BY THIS DATE:
May 1, 1995	May 1, 2014	May 1, 2015

REPORT

Background

On November 13, 1992, the City of Omak (the City) filed an application to appropriate public ground water. The application was accepted, assigned No. G4-31525, and public notice was made with no protests or objections being filed to the application.

Investigation

The following information was obtained through information provided with the application, discussions with Fred Sheldon and Fred Stouder both representing the City, and a meeting between representatives of Omak Wood Products (OWP), the City, the Colville Indian Nation, and the author on March 23, 1993.

The City proposes to withdraw up to 5,000 gallons per minute (gpm) from 2 wells located at the OWP facility, east of the Okanogan River, adjacent to the City of Omak, on the Colville Indian Reservation.

The City has issued a Determination of Non-significance in compliance with the provisions of the State Environmental Policy Act (SEPA).

The wells are currently used by OWP for steam generation of electricity and other uses in the processing of timber products. Cooling water used at the plant has been discharged to the Omak Creek and the Okanogan River drainages after use, but due to the high temperature of the water, the Environmental Protection Agency has ordered that practice stopped. The expense involved for OWP to treat its discharge water is considered substantial enough to threaten the continued operation of the plant.

A predecessor to OWP, Biles-Coleman Lumber Company, had filed Water Right Claim No. 005741 in response to the claims registration provisions of Chapter 90.14 RCW. The claim asserts a right to withdraw 5,000 gallons per minute, 8,065 acre-feet per year from a well located 540 feet north and 1120 feet west from the southeast corner of Section 35 for use within the company property located within Sections 35 and 36, T. 34 N., R. 26 E.W.M. The claimed date of first use is stated as "prior to 1945."

According to the Report of Examination within the Certificate No. 7332 file, Biles-Coleman Lumber Company established its plant at Omak during the 1920's.

While the author believes that Water Right Claim No. 005741 documents a valid water right, it is noted that the claimed annual volume of 8,065 acre-feet is equal to a continuous pumping of water at the rate of 5,000 gallons per minute for a year's time. The author believes it is improbable that such a continuous water withdrawal is or has been made. Therefore the historic extent of water use under this right is probably less than that claimed.

To afford greater security to the water rights of OWP, which are documented only by the above described claim; the author proposes that, for the purpose of this authorization, the water withdrawn, used by the OWP plant then delivered through the proposed cooling towers to the City be considered a part of the proposed municipal purpose. In so doing, the author believes that should a flaw be revealed in the assertions made through Water Right Claim No. 005741, which would call into question its validity, OWP could continue to use water for many of its purposes under this City of Omak permit (G4-31525).

The single large diameter well which was used for many years by Biles-Coleman and formed the basis of their claim has been replaced by 2 wells, both located within the SE $\frac{1}{4}$ Section 35. Office records include 3 water well reports for test wells which were constructed by Crown Zellerbach, then owner of the property, during 1981.

Test well No. 1, located within the SE $\frac{1}{4}$ of Section 35, is an 8-inch diameter well constructed to a depth of 100 feet. It penetrated sand, gravel, and silt throughout the depth and was estimated to yield greater than 200 gallons per minute.

Test well No. 3, located within the SE $\frac{1}{4}$ of Section 35, is an 8-inch diameter well constructed to the depth of 79 feet below the surface. The well penetrated sand, gravel, and clay and is estimated to produce 200 to 250 gallons per minute.

Test well No. 2, located within the SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 36, penetrated sand, silt, and clay but did not encounter a water bearing zone. No record of abandonment of the well is within office records.

The author is not certain whether test wells No. 1 and No. 3 were converted to production wells or if additional work was done on the basis of the test results. The test wells are not estimated to yield the 5,000 gallons per minute proposed by the subject application.

The wells are in continuity with the Okanogan River.

OWP should file a change application to change the point of withdrawal from the original well to the 2 wells which are currently used. This change application would be associated with Water Right Claim No. 005741.

Approximately 600 area residents are employed by OWP and the local economy is heavily dependant upon the plant.

The City proposes that it construct cooling towers and pipe the water discharged from OWP into the City's domestic water system. Water will also be required for municipal purposes when not used by the plant. An agreement has been reached between the City and OWP such that water withdrawn from the wells may continue to be used by the City even in the event that OWP ceases operations.

The OWP cooling water is of sufficient quality to satisfy applicable health regulations, with only cooling required.

Water Demand Forecasting

The City completed a comprehensive water system plan dated February 1990, which has been approved by the State Department of Health. The 1990 plan does not identify the OWP cooling water as a component of their future water supply.

The plan indicates that between the years from 1975 to 1985 the population of the City had decreased from 4400 to 3910, while the number of households increased. The population of the City was projected to increase at a rate of about 1 percent over the next 20 years to 4,500 persons by the year 2000.

Legislation, during the past few years which is designed to result in better planning by local government as well as more efficient and compact growth of urban areas, may tend to create incentives for development to occur within the City which might have otherwise occurred within the unincorporated county. Additionally, recent commercial development and more stringent standards for drinking water supplies may draw growth to the City.

Through Ecology's rule making powers to protect instream values, tributary streams to the Okanogan River are seasonally closed. Within many tributary drainages, it is difficult to obtain water that is not in continuity with surface water. In addition, growth management legislation may lead Okanogan County, through determinations of water availability related to its building permit and planning authority, and Ecology through its water appropriation permit system to discourage development in remote areas.

The City has had a moratorium against adding connections to the municipal system and has for several years limited outside water use by the City's residents to reduce peak demands and lessen the impact on storage.

The City recognizes that the comprehensive water system plan must be updated to reflect the water source proposed by the subject application, a changing development situation, and to address conservation strategies and accomplishments not addressed within the February 1990, plan.

The City has identified a service area within the comprehensive water system plan which differs from the existing corporate boundaries primarily by including lands to the north and east of the City. Consideration is also being given to adjusting the service areas somewhat to accommodate additional parties interested in municipal services.

There are existing privately owned water rights within the future service area. The extension of the municipal water system may result in some of those existing rights being unused in favor of municipal service. Water rights, if unused without sufficient cause for a period of five consecutive years are relinquished as provided by sections 90.14.130 through 90.14.180 of the Revised Code of Washington (RCW). A sufficient cause for which relinquishment would not occur is if the right is claimed for municipal water supply purposes under 90.03 RCW 90.14.140 (2)(d).

To maximize the beneficial use of existing water rights, the City should attempt to acquire existing water rights from within the future service area which will no longer be used and, when they are required, propose such modifications through the Department of Ecology change application process to authorize exercising the right for municipal purposes.

Water Rights Appurtenant to the City

Existing water rights of the City are listed within the plan but differ from the author's evaluation of the state water right record.

The author's review of the state water right record reveals the following (all the City's rights are from wells):

Certificates of Water Right:

Certificate No.	Priority Date	Pumping Rate (gpm)	Annual Volume (ac-ft)	Well*
Municipal Purposes ¹ :				
445-D	Dec. 1913	500	600	1
1081-D	May 1930	500	200	2
446-D	March 1936	800	96	3
1082-D	May 1944	1,630	1,430	4
3655	Mar. 20, 1958	1,300	2,080**	4
3656	Mar. 20, 1958	375	600**	3
7332	June 22, 1970	600	560***	5

¹ Rights associated with Certificates No. 445-D and No. 1081-D authorize emergency standby uses from wells, as such they would not be routinely used and shouldn't be added to the total withdrawal authorization of the system. The well authorized through Certificate No. 1081 has since been removed from the City water system. The current validity of the right embodied within Certificate No. 1081 has not been determined, however the right may have been abandoned.

Report Continued

* The City's wells were identified by number in some water right records and have been identified by location in other records as follows:

Well No. 1 = "Kenwood Street well" in the SE¼ Section 26

Well No. 2 = out of service, in the NE¼ Section 35

Well No. 3 = "Apple Street well" in the SE¼ Section 26

Well No. 4 = "East Omak well" in the SE¼ Section 35

Well No. 5 = "Okoma well" in the SE¼ Section 34

All located within T. 34 N., R. 26 E.W.M.

** These rights assumed a 1970 population of 5,500 people and limited the annual withdrawal from all rights to 4,300 acre-feet.

*** This right assumed a 1985 population of 6,000 people and issued for use during the period from May 1 to October 31 each year. Any water withdrawal by the City in excess of 3,456 acre-feet from any municipal water source was to be deducted from the annual volume authorized by this right.

All of the City's rights authorize use within the City as it existed at the time of certificate issuance.

Other Certificated Rights:

Certificate No.	Priority Date	Pumping Rate (gpm)	Annual Volume (ac-ft)	Use
5041	Oct. 9, 1959	10	16	Airport
6412	Mar. 28, 1967	70	25	Cemetery
6530	Mar. 28, 1968	400	185	Eastside Omak Park
(180 ac-ft to irrigate 60 acres; 5 ac-ft for continuous domestic)				

The following additional permit has issued to the City:

Permit No. G4-28244P, priority date June 24, 1983, authorizes the withdrawal of 500 gpm; 278 acre-feet per year from the "Eastside Omak Park well" located within the NE¼NE¼ Section 35, T. 34 N., R. 26 E.W.M. The purposes of use, all within the Eastside Omak Park are:

Irrigation of 90 acres from April 1 to October 1 (allocated 270 acre-feet per year with 180 acre-feet being supplemental to withdrawals under Certificate No. 6530);

Municipal supply from April 1 to October 1 (allocated 8 acre-feet with 5 acre-feet being supplemental to withdrawals under Certificate No. 6530).

An additional application is on file:

Application No. G4-29859, filed December 1, 1988, proposes to withdraw an additional 1,000 gpm from the Okoma well for the purpose of Municipal supply within the City. This application will be evaluated for permit after the subject application, G4-31525, at the agreement of Fred Sheldon, for the City, and the author.

Based upon the state water right record, considering provisions attached to rights at the time of issuance, the author believes that the City has the following municipal water rights which can be relied upon as a primary supply:

Water Right No.	Pumping Rate (gpm)	Annual Volume (ac/ft)
Certificate 446-D	800	96
Certificate 1082-D	1,630	1,430
Certificate 3655	1,300	2,080
Certificate 3656	375	600
Certificate 7332****	600	560
TOTAL RIGHTS:		
Valid the entire year	4,105	2,940
May 1 to October 31	600	560
Total municipal supply rights		3,500 ²

**** Certificate No. 7332 authorizes water use only during the period from May 1 to October 31.

The current pumping capacity of the wells authorized for pumping water as a primary source for general municipal supply is approximately 3,800 gpm (the Kenwood Street well is capable of producing 550 to 600 gpm, but the author interprets the right to be for a standby purpose only).

The pumping capacity of the City's wells is extracted from the City's comprehensive water system plan, dated February, 1990 and is compared to the City's water rights in the tabulation below:

Well No.	Well Name	Pumping Capacity	Authorized Pumping Rate
1	Kenwood Street Well	550-600	500 (standby)
3	Apple Avenue Well	500	1,175
4	East Omak Well	2,800-3,000	2,930
5	Okoma Well	380	600
TOTAL CAPACITY		4,230-4,480	4,705
PRIMARY SUPPLY CAPACITY		3,680-3,880	4,205

² The total annual withdrawal was limited by provisions associated with Certificates No. 3655 and No. 3656 to 4,300 acre-feet per year. This volume included the authorizations for standby wells. Since a standby well would not provide water to meet normal demand, the author has deducted the volumes authorized by those rights from the total.

Report Continued

If the comprehensive plan accurately reflects well pumping capacity, the City might consider the transfer of rights from wells which are lower in capacity than the authorized withdrawal to wells from which the right could be exercised.

According to the comprehensive water system plan dated February, 1990, additional water supply above existing water right authorizations is not required. The water demand for the City for the year 2000 was estimated to be about 2,900 acre-feet per year. The historic peak annual demand occurred during 1987 when 2,440 acre-feet were used.

The City has expanded its future service area and recent commercial development may make these estimates, which relied upon an average 1 percent growth rate, conservative.

The City will be updating its comprehensive water system plan to consider the addition of the subject well and other changes as required.

The installation of service meters has been occurring within the City and other steps are being taken to encourage conservation. These must be discussed as a part of the updated comprehensive plan.

Instream Flow Considerations

Chapter 173-549 of the Washington Administrative Code, the Water Resources Program In The Okanogan River Basin, establishes minimum flows for the reach of the mainstem Okanogan River at the City of Omak. When these flows are not met, any rights to appropriate water which were authorized after the effective date of the regulation are to cease appropriating water. Flows are not met during long periods of the year during the summer season in some years and occasionally are not met during the remainder of the year.

Provisioning the permit to issue to this application with minimum flows as established within Chapter 173-549 would prevent this project from being developed, since its goals could not be met.

To accomplish the goals of increasing the reliably available water supply of the City and assist in the improvement of the water quality of Omak Creek and the Okanogan River, the City must be able to receive water whenever OWP is using water throughout the year and in response to municipal demand.

Section 173-549-080 WAC of the Basin Plan provides that permits may be issued which conflict with the basin plan as provided by Section 90.54.020 (3)(a) of the Revised Code of Washington (RCW). Permits may issue which conflict with the basin plan only in those situations where it is clear that overriding considerations of public interest would be served.

Conclusions

The author concludes that the proposed project is a beneficial use of available water and is not contrary to the public interest including the minimum flows of the Okanogan River. The author further concludes that the issuance of a permit will not impair the rights of others.

The author's conclusions are based upon provisions being placed upon the permit which is proposed to issue under the subject application. Provisions are described within the Recommendations Section of this report.

The author also concludes that modification of the City's existing rights should occur to reflect current pumping capacities of the authorized wells, to change rights to existing wells, and to clarify the sequencing of reliance upon the wells incorporated within the City's municipal system.

The City of Omak has provided compelling justification for the issuance of a permit to this application. The project will resolve a cost prohibitive problem for a major employer within the Central Okanogan County area (which includes the Cities of Omak and Okanogan) and will relieve a water shortage during peak demand periods despite the findings of the 1990 comprehensive water plan.

The author concludes that the City of Omak must be able to receive water from OWP regardless of the measured flows of the Okanogan River. On an interim basis, this can be accomplished by exempting the permit proposed to issue to this application from the flow provisions of Chapter 173-549 WAC. The author proposes that this interim exemption exist for a period not to exceed two (2) years. During that time, the City of Omak must change existing water right which is not subject to instream flow provisions to the OWP wells to continue receiving water when minimum flows are not met.

The further need for this permit shall be evaluated during the process to change existing rights.

Recommendations

The author respectfully recommends that a permit issue to the City of Omak authorizing the withdrawal of up to 5,000 gallons per minute, 3,500 acre-feet per year, from 2 wells for the purpose of continuous municipal supply.

The authorization is subject to the following provisions:

This authorization is not additive to existing rights with respect to annual volumes of appropriation. The total withdrawal under all rights shall not exceed 3,500 acre-feet per year.

An updated comprehensive water system plan and a water conservation plan shall be prepared which is to the approval of the Department of Health.

The place of use of this authorization is intended to be the future service area of the comprehensive water system plan in effect at any given time, such that when the plan is updated, the authorization reflects any changes in service area: PROVIDED that Ecology must approve any changes in service area to determine that results in an appropriate use of this authorization and will not be injurious to the rights of others.

The actual extent to which this permit may be exercised shall be limited to the rate of withdrawal and annual volumes which are determined to be required to meet municipal demand by the updated comprehensive water system plan or the maximum yield of the authorized wells, whichever is less, not to exceed the maximum limitations of this permit, less any water withdrawn from the City's other sources.

Water well reports for the authorized wells must be submitted to this office prior to development (construction) of the system be regarded as complete.

The City shall evaluate its municipal water use under existing water rights and provide to this office an acceptable plan for maximizing the beneficial use of those rights. The submitted plan will include modifications to existing rights through change applications or modifications to well capacities that result in agreement between the authorized pumping rate and the capacity of the source; and general agreement between the priority of the City's rights and the degree of, or order of, reliance placed upon the source to meet to City's water demands.

The City will attempt to acquire existing rights which are displaced by the extension of the municipal water system. The City will propose plans to this office for the disposition of any acquired water rights through the filing of change applications to modify the right to suit a municipal purpose or, if of no use to the City, the right shall be voluntarily relinquished or otherwise accounted for to the satisfaction of the Department of Ecology to update the water right record.

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An access line and gage may be installed in addition to the access port.

Flow meters are required on each City well and the supply line from Omak Wood Products.

All water wells constructed within the state shall meet the minimum standards for construction and maintenance provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

Report Continued

This authorization is issued without minimum instream flow provisions under Chapter 173-549 WAC for a period of two (2) years from the date of issuance. After two years, the permit shall be subject to the following flow provisions:

This authorization is subject to the provisions of Chapter 173-549 WAC as adopted in Olympia, Washington, August 14, 1976, and revised effective July 19, 1984, and the general rules of the Department of Ecology as specified under Chapter 173-500 WAC.

Instream flows as established at monitoring station 12.4472.00 at river mile 17.0, Section 9, T. 32 N., R. 25 E.W.M. and as presented in the table below shall be maintained by regulation of diversions as set forth in said WAC 173-549.

Instream flow hydrographs, as represented in WAC 173-549-900, shall be used for definition of instream flows on those days not specifically identified in WAC 173-549-020(2). Instream flows at Station 12.4472.00.

Primary Control Station: 12.4472.00 (Lower Okanogan)
River Mile: 17.0

Instream Flows in the Okanogan River
(instantaneous cubic feet per second)

	Lower Okanogan	Middle Okanogan	Upper Okanogan	Similkameen
STATION:	12.4472.00	12.4450.00	12.4395.00	12.4425.00
RIVER MILE:	(17.0)	(50.8)	(77.3)	(15.8)
Jan 1	860	800	320	400
Jan 15	830	800	320	400
Feb 1	820	800	320	400
Feb 15	850	800	320	400
Mar 1	880	800	320	425
Mar 15	900	800	320	450
Apr 1	925	910	330	510
Apr 15	1100	1070	340	640
May 1	1750	1200	350	1100
May 15	3800	3800	500	3400
Jun 1	3800	3800	500	3400
Jun 15	3800	3800	500	3400
Jul 1	2100	2150	420	1900
Jul 15	1200	1200	350	1070
Aug 1	800	840	320	690
Aug 15	600	600	300	440
Sep 1	620	600	300	400
Sep 15	700	600	300	400
Oct 1	750	730	330	450
Oct 15	960	900	370	500
Nov 1	950	900	370	500
Nov 15	950	900	320	500
Dec 1	930	900	320	500
Dec 15	900	850	320	450

No diversion of water under this authorization shall take place when the stream flow at this station is below the above flows.

Report Continued

Based on projections of water availability for this location on the Okanogan River, it appears that a firm supply (defined as that flow level at which the instream flows are exceeded 9 out of every 10 years) will not be available during extended periods of the year.

Therefore, water shortages and regulations should be expected at least one year out of ten, but probably more often.

This water right (when perfected) shall carry the following advisory reference:

Water available under this authorization will not provide a firm supply throughout each year.

REPORT BY:

Fred Rajala
Fred Rajala

DATE: 4-22-93

APPROVED BY:

Doug Clausen
Doug Clausen, Section Manager

DATE: 4/22/1993

18x108gh/ska

Correspondence to: Mr. H. G. Hubbert, Water Supt.

GROUND WATER
DECLARATION OF CLAIM
PROGRESS SHEET

NAME: CITY OF OMAK, WATER DEPARTMENT
Omak, Washington

DECLARATION NO. 486 CERTIFICATE NO. 445 D

Declaratio received 7-7-47 Recording fee received 7-7-47

Returned for completion or correction _____ Received _____

Amended _____

Cancelled _____

Report: Game APPROVED BY DEPT. OF GAME 10-10-47 Fisheries _____

O.K'd for publication 262 by July 8, 1947

Notice of Declaration sent 7-9-47

Protests filed _____

Affidavit of Publication received and checked 7-28-47

Time for making protests expires 8-24-47

Examination made June 26, 1947 by F.B.R.

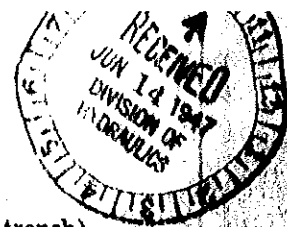
O.K'd for Certificate _____ by _____

Statement of filing and recording fee sent 11-3-47 Amount \$1.50

Fee received 12-11-47

Ground Water Certificate issued 12-15-47 No. 445 D

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION AND DEVELOPMENT
Division of Hydraulics



Declaration of Ground Water Claim

(Separate claims should be filed for each well, tunnel or infiltration trench)

No. **486**

I, City of Omak, Washington, Water Department
(Name of claimant)

of Box 72 Omak, Washington
(Complete postoffice address)

do hereby make declaration of claim of vested right to ground water by use prior to June 7, 1945, and file the same with the State Supervisor of Hydraulics, in accordance with Section 9, Chapter 263, Laws of 1945 of the State of Washington, and request a Certificate of Ground Water Right thereunder.

1. SOURCE from which water is withdrawn is pump well
(Flowing well, pump well, infiltration trench, or tunnel)

2. LOCATION is: Within the City Limits of Omak, Washington
(Approximate distance and direction from nearest city or town)
and is more particularly described as follows:

(a) _____
(Give distance and bearing to corner of section or other legal subdivision)

being within SE 1/4 of Sec. 35, Twp. 34 N., Rge. 24 E.
(Smallest legal subdivision) (E. or W.)

or (b) Within limits of incorporated city or town of Omak, Washington

Southeast corner of 2nd. St. East in Omak addition
in Lot _____ of _____
(Name of addition or plat)

County of Okanogan within _____
(Leave blank)

_____ sub-area _____
(Leave blank) (Leave blank)

(c) The location of the well or other works is shown on the accompanying plat, or other adequate maps or drawings.

(d) The owner of property on which the works are constructed is:

City of Omak Omak, Washington
(Name) (Post office address)

3. CONSTRUCTION WORK was begun on September 1913; was completed on December 1913
(Date) (Date)

and the ground water claimed was first used for the purposes set out below on December 1913
(Date)

since which time the water has been used (Continuously Dec. 1913 to May 1944) & Intermittently
(Continuously or Intermittently)

from May 1944 to May 1947
(Date) (Date)

4. QUANTITY of water claimed and used is 500 gallons per minute; 600 acre feet per year.

5. PURPOSE or PURPOSES for which water is used municipal

(Domestic, irrigation, municipal, manufacturing, industrial, etc.)

5. (Continued)

(a) FOR MUNICIPAL SUPPLY: To supply the city, town or community of Omak
in the county of Okanogan, having a present population of 3,500, and an estimated
population of _____ in 19____.

(b) FOR IRRIGATION: The land irrigated has a total area of _____ acres, and water is
used each year for this purpose from _____ to _____
(Date) (Date)

(c) Legal description of property on which water is used for all purposes other than municipal
supply:

6. DESCRIPTION OF WORKS:

(a) WELL: Depth 26'-2" feet. Diameter 14ft. inches or feet. Dug or drilled dug
Flowing or pump well pump

If PUMP WELL: Type and size of pump is 500 G.P.M. centrifugal

Type and size of motor or engine is 35 H.P. 220 Volt

Depth from ground surface to water level before pumping 10'-6" feet.

After continuous operation for at least four hours, the measured discharge of pump is _____
g.p.m., and the drawdown of water level is 9 feet.

Date of test May 1944

If FLOWING WELL: Measured discharge _____ g.p.m. on _____

(Date)

Shut-in pressure at ground surface _____ lbs. per sq. in. on _____

(Date)

Water is controlled by _____

(Cap, valve, etc.)

CASING: (Give diameter, commercial specifications and depth below ground surface of each
casing size.)

14 inch diameter _____ from 0 to 6 feet

12 inch diameter _____ from 6 to 10'-6" feet

12 inch diameter _____ from 20'-6" to 25'-6" feet

12 inch diameter _____ from 25'-6" to 26'-2" feet

Describe and show depth of shoe, plug, adapter, liner or other details:

PERFORATED CABINGS OR SCREENS:

from to

(Number per foot and size of perforations, or describe screen)

from to

from to

from to

LOG OF WELL: (Describe each stratum or formation clearly, indicate if water bearing, and give thickness and depth as indicated.)

[illegible]

(b) INFILTRATION TRENCH: Covered or open.....

Dimensions: Length.....ft. Minimum depth.....ft. Maximum depth.....ft.

Bottom width.....ft. Discharge.....g.p.m. Date of test.....

(c) TUNNEL: Type of lining.

Dimensions: _____
(Length, course, and cross-sectional size)

Position of water bearing stratum with reference to portal of tunnel

Log of tunnel: (Preceding table for log of well may be used, if desired. Give footage from portal and character of materials, as pertinent.)

7. Ownership of each existing well or other works for withdrawal of ground water within a radius of one-quarter mile and the distance and direction from well or other works being reported herein:

City of Omak (Name of owner) Southwest (Direction) 450 ft. (Distance)

(On accompanying plat or map show location of these existing wells or works.)

8. Remarks: Since #4 well has been put into operation this well has not been used since May 1944. It is retained for an emergency standby supply.

E. W. Hall
(Signature of claimant)

For City of Omak, Water Department

STATE OF WASHINGTON, }
COUNTY OF Okanogan } ss.

I, the claimant named in the foregoing claim, being first duly sworn, depose and say that I have read the above and foregoing claim to ground water right; that I know the contents thereof; and that to the best of my knowledge, information and belief, the facts therein stated are true and correct.

City of Omak, Water Department
By *E. W. Hall* Water Supt.

Subscribed and sworn to before me this 12th day of June, 1944

E. P. Phelan
Notary Public in and for the State of Washington
Residing at *Omak, Wash.*

STATE OF WASHINGTON
OFFICE OF SUPERVISOR OF HYDRAULICS

Olympia

NOTICE OF DECLARATIONS OF CLAIM OF RIGHT TO WITHDRAW GROUND WATER
NOS. 486, 487, 488 and 489.

To Whom it May Concern: Notice is hereby given that the City of
Omak, of Omak, Washington, on June 14, 1947, filed with the State
Supervisor of Hydraulics, Olympia, Washington, four (4) declarations
of claim of vested rights existing prior to June 7, 1948 to withdraw
public ground waters in Okanogan County, continuously for the purpose
of municipal supply, as follows:

Declaration No. 486 to withdraw 500 gallons per minute, 500 acre feet
per year, by means of a pump well located within the City Limits of
Omak, Washington at the Southeast corner of 2nd St. East in Omak
Addition, with priority (date of first beneficial use of water) as of
December 1913; and Declaration No. 487 to withdraw 300 gallons per
minute, 200 acre feet per year, by means of a pump well located
within the Lot 6, Block 89, of Colville Indian Reservation within the
City Limits of Omak, with priority date of the year May 1930; and
Declaration No. 488 to withdraw 800 gallons per minute, 500 acre feet
per year, by means of a pump well located within Block 3 of Omak
Addition, with priority date as of the year March 1936; and Declaration
No. 489 to withdraw 1630 gallons per minute, 1000 acre feet per year,
by means of a pump well located within $3\frac{1}{2}$ of Sec. 35, Twp. 34 N.,
Rge. 26 E.N.W. with priority date as of the year May 1944, and
claimant has requested Certificates of Ground Water Rights under such
claims. Any person, firm or corporation disputing such claims or
protesting that the rights claimed are not vested rights to be
recognized under Chap. 263 of the 1948 Session Laws of the State of

July 9, 1947

Page 2

Washington, may file with the State Supervisor of Hydraulics, at Olympia, Washington, such objections or representations, in writing, as he may desire to make within thirty (30) days after date of last publication, which date is _____.

Witness my hand and official seal this 9th day of July, 1947

RODNEY HYKOR, Supervisor of Hydraulics

By: CHAS. J. BARTHOLET, Deputy

REPORT OF FINDINGS ON GROUND WATER

NAME H. G. Hubbard, Supt. of Water, City of Omak Decl. 486

TYPE OF WORKS: pump well Date of Examination June 28, 1947

Dimensions: 261-8" x 141 Progress of Works completed

QUANTITY Claimed ~~or~~ Applied for 500 G.P.M. 600 acre feet per year

LOCATION SE corner of 2nd Street East in Omak Addition

USE: Municipal

Irrigation- acreage: Present _____ Planned _____ Feasible _____

Municipal: Population 3,300 as of present

Industrial: _____

Time Pump Will be operated: _____

Other Water Rights of Applicant: Ground Water Decs. 487, 488 and 489

Proximity to existing work, springs or streams: _____

Water Bearing Zone: _____

RECOMMENDATIONS

Approved for 500 G.P.M. 600 acre-feet per year, subject to existing water rights.

This is now a standby well, and will be used when needed. The maximum number of acre feet a year to be used will not exceed 600 acre-feet a year.

Signed this 3rd day of November, 1947

FBR
FRED H. ROBERTS
Ground Water Geologist

Affidavit of Publication

STATE OF WASHINGTON

COUNTY OF OKANOGAN

W. C. Phillips

being first duly sworn, on oath deposes and says That he is the Editor and Business Manager for Woody-Heath Publishing Co., a corporation, which is publisher of the Okanogan Independent, a legal newspaper of general circulation published in the English language, on Thursday of each week, at Okanogan, in Okanogan County, State of Washington, and printed in an office maintained at said place of publication, and that said newspaper has been so printed and published at said place of publication continuously for a period of more than six months prior to the date of the first publication of the notice herein referred to; and that the said Okanogan Independent has been approved as a legal newspaper by an order duly made and entered in the Superior Court of the State of Washington, for Okanogan County, on the 3rd day of July, 1941, and that the

Notice of Declarations of Claim of Right to Withdraw Ground Water Nos. 486, 487, 488, 489.

a full, true and correct copy of which is hereto attached was published in said newspaper once a week for **two** consecutive weeks in the issues of

July 17, 24

and in the regular and entire issues of said dates and not in a supplement that the full amount of the fee charged for said publication is the

sum of \$ **13.30** and that said fee has been paid in full

W. C. Phillips

Editor and Business Manager

Subscribed and sworn to before me this

25th

day of

July

1941

Harold Johnson

Notary Public in and for the State of Washington,
residing at Okanogan, Washington

NOTICE OF DECLARATIONS OF CLAIM OF RIGHT TO WITHDRAW GROUND WATER NOS. 486, 487, 488 and 489. To Whom It May Concern: Notice is hereby given that the City of Omak, in Okanogan County, Washington, on June 14, 1941, filed with the State Supervisor of Hydraulics, Olympia, Washington, four (4) declarations of claim of vested rights relating to the right to draw public ground waters in Okanogan County, continuously for the purpose of municipal supply, as follows: Declaration No. 486 to withdraw 500 gallons per minute, 500 acre feet per year, by means of a pump well located within the City Limits of Omak, Washington at the Southeast corner of 2nd St. East in Omak Addition with priority date of first beneficial use of water as of December 1933; and Declaration No. 487 to withdraw 500 gallons per minute, 500 acre feet per year, by means of a pump well located within the Lot 6, Block 20, of Gravelle Indian Reservation within the limits of Omak, with priority date of the year May 1930; and Declaration No. 488 to withdraw 500 gallons per minute, 500 acre feet per year, by means of a pump well located within Block 3 of Omak Addition with priority date as of the year March 1934; and Declaration No. 489 to withdraw 1000 gallons per minute, 1000 acre feet per year, by means of a pump well located within SE 1/4 of Sec. 28, Twp. 34 N., Rge. 26 E.W. 4 with priority date as of the year May 1934, and claimant has requested Certification of Ground Water Rights under each claim. Any person, firm or corporation disputing such claims or asserting that the rights claimed are not vested rights to be recognized under Chap. 200 of the 1933 Session Laws of the State of Washington, may file with the State Supervisor of Hydraulics, at Olympia, Washington, objections or counterclaims in writing, as he may desire to do, within thirty (30) days after the first publication, which date is July 24, 1941. Within 30 days after the first and last day of July, 1941, ROBERT ATKINS, Supervisor of Hydraulics, By: CHAS. J. BARTON, L.E.T. Deputy.

D-26-July 17-24

CERTIFICATE RECORD No. 1 PAGE No. 445-D UNDER DECLARATION OF CLAIM No. 486STATE OF WASHINGTON, COUNTY OF Okanogan**Certificate of Ground Water Right**

Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and the rules and regulations of the State Supervisor of Hydraulics thereunder.

THIS IS TO CERTIFY That CITY OF OMAK WATER DEPARTMENT
 of Omak, Washington has filed
 in the office of the State Supervisor of Hydraulics of Washington Declaration of Claim No. 486
 to withdraw ground waters of the State from a Pump Well
 located ~~xxxxx~~ at Southeast corner of 2nd Street East in Omak Addition,
Omak, Washington

for the purpose of Municipal supply

The right to the use of said ground waters has been sustained and approved by the Supervisor of Hydraulics in accordance with Chapter 263, Laws of Washington for 1945, and is hereby entered of record in Volume 1 of Ground Water Certificates at page 445-D; the right approved has a priority of December, 1913; the amount of water which the Declarant is entitled to withdraw for the aforesaid purpose is limited to the amount actually beneficially used and shall not exceed 500 gallons per minute; 500 acre-feet per year; and is appurtenant to the following described lands or place of use:

City of Omak, Okanogan County, Washington

The right to the use of the ground water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Hydraulics affixed this 15th day of December, 19 '47

RODNEY RYKER

State Supervisor of Hydraulics.

By

Chas. J. Bartholet
CHAS. J. BARTHOLET, Deputy

Declaration of Claim No. 186

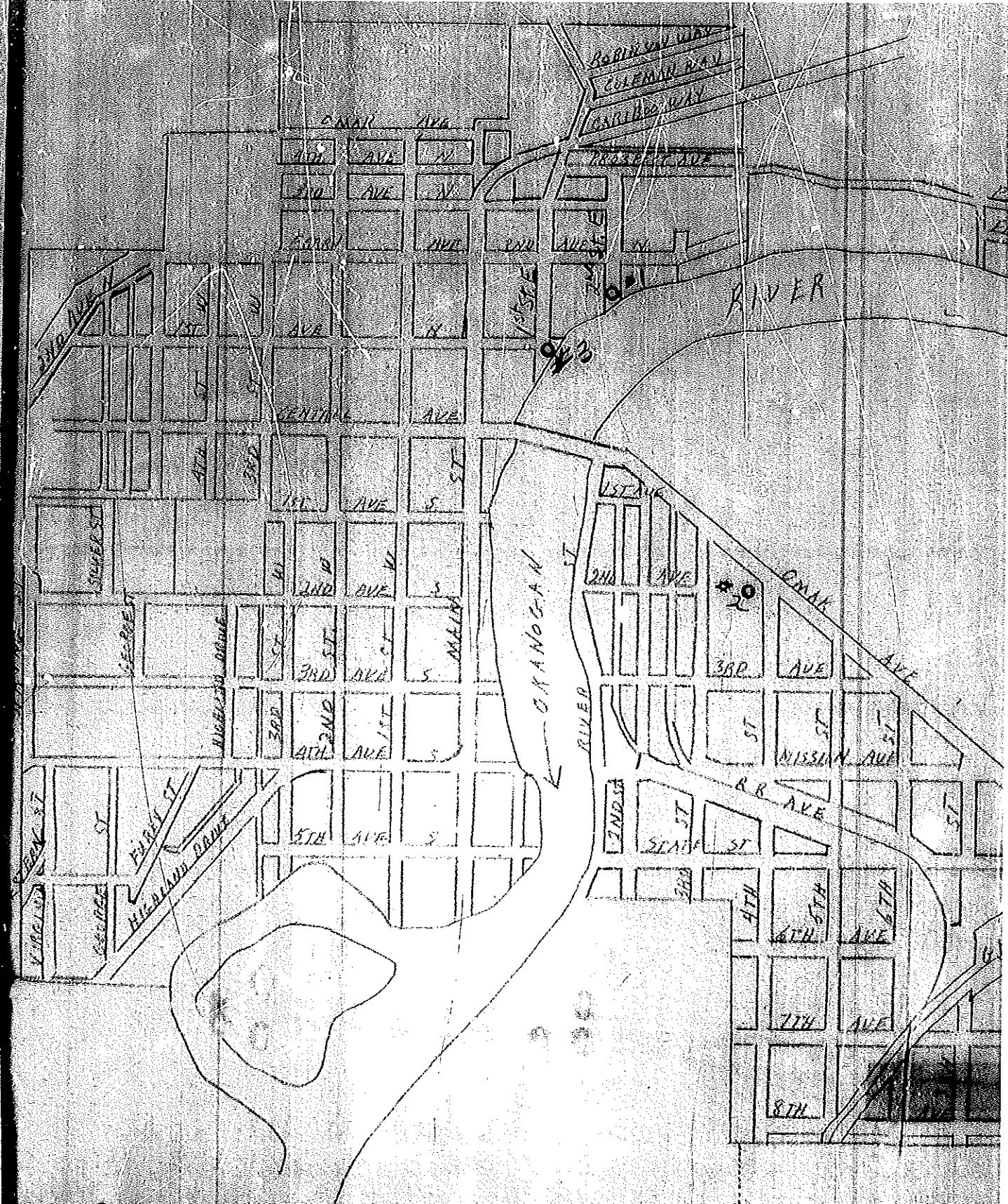
**CERTIFICATE OF GROUND
WATER RIGHT**

Recorded in the office of State Super-
visor of Hydraulics, Olympia, Washington,
in Book No. 1 of Ground Water
Right Certificates, on page 445-D on the
15th day of December, 19 47

STATE OF WASHINGTON, } ss.
County of Okanogan

I certify that the within was received and
duly recorded by me in Volume
of Book of Water Right Certificates, page
on the day of

19



City of Omak
Washington

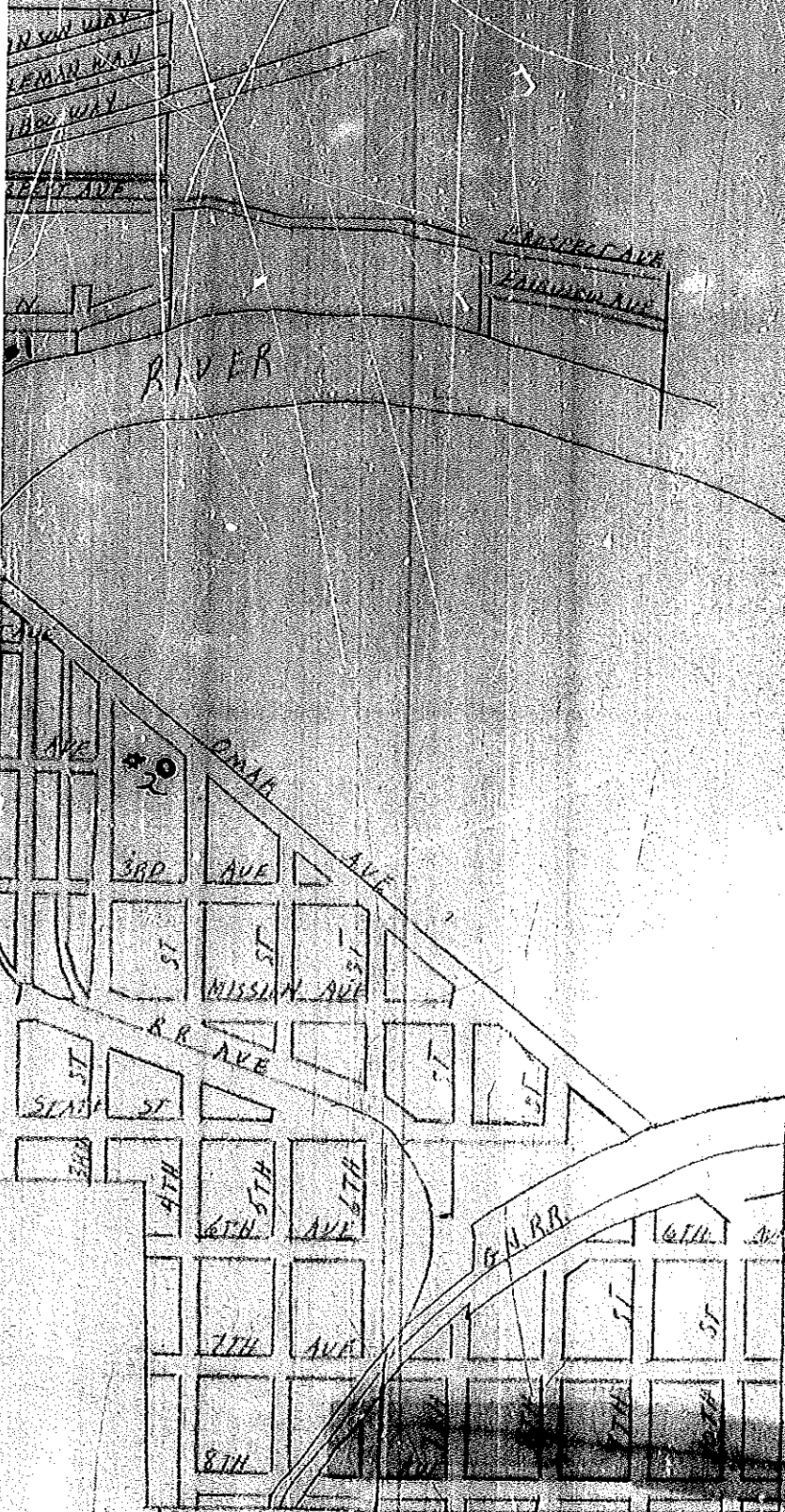
LOCATION MAP

SCALE 1" = 100'

● #1, 2 & 3 wells
○ #4 well

○ #4

14.6



© #4

A. W. Declaration
445

VIAP
ella
ell

Correspondence to: J. Hubbard, Water Supt.

GROUND WATER
DECLARATION OF CLAIM
PROGRESS SHEET

NAME: City of Omak
Omak, Washington

DECLARATION NO. 488 CERTIFICATE NO. 446 D

Declaration received 7-7-47 Recording fee received 7-7-47

Returned for completion or correction _____ Received _____

Amended _____

Cancelled _____

Report: Name 10-10-47 Fisheries _____

O.K'd for publication Yes, 1947 by LL

Notice of Declaration sent _____ 7-9-47

Protests filed _____

Affidavit of Publication received and checked 7-28-47

Time for making protests expires 8-24-47

Examination made June 26, 1947 by F.B.R.

O.K'd for Certificate _____ by _____

Statement of filing and recording fee sent 11-3-47 Amount \$1.50

Fee received 12-11-47

Ground Water Certificate issued 12-15-47 No. 446 D

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION AND DEVELOPMENT
Division of Hydraulics



Declaration of Ground Water Claim

(Separate claims should be filed for each well, tunnel or infiltration trench)

No. 3

488

I, City of Omak, Washington, Water Department
(Name of claimant)

of P.O. Box 78 Omak, Washington
(Complete postoffice address)

do hereby make declaration of claim of vested right to ground water by use prior to June 7, 1945, and file the same with the State Supervisor of Hydraulics, in accordance with Section 9, Chapter 263, Laws of 1945 of the State of Washington, and request a Certificate of Ground Water Right thereunder.

1. SOURCE from which water is withdrawn is pump well
(Flowing well, pump well, infiltration trench, or tunnel)

2. LOCATION is: Within the City Limits of Omak, Washington
(Approximate distance and direction from nearest city or town)
and is more particularly described as follows:

(a) _____
(Give distance and bearing to corner of section or legal subdivision)

being within _____ of Sec. 26, Twp. 37 N., Rge. 26E
(Smallest legal subdivision) (E. or W.)

or (b) Within limits of incorporated city or town of Omak, Washington

in Lot _____ Block 3 of Omak Addition
(Name of addition or plat)

County of Okanogan within _____ area
(Leave blank)

_____ sub-area _____ zone
(Leave blank) (Leave blank)

(c) The location of the well or other works is shown on the accompanying plat, or other adequate maps or drawings.

(d) The owner of property on which the works are constructed is:

City of Omak, Washington
(Name)

P.O. Box 78 Omak, Washington
(Post office address)

3. CONSTRUCTION WORK was begun on September 1935; was completed on February 1936
(Date) (Date)

and the ground water claimed was first used for the purposes set out below on March 1936
(Date)

since which time the water has been used intermittently
(Continuously or intermittently)

from March 1936 to March 1947
(Date) (Date)

4. QUANTITY of water claimed and used is 800 gallons per minute; 500 acre feet per year.

5. PURPOSE OR PURPOSES for which water is used municipal

(Domestic, irrigation, municipal, manufacturing, industrial, etc.)

5. (Continued)

(a) FOR MUNICIPAL SUPPLY: To supply the city, town or community of Oak
in the county of Okanagan, having a present population of 3500, and an estimated
population of _____ in 19____.

(b) FOR IRRIGATION: The land irrigated has a total area of _____ acres, and water is
used each year for this purpose from _____ to _____
(Date) (Date)

(c) Legal description of property on which water is used for all purposes other than municipal
supply:

6. DESCRIPTION OF WORKS:

(a) WELL: Depth 20 feet. Diameter 10 inches or feet. Dug or drilled dug
Flowing or pump well pump well

IF PUMP WELL: Type and size of pump is Sterling vertical type 800 g.p.m.

Type and size of motor or engine is 40 h.p. 220 v. electric motor

Depth from ground surface to water level before pumping 10.40 feet.

After continuous operation for at least four hours, the measured discharge of pump is 800
g.p.m., and the drawdown of water level is 10.40 feet.

Date of test May 1947

IF FLOWING WELL: Measured discharge _____ g.p.m. on _____
(Date)

Shut-in pressure at ground surface _____ lbs. per sq. in. on _____
(Date)

Water is controlled by _____
(Cap, valve, etc.)

CASING: (Give diameter, commercial specifications and depth below ground surface of each
casing size.)

<u>100</u> inch diameter	Building from 0 to 5 ft. <u>5</u> to <u>20</u> feet
_____ inch diameter	from _____ to _____ feet
_____ inch diameter	from _____ to _____ feet
_____ inch diameter	from _____ to _____ feet

Describe and show depth of shoe, plug, adapter, liner or other details:

PERFORATED CASINGS OR SCREENS:

(Number, size and size of perforations, or describe screen)

from _____ to _____

from _____ to _____

from _____ to _____

from _____ to _____

LOG OF WELL: (Describe each stratum or formation clearly, indicate if water bearing, and give thickness and depth as indicated.)

[illegible]

(b) INFILTRATION TRENCH: Covered or open.

Dimensions: Length.....ft. Minimum depth.....ft. Maximum depth.....ft.

Bottom width.....ft. Discharge.....g.p.m. Date of test.....

(c) TUNNEL: Type of lining.

Dimensions:

(Length, course, and cross-sectional size)

Position of water bearing stratum with reference to portal of tunnel.

Log of tunnel: (Preceding table for log of well may be used, if desired. Give footings from portal and character of materials, as pertinent.)

7. Ownership of each existing well or other works for withdrawal of ground water within a radius of one-quarter mile and the distance and direction from well or other works being reported herein:

City of Omak (Name of owner) Northaast (Direction) 450 ft. (Distance)

(On accompanying plat or map show location of these existing wells or works.)

8. Remarks:

STATE OF WASHINGTON, } ss.
COUNTY OF Okanogan

E. D. Lough
(Signature of claimant)
For City of Omak, Water Department

I the claimant named in the foregoing claim, being first duly sworn, depose and say that I have read the above and foregoing claim to ground water right; that I know the contents thereof; and that to the best of my knowledge, information and belief, the facts therein stated are true and correct.

Subscribed and sworn to before me this 12th day of June, 1947.

City of Omak, Water Department
By *E. D. Lough* Water Supt.

E. D. Lough
Notary Public in and for the State of Washington,
Residing at Omak, Wash.

REPORT OF FINDINGS ON GROUND WATER Deol. 488

NAME H. G. Hubbert Water Supt. City of Omak

TYPE OF WORKS: pump well Date of Examination June 26, 1947

Dimensions: 29' x 10' Progress of Works: completed

LOCATION: Block 3 of Omak Addition

QUANTITY Claimed on
~~Applied for~~ 800 g.p.m. 500 acre feet
per year

USE: municipal

Irrigation-acreage: Present _____ Planned _____ Feasible _____

Municipal: Population 3,300 as of present

Industrial: _____

Time Pump Will Be Operated: _____

Other Water Rights of Applicant: ground water deols. 486, 487 and 489

Proximity to existing works, springs or streams: _____

Estimated effect of withdrawal of water on existing water rights: _____

Water Bearing Zone: _____

RECOMMENDATIONS

Approved for 800 g.p.m. 96 acre feet
per year, subject to existing water rights.

This well used 31,263,000 gallons from October 1, 1946 to October 1, 1947 which amounts to 96 acre feet a year.

According to figures sent in by Mr. Hubbert 1,430 acre feet a year are used from the new city well on the Colville Indian Reservation, but as we have no jurisdiction over the two wells there, no findings for these are being sent.

Signed this 3rd day of November, 1947

FBR
FRED B. ROBERTS
Ground Water Geologist

STATE OF WASHINGTON, COUNTY OF Okanogan

Certificate of Ground Water Right

Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and the rules and regulations of the State Supervisor of Hydraulics thereunder.

THIS IS TO CERTIFY That CITY OF OMAK WATER DEPARTMENT
of Omak, Washington has filed
in the office of the State Supervisor of Hydraulics of Washington Declaration of Claim No. 488
to withdraw ground waters of the State from a Pump Well
located within Block 3 of Omak Addition, Omak, Washington

for the purpose of Municipal supply

The right to the use of said ground waters has been sustained and approved by the Supervisor of Hydraulics in accordance with Chapter 263, Laws of Washington for 1945, and is hereby entered of record in Volume 1 of Ground Water Certificates at page 446-D; the right approved has a priority of March, 1936; the amount of water which the Declarant is entitled to withdraw for the aforesaid purpose limited to the amount actually beneficially used and shall not exceed 800 gallons per minute; 96 acre-feet per year; and is appurtenant to the following described lands or place of use:

City of Omak, Okanogan County, Washington

well #3

The right to the use of the ground water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Hydraulics affixed this 15th day of December, 1947

By RODNEY RYKER
State Supervisor of Hydraulics
CHAS. T. BERTHOUD Deputy

Declaration of Claim No. 498

**CERTIFICATE OF GROUND
WATER RIGHT**

Recorded in the office of State Super-
visor of Hydraulics, Olympia, Washington,
in Book No. 1 of Ground Water
Right Certificates, on page 446-D on the
15th day of December, 19 47

STATE OF WASHINGTON. }
County of Okanogan } ss.

I certify that the within was received and
duly recorded by me in Volume
of Book of Water Right Certificates, page
_____ on the _____ day of

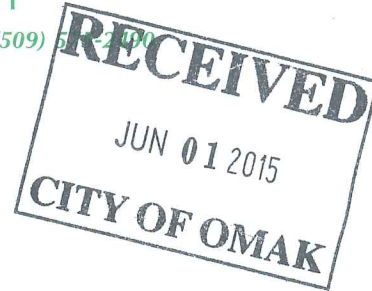
_____, 19____

STATE PRINTING PLANT, OLYMPIA, WASH.



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 W Yakima Ave, Ste 200 • Yakima, WA 98902-3452 • (509) 575-2597



May 29, 2015

City of Omak
Attn: Todd McDaniel
PO Box 72
Omak, WA 98841-0072

Re: Water Right Change Application No.: CG4-GWC01082-D@5

Dear Mr. McDaniel:

Enclosed is a copy of the Department of Ecology's *Report of Examination for Change*. This report contains our decision regarding your application.

Your application has been approved.

To protect your water right, you should continue to put the water to full beneficial use. During development of your project, you may use the water for the original purpose, the newly approved purpose, or a combination of both.

If you have any questions or for other options to protect your water right, please contact the Help Desk at (509) 575-2597.

Sincerely,

Sage Park
Section Manager
Water Resources Program

SP:CLG:SS/150538
WR ID# 6202524

Enclosures: Report of Examination for Change
Your Right to Be Heard
Construction Notice
Water Measurement Requirements & Form 1
Focus on Water Right Relinquishment

By certified mail: 7010 0290 0000 7126 6609

cc: Lois Trevino, Water Administrator, Colville Confederated Tribes
David Ellis, P.E., Gray & Osborne, Inc.





RECEIVED

JAN 08 2003

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CITY OF OMAK

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

January 6, 2003

Mayor Dale Sparber
City of Omak
PO Box 72
Omak WA 98841

*See w/water
permits*

RE: Ground Water Permit No. G4-31525P

The intent of this letter is to encourage a review of the status of Ground Water Permit No. G4-31525P.

Superseding Ground Water Permit No. G4-31525P issued July 18, 1994, with a priority date of November 23, 1992 for the withdrawal of 5000 gallons per minute (gpm), 3500 acre-feet per year for continuous municipal supply (including water that would be used by Omak Wood Products if subsequently received by the City of Omak). The two wells authorized are located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 35, T. 34 N., R. 26 E.W.M. Development schedule allowed until May 1, 2014, for completing the source and distribution system and file Completion of Construction form and until May 1, 2015, to perfect the water to full beneficial use and file Proof of Appropriation form.

A Proof of Appropriation form is a notarized statement by the permittee that the water use authorized in the permit is perfected to the maximum extent intended. A Proof of Appropriation form was filed by Mayor Smith on March 28, 2000 for a well equipped with a 150 horse power pump and for 1650 gpm.

With the rather large difference between the permit and the Proof of Appropriation form, and the time allowed in the permit for full development, this filing of proof may have been intended by Mayor Smith as a status report and not the intended end of development.

Please advise this office whether or not the proof was intended to represent the maximum development under the permit.

I hope you find this information of assistance. Feel free to contact me at (509) 457-7143 if you have questions. There is an answering system at that number to cover when I am away from my desk.

Sincerely,


Darrell Monroe
Water Resources Program

DM:gg
030102





STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PROOF OF APPROPRIATION OF WATER

APPLICATION NUMBER		PERMIT NUMBER G4-31525P	
NAME OF PERMITTEE City of Omak			
POST OFFICE ADDRESS P.O. Box 72		(CITY) Omak	(STATE) WA (ZIP CODE) 98841
ACTUAL SOURCE OF APPROPRIATION Groundwater Well			
PURPOSE OR PURPOSES WATER IS USED FOR Municipal Water Supply			
DATE WATER WAS COMPLETELY APPLIED TO PERMITTED USE August 6, 1996		IF USED FOR IRRIGATION: NUMBER OF ACRES ACTUALLY IRRIGATED	
IF SOURCE IS A WELL, IS AN ACCESS PORT NOW INSTALLED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		MONTHS DURING WHICH WATER IS USED Year - round supply	
PUMP SIZE Worthington 14HH220, 3 Stage, 150 HP			
ACTUAL AMOUNT WITHDRAWN OR DIVERTED FROM PERMANENT SYSTEM 1,650		<input checked="" type="checkbox"/> GPM <input type="checkbox"/> CFS	
HAVE ALL PROVISIONS AS REQUIRED BY PERMIT BEEN ACCOMPLISHED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		IF NO, EXPLAIN	

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS USED (USE ADDITIONAL SHEET IF NECESSARY)

City of Omak Water System Service Area

HAS AN APPROPRIATE FLOW METER BEEN INSTALLED?
☒ YES ☐ NO

HAS A DEPARTMENT OF FISH AND WILDLIFE APPROVED FISH SCREEN BEEN INSTALLED?
☐ YES ☒ NA ☐ NO

STATE OF WASHINGTON,
County of Okanogan } ss.

I, E. WALT SMITH, being first duly sworn, depose and say that I have read the above and foregoing proof of appropriation; that I know the contents thereof; and that the facts therein stated are true.

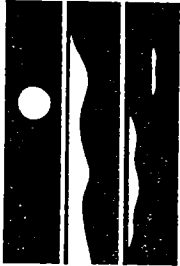
IN WITNESS WHEREOF, I have hereunto set my hand this 28 day of March, 192000



E. Walt Smith
Permittee Signature

Subscribed and sworn to before me this 28 day of March, 192000

Patricia L. Butler
Notary Public



WASHINGTON STATE
DEPARTMENT OF
ECOLOGY

APPLICATION FOR PERMIT

TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

☐ SURFACE WATER ☒ GROUND WATER

\$10.00 MINIMUM STATUTORY EXAMINATION FEE REQUIRED WITH APPLICATION
(GRAY BOXES FOR OFFICE USE ONLY)

APPLICATION NO.		W.R.I.A.	COUNTY	PRIORITY DATE	TIME	ACCEPTED
APPLICANT'S NAME — PLEASE PRINT		Okanogan				
CITY OF OMAK				Bus. Tel.	(509) 826-1170	

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
P. O. Box 72	Omak	WA	98841

DATE & PLACE OF INCORPORATION IF APPLICANT IS A CORPORATION	Bill Huibregtse, Consultant/Engineer
Municipality - 1911	(509) 453-4848

1.	SOURCE OF SUPPLY	IF GROUND WATER
IF SURFACE WATER		
SOURCE (NAME OF STREAM, LAKE, SPRING, ETC.) (IF UNNAMED, SO STATE)	SOURCE (WELL, TUNNEL, INFILTRATION TRENCH, ETC.)	
N/A	Two (2) Wells	
TRIBUTARY	SIZE AND DEPTH	

2.	USE
USE TO WHICH WATER IS TO BE APPLIED (DOMESTIC SUPPLY, IRRIGATION, MINING, MANUFACTURING, ETC.)	
Domestic Supply	

ENTER QUANTITY OF WATER REQUESTED USING UNITS OF:	CUBIC FEET PER SECOND (CFS)	OR	GALLONS PER MINUTE (GPM)	ACRE FEET PER YEAR
			5000	8,065

TIMES DURING YEAR WATER WILL BE REQUIRED
Continuous 365 days per year

IF IRRIGATION, NUMBER OF ACRES	IF DOMESTIC USE, NUMBER OF UNITS BY TYPE, E.G. 1-HOME, 1-MOBILE HOME, 2-CAMPSITES, ETC.	IF MUNICIPAL USE, ESTIMATED POPULATION 20 YEARS FROM TODAY
N/A	2,000	5,250
DATE PROJECT WAS OR WILL BE STARTED	DATE PROJECT WAS OR WILL BE COMPLETED	
March 1993	July 1993	

3. LOCATION OF POINT OF DIVERSION/WITHDRAWAL

3A. IF IN PLATTED PROPERTY				
LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)	SECTION	TOWN
		Peter Swimptkin Allotment No.	35	34
			RANGE	26

5-793

3B. IF NOT IN PLATTED PROPERTY

ON ACCOMPANYING SECTION MAPS, ACCURATELY MARK AND IDENTIFY EACH POINT OF DIVERSION. SHOW NORTH-SOUTH AND EAST-WEST DISTANCES FROM NEAREST SECTION CORNER OR PROPERTY CORNER

ALSO, ENTER BELOW THE DISTANCES FROM THE NEAREST SECTION OR PROPERTY CORNER TO THE DIVERSION OR WITHDRAWAL.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.	COUNTY

4. DO YOU OWN THE LAND ON WHICH THIS SOURCE IS LOCATED. IF NOT, INSERT NAME & ADDRESS OF OWNER
OMAK WOOD PRODUCTS, Rt. 2, Box 54, Omak, WA 98841-9609

5. LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED
ATTACH A COPY OF THE LEGAL DESCRIPTION OF THE PROPERTY (ON WHICH THE WATER WILL BE USED) TAKEN FROM A REAL ESTATE CONTRACT, PROPERTY DEED OR TITLE INSURANCE POLICY. OR, COPY CAREFULLY IN THE SPACE BELOW.

CITY OF OMAK FUTURE SERVICE AREA BOUNDARY (SEE ATTACHED MAP)

WHAT IS YOUR INTEREST IN THE PROPERTY ON WHICH THE WATER IS TO BE USED (PROPERTY OWNER, LESSEE, CONTRACT PURCHASER, ETC.)
Water purveyor to municipal customers.

ARE THERE ANY EXISTING WATER RIGHTS RELATED TO THE LAND ON WHICH THE WATER IS TO BE USED (INCLUDING WATER PROVIDED BY IRRIGATION DISTRICTS OR DITCH COMPANIES) ☒ YES ☐ NO

IF YES, FROM WHAT SOURCE (i.e. SURFACE OR GROUND WATER) AND UNDER WHAT AUTHORITY
Ground Water, Existing Water Rights.

6. DESCRIPTION OF SYSTEM PROPOSED OR INSTALLED

(FOR EXAMPLE: SIZE OF PUMP, CAPACITY OF PUMP, PUMP MOTOR HORSE POWER, PIPE DIAMETER, NUMBER OF SPRINKLERS, ETC.)

CITY IS PROPOSING TO INSTALL COOLING TOWERS. A 20,000 GALLON SUMP. A 1,500 GPM DEEP WELL TURBINE; PUMPHOUSE CHLORINATION AND ELECTRICAL CONTROLS; 24-INCH OVERFLOW PIPE; 16-INCH

TRANSMISSION MAIN; AND A VARIABLE 1,500 GPM AND 3,500 GPM PUMP STATION.

7. REMARKS

8. COMPLETE THIS SECTION ONLY IF THIS APPLICATION INCLUDES IRRIGATION AS A USE

N/A

IN ORDER TO IMPLEMENT THE PROVISIONS OF INITIATIVE MEASURE NUMBER 59, THE FAMILY FARM WATER ACT WHICH WAS PASSED BY THE VOTERS ON NOVEMBER 3, 1977, WE MUST ASK THE FOLLOWING QUESTIONS:

DOES THE TOTAL NUMBER OF ACRES IN WHICH YOU HAVE CONTROLLING INTEREST IN THE STATE OF WASHINGTON EXCEED 2000 ACRES FOR THE FOLLOWING THREE CATEGORIES:

- 1. LANDS THAT ARE BEING IRRIGATED UNDER WATER RIGHTS ACQUIRED AFTER DECEMBER 8, 1977. YES ☐ NO ☐
- 2. LANDS THAT MAY BE IRRIGATED UNDER APPLICATIONS NOW ON FILE WITH THE DEPARTMENT OF ECOLOGY. YES ☐ NO ☐
- 3. LANDS THAT MAY BE IRRIGATED UNDER THIS APPLICATION. YES ☐ NO ☐

IF 10 ACRE-FEET OR MORE OF WATER IS TO BE STORED AND/OR IF THE WATER DEPTH WILL BE 10 FEET OR MORE AT THE DEEPEST POINT, A STORAGE PERMIT MUST BE FILED IN ADDITION TO THIS PERMIT. THESE FORMS CAN BE SECURED TOGETHER WITH INSTRUCTIONS, FROM THE DEPARTMENT OF ECOLOGY.

SIGNATURES

APPLICANT'S SIGNATURE

CITY OF OMAK - E. Walt Smith, Mayor

LEGAL LANDOWNERS NAME (PLEASE PRINT)

LEGAL LANDOWNER'S SIGNATURE (OWNER OF PROPERTY DESCRIBED IN ITEM NUMBER 5)

LEGAL LANDOWNER'S ADDRESS

FOR OFFICE USE ONLY

STATE OF WASHINGTON

DEPARATMENT OF ECOLOGY

SS.

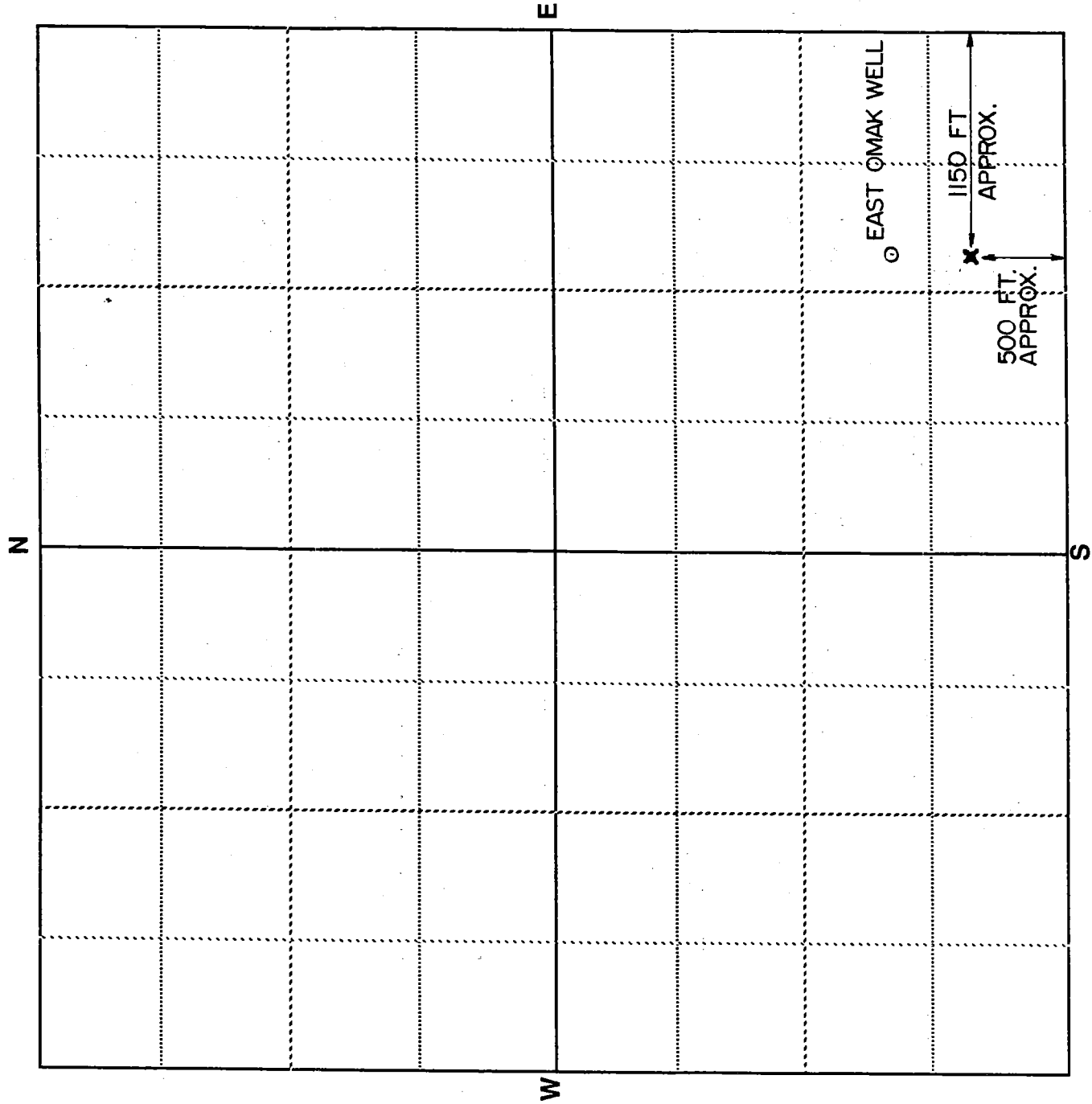
This is to certify that I have examined this application together with the accompanying maps and data, and am returning it for correction or completion as follows:

In order to retain its priority date, this application must be returned to the Department of Ecology, with corrections, on or before 19

Witness my hand this day of 19

SECTION MAP

Sec. 35 Twp. 34 N. R. 26 E.W.M.



Scale: 1 inch = 800 feet (each small square = 10 acres)

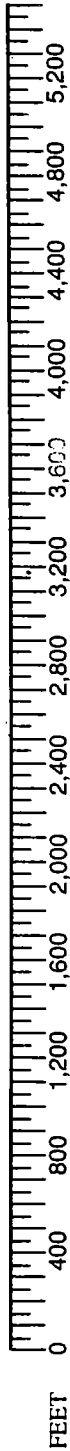
Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source). For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile. Indicate traveling directions from nearest town in space below.

The two wells are located east of SR97 in the southeast corner of Omak within the

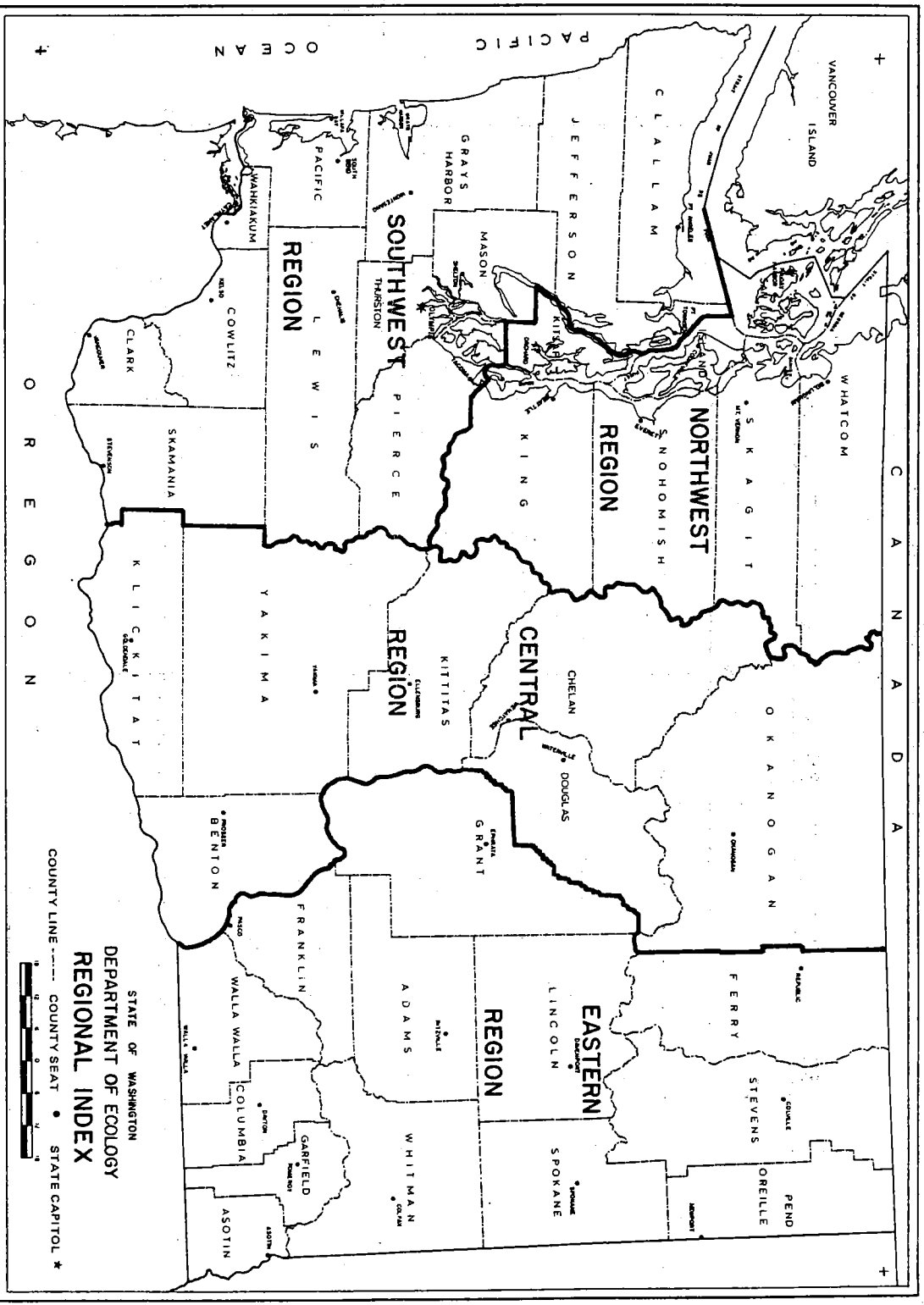
Omak Wood Products mill site.

Detach here

Fold along scale



Detach this scale at the performance, fold excess paper under or cut off excess by cutting along the scale line. This scale corresponds to the SECTION MAP above. You can read feet directly from this scale to outline property and locate points of diversion or withdrawal on the SECTION MAP. Enclose this map along with the application and \$10.00 examination fee.



Your water right application will be processed by the Regional Office of the Department of Ecology having jurisdiction in the area in which your water works are located. Please submit your completed application form, maps, sketches, and \$10.00 examination fee to the appropriate Regional Office.

Northwest Regional Office
3190 - 160th Avenue S.E.
Bellevue, WA 98008-5452
Tel. (206) 649-7000

Central Regional Office
3601 West Washington
Yakima, Washington 98903-1164
Tel. (509) 575-2800

Southwest Regional Office
7272 Cleanwater Lane
Olympia, Washington 98504-6811
Tel. (206) 586-6380

Eastern Regional Office
N. 4601 Monroe, Suite 100
Spokane, Washington 99205-1295
Tel. (509) 456-2926

The appropriate Regional Office will be happy to answer any further questions you may have.



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

August 11, 2005

To: Lois Trevino, Water Administrator, Office of Environmental Trust, Colville Confederated Tribes

**RE: Reports of Examination for Change on Nos. CG4-GWC445D@1, CG4-GWC446-D@3,
CG4-GWC1082-D@1, G4-GWC3655@1, CG4-GWC3656-A@1, CG4-GWC7332-A@1
(City of Omak, Applicant)**

Since you are identified as a party interested in the above water right applications, we are enclosing copies of our Reports of Examination for Change which summarize our findings and represents our final decision.

You have the right to appeal this decision to the Pollution Control Hearings Board. Pursuant to Chapter 43.21B RCW, your appeal must be filed with the Pollution Control Hearings Board, and served on the Department of Ecology, within thirty (30) days of the date of your receipt of this document.

To appeal this decision, your notice of appeal must contain a copy of the Ecology decision you are appealing.

Your appeal must be filed with:

The Pollution Control Hearings Board
4224 - 6th Avenue SE Rowe Six Bldg 2
PO Box 40903
Lacey WA 98504-0903

Your appeal must also be served on:

The Department of Ecology
Appeals Coordinator
PO Box 47608
Olympia WA 98504-7608

In addition, please send a copy of your appeal to:

Robert F. Barwin
Department of Ecology
15 W Yakima Ave Ste 200
Yakima WA 98902-3452

If you have any questions or concerns about these decisions, or we if can otherwise provide further assistance, please call Bryce Bealba of the Department of Ecology at (509) 575-2597.

Sincerely,

Robert F. Barwin, Section Manager
Water Resources Program
Central Region Office

FILE COPY

RFB:gg050814a

Enclosures: Reports of Examination for Change (6)

f-10th.doc





STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION
TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

- ☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)
- ☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE May 1944	APPLICATION NUMBER CG4-GWC1082-D@1	PERMIT NUMBER	CERTIFICATE NUMBER
NAME City of Omak			
ADDRESS (STREET) PO Box 72			
(CITY) Omak	(STATE) WA	(ZIP CODE) 98841-0072	

PUBLIC WATERS TO BE APPROPRIATED

SOURCE 9 wells	TRIBUTARY OF (IF SURFACE WATERS)	
MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE 1630	MAXIMUM ACRE-FEET PER YEAR 1430
QUANTITY, TYPE OF USE, PERIOD OF USE 1630 Gallons per minute and 1430 acre-feet per year continuously for municipal supply.		

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL	
✓ Kenwood Well:	1100 feet north and 600 feet east of the south quarter corner of Section 26.
✓ Apple Well:	800 feet north and 200 feet east of the south quarter corner of Section 26.
✓ Okoma Well:	660 feet south and 520 feet west of the east quarter corner of Section 34.
✓ Eastside Well:	800 feet north and 1170 feet west of the southeast corner of Section 35.
✓ OWP No. 2:	1210 feet north and 530 feet west from the southeast corner of Section 35.
✓ Hicks Well:	275 feet south and 1000 feet east from the northwest corner of Section 25.
✓ Powers Well:	Being within the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 26.
✓ Well No. 9:	1275 feet north and 100 feet west from the southeast corner of Section 24.
✓ Dean Well:	1625 feet north and 225 feet east of the southwest corner of Section 19.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.L.A.	COUNTY
✓ K SW $\frac{1}{4}$ SE $\frac{1}{4}$	26	34	26 E	49	Okanogan
✓ A SW $\frac{1}{4}$ SE $\frac{1}{4}$	26				
✓ O NE $\frac{1}{4}$ SE $\frac{1}{4}$	34				
✓ E SE $\frac{1}{4}$ SE $\frac{1}{4}$	35				
✓ G SE $\frac{1}{4}$ SE $\frac{1}{4}$	35				
✓ H NW $\frac{1}{4}$ NW $\frac{1}{4}$	25				
✓ F NE $\frac{1}{4}$ NE $\frac{1}{4}$	26				
✓ 9 SE $\frac{1}{4}$ SE $\frac{1}{4}$	24				
✓ D NW $\frac{1}{4}$ SW $\frac{1}{4}$	19		27 E		

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
-----	-------	------------------------------------

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

The place of use of this water right is the service area described in the most recent Water System Plan approved by the Washington State Department of Health, so long as city of Omak is and remains in compliance with the criteria in RCW 90.03.386(2). RCW 90.03.386 may have the effect of revising the place of use of this water right.

If the criteria in RCW 90.03.386(2) are not met, the place of use of this water right reverts to the last place of use described by Ecology in a water right authorization.

FILE COPY

DESCRIPTION OF PROPOSED WORKS

The City's wells pump water, through a series of main lines to four reservoir systems (500,000 gallons, 550,000 gallons, 800,000 gallons, and 1,065,000 gallons) sited in various locations around the City. The telemetry system is located at City Hall which controls both the quantities of water pumped and the quantities of water released from the reservoirs to the City's connections.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE:

June 2006

COMPLETE PROJECT BY THIS DATE:

June 2011

WATER PUT TO FULL USE BY THIS DATE:

Good Standing

REPORT

BACKGROUND INFORMATION

On November 24, 1998, the City of Omak, Washington filed an application for change to add one point of withdrawal under Ground Water Declaration Certificate No. G4-GWC1082-D. In late 2004, the City requested to amend that application to add an additional three points of withdrawal for a total of four additional points of withdrawal. The application was accepted and assigned identifier No. CG4-GWC1082-D@1.

The City of Omak (the City) submitted two sets of proposed applications for change to the Department of Ecology's Central Region Office. The first set, submitted January 3, 1994, requests authorization to consolidate all of the points of withdrawal under six of the City's existing rights. Those applications were authorized on June 7, 2005.

The City's second set of Applications for Change, submitted November 24, 1998, request the addition of Well No. 9 to each of their existing water rights. On December 7, 2000, a Report of Examination was issued for one of these applications (CG4-GWC446-D@1) approving the use of Well No.9. This second set of applications were amended on August 4, 2004, requesting to add three wells in addition to Well No. 9, to the City's existing rights.

This report will address the Department of Ecology's findings of fact and recommendations related to Application for Change No. CG4-GWC1082-D@1. Separate reports will address the specific recommendations for each Application for Change. Although many elements of the reports are identical, the evaluation for adding all water rights to each source, including the consideration of the potential for impairing existing rights due to increased pumping rates at each source, will be considered separately.

Attributes of Ground Water Declaration Certificate No. G4-GWC1082-D

Name on Certificate, Claim, Permit:	City of Omak
Priority Date, First Use:	May 1944
Instantaneous Quantity:	1630 gallons per minute (gpm)
Annual Quantity:	1430 acre-feet per year (acre-ft/yr)
Source:	5 wells
Points of Withdrawal:	Kenwood Well: 1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M. Apple Well: 800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 26, T. 34 N., R. 26 E.W.M. Okoma Well: 660 feet south and 520 feet west of the east quarter corner of Section 34, being within the NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 34, T. 34 N., R. 26 E.W.M. Eastside Well: 800 feet north and 1170 feet west of the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M. OWP No. 2: 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M.
Purpose of Use:	Municipal supply for the City of Omak
Period of Use:	Continuously throughout the year
Place of Use:	City of Omak, Okanogan County, Washington

Proposed Change

Name of Applicant:	City of Omak
Application Date:	January 3, 1994; Amended August 4, 2004
Instantaneous Quantity:	1630 gpm
Annual Quantity:	1430 acre-ft/yr
Source:	9 wells
Point of Diversion:	<p>Kenwood Well: 1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW$\frac{1}{4}$SE$\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M.</p> <p>Apple Well: 800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW$\frac{1}{4}$SE$\frac{1}{4}$ of Section 26, T. 34 N., R. 26 E.W.M.</p> <p>Okoma Well: 660 feet south and 520 feet west of the east quarter corner of Section 34, being within the NE$\frac{1}{4}$SE$\frac{1}{4}$ of Section 34, T. 34 N., R. 26 E.W.M.</p> <p>Eastside Well: 800 feet north and 1170 feet west of the southeast corner of Section 35, being within the SE$\frac{1}{4}$SE$\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M.</p> <p>OWP No. 2: 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE$\frac{1}{4}$SE$\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M.</p> <p>Hicks Well: 275 feet south and 1000 feet east from the northwest corner of Section 25, being within the NW$\frac{1}{4}$NW$\frac{1}{4}$ of Section 25, T. 34 N., R. 26 E.W.M.</p> <p>Dean Well: 1625 feet north and 225 feet east of the southwest corner of Section 19, being within the NW$\frac{1}{4}$SW$\frac{1}{4}$ of Section 19, T. 34 N., R. 27 E.W.M.</p> <p>Proposed Powers Well: Being within the NE$\frac{1}{4}$NE$\frac{1}{4}$ of Section 26, T. 34 N., R. 26 E.W.M.</p> <p>Well No. 9: 1275 feet north and 100 feet west from the southeast corner of Section 24, being within the SE$\frac{1}{4}$SE$\frac{1}{4}$ of Section 24, T. 34 N., R. 26 E.W.M.</p>
Purpose of Use:	Municipal supply for the City of Omak
Period of Use:	Continuously throughout the year
Place of Use:	City of Omak, Okanogan County, Washington

Public Notice of the application was given in the Omak-Okanogan County Chronicle on March 3 and 10, 1999. An Amended Notice of application was given in the Omak-Okanogan County Chronicle on September 22 and 29, 2004. There were no protests during either 30 day protest period.

INVESTIGATION

The following information was obtained from a site inspection conducted by Department of Ecology (Ecology) staff Scott Turner and Melissa Nihsen, with the Assistant Director of Public Works present, on July 28, 2004, research of department records, and conversations with the applicant and department staff. In order to approve the addition of four points of withdrawal under No. GWC1082-D, Ecology must determine:

- The validity and extent of the original water right.
- That the proposed new points of withdrawal tap the same body of public ground water as the authorized wells.
- That the proposed change will not cause impairment to existing water rights or enlarge the original right.
- That the proposed change will not be contrary to the public interest.

Filing of Applications for Change Nos. CG4-GWC445-D@1, CG4-GWC446-D@3, CG4-GWC1082-D@1, CG4-GWC3655-A@1, CG4-GWC3656-A@1, and CG4-GWC7332-A@1, attempts to increase the City's flexibility in managing its ground water withdrawals for municipal supply. This in part came about because Washington State Department of Health (DOH) declared the Apple and Kenwood wells as ground water under the influence of surface water (GUI). As a result, the City currently uses those wells only in an emergency need situation. This presents a need for the City to compensate for the water not produced by these wells through the use of newly acquired wells.

Currently there are five wells the City operates under municipal water rights. The wells pump water, through main lines to four reservoir systems (500,000 gallons, 550,000 gallons, 800,000 gallons, and 1,065,000 gallons) sited in various locations around the City. The telemetry system is located at City Hall, which controls both the quantities of water pumped and the quantities of water released from the reservoirs to the City's connections.

The City of Omak's Existing Municipal Water Rights

The City filed the declarations for the vested water uses under RCW 90.44 090 on July 7, 1947, that resulted in the issuance of Ground Water Declaration Certificate Nos. 445-D, 446-D, and 1082-D described in more detail below.

The water rights are listed below in priority date sequence.

Ground Water Declaration Certificate No. 445-D has a priority date of December 1913, and certifies the withdrawal of 500 gpm, 600 acre-ft/yr for municipal supply from a well (known as the Kenwood Well) located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M. This well has been categorized by DOH as a GUI source. This well was reported to be a standby well in the Report of Finding on Ground Water Declaration Claim No. 486 dated November 3, 1947. This well is identified as source S03 by DOH. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Apple Well, the Eastside Well, the Okoma Well, and Omak Wood Products Well No. 2 (OWP No. 2), under this Certificate.

Ground Water Declaration Certificate No. 446-D has a priority date of March 1936, and certifies the withdrawal of 800 gpm, 96 acre-ft/yr for municipal supply from a well (known as the Apple Well) located in the SW¼SE¼ Section 26, T. 34 N., R. 26 E.W.M. This well has been categorized by DOH as a GUI source. This well is identified as source S02 by DOH. On December 7, 2000, Ecology approved an Application for Water Right Claim authorizing the use of Well No. 9. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Kenwood Well, the Eastside Well, the Okoma Well, and OWP No. 2, under this Certificate.

Ground Water Declaration Certificate No. 1082-D has a priority date of May 1944, and certifies the withdrawal of 1630 gpm, 1430 acre-ft/yr for municipal supply from a well (known as the Eastside Well) located in the SE¼SE¼ Section 35, T. 34 N., R. 26 E.W.M. The well was equipped with three pumps; a 15 horsepower (hp), a 30 hp, and a 40 hp rated at 280 gpm, 550 gpm, and 800 gpm respectively. This well is identified as source S01 by DOH. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Apple Well, the Kenwood Well, the Okoma Well, and OWP No. 2, under this Certificate.

Ground Water Certificate No. 3655-A has a priority date of March 20, 1958. It is the second authorization from the Eastside Well (see discussion about the earlier right under Ground Water Declaration Certificate No. 1082-D). It certifies the withdrawal of 1300 gpm, 2080 acre-ft/yr for municipal supply. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Apple Well, the Kenwood Well, the Okoma Well, and OWP No. 2, under this Certificate.

Ground Water Certificate No. 3656-A has a priority date of March 20, 1958, and certifies the withdrawal of 375 gpm, 600 acre-ft/yr for municipal supply. This is a 2nd authorization from the Apple Well (see earlier discussion under Ground Water Declaration Certificate No. 446-D) located in the SW¼SE¼ Section 26, T. 34 N., R. 26 E.W.M. As described earlier, this well has been categorized by DOH as a GUI source. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing use of the Kenwood Well, the Eastside Well, the Okoma Well, and OWP No. 2, under this Certificate.

Ground Water Certificate No. 7332-A has a priority date of June 22, 1970, and certifies the withdrawal of 600 gpm, 560 acre-ft/yr for municipal supply from May 1 through October 31 from a well (known as the Okoma Well) located in the NE¼SE¼, Section 34, T. 34 N., R. 26 E.W.M. Any water withdrawal by the City in excess of 3456 acre-feet from any municipal source is to be deducted from the annual volume authorized by this right. This well is identified as source S04 by DOH. On June 7, 2005, Ecology approved an Application for Water Right Change authorizing the use of the Apple Well, the Eastside Well, the Kenwood Well, and OWP No. 2, under this Certificate.

Ground Water Permit No. G4-31525P has a priority of November 23, 1992, and authorizes the withdrawal of 5000 gpm, 3500 acre-ft/yr from two wells (interruptible when the Okanogan River drops below minimum instream flows as outlined in the Permit) for municipal supply. The wells described in this Permit are located approximately 1,150 feet west and 500 feet north from the southeast corner of Section 35, being within the SE¼SE¼ Section 35, T. 34 N., R. 26 E.W.M. A provision in this Permit states that the annual quantity is not additive to the City's existing rights, and limits all of the City's water rights to 3500 acre-ft/yr.

The source the City believed to be authorized under Ground Water Permit No. G4-31525P (OWP No. 2) is not described on the original Permit. This oversight has resulted in an unauthorized change in point of withdrawal. OWP No. 2 is located approximately 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE¼SE¼ of Section 35, T. 34 N., R. 26 E.W.M., approximately 1,000 feet northeast from the authorized points of withdrawal. OWP No. 2 is actually the authorized source under Certificate of Change CCVOL1-4P238, and is identified as source S07 by DOH.

The original Public Notice was given for Ground Water Permit No. G4-31525P on January 13 and 20, 1993, in the Omak-Okanogan County Chronicle. That Public Notice described the proposed sources for Ground Water Permit G4-31525P as being within the SE¼SE¼ of Section 35, T. 34 N., R. 26 E.W.M. As noted above, OWP No. 2 is also located within the SE¼SE¼ of Section 35, T. 34 N., R. 26 E.W.M. RCW 90.44.100(3) states "the construction of a replacement or new additional well or wells **at the location of the original well or wells** (emphasis added) shall be allowed without application to the department for an amendment". On July 27, 2005, the City submitted a Showing of Compliance form stating they have met the criteria stated in RCW 90.44.100(3) in order to legally operate OWP No. 2 under Ground Water Permit No. G4-31525P. The Showing of Compliance form is currently under review by Ecology.

Proposed Additional Sources

The City proposes to add four additional wells, located northeast of the existing municipal wells, under each of the water rights above. The City is requesting the addition of the following four wells to each of their municipal water rights:

- **The Dean Well:** Source for Ground Water Certificate No. G4-28873C, described in the **Ground Water Rights within Omak's Urban Growth Area** section of this report. The well is reported to be 312 feet deep, and capable of pumping about 300 gpm. The City would like to increase the capacity of this well to 500 gpm. The City's application requests only to add this well as an additional source under Ground Water Declaration No. 445-D.
- **The Hicks Well:** This well is located within the place of use, but is not the authorized source for Ground Water Certificate No. G4-26176C, described in the **Ground Water Rights within Omak's Urban Growth Area** section of this report. The well is reported to be 247 feet deep with a static water level of 150 feet. The Hicks Well is capable of pumping about 600 gpm, but the City would like to increase the capacity to 700 gpm.
- **The Powers Well:** A source to be drilled in the future. Located within the NE¼NE¼ of Section 26, T. 34 N., R. 26 E.W.M.
- **Well No. 9:** This well is identified as source S08 by DOH. Authorized as an additional source for Ground Water Declaration Certificate No. 446-D (Apple Well) on December 7, 2000. This well is 305 feet deep with a static water level of 203 feet. Well No. 9 is equipped with a pump capable of producing about 100 gpm, but the City would like to increase the capacity to 500 gpm.

Figure 1 illustrates the location of the City’s authorized municipal wells, and the location of the proposed additional wells.

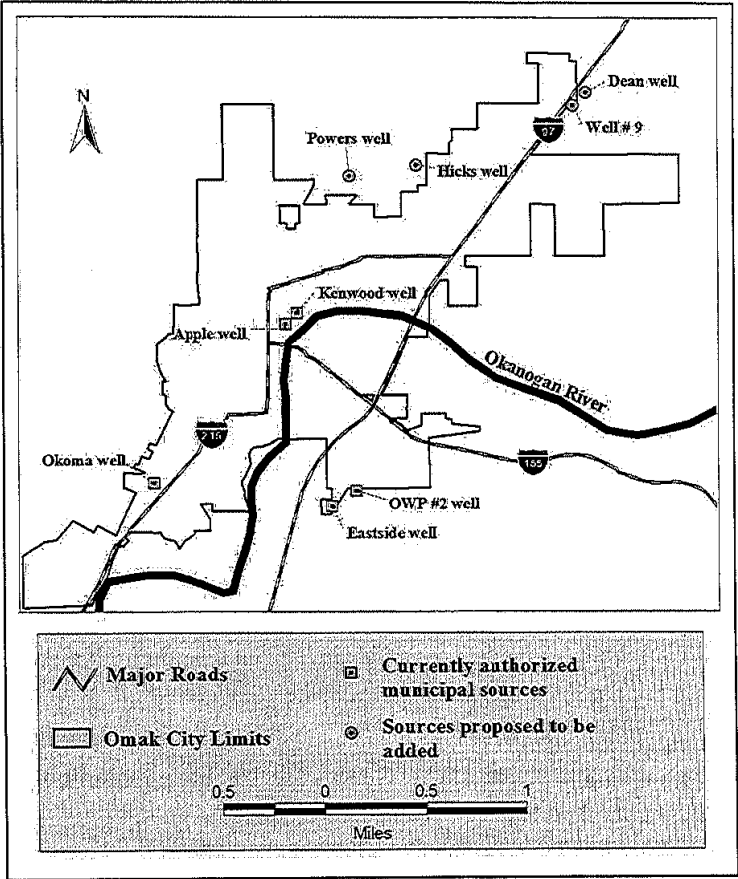


Figure 1. Overview of the five wells the City of Omak proposes to consolidate.

Ground Water Rights Within Omak’s Urban Growth Area

Ground Water Certificate No. G4-28873C describes a well located approximately 200 feet east and 1700 feet north of the southwest corner of Section 19, being within NW¼SW¼ of Section 19, T. 34 N., R. 27 E.W.M. That water right issued for a well for quantities up to 288 gpm and 55 acre-ft/yr for the irrigation of 55 acres from April 1 to October 31. The place of use is all of Government Lot 4 and the S½ of Government Lot 3 lying southeasterly of State Hwy 97 in Section 19, T. 34 N., R. 27 E.W.M. During the 2004 site inspection, it was observed that the place of use was covered in established sagebrush and appeared not to have been watered within the last five or more years.

Ground Water Certificate No. G4-26176C describes a well located approximately 1000 feet east and 40 feet north from the southwest corner of Section 24 being within the SW¼SW¼ Section 24, T. 34 N., R. 26 E.W.M. Water is withdrawn from the well at up to 230 gpm and 117 acre-ft/yr for primary irrigation of 6 acres and standby reserve for 20 acres. The primary right for irrigation of the 20 acres is provided by the Okanogan Irrigation District. The place of use is that part of Section 24, T. 34 N., R. 26 E.W.M. described as follows: the S½SW¼SW¼ and that part of the NW¼SW¼SW¼ lying south of the L. B. Lateral of the Okanogan Irrigation District and also the NE¼NW¼NW¼ Section 25, T. 34 N., R. 26 E.W.M.

Ground Water Certificate No. G4-26558C describes a right for a well situated approximately 1310 feet west and 1050 feet north from the south quarter corner Section 24 being within the SE¼SW¼ Section 24, T. 34 N., R. 26 E.W.M. It allows for the withdrawal of up to 19 gpm, 0.25 acre-ft/yr for in-house domestic supply and 7 acre-ft/yr to be used during the irrigation season from April 1 through October 15 as standby reserve for the irrigation of two acres. The primary right for irrigation is provided by the Okanogan Irrigation District. The place of use is the N½ of the west 330 feet of the N ½SE¼SW¼ Section 24, T. 34 N., R. 26 E.W.M. lying south of the county road right of way.

Suncrest Plat Water System

This system is identified by DOH as PWS ID No. 85207 and has two water rights:

Ground Water Certificate No. G4-23779C is for a well within the NE¼SE¼ Section 25, T. 34 N., R. 26 E.W.M. and certifies the withdrawal for 300 gpm, 30 acre-ft/yr for community domestic supply for 30 homes located within the SE¼SE¼ Section 25, T. 35 N., R. 26 E.W.M.

The second authorization, from the same wells under Ground Water Permit No. G4-26888P with priority date of July 21, 1980, is for two wells within the E½ Section 25, T. 34 N., R. 26 E.W.M. The Permit authorizes the withdrawal of 300 gpm, and 200 acre-ft/yr for community domestic supply for 200 homes and mobile homes. The place of use is the E½E½SE¼ Section 25, T. 34 N., R. 26 E.W.M.

Sandflat Water Users Association

Another community system in the area is the Sandflat Water Users Association, identified by DOH as PWS No. 09064. It is authorized water use under Superseding Ground Water Permit No. G4-26301P with a priority date of July 20, 1979, from two (2) wells located within the NW¼SW¼ Section 30, T. 34 N., R. 26 E.W.M. The Permit authorizes the withdrawal of ground water at 250 gpm, and 220 acre-ft/yr for 245 homes (houses, apartments, duplexes, and condominiums). One well is reported to be drilled 445 feet deep with a 250 gpm capacity and the other is 214 feet deep with 109 gpm capacity.

Irrigation water within the Sandflat place of use is provided from a surface water diversion under authority of Surface Water Permit No. S4-24234P for the diversion of surface water from the Okanogan River subject to instream flows set by Chapter 173-549 WAC, the Water Resources Program for the Okanogan River Basin, WRIA 49.

Aston Estates

Aston Estates is a public water system operating under three Certificates of Water Right.

Certificate No. G4-23805C with priority date of January 6, 1975, certifies the withdrawal of 40 gpm and 54 acre-ft/yr for a well located within the NE¼NW¼ Section 31, T. 34 N., R. 27 E.W.M. to serve 60 homes within Aston's First Addition in Government Lots 2 and 3 Section 31, T. 34 N., R. 27 E.W.M.

Certificate No. G4-23806C with priority date of January 6, 1975, certifies the withdrawal of 45 gpm and 54 acre-ft/yr from a well located approximately 875 feet west and 850 feet south of the north quarter corner within the NE¼NW¼ of Section 31, T. 34 N., R. 27 E.W.M. to serve 60 homes within Aston's First Addition in Government Lots 2 and 3, Section 31, T. 34 N., R. 27 E.W.M. These are the same 60 homes referenced by Certificate No. G4-23805C. The 54 acre-ft/yr is the maximum annual quantity under both rights, but the instantaneous quantities (40 and 45 gpm) are additive.

A third well is covered by Certificate No. G4-29424C, and authorizes 54.9 acre-ft/yr for 61 homes (60 were covered by the earlier two water rights described above) less any quantity withdrawn under Certificate Nos. G4-23805C and G4-23806C. The instantaneous quantity of 90 gpm is additive to the quantities (40 and 45 gpm) under Certificate Nos. G4-23805C and G4-23806C. This well is located approximately 510 feet west and 650 feet south of the north quarter corner in Section 31 being within Government Lot 2 Section 31, T. 34 N., R. 27 E.W.M.

Water Quantity

Table 1 identifies the Municipal Ground Water Certificates that are included in city of Omak's Water System Plan.

Table 1: Municipal Ground Water Certificates Held by the City of Omak

Certificate No.	Source	Priority date	Q _i (gpm)	Q _a (acre ft/yr)	Place of use
445-D	Kenwood Well	December 1913	500	600	city of Omak
446-D	Apple Well	March 1936	800	96	city of Omak
3656-A	Apple Well	March 20, 1958	375	600	city of Omak
1082-D	Eastside Well	May 1944	1630	1430	city of Omak
3655-A	Eastside Well	March 20, 1958	1300	2080	city of Omak
7332-A	Okoma Well	June 22, 1970	600	560	city of Omak
G4-31525P	OWP No. 2**	November 23, 1992	5000	3500*	city of Omak

*This annual quantity is not additive to the City's other municipal rights, furthermore this Permit limits the total withdrawal under all of the City's rights not to exceed 3500 acre-ft/yr.

OWP No. 2 represents an unauthorized change in point of withdrawal described in the **The City of Omak's Existing Municipal Water Rights section of this report.

Water Demand Forecasting

Historical population and water use reported in the Draft 2004 Water System Plan indicates the extent that the City has continued to develop water use under its water rights. Historical population data included in the plan states that in 1980 the population was 4007 with gradual increases up to 4721 in 2000. This represents a 17.83% increase in the population for that 20 year period. The Water System Plan also contains information on the existing water supply and demand, as well as projections for future water demand and how that relates to the existing supply. The Water System Plan outlines the annual water production for the years of 1998 through 2002. Within that five year period, 1998 was indicated to be the highest production year at approximately 600 million gallons (1841 acre-feet); leaving approximately 1600 acre-feet of the City's total water rights to be developed. The future water demand forecast for the year 2023 predicts that the City's annual water use will be 819.3 million gallons (2514 acre-feet). These data indicate a trend of past growth, and the City's continuing growth into their existing water rights with the flexibility for further growth.

Instantaneous Quantities

Water Right Declaration No. 1082-D certifies the withdrawal of 1630 gpm. The proposed change would authorize the withdrawal of that 1630 gpm from all of the wells listed in Table 2. The City proposed maximum instantaneous quantities of each well. The maximum Q_i for each source submitted by the City is listed in Table 2.

Table 2: Maximum Q_i placed on all Possible Sources for the City of Omak

Source	Q_i (gpm)
Kenwood Well	500 gpm
Apple Well	1175 gpm
Eastside Well	2930 gpm
Okoma Well	600 gpm
OWP No. 2	5000 gpm
Well No. 9	500 gpm*
Dean Well	500 gpm*
Hicks Well	700 gpm*
Proposed Powers Well	500 gpm*

*Instantaneous quantities are non-additive to the City's municipal rights.

The voluntary cap on instantaneous quantities was proposed by the City for three reasons:

- 1) The City does not intend on improving any existing well to increase water use beyond the capacities shown in Table 2.
- 2) If there were no caps, all of the instantaneous quantities would have to be cumulatively evaluated for impairment at each source (approximately 5200 gpm at each well), greatly increasing the chance for the proposed changes to impair other water users in the area.
- 3) Adding Well No. 9, the Dean Well, the Hicks Well, and the proposed Powers Well will increase the City's flexibility in obtaining adequate water production.

Annual Quantities

The water system plan states that during the years of 1998 and 2002 the Eastside Well (original source for this water right) was used for a total of 873.4 acre-feet in 1998, 888.9 acre-feet in 1999, 917.5 acre-feet in 2000, 798.8 acre-feet in 2001, and 558.7 acre-feet in 2002. In order to pump the full 1430 acre-feet authorized by this water right, the Eastside Well would need to withdraw 1630 gpm for 199 days. While the data in the City's plan suggests the City has not put Groundwater Declaration No. 1082-D to full beneficial use, it is uncertain whether the Eastside Well may have been relied upon to a greater extent historically. It is clear that a portion of the six rights the City proposes to transfer is inchoate and that some of these rights were issued based on Ecology's former "pumps-and-pipes" methodology. Adding the additional sources would allow the City to begin to legally use the annual quantities associated with this water right through sources other than the Eastside Well. The authorization of additional sources will not allow a greater annual quantity of water to be withdrawn; the right will be limited to 1430 acre-ft/yr from all sources.

In *Department of Ecology v. Theodoratus*, 135 Wn.2d 582, 957 P.2d 1241, the Washington Supreme Court held in a scenario that involved a non-municipal water supplier that Ecology's administrative practice of issuing Certificates of Water Right prior to full beneficial use was in error. This created uncertainty with respect to the water rights of Certificate holders, such as the City of Omak, that received Certificates based on system capacity rather than the extent of actual use.

Recent legislative changes have affected municipal water rights. SESSH 1338 provided clarification and certainty for municipal water rights documented by Certificates that were issued based on system capacity. RCW 90.03.330 (3) states that:

"This sub-section applies to the water right represented by a Water Right Certificate issued prior to September 9, 2003, for municipal water supply purposes as defined in RCW 90.03.015 where the Certificate was issued based on an administrative policy for issuing such Certificates once works for diverting or withdrawing and distributing water for municipal supply purposes were constructed rather than after the water had been placed to actual beneficial use. Such a water right is a right in good standing."

A licensed Ecology staff hydrogeologist reviewed and stamped a separate technical memorandum which discusses the hydrogeologic analysis for this application. The hydrogeologic interpretations provided below are extracted from this memorandum.

Hydrogeologic Setting

This section describes in general terms the hydrogeology surrounding the City of Omak, Okanogan County, Washington. In this area, the Okanogan River flows in an overall southerly direction, however, through the City of Omak the river takes a 90 degree bend to the west. Consequently, the City spans an area both north and south of the Okanogan River. Glacial terraces, located toward the north and west of the City, are a local remnant left by ancient ice sheets that once scoured the Okanogan River Valley. Sedimentary deposits, largely composed of glacial drift, glacial outwash, glaciolacustrine and more recent alluvial materials along with lesser amounts of glacial till, dune sands, and mass wasting materials, have in filled the ice scoured valley. The City of Omak is located near the western edge of the Okanogan Metamorphic Core Complex. Gneissic granodiorite, a meta-igneous rock of the Okanogan Core Complex, forms the valley walls to the south and east of the Okanogan River. To the north and west of the river, valley walls are composed of igneous rocks (dacite and quartz monzonite) and metasedimentary rocks of the Cave Mountain Formation. Thick glacial deposits obscure much of the described bedrock in the low lying areas; however, more resistant bedrock knobs protrude through the glacial materials in places along the valley floor.

Well log data on file with Ecology indicates the glacial/alluvial sediments, which form the unconsolidated aquifer, consist of clays, silts, sands, gravels, glacial till, boulders, cobbles and hardpan/cemented gravel. Well log data also indicates this aquifer is bound at depth by bedrock, or what well drillers generally refer to as granite, a geologic description drillers applied to the various rock types that outcrop on both sides of the river. Sediment thicknesses range from approximately 14 feet to as much as 620 feet, with total thicknesses and/or depth to bedrock varying throughout the area. However, it appears that there is a thinning of sediments toward the southwest of Omak (Section 34, T. 34 N., R. 26 E.W.M.), as many wells are completed into the underlying bedrock in this area. Well log data suggests that most wells surrounding the City of Omak encounter a varying sequence of sediments, suggesting sediment layers pinch out and are discontinuous throughout the area. The wide range of sediments and thicknesses contribute to heterogeneous aquifer characteristics; for example, areas in the unconsolidated aquifer where clays and silts are present will likely have lower permeabilities, hydraulic conductivities and well yields than areas encountering mostly sands and gravels. Well logs indicate well yields range from 20 gpm to 1630 gpm for wells utilizing glacial/alluvial materials. This range reflects varied sediments and aquifer characteristics throughout the Omak area. The low range of 20 gpm begins to approach a small but notable difference from bedrock wells that tend to yield approximately 5-10 gpm or less. The unconsolidated aquifer is recharged by precipitation infiltrating into the surficial sediments and from interaction with the Okanogan River. Static water levels for the subject wells and other selected wells on file with Ecology, which are completed into surficial sediments, when corrected for elevation, indicate that ground water head levels correlate with river level elevations. This relationship suggests an exchange of flow between the ground water and surface water. Aquifer recharge and ground water levels tend to fluctuate as the hydrologic system responds to seasonal variations.

Impairment, Qualifying Ground Water Withdrawal Facilities, and Well Interference

There are three concepts that are important when considering whether a withdrawal of water from a well would impair another existing water right. The concepts are defined as follows:

Impairment is an adverse impact on the physical availability of water for a beneficial use that is entitled to protection i.e. water rights that are both senior and junior in priority to the right the applicant seeks to change.

Qualifying ground water withdrawal facilities are defined as those wells which in the opinion of the Department are adequately constructed. An adequately constructed well is one that (a) is constructed in compliance with well construction requirements; (b) fully penetrates the saturated thickness of an aquifer or withdraws water from a reasonable and feasible pumping lift (Chapter 173-150 WAC); (c) the withdrawal facilities must be able to accommodate a reasonable variation in seasonal pumping water levels; and (d) the withdrawal facilities including pumping facilities must be properly sized to the ability of the aquifer to produce water.

Well interference may occur when several wells penetrate and withdraw ground water from the same aquifer. Each pumping well creates a drawdown cone. When several wells pump from the same aquifer, well density, aquifer characteristics, and pumping demand may result in individual drawdown cones that intersect and form a composite drawdown cone. At any point in an aquifer, the composite drawdown caused by pumping wells will be greatly influenced by the transmissivity (T) of the aquifer. In aquifers with high Ts, composite drawdown will generally be much less than in aquifers with similar properties but with low Ts. Transmissivity is related to hydraulic conductivity (K) and the saturated thickness (b) of an aquifer by the relationship $T=Kb$.

An aquifer's hydraulic conductivity (K) is derived from the physical properties of both the fluid and geologic materials that form an aquifer. Once formed, an aquifer's saturated thickness (b) becomes important in evaluating its transmissivity. For regions of similar K in an aquifer, a large saturated thickness will result in a much higher T than a small saturated thickness. As a result, regions of similar K in an aquifer with a large saturated thickness will experience less composite drawdown or well interference than with a small saturated thickness.

Some conditions, however, will increase or steepen composite drawdown in an aquifer. For instance, where characteristics (such as very fine, clay-rich, or poorly sorted sediments) of an unconfined aquifer cause significant drawdown relative to the saturated thickness, the composite drawdown will increase as saturated thickness is reduced and T becomes smaller. Additionally, in regions where negative or no-flow boundaries occur, such as near the edges of a valley fill aquifer where it is bounded by bedrock, composite drawdown will be steeper than in the central part (generally the greatest thickness region) of the aquifer. Consequently, it is commonly understood that the greatest composite drawdown or well interference is more likely to occur in regions of low transmissivities, thin saturated thicknesses and near negative or no-flow boundaries than in regions of high transmissivities, large saturated thicknesses, and away from negative or no-flow boundaries.

Hydrogeologic Analysis of the Site

The City of Omak has multiple ground water rights and corresponding wells, which collectively constitute their municipal water supply. The City submitted 6 change applications in 1994, requesting to add each of their existing municipal supply wells (5 existing wells) to each one of the following Water Rights: G4-GWC445-D, G4-GWC446-D, G4-GWC1082-D, G4-GWC3655-A, G4-GWC3656-A and G4-GWC7332-A. The City submitted six additional change applications in 1998 requesting to add four proposed wells to each of the above water rights. Both requests would allow for greater flexibility in the City's water system operations. In total, if both sets of change applications are approved, the City would have the ability to withdraw water quantities from up to nine wells from any of the above mentioned water rights, however, each water right will not be allowed to exceed its historic water quantity. This analysis will address all six 1998 applications. These requests are in part due to two existing city wells, the Apple Well and Kenwood Well, being designated groundwater under the influence of surface water (GUI). As a result, the City currently classifies these two wells as emergency use wells only.

Table 3 below delineates the suite of water rights, existing wells, corresponding annual withdrawal quantities, instantaneous water quantities, depth of wells and corresponding static water levels.

Table 3

Well Name	Original Water Right No.	Instantaneous Quantity Qi (gpm)	Annual Quantity Qa (acre-ft/yr)	Depth of Well (ft)	Static Water Level swl (ft)
Kenwood	445-D	500	600	26	16.5
Apple	446-D + 3656-A	1175	696	29	10.0
Eastside	1082-D + 3655-A	2930	3510	40	28.5
Okoma	7332-A	600	560	105	8.75
OWP No.2	G4-31525P**	Interruptible 5000	3500*	69	38.75
Hicks		700		247	150
Dean		500		312	212
No.9 (NE Omak)		500		295	203
Proposed Powers		500			
*This quantity is not additive and furthermore this Permit limits the Qa under all the City's water rights not to exceed 3500 acre-ft/yr.					
**OWP No. 2 represents an unauthorized change in point of withdrawal described in the City of Omak's Existing Municipal Water Rights section of this report.					

The City voluntarily capped the instantaneous water quantity at each well, to reduce the risk of impairing existing water rights in close proximity. To clarify, the instantaneous quantity at each well is limited to the aforementioned quantity stated in the table. The combined annual water quantity that would be allowed to be withdrawn from any combination of wells, should the change be approved, is 3500 acre-ft/yr, as stated in G4-31525P.

Discussion of Existing Wells

The Kenwood Well is located approximately 1100 feet north and 600 feet east of the south quarter corner of Section 26, T. 34 N., R. 26 E.W.M., and approximately 50 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was designated GUI by the Washington State Department of Health (DOH). The Kenwood Well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 20 feet below ground surface (bgs). However, the well log on file with Ecology indicates the well is 14 feet in diameter and completed to a depth of 26 feet 2 inches bgs. These discrepancies, as well as discrepancies in other well documents described subsequently in the report, are likely the result of information being passed down through comprehensive water plans over the years rather than well alteration (Louman, 2005). The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 16.5 feet was recorded at the time of drilling, December 1913. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 500 gpm and 7 feet of drawdown in the well were also reported. If approved the proposed changes would allow the Kenwood Well to withdraw up to 500 gpm, in emergency situations.

The Apple Well is located approximately 800 feet north and 200 feet east of the south quarter corner of Section 26, T. 34 N., R. 26 E.W.M., and approximately 80 feet northwest of the Okanogan River. This well is currently used only in emergency situations, as it was also designated GUI by DOH. The Apple Well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 10 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is completed to 29 feet bgs. The materials encountered during drilling, as reported on the well log, include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 10 feet 4 inches was recorded at the time of drilling, February 1936. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A yield of 800 gpm and 10 feet 4 inches of drawdown in the well were also reported. If approved, the proposed changes would allow the Apple Well to withdraw up to 1175 gpm, in emergency situations.

The Eastside Well is located approximately 800 feet north and 1170 feet west of the southeast corner of Section 35, T. 34 N., R. 26 E.W.M., and approximately 1900 feet east of the Okanogan River. This well is currently in use by the City and houses 4 turbine pumps which have a combined capacity to pump 2,800 gpm. The Eastside Well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, has an inner diameter of 15 feet and is completed to a depth of 30 feet bgs. However, the well log on file with Ecology indicates the well is 14 feet in diameter and completed to 40 feet 10 inches bgs. The materials encountered during drilling, as reported on the well log, include soil, rock and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 28 feet 6 inches was recorded during the time of drilling in 1944. However, a static water level of 12.4 feet was recorded by Ecology staff, via the City's real-time telemetry system, during a site visit on July 28, 2004. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. The telemetry system also indicated the Eastside Well was pumping at a rate of 1488 gpm at the time. A yield of 1630 gpm and 1 foot of drawdown in the well was also reported on the well log. Mike Ervin, city of Omak Water Department Chief Operator, indicated during the site visit that the Eastside Well shuts off when the storage reservoir is full, as opposed to shutting off because the water level in the well has dropped. If approved, the proposed changes would allow the Eastside Well to withdraw up to 2930 gpm.

The Okoma Well is located approximately 660 feet south and 520 feet west of the east quarter corner of Section 34, T. 34 N., R. 26 E.W.M., and approximately 2300 feet west of the Okanogan River. This well is currently in use by the City and is equipped with one turbine pump, which has the capacity to pump 500 gpm. The well log on file with Ecology indicates the Okoma well is 16 inches in diameter, completed to a depth of 105 feet bgs and screened from 55 feet to 90 feet bgs. Materials encountered during drilling include clay, silt, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 8 feet 9 inches was recorded at the time of drilling, winter 1988-1989. However, Mike Ervin informed Ecology staff during the site exam the current static water level is approximately 13 feet bgs and the pumping water level is approximately 32 feet bgs. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A well test performed by the driller and reported on the well log indicated a yield of 350 to 400 gpm with 69.3 feet of drawdown in the well after 13.5 hours. This well is located in an area where the aquifer thins, therefore, the well is producing as expected, meaning it is producing less than other city wells which are located in areas where the aquifer is thicker. The steep drawdown could also be explained in combination with well efficiency, well construction and/or development and the 18 feet of silt with clay encountered in the well. If approved, the proposed changes would allow the Okoma Well to withdraw up to 600 gpm.

The OWP No. 2 well is located approximately 1210 feet north and 530 feet west of the southeast corner of Section 35, T. 34 N., R. 26 E.W.M., and approximately 2600 feet east of the Okanogan River. This well is currently in use by the City, which is leased from Omak Wood Products. The OWP No.2 well, as reported in the City of Omak Comprehensive Water Plan (Preliminary) 2004, is 24 inches in diameter, completed to a depth of 69 feet bgs, cased to a depth of 44 feet bgs and screened from 44 to 60 feet bgs. An additional inner well screen was installed from 46 to 69 feet bgs during well rehabilitation in July of 1996. Materials encountered during drilling include silt, sand, gravel and cobbles, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 38.75 was recorded in a schematic of the well located within the Comprehensive Water Plan, while a static water level of 36.5 feet was recorded during rehabilitation. According to the well log on file with Ecology, a well test was performed during rehabilitation with a maximum yield of 2500 gpm and 3.8 feet of drawdown in the well after 5.5 hours. The City's telemetry system indicated the OWP No.2 well was pumping at a rate of 1341 gpm at the time of the site visit, July 2004. If approved, the proposed changes would allow the OWP No. 2 well to withdraw up to 5,000 gpm. Note, the water right associated with this well is interruptible and subject to instream flows on the Okanogan River.

Hydrogeologic Analysis of Proposed Well Sites

The Hicks Well is located approximately 275 feet south and 1000 feet east from the northwest corner of Section 25, T. 34 N., R. 26 E.W.M., and approximately 4000 feet north of the Okanogan River. The City is proposing to acquire this well from the current property owner, Marlene (Hicks) Rawley, during 2005, according to the City of Omak Comprehensive Water Plan (Preliminary) 2004. This well does not appear to be associated with a state issued water right. As indicated by the proposed use on the water well report on file with Ecology, the well was constructed for domestic purposes. The Hicks Well is 8 inches in diameter and completed to a depth of 247 feet bgs. Materials encountered during drilling include clay, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 150 feet was recorded at the time of drilling, April 1998. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A 4-hour spring season pump test performed by Irrigation, Technology and Control indicated a pumping rate of 600+ gpm with 8 feet of drawdown in the well after 4 hours. It appears that stabilization occurred quickly during recovery, as the pre-pumping static water level was achieved within 3 seconds of shutting off the pump. If approved, the proposed changes would allow the Hicks Well to withdraw up to 700 gpm.

Well No. 9 also known as the NE Omak Well is located approximately 1275 feet north and 100 feet west of the southeast corner of Section 24, T. 34 N., R. 26 E.W.M., and approximately 5800 feet west of the Okanogan River. This well was authorized as an additional source for Water Right No. GWC-446-D on December 7th, 2000, and is currently in use. The City had the well constructed in July 2001. The well log on file with Ecology indicates the well is 12 inches in diameter, completed to a depth of 295 feet bgs, screened from 268 to 282 feet bgs, and gravel packed from 200 to 295 feet bgs. Materials encountered during drilling include clay, silt, sand and gravel, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. A static water level of 203 feet was recorded at the time of drilling, July 2001. When corrected for elevation, the static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. A 24-hour pump test performed by Arcadia Drilling Inc. on July 16, 2001, indicated a pumping rate of 120 – 132 gpm with 59.5 feet of drawdown in the well after 24 hours. It appears that the pre-pumping static water level was achieved within 2 hours of shutting off the pump. Explanations for the steep drawdown in this well could be any combination of the well efficiency, well construction and/or development and the significant quantity of silt and clay materials encountered compared to any of the previously described wells. The City would like to eventually increase the capacity of this well. If approved, the proposed changes would allow Well No. 9 to withdraw up to 500 gpm.

The Dean Well is located approximately 1625 feet north and 225 feet east of the southwest corner of Section 19, T. 34 N., R. 27 E.W.M., and approximately 5400 feet west of the Okanogan River. The City is proposing to acquire this well during 2005 as well. This well appears to be associated with Water Right No. G4-28873C, however, Ecology does not have a water well report on file for this well. The water right documents refer to the dimensions of the Dean (irrigation) Well as being 8 inches in diameter and 312 feet deep. These documents also refer to a domestic well located on the Dean property within approximately 50 feet of the irrigation well, reportedly with a depth of 335 feet deep, however, a water well report is also unavailable for this well. Mr. Dean reported at the time, spring 1987, that the irrigation and domestic wells had the same static water level of 212 feet bgs. When corrected for elevation, the reported static water level correlates with the Okanogan River elevation, suggesting the aquifer has a flow exchange with the river. The City of Omak's NE Omak Well is located approximately 500 feet southwest of the proposed well location and has a depth of 295 feet, a static water level of 203 feet bgs and encountered clay, silt, sand and gravel materials during drilling. It is likely that the Dean (irrigation) Well penetrates similar materials within the same aquifer, suggesting the well is completed into the unconsolidated glacial/alluvial sediment aquifer. If approved, the proposed changes would allow the Dean Well to withdraw up to 500 gpm.

The proposed Powers Well has not been drilled at this time; however, the City has proposed the well be located within the NE¼, NE¼ of Section 26, T. 34 N., R. 26 E.W.M. Note this location is a ¼ section west of the Hicks Well. Well logs on file with Ecology in the same quarter section as the proposed Powers Well, indicate the sediments encountered locally include clay, silt, sand and gravel and the sediments are at least 350 feet deep. The proposed well shall be completed into the glacial/alluvial aquifer to be considered the same body of ground water as the original wells. If approved, the proposed changes would allow the proposed Powers Well to withdraw up to 500 gpm.

Some wells in and around the City of Omak terminate above the bottom of the unconsolidated aquifer and others utilize the full saturated thickness. Water well reports from wells terminating in bedrock (the bottom of the sediment aquifer) indicate a minimum sediment thickness of 38 feet in an area south of the City where the aquifer thins, while water well reports from wells terminating above the bottom of the aquifer suggest a sediment thickness up to 620 feet in areas. However, saturated thicknesses (b) throughout the area are much less than sediment thicknesses and range from approximately 10 feet south of the City where the aquifer thins, to 393 feet north of the City in the area of the proposed well locations. Saturated thickness (b) is 97 feet for the Hicks Well, 92 feet for Well No. 9 and estimated to be 100 feet for the Dean Well. Since all these values approach 100 feet, the saturated thickness (b) for the subject wells will subsequently be referred to as 100 feet. In the area of the proposed wells, well reports indicate that the majority of wells terminate above the bottom of the aquifer and do not utilize the aquifer's full saturated thickness. Drillers have estimated yields for wells completed into the unconsolidated glacial/alluvial sediment aquifer to be between 20 and 1630 gpm. Based on the results of the pumping tests on the Hicks Well and Well No. 9, specific capacity was determined to be approximately 75 gpm per foot of drawdown and 2.7 gpm per foot of drawdown respectively. This noticeable difference is further evidence that the wide range of sediments and thicknesses contribute to heterogeneous aquifer characteristics. As noted above, Well No. 9 encountered significantly more silts and clays than the Hicks Well, likely contributing to its lower well yield and specific capacity. Transmissivities (T) also vary greatly due to the heterogeneous nature of the aquifer and are estimated to range from approximately 4000 gallons per day per foot (gpd/ft) to 115,000 gpd/ft. Hydraulic conductivities (K), then, for a saturated thickness of 100 feet would range between 40 gallons per day per square foot (gpd/ft²) and 1150 gpd/ft².

Evaluation by Theis non-equilibrium equation coupled with image well theory to simulate aquifer boundary conditions at the Hicks and Powers Well locations, using the upper value of hydraulic conductivity, indicates that at approximately 50 feet from a subject well, aquifer drawdown due to the maximum instantaneous pumping rate of 700 gpm (Hicks Well) at 182 days, will be about 4 feet or less. However, a more conservative analysis to simulate boundary conditions at well No. 9 and the Dean Well locations, using a mid-range hydraulic conductivity of 600 gpd/ft², indicates that at approximately 50 feet from a subject well, aquifer drawdown due to maximum instantaneous pumping rate of 500 gpm at 182 days, will be about 10 feet or less. A mid-range K value was used in the analysis because 600 gpd/ft² is still a conservative value when compared to literature K values of 1 to 5,000 gpd/ft² for silty sand, the materials being utilized in Well No. 9, (Freeze & Cherry, 1979). The analyses were run at 182 days (half a year) under the assumption that the proposed wells would not be running for 365 days (a full year) continuously. If a subject well is pumped in cycles or if it is pumped at less than the maximum instantaneous quantity, the predicted effect(s) would be reduced. Total annual water quantities will not be increasing from the aquifer, however, by adding the proposed wells to the suite of water rights, the overall pumping effects will be spread over a broader area within the aquifer. With the closest known well located approximately 50 feet from the Dean Well and even further distances from the other subject wells, composite drawdown/well interference which may occur is not expected to be significant.

Relationship between the Original Source and Proposed Source

In order to transfer or add a well to an existing water right, "the additional or replacement well or wells shall tap the same body of public ground water as the original well or wells," as stated in Chapter 90.44.100(2a) RCW. The subject wells tap the unconsolidated glacial/alluvial sediment aquifer and are not separated from each other or the original wells by a hydraulic barrier, such as a fault. Therefore, all four subject wells are considered to utilize the same body of ground water as the original five wells.

FINDINGS

- In accordance with Chapter 90.44 RCW and Chapter 90.03 RCW, the author makes a tentative determination that Water Right Declaration No. 1082-D is a valid right, with an instantaneous quantity of 1630 gpm and an annual quantity of 1430 acre-ft/yr, and is eligible for change. Although the City of Omak has not put the full certificated amount of water to beneficial use, the inchoate portion is in good standing and may be developed by the City consistent with the intent of the original Certificate.
- The four additional points of withdrawal tap the same body of public ground water as the authorized wells.
- Approval of this change request will not cause impairment of existing rights or will not enlarge the original right.
- Approval of this change will not be detrimental to the public interest.

RECOMMENDATIONS**Water Use**

Based on the above facts and findings, it is recommended that the requested additional 4 points of withdrawal under Ground Water Declaration No. 1082-D be authorized as follows:

Purpose of Use

1630 gpm and 1430 acre-ft/yr for year round municipal supply purposes.

Points of Withdrawal

Kenwood Well: 1100 feet north and 600 feet east of the south quarter corner of Section 26, being within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 34 N., R. 26 E.W.M.

Apple Well: 800 feet north and 200 feet east of the south quarter corner of Section 26, being within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 26, T. 34 N., R. 26 E.W.M.

Okoma Well: 660 feet south and 520 feet west of the east quarter corner of Section 34, being within the NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 34, T. 34 N., R. 26 E.W.M.

Eastside Well: 800 feet north and 1170 feet west of the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M.

OWP No. 2 Well: 1210 feet north and 530 feet west from the southeast corner of Section 35, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, T. 34 N., R. 26 E.W.M.

Hicks Well: 275 feet south and 1000 feet east from the northwest corner of Section 25, being within the NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 25, T. 34 N., R. 26 E.W.M.

Dean Well: 1625 feet north and 225 feet east of the southwest corner of Section 19, being within the NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 19, T. 34 N., R. 27 E.W.M.

Proposed Powers Well: being within the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 26, T. 34 N., R. 26 E.W.M.

Well No. 9: 1275 feet north and 100 feet west from the southeast corner of Section 24, being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 24, T. 34 N., R. 26 E.W.M.

Place of Use

The place of use of this water right is the service area described in the most recent Water System Plan approved by the Washington State Department of Health, so long as city of Omak is and remains in compliance with the criteria in RCW 90.03.386(2). RCW 90.03.386 may have the effect of revising the place of use of this water right.

If the criteria in RCW 90.03.386(2) are not met, the place of use of this water right reverts to the last place of use described by Ecology in a water right authorization.

Construction Schedule

Begin Construction by:	June 2006
Complete Construction by:	June 2011
Apply water to full beneficial use by:	Good Standing

PROVISIONS

A Certificate of Change will not be issued until a proof inspection is conducted and a final investigation is made. The Certificate of Change will reflect the extent of the project perfected within the limitations of the authorization. Aspects of the investigation will include, as appropriate, the source, system instantaneous capacity, beneficial use, annual quantity, acreage, place of use, and satisfaction of provisions. Final determination will be calculated based on the best information available to Ecology, including metering data and/or water duty analysis.

The amount of water granted is a maximum limit that shall not be exceeded.

The City's maximum instantaneous quantities for each well are as follows:

Kenwood Well:	500 gpm
Apple Well:	1175 gpm
Eastside Well:	2930 gpm
Okoma Well:	600 gpm
OWP No. 2:	5000 gpm
Well No. 9:	500 gpm
Dean Well:	500 gpm
Hicks Well:	700 gpm
Proposed Powers Well:	500 gpm

The total instantaneous withdrawal between the City's municipal water rights is 1020 gpm. Ground Water Permit No. G4-32525P (5000 gpm) is subject to curtailment when instream flows in the Okanogan River are below those set in Chapter 173-549 WAC. In the event the Okanogan River drops below the set minimum flows, the total instantaneous withdrawal from all sources shall not be more than 5205 gpm (10205gpm – 5000gpm = 5205gpm)

The total annual withdrawal under all rights shall not exceed 3500 acre-ft/yr.

This authorization shall in no way excuse the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations including those administered by other programs of the Department of Ecology.

Well Construction

All newly constructed wells shall be constructed into the unconsolidated glacial/alluvial sediment aquifer.

All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gage may be installed in addition to the access port.

Metering

An approved measuring device shall be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", Chapter 173-173 WAC.

Water use data shall be recorded weekly. The maximum rate of withdrawal and the annual total volume shall be submitted to Ecology by January 31st of each calendar year.

The following information shall be included with each submittal of water use data: owner, contact name if different, mailing address, daytime phone number, WRIA, Certificate, number of service connections, source name, Washington State Department of Health number, annual quantity used including units of measure, maximum rate of withdrawal including units of measure, monthly meter readings including unit of measures, purpose of use, and period of use. In the future, Ecology may require additional parameters to be reported or more frequent reporting. Ecology prefers web based data entry, but does accept hard copies. Ecology will provide forms and electronic data entry information.

Chapter 173-173 WAC describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition Ecology for modifications to some of the requirements. Installation, operation and maintenance requirements are enclosed as a document entitled "Water Measurement Device Installation and Operation Requirements".

Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the records of water use that are kept to meet the above conditions, and to inspect at reasonable times any measuring device used to meet the above conditions.

Report by: Scott Turner
Scott Turner, Water Resources Program

8-10-05
Date

FINDINGS OF FACT AND DECISION

Upon reviewing the above report, I find all facts relevant and material to the subject application have been thoroughly investigated. Furthermore, I find the change of water right as recommended will not be detrimental to existing rights and is not detrimental to the public welfare.

Therefore, I ORDER the additional points of withdrawal under Ground Water Application No. CG4-GWC1082-D@1 be approved, subject to the existing rights and provisions specified in the foregoing report.

Signed at Yakima, Washington, this 11th day of August 2005.

Robert F. Barwin
Robert F. Barwin, Section Manager
Water Resources Program
Central Region Office

APPENDIX N
COST ESTIMATES

City of Omak					
(April 2017 ENR National Construction Cost Index #10699)					
Water System Plan					
G&O #16015					
No.	Item	Quantity	Unit	Unit Price	Amount
	Water Rights Consolidation	1	LS	\$10,000	\$10,000
	Okoma Well Inspection				
1	Mobilization and Demobilization	1	LS	\$10,000	\$10,000
2	Remove pump, motor and piping	1	LS	\$10,000	\$10,000
3	Downhole video inspection	1	LS	\$5,000	\$5,000
4	Reinstall pump, motor and piping	1	LS	\$10,000	\$10,000
5	Report	1	LS	\$5,000	\$5,000
		Construction Subtotal			\$40,000
		Contingency (25%, rounded)			\$10,000
		Sales Tax (8.1%, rounded))			\$4,100
		Design/CA Services (25%, rounded))			\$12,500
		Total Estimated Project Cost			\$66,600
				ROUNDED	\$67,000
	Arsenic Treatment Pilot Study				
1	Pilot study & report				\$30,000
	South Hill Reservoir Altitude Valve				
8	Replace altitude valve (City public works department project)				\$30,000
	Ross Canyon Reservoirs Inspection and Repair				
9	Cleaning, inspections and repair				\$30,000
	Reservoir Cleaning and Inspection				
10	Riverside, South Hill and Coleman Butte reservoirs				\$60,000
	Coleman Butte Reservoir Mixing				
11	Red Valve mixing system				\$60,000
	Eastside Well Pump No. 4				
1	Replace well pump (City public works department project)				\$35,000
	Riverside Reservoir Water Line Valves				
11	Replace water line valves (City public works department project)				\$120,000
	Water Valve Replacement				
40	Replace downtown valves (City public works department project)				\$66,000
	AMR Meter Reading Upgrade				
41	Replace meters with radio-read meters (City public works department				\$300,000

City of Omak					
(April 2017 ENR National Construction Cost Index #10699)					
G&O #16015					
No.	Item	Quantity	Unit	Unit Price	Amount
Well Improvements					
1	Mobilization and Demobilization	1	LS	\$10,000	\$10,000
2	NE Omak	1	LS	\$20,000	\$20,000
3	OWP No. 2	1	LS	\$30,000	\$30,000
4	Eastside	1	LS	\$50,000	\$50,000
				Construction Subtotal	\$110,000
				Contingency (25%, rounded)	\$27,500
				Sales Tax (8.1%, rounded))	\$11,100
				Design/CA Services (25%, rounded))	\$34,400
				Total Estimated Project Cost	\$183,000
				ROUNDED	\$183,000
Arsenic Treatment Facility					
1	Mobilization and Demobilization	1	LS	\$80,000	\$80,000
2	Site Work	1	LS	\$50,000	\$50,000
3	Arsenic Treatment Facility	1	LS	\$500,000	\$500,000
4	Piping, Valves and Appurtenances	1	LS	\$50,000	\$50,000
5	Electrical, Telemetry and Instrumentation	1	LS	\$150,000	\$150,000
6	Surface Restoration	1	LS	\$2,000	\$2,000
				Construction Subtotal	\$832,000.00
				Contingency (25%)	\$208,000.00
				Sales Tax (8.1%)	\$84,240.00
				Engineering Design and Construction Administration (25%)	\$260,000.00
				Total	\$1,384,240.00
				ROUNDED	\$1,385,000
Ash Street Booster Pump Station					
1	Mobilization and Demobilization	1	LS	\$40,000	\$40,000
2	Demolition	1	LS	\$30,000	\$30,000
3	New Pumps and Motors	3	EA	\$40,000	\$120,000
4	New Header, Discharge Pipe, Valves and Appurtenances	1	LS	\$80,000	\$80,000
5	New PRV	1	LS	\$20,000	\$20,000
6	New Access Hatches	2	EA	\$5,000	\$10,000
7	Electrical Panel Canopy	1	LS	\$30,000	\$30,000
8	Electrical, Telemetry and Instrumentation	1	LS	\$100,000	\$100,000
				Construction Subtotal	\$430,000
				Contingency (25%, rounded)	\$107,500
				Sales Tax (8.1%, rounded))	\$43,500
				Design/CA Services (25%, rounded))	\$134,400
				Total Estimated Project Cost	\$715,400
				ROUNDED	\$716,000

City of Omak
(April 2017 ENR National Construction Cost Index #10699)
Water System Plan
G&O #16015

[illegible]

City of Omak
 (April 2017 ENR National Construction Cost Index #10699)
 Water System Plan
 G&O #16015

[illegible]

City of Omak												
(April 2017 ENR National Construction Cost Index #10699)												
Water System Plan												
G&O #16015												
					Jackson Street Upsize			Dewberry Avenue Loop			Pine Street Upsize	
						Unit			Unit			Unit
No.	Item		Unit	Qty.	Price	Amount	Qty.	Price	Amount	Qty.	Price	Amount
1	Mobilization and Demobilization		LS	1	\$20,000	\$20,000	1	\$30,000	\$30,000	1	\$10,000	\$10,000
2	Trench Excavation Safety Systems		LS	1	\$3,000	\$3,000	1	\$6,000	\$6,000	1	\$2,000	\$2,000
3	Temporary Erosion Control		LS	1	\$2,000	\$2,000	1	\$2,000	\$2,000	1	\$2,000	\$2,000
4	Traffic Control		LS	1	\$3,000	\$3,000	1	\$6,000	\$6,000	1	\$2,000	\$2,000
5	SPCC Plan		LS	1	\$1,000	\$1,000	1	\$1,000	\$1,000	1	\$1,000	\$1,000
6	Foundation Material		CY	20	\$25	\$500	30	\$25	\$750	10	\$25	\$250
7	Bank Run Gravel for Trench Backfill		CY	90	\$25	\$2,250	170	\$25	\$4,250	70	\$25	\$1,750
8	12" C900 PVC Pipe		LF	0	\$50	\$0	0	\$50	\$0	0	\$50	\$0
9	8" C900 PVC Pipe		LF	800	\$40	\$32,000	1,800	\$40	\$72,000	600	\$40	\$24,000
10	DI Hydrant Pipe 6-inch		LF	120	\$40	\$4,800	60	\$40	\$2,400	120	\$40	\$4,800
11	12" Butterfly Valve		EA	0	\$3,000	\$0	0	\$3,000	\$0	0	\$3,000	\$0
12	8" Gate Valve		EA	2	\$2,000	\$4,000	3	\$2,000	\$6,000	6	\$2,000	\$12,000
13	Fire Hydrant Assembly		EA	3	\$4,000	\$12,000	2	\$4,000	\$8,000	3	\$4,000	\$12,000
14	Water Main Fittings		LS	1	\$3,000	\$3,000	1	\$6,000	\$6,000	1	\$2,000	\$2,000
15	Additional Water Main Fittings		LB	1,000	\$3	\$3,000	2,000	\$3	\$6,000	1,000	\$3	\$3,000
16	Additional Concrete Thrust Block		CY	10	\$100	\$1,000	10	\$100	\$1,000	5	\$100	\$500
17	Connect to Existing System		EA	2	\$2,000	\$4,000	3	\$2,000	\$6,000	2	\$2,000	\$4,000
18	1" Service Connection		EA	8	\$100	\$800	24	\$100	\$2,400	4	\$100	\$400
19	1" Service Pipe		LF	160	\$20	\$3,200	960	\$20	\$19,200	80	\$20	\$1,600
20	1" PRV Valve		EA	0	\$600	\$0	12	\$600	\$7,200	0	\$600	\$0
21	Site Restoration		SY	800	\$30	\$24,000	1,900	\$30	\$57,000	600	\$30	\$18,000
					Jackson Street Upsize			Dewberry Avenue Loop			Pine Street Upsize	
					Construction Subtotal		\$123,550			\$243,200		\$101,300
					Contingency (25%, rounded)		\$30,900			\$60,800		\$25,300
					Sales Tax (8.1%, rounded))		\$12,500			\$24,600		\$10,300
					Design/CA Services (25%, rounded))		\$38,600			\$76,000		\$31,700
					Total Estimated Project Cost		\$205,550			\$404,600		\$168,600
											(20-year improvement)	
						ROUNDED	\$206,000		ROUNDED	\$405,000		ROUNDED \$169,000

APPENDIX O
SERVICE AREA POLICIES

SERVICE AREA POLICIES

Many policies are established by a utility which affect its growth and development. Some policies deal specifically with drinking water and have a direct impact upon utility development within its Urban Growth Area. Adopted as part of this Plan, the City of Omak has identified the following policies which directly or indirectly affect the water system:

1. The City will make every effort to provide domestic water service to new customers within Omak's Urban Growth Area under the following conditions:
 - a. The property (properties) is within the City Limits or shall be annexed into the City prior to service being provided.
 - b. All costs associated with providing water service, e.g., extending water mains to the site, shall be the responsibility of the proponent/developer.
Requirements to be met by proponents/developers when extending the City's water system are identified in Section 9.04 Water Service Regulations of the City Municipal Code.
 - c. The City maintains adequate water rights capacity per DOH's required "water rights self assessment" to serve the proposed property/properties.
 - d. The City maintains adequate physical source and/or storage capacity to serve the proposed property/properties.
 - e. The proponent/developer shall transfer all potable water rights associated with the property/properties to the City.
 - f. The proponent/developer shall "decommission" any and all ground water wells on the property in accordance with the applicable Washington Administrative Code (WAC) requirements, unless a well is to become part of the City's water system.
 - g. The proponent/developer shall allow the City the opportunity to purchase any irrigation water rights/shares associated with the property/properties prior to offering said irrigation rights/shares to any other interested party.
2. The City may choose to require a water main extension to be oversized for future demand. The difference in material and construction costs between the two sizes may be paid for by the City, or it may enter into an agreement requiring those costs be repaid by the future users.

3. Service will not be provided to proposed structures which have fire flow requirements greater than the capacity of the system. The cost of upgrading the existing water system which is required by a development to meet fire flow requirements shall be the responsibility of the developer including, but not limited to:
 - Upsizing existing water mains.
 - Looping of the distribution system by installing new water mains.
 - Increasing storage and/or pumping capacities.
4. The City will administratively assist property owners who wish to establish a Local Improvement District for the purposes of constructing water system improvements.
5. City does not allow “Latecomer’s Agreement” for extension of utility improvements.
6. The City will wholesale water to other utilities.
7. The City will not allow its mains to be used to transmit another water purveyor’s water through the City’s system to other non-City water users (wheeling of water).
8. Existing “outside customers” will be assessed water rates which are higher than those charged to customers within the City Limits in accordance with Chapter 9.04.370 of the City Municipal Code.
9. The City may choose to manage and operate, or provided specific contract services for a satellite water system outside the City limits but within the City’s service area. In making its decision, the City will take into consideration such factors as:
 - a. Construction materials, standards, and specifications of the satellite system;
 - b. Condition of the various components of the satellite system including, but not limited to pipes, valves, pumps, reservoirs, and sources of supply;
 - c. Easements and access of the satellite system;
 - d. Fire protection capability of the satellite system;
 - e. Cross-connection control of the satellite system;
 - f. Specific operation, management, or contract service responsibilities to be provided; and
 - g. Conditions for assuming management and operation of the satellite system.

City operation of satellite systems will be made on a case-by-case basis. In those cases where agreements for City operation are reached between the City and the

satellite system, contracts for ownership, operation, and maintenance will be developed.

10. The City shall not accept ownership or operation of existing private water systems annexed into the City unless said systems meet Omak standards. Substandard systems shall be upgraded or replaced prior to integration into the City's water system.

APPENDIX P
PUBLIC MEETINGS

**OMAK CITY COUNCIL
REGULAR MEETING MINUTES
October 16, 2017**

CALL TO ORDER:

Mayor Gagné called the regular meeting of the Omak City Council to order at 7:00 PM and everyone joined in the flag salute.

COUNCIL AND ADMINISTRATIVE PERSONNEL:

Michael Foth	Patrick Dalton, Building Official-absent
Nattalie Cariker	Kevin Bowling, Fire Chief
Barry Freel-absent	Jeff Koplin, Police Chief
Steve Clark	Ken Mears, Public Works Director
Walt Womack	Connie Thomas, City Clerk
Michelle Gaines	Todd McDaniel, City Administrator
Dave Womack	

CONSENT AGENDA:

Member Clark moved, seconded by Member Cariker, to approve the consent agenda consisting of minutes from the October 2, 2017 meeting; 2017 claims checks numbered 18078-18144, in the amount of \$535,819.81; manual treasurer's checks numbered 20424-20426 and electronic transfers, dated from September 1, 2017 through September 30, 2017 in the amount of \$5,424.66. As there was no discussion and no comments from the audience, Council voted and unanimously approved the motion.

CORRESPONDENCE AND MAYOR'S REPORT:

Mayor Gagné asked City Council to confirm the appointment for the current Municipal Court Judge, David Ebenger. The term of the Municipal Court Judge is a four year rotating cycle. There was no opposition and Councilmembers signed the Certificate of Appointment.

PUBLIC HEARINGS:

City of Omak Water System Plan

Mayor Gagné opened the public hearing at 7:03 and read the public hearing disclaimer to ensure the hearing is fair in form and substance as well as appearance. She introduced engineer from Gray & Osborne, Dave Ellis who will present a summary of the Water System Plan. He wanted City Council and the Mayor to recognize City Staff who spent a lot of hours gathering data and participating in meetings to help put the plan together. He gave a Power Point presentation on the Water System Plan update. Mr. Ellis explained that in the past, the plan was required to be updated every six years and that requirement has changed. The plan will now need to be updated every ten years. The Power Point was an executive summary that highlighted the historical information, planning, analysis, water use efficiencies, capital improvements and financing. Capital Improvements include the Julia Maley Well Equipping Project, Well Improvements and Okoma Well inspection and rehabilitation. The next step is for Council to approve the goals and allow the City to submit the plan to the Department of Health for review. Member Gaines wanted to ensure the plan did not hold Council accountable for the increase in rates that were outlined in the plan. Mr. Ellis explained the plan is only a guidance document for the City. Mayor Gagné opened the floor to comments and discussion. Hearing none, Mayor Gagné closed the public hearing at 7:41 pm.

2018 Budget Revenue Sources-Consideration of 2018 Ad Valorem Revenue Taxes

Mayor Gagné opened the Public Hearing of the 2018 Budget Revenue Sources-Consideration of 2018 Ad Valorem Revenue Taxes at 7:41 pm. City Administrator McDaniel explained to Council that Washington State Statute allows cities to increase the amount of total taxes levied on real and persona property up to one percent of the amount levied the previous year. He presented the Current Expense revenues to Council. He explained the graphs indicated the revenue has remained flat since 2010. The one percent of the amount levied from the previous year is \$8,148 in additional property tax. Historically fifty percent of that will go into the Current Expense Fund and fifty percent into the Street Fund. He explained that staff is still working on the budget process and based what he has reviewed; he recommends Council adopt Ordinance 1847. Mayor Gagné closed the public hearing at 7:45 pm.

**OMAK CITY COUNCIL
REGULAR MEETING MINUTES
October 16, 2017**

NEW BUSINESS:

Resolution 58-2017-Approve Public Works Contract with Overland Fence-Riverside Reservoir

Member Foth moved, seconded by Member Clerk to approve Resolution 58-2017. Public Works Director Ken Mears explained to Council that the Resolution is to construct a fence around the Riverside Reservoir to protect the asset and prevent tampering and vandalism. The project is in the 2017 budget and the estimated completion cost of \$17,080 is under budget. Member Walt Womack asked why the reservoir had to be fenced now. Mr. Mears explained that the Department of Health recommends it be protected and it also provides security for the reservoir. City Administrator McDaniel told Council that a citizen had parked a motor home on the top of the reservoir and a fence would prevent that. He also explained if the reservoir was tampered with, it would affect everyone in the City. As there were no further questions or comments, Council voted unanimously to approve the motion.

Resolution 59-2017-Authorize the Water System Plan be sent to Department of Health for Review

& Approval

Member Clark moved, seconded by Member Cariker to approve Resolution 59-2017. Public Works Director Ken Mears said that he wants to mention openly that the Water System Plan includes water efficiency goals which Council would be approving in the motion. As there were no questions or comments, Council voted unanimously to approve the motion.

Resolution 60-2017-Approve WSDOT Airport Aid Grant Offer

Member Clark moved, seconded by Member Gaines to approve Resolution 60-2017. Public Works Director Ken Mears explained to Council that the Washington State Department of Transportation has awarded the City of Omak a grant for the Omak Municipal Airport Project for 5% of the project up to \$75,000. The project is funded 90% by the Federal Aviation Administration and the City of Omak pledged \$125,000 toward the project. The state money will make up the balance of the 1.9 million dollar project. As there were no questions or comments, Council voted unanimously to approve the motion.

Ordinance 1847-Authorize Ad Valorem Taxes for 2018 Fiscal and Calendar Year

Member Gaines moved, seconded by Member Cariker to approve Ordinance 1847. As there were no additional questions or comments, Council voted unanimously to approve the motion.

OTHER BUSINESS:

Staff Reports:

Public Works Director Ken Mears thanked Dave Ellis for making the trip to Omak to present the Water System Plan to Council and answer questions. He also thanked the Clerk's Department, his staff and Gray & Osborne for their help in putting the document together.

City Clerk Thomas wanted to remind Mayor Gagné and City Council that re-elected members will need to meet the specific requirements for elected officials under the Open Government Training Act. Each re-elected official will need to recertify. She said the Association of Washington Cities will be hosting an Elected Officials Essentials Training in Chelan on December 2, 2017 to help fulfill that requirement. If you are interested, contact Deputy Clerk Amber Scott.

City Administrator McDaniel told Council that he met with personnel from the 12 Tribes Casino this past week about the sewer issue. He also met with Tribal Business Councilmember, Edwin Marchand. Everyone is trying to work together to get the problem corrected. Administrator McDaniel explained that the casino has spent a lot of money trying to correct the problem. He wanted Council to know that staff is still working to find a solution.


Member Cariker reminded everyone about the events being held on Saturday, October 28th. The Omak Theater will be showing a movie, Fit 4 Life will be hosting the Zombie Fun Run and the Halloween Harvest Festival will take place in Civic League Park. There will be a costume contest, prizes will be provided by Washington Federal Bank.

Member Clark thanked Police Chief Koplin for adding extra patrols in the school zone.

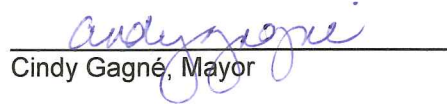
Member Gaines referred to the report provided by Public Works Director Mears. She asked about the drainage issues at the newly constructed mini storage on Okoma Drive. Mr. Mears explained that there was a minor error in the sloping elevations for the swell at the corner of Fir Street and Okoma Drive. The City just provided guidance as the drainage is on private property. Member Gaines also asked about the reference to the traffic studies and grocery store project. Mr. Mears replied that a potential developer asked the City of Omak to provide them with traffic studies the City had on file.

**OMAK CITY COUNCIL
REGULAR MEETING MINUTES
October 16, 2017**

As there was no further business before Council, Mayor Gagné adjourned the meeting at 7:53 PM.



Connie Thomas, City Clerk



Cindy Gagné, Mayor

October 16, 2017

APPENDIX Q
NOTICE TO ADJACENT UTILITY PROVIDERS



September 7, 2017

Mr. Jerry Hendrick
Coleman Butte Water Association
62 O'Neil Road
Oroville, Washington 98844

SUBJECT: OMAK WATER SYSTEM PLAN
CITY OF OMAK, OKANOGAN COUNTY, WASHINGTON
G&O #16015

Dear Mr. Hendrick:

The purpose of this letter is to inform you that the City of Omak has available for the Association's review a draft of their Water System Plan. If you would like a copy of the Plan please contact David Ellis, P.E., Gray & Osborne, Inc., at (509) 453-4833 or by email at dellis@g-o.com.

Sincerely,

GRAY & OSBORNE, INC.

David G. Ellis, P.E.

DGE/kd

cc: Mr. Ken Mears, Public Works Director, City of Omak



September 7, 2017

Mr. Loren Howell
City of Okanogan Water Department
P.O. Box 752
Okanogan, Washington 98840

SUBJECT: OMAK WATER SYSTEM PLAN
CITY OF OMAK, OKANOGAN COUNTY, WASHINGTON
G&O #16015

Dear Mr. Howell:

The purpose of this letter is to inform you that the City of Omak has available for the City's review a draft of their Water System Plan. If you would like a copy of the Plan please contact David Ellis, P.E., Gray & Osborne, Inc., at (509) 453-4833 or by email at dellis@g-o.com.

Sincerely,

GRAY & OSBORNE, INC.

David G. Ellis, P.E.

DGE/kd

cc: Mr. Ken Mears, Public Works Director, City of Omak



September 7, 2017

Mr. Brent Harrison
Suncrest Plat Water System
13023 NE HWY 99 Suite 7 #333
Vancouver, Washington 98686

SUBJECT: OMAK WATER SYSTEM PLAN
CITY OF OMAK, OKANOGAN COUNTY, WASHINGTON
G&O #16015

Dear Mr. Harrison:

The purpose of this letter is to inform you that the City of Omak has available for your review a draft of their Water System Plan. If you would like a copy of the Plan please contact David Ellis, P.E., Gray & Osborne, Inc., at (509) 453-4833 or by email at dellis@g-o.com.

Sincerely,

GRAY & OSBORNE, INC.

David G. Ellis, P.E.

DGE/kd

cc: Mr. Ken Mears, Public Works Director, City of Omak



September 7, 2017

Mr. Carl Behrent
Sandflat Water Association
526 Ironwood Street
Omak, Washington 98841

SUBJECT: OMAK WATER SYSTEM PLAN
CITY OF OMAK, OKANOGAN COUNTY, WASHINGTON
G&O #16015

Dear Mr. Behrent:

The purpose of this letter is to inform you that the City of Omak has available for the Association's review a draft of their Water System Plan. If you would like a copy of the Plan please contact David Ellis, P.E., Gray & Osborne, Inc., at (509) 453-4833 or by email at dellis@g-o.com.

Sincerely,

GRAY & OSBORNE, INC.

David G. Ellis, P.E.

DGE/kd

cc: Mr. Ken Mears, Public Works Director, City of Omak



September 7, 2017

Mr. Carl Behrent
Duck Lake Water Association
526 Ironwood Street
Omak, Washington 98841

SUBJECT: OMAK WATER SYSTEM PLAN
CITY OF OMAK, OKANOGAN COUNTY, WASHINGTON
G&O #16015

Dear Mr. Behrent:

The purpose of this letter is to inform you that the City of Omak has available for the Association's review a draft of their Water System Plan. If you would like a copy of the Plan please contact David Ellis, P.E., Gray & Osborne, Inc., at (509) 453-4833 or by email at dellis@g-o.com.

Sincerely,

GRAY & OSBORNE, INC.

David G. Ellis, P.E.

DGE/kd

cc: Mr. Ken Mears, Public Works Director, City of Omak



September 7, 2017

Mr. Carl Behrent
Aston Estates Water Association
526 Ironwood Street
Omak, Washington 98841

SUBJECT: OMAK WATER SYSTEM PLAN
CITY OF OMAK, OKANOGAN COUNTY, WASHINGTON
G&O #16015

Dear Mr. Behrent:

The purpose of this letter is to inform you that the City of Omak has available for the Association's review a draft of their Water System Plan. If you would like a copy of the Plan please contact David Ellis, P.E., Gray & Osborne, Inc., at (509) 453-4833 or by email at dellis@g-o.com.

Sincerely,

GRAY & OSBORNE, INC.

David G. Ellis, P.E.

DGE/kd

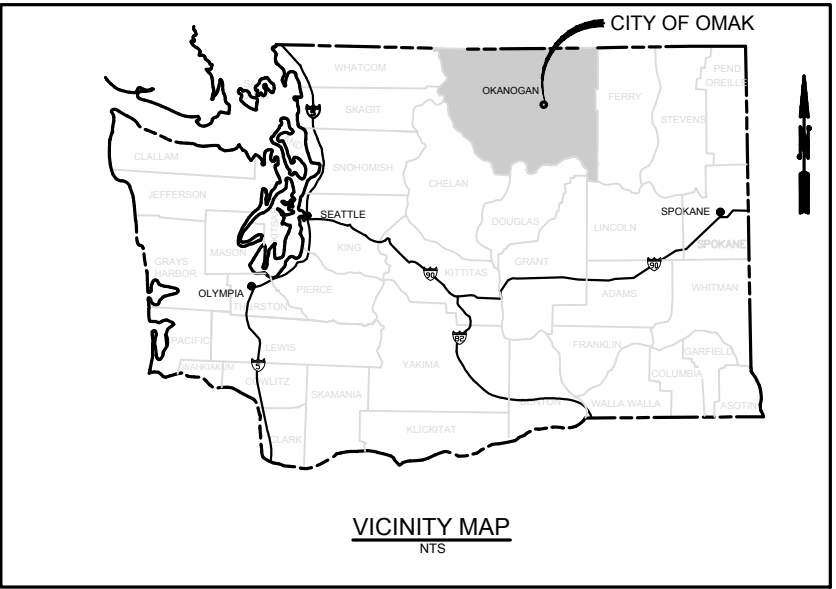
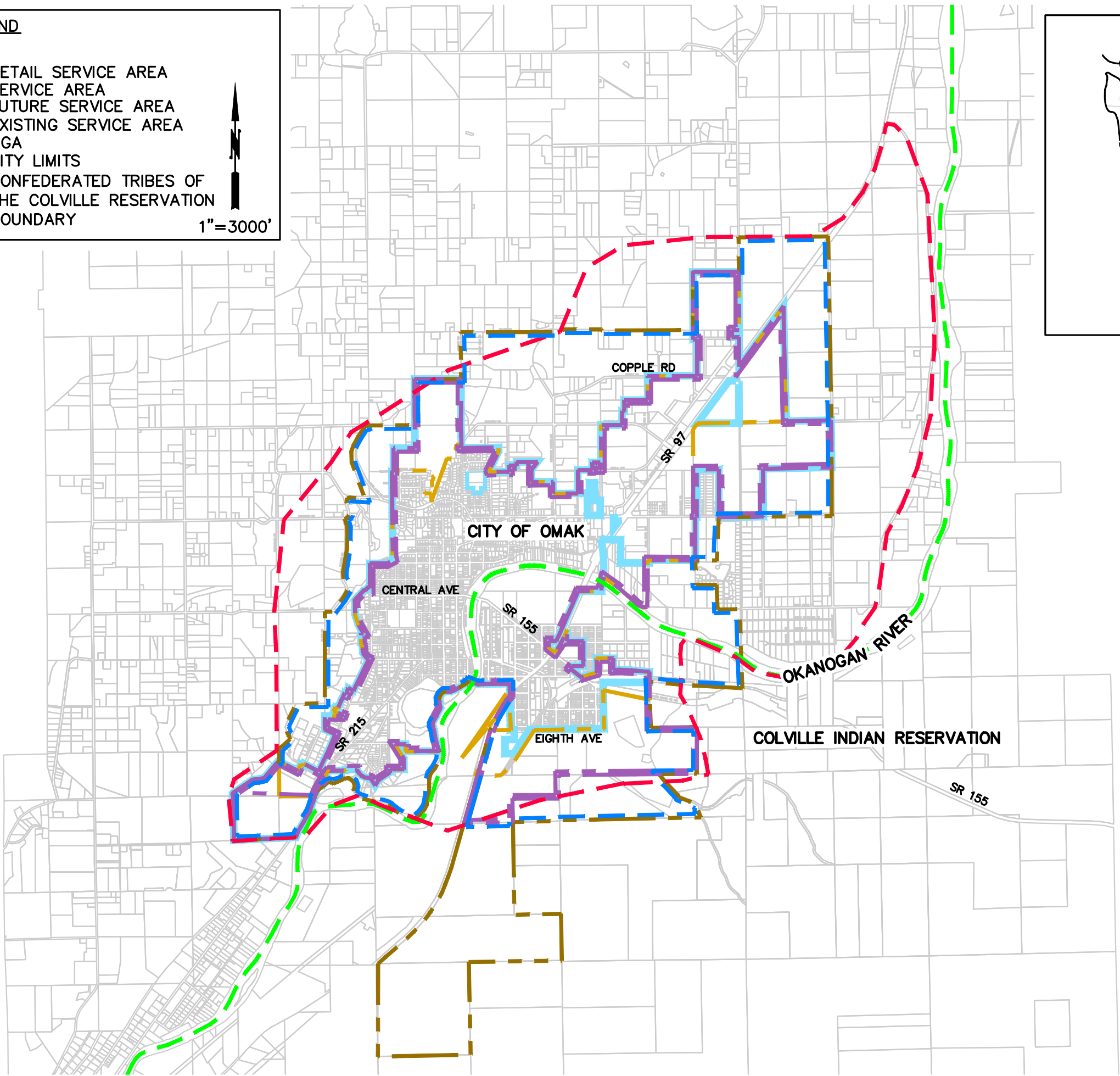
cc: Mr. Ken Mears, Public Works Director, City of Omak

APPENDIX R
LARGE FORMAT FIGURE 1-3

LEGEND

- RETAIL SERVICE AREA
- SERVICE AREA
- FUTURE SERVICE AREA
- EXISTING SERVICE AREA
- UGA
- CITY LIMITS
- CONFEDERATED TRIBES OF THE COLVILLE RESERVATION BOUNDARY

1"=3000'



CITY OF OMAK
WATER SYSTEM PLAN
FIGURE 1-3
CITY LIMITS, UGA & SERVICE AREAS

