



*City of
Vale, Oregon*

**WATER MANAGEMENT AND
CONSERVATION PLAN UPDATE**



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WATER MANAGEMENT AND CONSERVATION PLAN UPDATE

FOR

CITY OF VALE, OREGON

2024



ANDERSON PERRY & ASSOCIATES, INC.

**La Grande, Redmond, Hermiston, and Enterprise, Oregon
Walla Walla, Washington**

Table of Contents

Executive Summary	ES-1
Purpose of Plan	ES-1
Water Management and Conservation Plan Key Elements.....	ES-1
Update Schedule for the Water Management and Conservation Plan	ES-3
Section 1.0 - Overview	1-1
1.1 Purpose	1-1
1.2 General System Description.....	1-1
1.3 Summary of Data Sources.....	1-4
1.4 Input During Water Management and Conservation Plan Update Development	1-4
1.5 Document Organization.....	1-5
Section 2.0 - Municipal Water Supplier Description	2-1
2.1 Service Area and Population.....	2-1
2.2 Water Supply Sources	2-3
2.3 Description of Customers Served	2-10
2.4 Water System Description	2-10
2.5 Existing Water Supply Reliability and Adequacy.....	2-13
2.6 Interconnections	2-13
2.7 System Efficiency	2-13
Section 3.0 - Water Conservation Element	3-1
3.1 Previous Water Management and Conservation Plan Efforts.....	3-1
3.2 Water Use and Reporting	3-1
3.3 Rate Structure and Metering	3-1
3.4 Required Conservation Measures.....	3-2
3.5 Ongoing Conservation Measures.....	3-4
3.6 Additional Conservation Measures.....	3-4
3.7 Summary of Benchmarks	3-4
Section 4.0 - Municipal Water Curtailment Element	4-1
4.1 Assessment of Supply	4-1
4.2 Past Water System Curtailment Events	4-1
4.3 Objectives of Curtailment Program	4-1
4.4 Water Curtailment Plan	4-2
4.5 Loss of Water Supply Scenarios	4-2
4.6 Shortfalls Triggering Action.....	4-2
4.7 Capacity Limitations.....	4-3
4.8 Plan of Action for Water Curtailment	4-3
4.9 Water Curtailment Plan Implementation Program	4-3
4.10 Emergency Response Plan	4-3
Section 5.0 - Municipal Water Supply Element	5-1
5.1 Future Service Area.....	5-1
5.2 Future Water Demands	5-3
5.3 Conservation Measures and Interties.....	5-4
5.4 Potential Conservation Savings Compared to Increasing Supply Use	5-4
5.5 Long-Range Supply Plan.....	5-4
5.6 Schedule of Beneficial Use	5-4
5.7 Acquisition of New Water Rights	5-4

CHARTS

Chart 2-1 Monthly Water Production - Washington Street Well..... 2-5
Chart 2-2 Monthly Water Production - Airport Well Field..... 2-6
Chart 2-3 Combined Monthly Water Production - Washington Street Well and Airport Well Field..... 2-6
Chart 2-4 Total Yearly Water Usage..... 2-7
Chart 5-1 Historical and Projected Population..... 5-2

TABLES

Table ES-1 Anticipated Future Water Supply Needs..... ES-2
Table ES-2 2024 Conservation Element Actions ES-2
Table 1-1 City of Vale Wells..... 1-2
Table 1-2 Water Rights..... 1-3
Table 2-1 Historical Population Data 2-2
Table 2-2 Annual Population Growth Rate Data 2-2
Table 2-3 Current Water Supply Capacity..... 2-3
Table 2-4 Annual Water Use Data..... 2-7
Table 2-5 Comparative Water Usage Typical for Small Cities in Eastern Oregon and Eastern Washington, Metered Systems 2-8
Table 2-6 Year 2024 Total Average and Peak Daily Demand Data..... 2-9
Table 2-7 Water Account Information 2-10
Table 2-8 Water Audit Results 2-14
Table 3-1 Water Rate Information 3-2
Table 3-2 2024 Conservation Element Status 3-5
Table 3-3 2024 Conservation Benchmarks..... 3-5
Table 5-1 Future Population Estimates..... 5-3
Table 5-2 Future Anticipated Water System Demands..... 5-3

FIGURES

Figure 1-1 Location and Vicinity Maps
Figure 2-1 Water Rights Inventory - October 2024
Figure 2-2 Water System Components - North
Figure 2-3 Water System Components - South
Figure 4-1 Water Curtailment Plan
Figure 5-1 Zoning Map

MAP

Existing Water System Map

APPENDICES

Appendix A Water Rights Information
Appendix B Well Logs
Appendix C Water Rate Schedule
Appendix D Public Education Materials

Executive Summary

Purpose of Plan

The City of Vale, Oregon, is submitting this Water Management and Conservation Plan (WMCP) Update in accordance with Oregon Administrative Rules (OAR) Chapter 690, Division 86. The City's WMCP Update summarized herein is intended to meet the requirements of the Oregon Water Resources Department (OWRD). This WMCP Update was completed in accordance with recommendations outlined in the *Water Management and Conservation Plan Guidebook, March 2015 (2nd Edition)* (Guidebook) prepared by the OWRD for the League of Oregon Cities, Oregon Utilities Council, and Special Districts Association and follows the *Suggested Outline of a Water Management and Conservation Plan* presented in Appendix F of the Guidebook. This WMCP Update outlines the City's water management and conservation needs for the next 20 years. Additionally, this WMCP Update outlines the practices and water system management methods used to help track water use and demands, as well as identify potential conservation measures.

Water Management and Conservation Plan Key Elements

This WMCP Update meets the OWRD approval criteria in OAR 690-086-0130 based on the following information included in this WMCP Update:

- **Required Elements under OAR 690-086-0125.** This rule requires a municipal water supplier description, a water conservation element, a curtailment element, and a municipal supplier element, including a list of affected local government agencies this WMCP Update will be made available to, and a schedule for updating the WMCP. These items are included in this WMCP Update.
- **Affected Local Governments.** The cities/communities and other developed areas closest to the City of Vale are the Cities of Ontario and Nyssa, Oregon. Any actions taken by the City of Vale concerning its water system are not likely to impact the neighboring communities of Ontario and Nyssa; however, any actions taken could impact Malheur County. The City has provided a draft copy of this WMCP Update to the Malheur County Planning Department and the Malheur County Watermaster for agency comments. Comments received are included in Appendix E.
- **Projections of Future Water Needs.** A projection of future water needs for the City is presented in Section 5.0 of this WMCP Update. Presently, the City is able to meet water supply demands, including the peak daily demand with its current water supply sources. Future projected demands are also anticipated to be met.

Assuming current water use characteristics do not change and the population growth of the City occurs as estimated herein, the year 2029 (five-year), 2034 (ten-year), and 2044 (20-year) water supply demands are anticipated to increase. Table ES-1 shows the anticipated future water supply needs.

**TABLE ES-1
 ANTICIPATED FUTURE WATER SUPPLY NEEDS**

Year	Average Daily Demand (gpm)	Peak Daily Demand (gpm)
2029	200	500
2034	210	540
2044	230	600

gpm = gallons per minute

With the current capacity of the water supply system at approximately 1,100 gpm, the City appears to have an adequate water supply to meet future needs.

- **Water Conservation Measures (OAR 690-086-0150).** The City currently practices some of the required conservation measures listed in OAR 690-086-0150 and intends to continue improving its conservation practices to fully meet the requirements. A summary of the five-year benchmarks for the City’s conservation activities is provided on Table ES-2.

The City intends to continue improving its conservation practices to fully meet requirements and encourage resource conservation by the community. Table ES-2 also shows implementation dates for additional practices to meet the stated requirements.

**TABLE ES-2
 2024 CONSERVATION ELEMENT ACTIONS**

Benchmark	Status/ Action	Implementation Date	Anticipated Completion Date	Frequency
Measurement and Reporting	Compliant	Completed	N/A	Annual
Fully Metered	Compliant	Completed	N/A	Ongoing
Annual Water Audit	Compliant	Completed	Ongoing	Annual
Track Customer Water Use by Type	Continuous Plan	2025	Ongoing	Annual
Water Loss Reduction				
Record Unaccounted Water Use (i.e., Water Truck Filling, etc.)	Continuous Plan	2025	Ongoing	Ongoing
Identify Potential Factors for Water Loss and Selected Action for Remedy	Two-year Plan	2025	2027	Annual
Develop and Implement a Water Loss Control Program if Water Loss Exceeds 10 Percent after the Two-year Benchmark	Five-year Plan	2027	2032	Five Years
Meter Testing and Maintenance Program				
Service and Calibrate Master Meters	Five-year Plan	2025	Ongoing	Five Years
Service Meter Replacement Program	Continuous Plan	Ongoing	Ongoing	Annually

Benchmark	Status/ Action	Implementation Date	Anticipated Completion Date	Frequency
Service Meter Replacement Project	Eighteen-year Plan	2024	2042	Annually
Leak Detection and Repair	Continuous Plan	Ongoing	Ongoing	Ongoing
Rate Structure Based on Use	Compliant	Completed	N/A	N/A
Public Education Program				
Newsletter	Five-year Plan	2025	Ongoing	Annually

N/A = Not Applicable

- Water Curtailment Plan.** The City has developed a Water Curtailment Plan, which is summarized in Section 4.0 of this WMCP Update. The Water Curtailment Plan is consistent with the requirements outlined in OAR 690-086-0160. The Water Curtailment Plan has three alert levels along with specific implementation actions to help conserve water during each level.

Update Schedule for the Water Management and Conservation Plan

In accordance with OWRD regulations, the City will submit an updated WMCP at the required ten-year interval as well as a five-year progress report. The update will provide a summary of the City’s water use data and an updated forecast for when additional supply sources are anticipated to be required.

Section 1.0 - Overview

This section of the City of Vale’s Water Management and Conservation Plan (WMCP) Update provides the purpose of this update, a general system description (data, connections, and water rights), a schedule for updating this WMCP Update, a summary of data sources utilized, input received during development, and a summary of the organizational layout of this WMCP Update.

1.1 Purpose

In 2015, the City completed and submitted a WMCP to the Oregon Water Resources Department (OWRD). This WMCP Update was completed to meet anticipated future permit requirements and to address the City’s long-term water supply needs in accordance with Oregon Administrative Rules 690-315 and 690-86.

1.2 General System Description

The City is located in Malheur County at the intersection of State Highways 20 and 26 and is adjacent to the confluence of Bully Creek and the Malheur River. Vale serves as the county seat of Malheur County, which is bordered to the north by Baker County, the east by the State of Idaho, the south by the State of Nevada, and the west by Harney and Grant Counties. The general location of the community is shown on Figure 1-1, Location and Vicinity Maps. A map of the water supply and storage systems is shown on the Existing Water System Map at the end of this WMCP Update.

The City currently serves approximately 831 connections, which include approximately 657 residential connections, 139 commercial connections, 16 industrial connections, and 19 other connections (public facilities like schools, parks, and the community swimming pool). The service area is predominantly inside the Vale city limits, with some areas within the City’s urban growth boundary. Aside from residential usage, the largest municipal system connections include the following:

- Vale Estates Park, LLC
- Westerner Trailer Park
- Vale Municipal Swimming Pool
- Lana Andrews
- Pioneer Place
- Producers, Inc.

The City has recently been experiencing rapid growth in its newly developed areas, including a new subdivision and a 122-site recreational vehicle park.

The City’s municipal water system includes eight wells, a booster pump station, two water storage reservoirs, a water treatment facility (WTF), and a piping distribution system. The main components of the water system are discussed in greater detail in Section 2.0 of this WMCP Update and are briefly summarized hereafter.

Water Supply

The City has a long history of poor water quality and contaminated wells. In response to this contamination, the City has explored new water sources and built a WTF to resolve arsenic contamination in the existing sources. Table 1-1 summarizes the wells owned or operated by the City. The location of each supply well is shown on figures included in Section 2.0, as well as on the Existing Water System Map at the end of this WMCP Update.

**TABLE 1-1
 CITY OF VALE WELLS**

Well Name	Well Log No.	Depth (feet)	Casing Diameter	Construction Date	Current Status
Washington Street Well	N/A	30	16 feet ¹	1912	Primary
Airport Well No. 1	MALH 51259	36	8 inches	1997	Primary
Airport Well No. 2	MALH 51258	33	8 inches	1997	Primary
Airport Well No. 3	MALH 51257	36	8 inches	1997	Primary
Airport Well No. 4	MALH 51261	38	8 inches	1997	Primary
Airport Well No. 5	MALH 51522	32	8 inches	2000	Primary
Airport Well No. 6	MALH 51524	35	8 inches	2000	Primary
Airport Well No. 7	MALH 51523	35	8 inches	2000	Primary

¹Hand-dug well, no casing.

N/A = not applicable

Washington Street Well

The Washington Street Well is a 30-foot deep well, hand-dug in 1912, located within the Vale city limits in the northwestern part of the City. The Washington Street Well was not used from 2003 to 2014 and was designated as an emergency backup supply source. However, the well was brought back online in July 2014 to help mitigate water quality concerns. In 2017, improvements were made to the Washington Street Well, including a dedicated transmission main to the WTF to treat the water for arsenic. Other improvements include installation of a standby power generator for use during power outages or other emergencies and an emergency disinfection system that can be used to chlorinate the well water if the WTF were to be offline for an extended period of time.

Airport Well Field

The Airport Well Field is a group of seven wells located approximately 1 mile south of Vale at the Miller Memorial Airpark and were installed between 1997 and 2000. The wells are located on City-owned property. The collected water is sent through the WTF for chlorination and removal of arsenic, and then routed into the adjacent Airport Reservoir. A booster pump station located at the Airport Reservoir is used to serve the City as well as fill the Rhinehart Reservoir.

Water Rights

The City currently holds six water rights. Three of these rights are municipal, two are for irrigation, and one is for the use of geothermal water for heating and air conditioning. A summary of the water rights information is provided on Table 1-2. A more detailed discussion of the City’s water rights is presented in Section 2.0 of this WMCP Update. Water rights information is included in Appendix A.

**TABLE 1-2
 WATER RIGHTS**

Water Source	Application No.	Permit No.	Transfer	Certification No. (Full Beneficial Use)	Priority Date	Allowed Use
Seven shallow, hydraulically connected wells, plus one additional diversion to mitigate potential hydraulic interference with Bully Creek			T-8166	90942	September 24, 1897	Irrigation, street, and municipal
Wastewater from Oregon Trail Mushroom Plant	S-73411	S-52623	N/A	93212	May 21, 1993	Heating of water for the Vale Municipal Swimming Pool and radiant floor space heating for the City’s fire hall
Willow Springs, tributary to the Malheur River	S-6278	S-3916	N/A	2376	September 16, 1918	Municipal
One well (as modified by T-8339 and confirmed by Certificate 87397)	G-4678	G-4405	T-8339	87397	November 12, 1968	Municipal
Well No. 4	G-4679	G-4406	N/A	41133	November 12, 1968	Irrigation of 5.9 acres
Malheur River	S-50354	S-38013	N/A	61405	April 25, 1973	Irrigation of 21 acres

Water Storage Reservoirs

The City has two water storage reservoirs in operation. The City’s main water storage reservoir, Rhinehart Reservoir, is located southeast of the City on Rhinehart Butte. The Rhinehart Reservoir has a 750,000-gallon capacity, is constructed of concrete, and has a base elevation of approximately 2,387 feet above mean sea level (AMSL). The reservoir is 20 feet deep and has a diameter of 80 feet. The Rhinehart Reservoir serves all of Vale through a gravity-fed distribution system.

The Airport Reservoir has a capacity of 720,000 gallons, is 32 feet high, and has a diameter of 65 feet and a base elevation of approximately 2,250 feet AMSL. This welded steel reservoir is supplied by the WTF and provides water to the distribution system and Rhinehart Reservoir through the Airport Booster Pump Station when the Rhinehart Reservoir reaches a low level of water and calls for water. Water from the Airport Reservoir enters the distribution system at the intersection of Main and I Streets via an 8-inch transmission line. The locations of the City’s existing reservoirs are shown on figures included in Section 2.0.

Water Distribution System

The City's distribution system main lines are primarily 8- to 12-inch diameter polyvinyl chloride, transite, and ductile iron, although there are also areas with smaller lines. Most of the City's water main lines were installed during development of the water system in 1912. However, distribution system improvements have been made over the years to improve flow and pressure in the system. The distribution system is generally laid out with looped piping to assist with water circulation through the system. The City has indicated that the water main lines in the distribution system are generally in fair condition. Nearly all service lines were installed during system development in 1912. The service lines are primarily galvanized and copper pipe.

A layout of the distribution system is shown on the Existing Water System Map at the end of this WMCP Update.

Interconnections

The City has no interconnections with neighboring water systems. No private water systems are adjacent to the City. The nearest communities are Ontario, Oregon (approximately 16 miles) and Nyssa, Oregon (approximately 20 miles).

1.3 Summary of Data Sources

Considerable information was utilized during the preparation of this WMCP Update. The main sources used are summarized as follows:

- City records for water pumped from the existing water supply sources, as well as water billing records
- City water system maps
- 2014 Water System Master Plan
- 2015 WMCP
- 2019 WMCP Progress Report
- 2019 Operation and Maintenance Manual - Part I for City of Vale, Oregon, Water System Improvements
- Certificates of Water Rights, Water Permits, and Final Orders available from the OWRD website
- Well logs from the OWRD website

1.4 Input During Water Management and Conservation Plan Update Development

During the preparation of this WMCP Update, assistance was received from the City's Public Works staff and city manager, and meetings were held with City staff to discuss the data to be included in the WMCP Update, potential implementation of conservation measures, etc. A draft WMCP Update was submitted to the Malheur County Planning Department and the Malheur County Watermaster for review and comment. No comments were received.

1.5 Document Organization

This WMCP Update has been organized based on the *Water Management and Conservation Plan Guidebook, March 2015 (2nd Edition)* (Guidebook) prepared by the OWRD for the League of Oregon Cities, Oregon Utilities Council, and Special Districts Association. The document follows the *Suggested Outline of a Water Management and Conservation Plan* presented in Appendix F of the Guidebook. This WMCP Update is divided into the following sections:

Executive Summary

The Executive Summary provides a brief overview of the City's overall WMCP Update, including the review and approval criteria, projection of future water system needs, a summary of water conservation elements, five-year conservation benchmarks, an updated schedule for the WMCP, and a summary of the City's conservation activities for its water system.

Section 1.0 - Overview

This section provides a brief overview of the City's WMCP Update, why it has been completed, regulatory requirements, WMCP Update requirements, a general description of the City's water system and water rights, and organizational layout of this WMCP Update.

Section 2.0 - Municipal Water Supplier Description

This section summarizes the service area, customer base, population data, water use characteristics, and water sources. Water rights are also presented, including an assessment of the adequacy and reliability of supply sources. A map showing the major water system features is included at the end of this WMCP Update.

Section 3.0 - Water Conservation Element

This section summarizes the City's water use measurement and reporting and discusses water conservation elements to be considered for the water system. This section also includes a proposed implementation schedule for conservation items yet to be enacted.

Section 4.0 - Water Curtailment Element

This section discusses events that have resulted in past curtailment situations and includes a Water Curtailment Plan. The Water Curtailment Plan includes an overview of the current curtailment program, levels of curtailment, and an implementation program to enact curtailment items and a proposed schedule, if applicable, for implementing curtailment activities not currently in place.

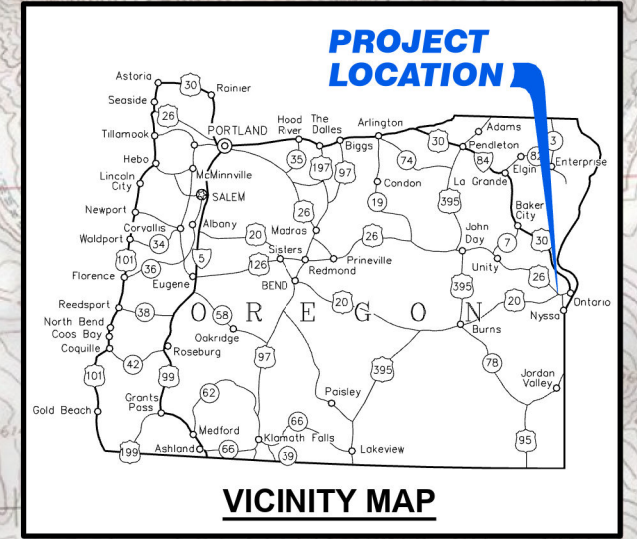
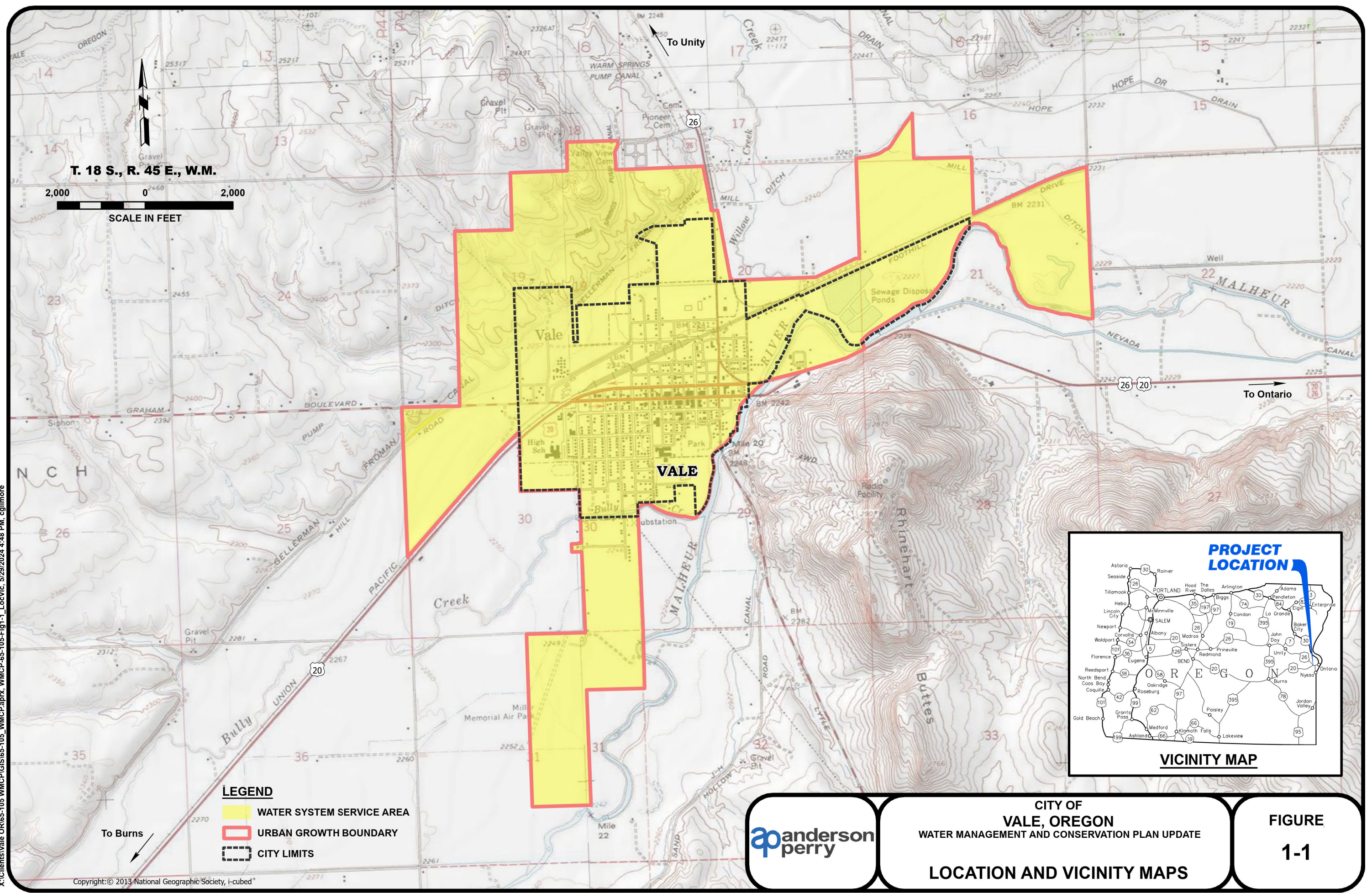
Section 5.0 - Municipal Water Supply Element

This section provides key data for water system planning, including population projections, area development considerations, water system demand forecasting, and a comparison of maximum use to permitted amounts.

Appendices

The Appendices contain supporting information for this WMCP Update, such as Water Rights Information (Appendix A), Well Logs (Appendix B), Water Rate Schedule (Appendix C), Public Education Materials (Appendix D), and Local Jurisdictional Comments (Appendix E).

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CITY OF VALE, OREGON
WATER MANAGEMENT AND CONSERVATION PLAN UPDATE

LOCATION AND VICINITY MAPS

FIGURE 1-1

Section 2.0 - Municipal Water Supplier Description

This section summarizes the basic data for the water system, including the service area and population estimates, water rights, water system demands, a description of customers served, a brief description of the overall water system, and a discussion of the efficiency of the water system, particularly the water supply system. This section provides the basic data to help evaluate future water supply needs for the City of Vale.

2.1 Service Area and Population

Service Area

The term “service area” refers to the area being served with water from the City’s water system. Both the present and future service areas are considered in this Water Management and Conservation Plan (WMCP) Update. The present service area primarily consists of the developed lands within the boundaries of the Vale city limits; however, several services are located outside the city limits in the urban growth boundary (UGB), most of which are located on Lytle Boulevard. For this WMCP Update, the future service area will consist of the present service area plus all areas within the current UGB (see Figure 1-1, Location and Vicinity Maps, in Section 1.0).

The area within the current Vale UGB is approximately 1,792 acres. Many areas with large tracts of undeveloped land currently exist within the city limits. With a significant area of open, undeveloped land available, the City has the potential for residential, commercial, and industrial growth.

Recent growth that the City has experienced is on the west side where 20 acres were annexed, and a 122-site recreational vehicle (RV) park has been developed on that land. Additionally, a 61-lot subdivision (Wildwood Estates) has entered Phase 2 of development on the north side of the City. This recent growth and its effect on the City’s population projections is discussed in Section 5.0.

The current Vale city limits and UGB are shown on Figure 1-1 in Section 1.0 of this WMCP Update. The city limits and UGB are also shown on the Existing Water System Map at the end of this WMCP Update.

Population Estimates

The City’s historical population from 1960 through the latest available population estimate (2023) is summarized on Table 2-1. The City’s population projection for future anticipated demands is summarized in Section 5.0 of this WMCP Update.

**TABLE 2-1
 HISTORICAL POPULATION DATA**

Year	Population
1960	1,491
1970	1,448
1980	1,558
1990	1,491
2000	1,976
2010	1,875
2011	1,875
2012	1,890
2013	1,890
2020	1,894
2021	1,914
2022	1,916
2023	1,947

The historical population of Vale has increased from 1,491 people in 1960 to an estimate of 1,947 in 2023. This represents a historical growth rate from 1960 through 2023 of approximately 0.5 percent per year. Population estimates shown on the above table were obtained from the Population Research Center (PRC) at Portland State University in Portland, Oregon.

The annual population growth rate for each ten-year period between the U.S. Census data, as well as the overall period from 1960 through 2023, is presented on Table 2-2.

**TABLE 2-2
 ANNUAL POPULATION GROWTH RATE DATA**

Period	Population Change	Annual Population Growth Rate (Percent)
1960 to 1970	-43	-0.29
1970 to 1980	110	0.76
1980 to 1990	-67	-0.43
1990 to 2000	485	3.25
2000 to 2010	-101	-0.5
2010 to 2020	19	0.1
2020 to 2023	53	0.3
1960 to 2023	456	0.5

As Table 2-2 demonstrates, Vale’s population has fluctuated with periods of both growth and decline, with an average annual growth rate (AAGR) of 0.5 percent over the last 63 years of population history. Population data for the tables above were obtained from the official federal Census and the PRC. Three of the six ten-year periods between U.S. Censuses experienced a negative growth rate. One ten-year period experienced an annual growth rate of more than 3 percent. This WMCP Update provides a review of the past, present, and anticipated future of the City’s water system and is intended to analyze the water system over an extended period of time to properly forecast future water system needs.

In accordance with Oregon Revised Statutes, the PRC is responsible for establishing and maintaining population forecasts for cities in Oregon. The PRC forecasted an AAGR of 0.88 percent for the City of Vale for the years 2024 to 2044, which results in an estimated 2044 population of 2,319. However, the City has recently seen an influx of development that is anticipated to increase population beyond what the PRC forecast indicates. This population increase will also increase water demand. The City recently annexed approximately 20 acres of land into the city limits. Since the annexation, a 122-site RV park has been developed on the annexed land. Additionally, Phase 1 of the total 61-lot Wildwood Estates Subdivision was recently completed, with Phase 2 currently under construction. With the addition of the RV park and the Wildwood Estates Subdivision, the growth and water demand could exceed this estimate. The City has chosen to include the addition of the RV park and the Wildwood Estates Subdivision in addition to what the PRC forecasted. Utilizing an average value of 2.55 persons per single family home for the City of Vale, as published in the PRC’s “Vale City 2020 Census” summary, it is anticipated that the full buildout of the Wildwood Estates Subdivision could add another 156 people over the planning period. Additionally, the completion of the RV park will increase the demand on the water system without a change to the projected population. The standard used for estimating water use for the RV park is National Fire Protection Association 1194 Standard for Recreational Vehicle Parks and Campgrounds. Per Chapter 7, Environmental Health and Sanitation, Section 7.2 Potable Water Supply and Distribution, 7.2.4 Supply, a minimum of 50 gallons per day per site for sites with individual connections should be utilized for water demand estimates. This results in the RV park using a total of 6,000 gallons per day. Using the current average daily demand (ADD) of 136 gallons per capita day (gpcd) as discussed later in this section, the RV park has an estimated water demand equivalent to approximately 45 people. Based on this information, this WMCP Update uses a forecasted population of 2,520 for the 20-year planning period, with a projected influx of an additional 573 residents. Population projections relating to the City’s water system supply are discussed in greater detail in Section 5.0 of this WMCP Update. This growth rate will steadily increase water supply needs for future anticipated demands.

2.2 Water Supply Sources

The City has water rights for several wells and surface waters. Some of these rights are either not being utilized or have been transferred to other wells. A summary of the City’s water supply capacity is illustrated on Table 2-3. A complete list of the City’s water rights and further description of the City’s wells are provided in this section.

**TABLE 2-3
 CURRENT WATER SUPPLY CAPACITY**

Source ID	Depth (feet)	Flow Capacity (gpm)	Percent of Total Supply Capacity	Actual Percent Capacity Based on Current Use
Washington Street Well	30	336	29	35
Airport Well Field	30.5 to 37	835	71	65

gpm = gallons per minute

The City has a certificated water right of 0.75 cubic feet per second (cfs) for municipal use from the Washington Street Well. The water rights from the abandoned Railroad Well and Harrison Street Well were transferred to the Washington Street Well in 2003. The Washington Street Well was not operated

for a few years due to water quality issues. However, in July 2014 the Washington Street Well was brought online to help minimize the arsenic and nitrate levels in the City's drinking water supply.

Currently, the Airport Well Field supplies approximately 65 percent of the City's municipal water. The City is permitted to an instantaneous amount of 5 cfs of water from the Airport Well Field, with a maximum monthly use of 225 acre-feet (AF) and an annual maximum use of 1,076 AF.

Arsenic and nitrates have been detected in all City-owned wells. Only arsenic was detected at levels exceeding the maximum contaminant level of 0.010 milligrams per liter established by the U.S. Environmental Protection Agency (EPA). In 2006, as part of the EPA's Arsenic Removal Technology Demonstration Program, an ion exchange arsenic treatment facility was constructed adjacent to the Airport Well Field. In 2014, the City began bypassing the ion exchange treatment facility after testing showed it was an ineffective treatment for arsenic removal. This facility was deactivated and reserved for possible future use since it is effective at removing nitrates and sulfates. Following the 2015 WMCP and pilot study project, a new coagulation and filtration system was constructed in 2018 for the treatment of arsenic in the City's water supply. The City returned to compliance for arsenic on July 2, 2019.

Water Rights

The City currently holds six water rights. Three of these rights are municipal, two are for irrigation, and one is for the use of geothermal water for heating and air conditioning. Of the three municipal water rights held by the City, the main water supply is provided by Certification No. 90942. This water right was part of Transfer No. T-8166, which canceled Certification No. 6878. The transfer changed the point of appropriation from the Malheur River to seven shallow wells located adjacent to the Miller Memorial Airpark. The other municipal water right that the City utilizes is Certification No. 87397, which is for one well located adjacent to Washington Street. A summary of the City's water rights is presented on Figure 2-1, Water Rights Inventory - October 2024. Water rights information is included in Appendix A. None of the City's water rights are located in a critical groundwater area.

Environmental Concerns

The City's Airport Well Field, Washington Street Well, and Well No. 4 are all considered to be hydraulically connected to the Malheur River. Since these sources are technically connected to surface water, stream flow-dependent species and water quality limited parameters could potentially impact these water rights. The stream flow-dependent species located in the Malheur River include Western brook lamprey and Pacific lamprey. These species are state-listed as "sensitive" according to the 2021 Oregon Department of Fish and Wildlife Sensitive Species List.

The Malheur River is listed as impaired by the Oregon Department of Environmental Quality (DEQ) for several water quality limiting parameters, including:

- Chlorophyll a
- Dichlorodiphenyltrichloroethane
- Dieldrin
- *E. Coli*

- Fecal coliform
- Arsenic

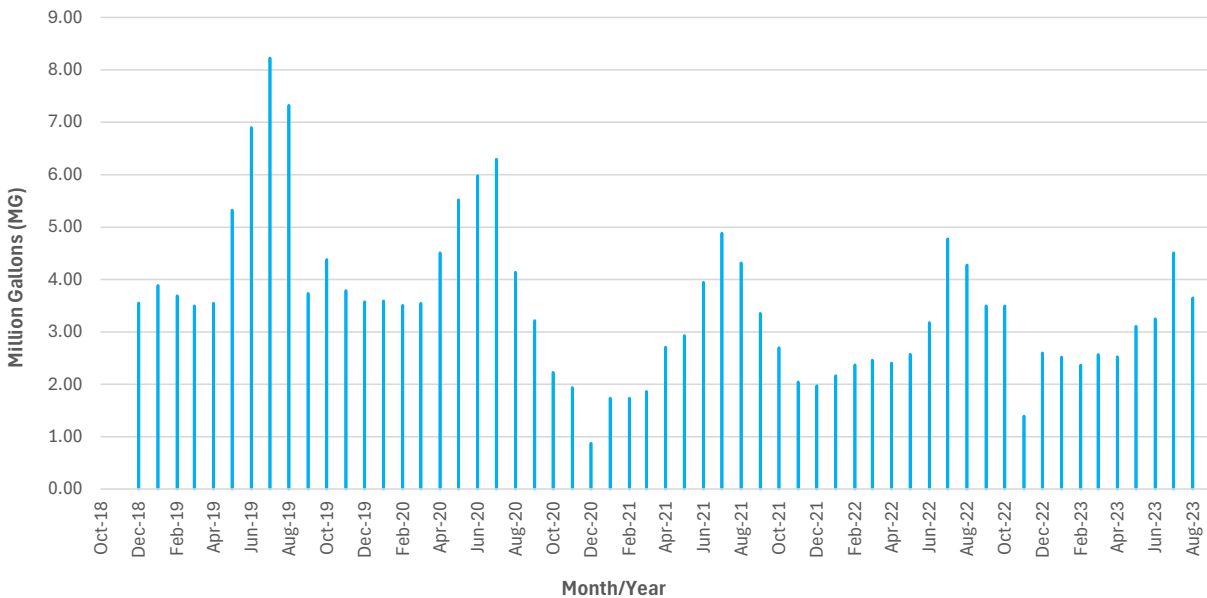
The City should continue to coordinate with the DEQ related to changes to these water quality parameters to ensure safe drinking water for its customers. The City’s water use is not anticipated to impact the water quality of the Malheur River.

Water System Demands

To determine current water system demands, production records for the City’s water supply system from 2018 to 2023 were reviewed. Population data for the same time period were also utilized. Monthly well production for the Washington Street Well and the Airport Well Field are shown on Charts 2-1 and 2-2, respectively. Combined monthly well production for both supply sources are shown on Chart 2-3.

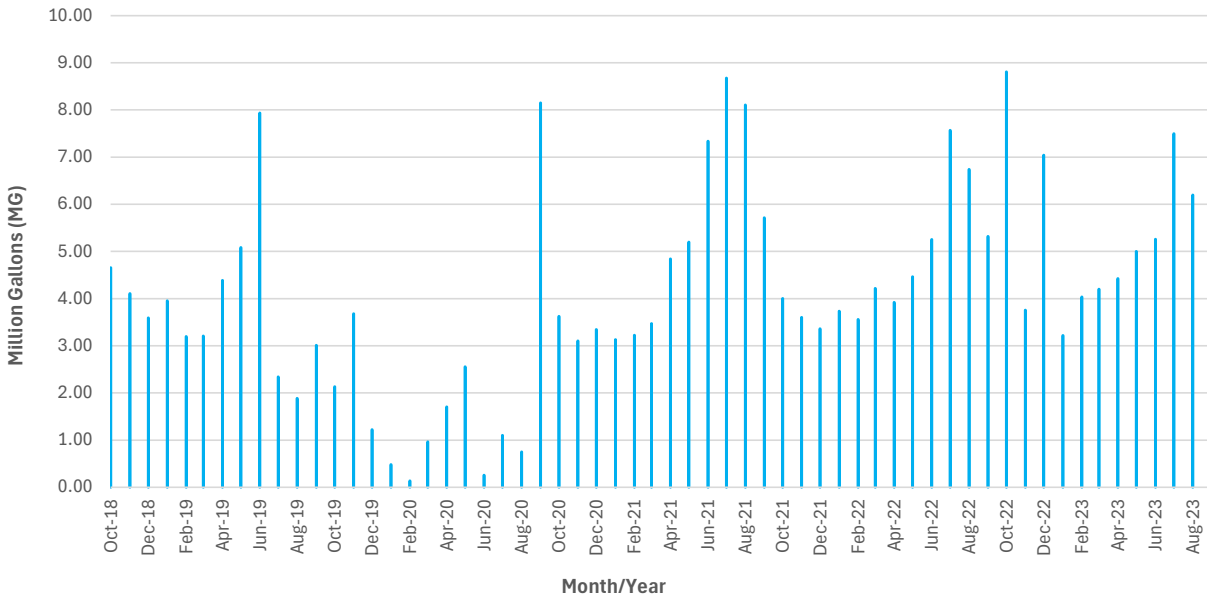
Charts 2-1 through 2-3 show typical patterns of high summer demand and low winter demand, which is typical due to irrigation and other summer uses. The plots depicted on Charts 2-1 through 2-3 show summer demands are nearly two times higher than winter demands.

**CHART 2-1
 MONTHLY WATER PRODUCTION - WASHINGTON STREET WELL***

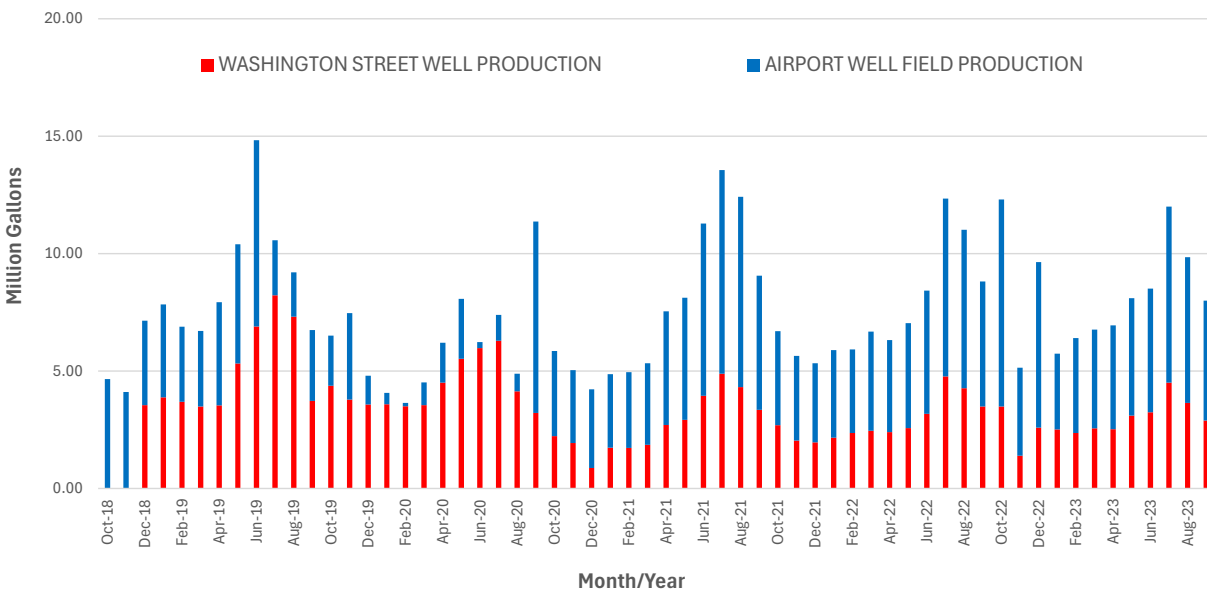


*No production data for October and November 2018 due to the Washington Street Well being taken offline during the Water System Improvements project.

**CHART 2-2
 MONTHLY WATER PRODUCTION - AIRPORT WELL FIELD**

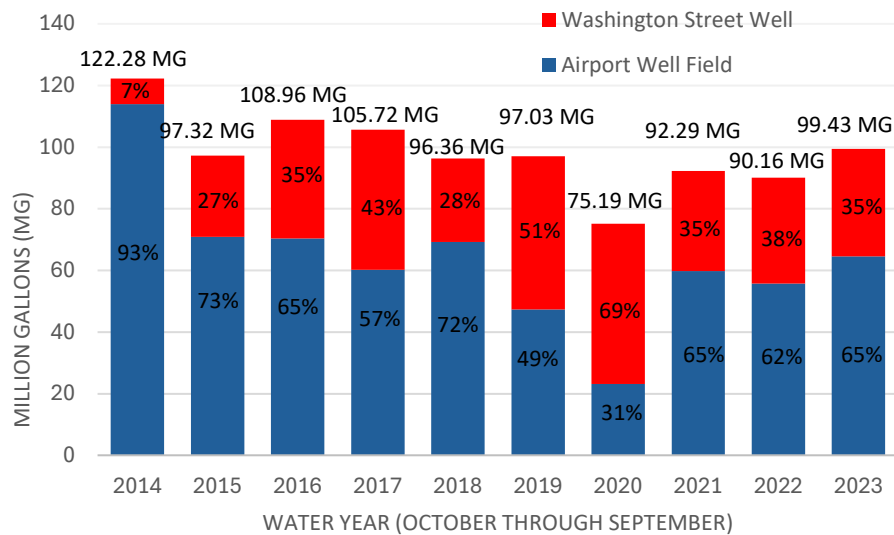


**CHART 2-3
 COMBINED MONTHLY WATER PRODUCTION - WASHINGTON STREET WELL AND AIRPORT WELL FIELD**



The total yearly production from both sources is further broken down into percentage inputs from each source compared to the total yearly production, as shown on Chart 2-4.

**CHART 2-4
 TOTAL YEARLY WATER USAGE**



To estimate the City’s average water use per person per day, the total amount of water diverted from each source for the water year was divided by City’s population for the respective year. Based on the data, the average annual water use is shown on Table 2-4.

**TABLE 2-4
 ANNUAL WATER USE DATA**

Water Year (October through September)	Population	Annual Total (MG)	Average Daily Demand (gpcd)
2019	1,875	97.03	141.8
2020	1,895	75.19	108.7
2021	1,914	92.29	132.1
2022	1,916	90.16	128.9
2023	1,947	99.43	139.9

Average Daily Demands

Based on the water use data for 2019 through 2023, the City’s average per person water use has decreased from 141.8 gpcd in 2019 to 139.9 gpcd in 2023. Note that the ADD for year 2020 was much lower than the ADD from years 2019 to present. Based on this low value, the ADD for year 2020 was omitted from the average calculation. The average of the other four values shown on Table 2-4 is 136 gpcd.

The City’s average water demand of 136 gpcd is in the low range of typical demands when compared to municipalities with water meters in eastern Oregon and eastern Washington, as shown on Table 2-5.

**TABLE 2-5
 COMPARATIVE WATER USAGE TYPICAL FOR SMALL CITIES IN EASTERN OREGON
 AND EASTERN WASHINGTON, METERED SYSTEMS**

City	ADD (gpcd)	PDD (gpcd)	Peak Factor (peak daily)	Population
Vale, Oregon	136	343	2.7	1,947
Lostine, Oregon	170	544	3.2	250
Prineville, Oregon	176	405	2.3	8,889
Ice Fountain Water District, Oregon	176	282	1.6	2,314
Union, Oregon	190	560	2.9	2,170
White Salmon, Washington	192	486	2.5	2,490
Adams, Oregon	195	625	3.2	265
Weston, Oregon	195	834	4.3	670
Echo, Oregon	200	600	3.0	632
Umatilla, Oregon	210	483	2.3	4,686
Cove, Oregon	215	628	2.9	594
La Grande, Oregon	230	667	2.9	13,238
Prairie City, Oregon	234	549	2.3	1,195
Mt. Vernon, Oregon	240	585	2.4	617
Pilot Rock, Oregon	240	810	3.4	1,332
Prescott, Washington	240	1,032	4.3	300
Baker City, Oregon	247	1,021	4.1	9,890
Athena, Oregon	250	710	2.8	1,175
Hermiston, Oregon	250	600	2.4	17,730
Wallowa, Oregon	256	764	3.0	840
Island City, Oregon	270	810	3.0	989
John Day, Oregon	270	865	3.2	2,010
Boardman, Oregon	275	960	3.5	3,555
Stanfield, Oregon	275	660	2.4	2,130
La Pine, Oregon	280	700	2.5	982
Condon, Oregon	282	787	2.8	695
Enterprise, Oregon	284	582	2.0	1,940
Irrigon, Oregon	290	800	2.8	1,790
Ontario, Oregon	296	533	1.8	11,485
Milton-Freewater, Oregon	300	750	2.5	6,550
Dayton, Washington	305	754	2.5	2,545
Huntington, Oregon	320	1,074	3.4	508
Helix, Oregon	323	1,130	3.5	155
Arlington, Oregon	325	1,040	3.2	615
Lexington, Oregon	325	1,100	3.4	238
Dufur, Oregon	330	1,450	4.4	605
Hines, Oregon	358	1,074	3.0	1,692
Joseph, Oregon	400	1,210	3.0	1,173
Elgin, Oregon	400	1,124	2.8	1,655
Burns, Oregon	401	1,265	3.2	2,835
St. John, Washington	425	1,306	3.0	510
Halfway, Oregon	431	1,317	2.1	358
lone, Oregon	461	1,865	4.0	250

City	ADD (gpcd)	PDD (gpcd)	Peak Factor (peak daily)	Population
Moro, Oregon	475	1,520	3.2	369
Connell, Washington	604	1,034	1.7	5,330

PDD = peak daily demand

Table sorted by ADD in ascending order.

Peak Daily Demands

PDDs usually occur during a particular day from June through September, which is when water use is normally at its greatest due to summer uses. Peak daily flows can occur in other months, but normally occur during the hottest period of the year. Typically, PDDs are approximately three times the ADDs. The City obtains daily readings of its water production rates. Daily water production rates from 2020 through 2023 were reviewed to estimate the City’s PDDs.

Based on the data reviewed, the highest PDDs for years 2020 through 2023 occurred on July 27, 2022, and August 27, 2022, when a total of 667,000 gallons were supplied on each of those days. This equates to approximately 460 gpm or 343 gpcd, using the year 2023 population of 1,947. This PDD is lower than the 2015 WMCP estimate of 625 gpcd. Comparing the City’s PDD of 343 gpcd to the ADD of 136 gpcd results in a peaking factor of approximately 2.7. Both the PDD of 343 gpcd and the peaking factor of 2.7 are relatively low when compared to other cities in eastern Oregon and eastern Washington, as shown on Table 2-5.

The ADD and PDD assumed for planning purposes are summarized on Table 2-6. These demands have also been summarized as a flow rate to provide the basis for comparison to water supply capacity. The system capacity is based on the design flow rate for the water treatment facility (WTF) of 1,100 gpm. The assumed population for determining the current daily demand rates is 1,947.

**TABLE 2-6
 YEAR 2024 TOTAL AVERAGE AND PEAK DAILY DEMAND DATA**

Parameter	System Demand		Percentage of Water Treatment Capacity (1,100 gpm)
	(gpcd)	(gpm)	
ADD	136	180	16
PDD	343	460	42

Water supply facilities (well pumps) are normally designed to meet PDDs without providing 24-hour service. It is preferable that well pumps operate a maximum of 18 hours per day, if possible. The current total production capability of the WTF is 1,100 gpm provided by approximately 800 gpm from the Airport Well Field and approximately 300 gpm from the Washington Street Well. The existing 1,100 gpm capacity of the water system meets the current ADD and PDD. The water use data show that the City has an adequate water supply to meet current demands as well as the projected future demands discussed in Section 5.0 of this WMCP Update.

It should be noted that future changes in the City’s projected population, water use characteristics, and/or available supply could affect these assumptions. The City should periodically review this information to ensure additional water supply beyond that recommended herein is not needed sooner than anticipated to meet City demands.

2.3 Description of Customers Served

Table 2-7 summarizes the City’s water service accounts from 2015 and 2023. The City began tracking water use by account type in 2014. On Table 2-7, residential water customers account for approximately 79 percent of the total water users in Vale, while commercial, industrial, and other (public facilities) customers account for approximately 21 percent. Residential water use accounts for approximately 73 percent of water use, while commercial, industrial, and others account for the remaining 27 percent.

**TABLE 2-7
 WATER ACCOUNT INFORMATION**

Account Type	2015 WMCP Number of Accounts	2024 WMCP Update Number of Accounts	2015 WMCP Total Use (gallons)	2024 WMCP Update Total Use (gallons)	2024 WMCP Update Average Use per Account (gallons)	2024 WMCP Update Percent of Total Accounts	2024 WMCP Update Percentage of Total Water Use
Residential	581	657	74,832,300	53,654,891	81,667	79	73
Commercial	131	139	36,634,320	15,921,000	114,540	17	22
Industrial	9	16	223,380	1,857,000	116,063	2	2
Other	-	19	-	2,290,000	120,526	2	3
TOTALS	721	831	111,690,000	73,722,891		100	100

2.4 Water System Description

This section summarizes the City’s water supply wells, treatment, storage reservoirs, booster pump station, and distribution system. In general, water is pumped from the seven Airport Well Field wells and Washington Street Well, sent to the WTF where it is treated for arsenic through a coagulation and filtration system, disinfected, and then discharged into the Airport Reservoir. The treated and disinfected water from the Airport Reservoir is then pumped into the distribution system, which also fills the Rhinehart Reservoir. With the construction of the WTF, the City has been able to remain in compliance for arsenic since July 2, 2019.

A summary of each well in Vale’s water system follows. Further information on each well is provided on the well logs in Appendix B.

Water Supply

The City has two water supply sources. The first source is a group of shallow wells located at the Miller Memorial Airpark south of Vale. The wells are located on City-owned property adjacent to the WTF. The second supply source is a shallow well, dug in 1912, located near the intersection of Washington and 17th Streets.

The location of each water supply source is shown on Figures 2-2 and 2-3. Water rights information for all water sources is included in Appendix A.

Washington Street Well

The Washington Street Well was hand-dug in 1912 when the City water system was originally constructed. The well is approximately 16 feet in diameter, 30 feet deep, and located within the Vale city limits in the northwestern part of the City. This well utilizes a

shallow alluvial aquifer. The Washington Street Well was not used from 2003 to 2014 and was designated as an emergency backup supply source. However, the well was brought back online in July 2014 to help mitigate water quality concerns. In 2017, improvements were made to the Washington Street Well, including new pumps, control and telemetry system, standby power generator, emergency disinfection system, and a dedicated transmission main to the WTF to treat the water for arsenic.

Airport Well Field

As part of the 2002 Water System Improvements (WSI) project, the City constructed a well field located approximately 1 mile south of the City at the Miller Memorial Airpark. The well field is located on City-owned property and consists of seven shallow wells. The wells were constructed with a 12-inch bore hole and an 8-inch steel casing. Wells No. 1 through 4 were constructed with a bentonite seal, and Wells No. 5 through 7 were constructed with a bentonite and silica sand seal. The depths of the wells vary from 30.5 to 37.0 feet. Each well is equipped with an 8-inch stainless steel screen with a slot size of 0.04 inch. The collected water is sent through the WTF to remove arsenic and be disinfected. As part of the 2017 improvements project, the electrical supply, controls, and telemetry systems were updated and relocated to the WTF. The standby power generator at the WTF was also sized accordingly to provide backup power to the WTF and the Airport Well Field in the event of a power outage.

Disinfection and Treatment

Historically, the City has had water quality issues, primarily related to high levels of arsenic. In 2006, an ion exchange system was installed for the removal of arsenic and nitrates from the City's Airport Well Field wells. However, the system was unable to adequately remove the arsenic from the source water and was taken offline in 2014. The ion exchange system was set aside for future use if needed as it is effective at removing nitrates and sulfates.

In 2015, the City completed a Water System Master Plan that included a recommendation for the construction of a new WTF using coagulation and filtration for the removal of arsenic from the source water. Prior to implementation of the recommended improvements, a pilot study was completed to help ensure that the coagulation and filtration system would adequately and efficiently remove the arsenic. A full-scale WTF utilizing the coagulation and filtration system was subsequently designed based on the results of the pilot test and then constructed. Construction of the WTF was completed in 2018. The WTF includes the coagulation and filtration system, various pumping systems, chemical systems that include a liquid sodium hypochlorite system for disinfection and ferric chloride for the coagulation filtration system, a backwash tank system used to capture and reclaim backwash water from the treatment process, and an evaporation pond used to capture the backwash wastewater from the process. The City returned to compliance for arsenic on July 2, 2019. The new system is shown on Figure 2-3.

Water Storage Reservoirs

The City has two water storage reservoirs. The City's main water storage reservoir, Rhinehart Reservoir, is located southeast of the City on Rhinehart Butte. Rhinehart Reservoir has a

750,000-gallon capacity, is constructed of concrete, and has a base elevation of approximately 2,387 feet above mean sea level (AMSL). The reservoir is 20 feet deep and has a diameter of 80 feet. Rhinehart Reservoir serves all of Vale through a gravity-fed distribution system.

The Airport Reservoir has a capacity of 700,000 gallons, is 32 feet high, and has a diameter of 65 feet and a base elevation of approximately 2,250 feet AMSL. This welded steel reservoir is supplied by the WTF and provides water to the distribution system and Rhinehart Reservoir through the Airport Booster Pump Station when Rhinehart Reservoir calls for water. Water from the Airport Reservoir enters the distribution system at the intersection of Main and I Streets via an 8-inch transmission line.

The locations of the City's existing reservoirs are shown on Figures 2-2 and 2-3.

Booster Pump Station

Currently, the City has one booster pump station, the Airport Booster Pump Station located adjacent to the Airport Reservoir. The booster pump station operates on an "on-demand" basis with two 75-horsepower pumps controlled by variable frequency drives. Once Rhinehart Reservoir reaches the low-level set point, the booster pump station is activated and draws water from the Airport Reservoir to feed the distribution system and Rhinehart Reservoir. The booster pump station is equipped with a backup generator in case of power outages.

Controls

As part of the 2017-2018 improvements project, a new controls and telemetry system was constructed for complete operation and control of the water system. The wells (Airport Well Field and Washington Street Well) and the WTF are controlled based on the water level in the Airport Reservoir. When the water level in the Airport Reservoir reaches an operator-set low level, the WTF and associated wells are called to run to supply, treat, and disinfect the water. Once the water level reaches an operator-set high level, the WTF and associated wells are called to shut down. The level in the Airport Reservoir is measured using a pressure transducer located in the adjacent Airport Booster Pump Station. The water level in Rhinehart Reservoir is controlled by the Airport Booster Pump Station. A pressure transducer located in the Rhinehart Reservoir is used to measure the water level. When the level of Rhinehart Reservoir drops to an operator-set low level, the Airport Booster Pump Station is activated, and water is pumped from the Airport Reservoir into the distribution system. The Rhinehart Reservoir then "floats" on the distribution system, and any water in excess of the system demand fills Rhinehart Reservoir. Once the water level in the Rhinehart Reservoir reaches the operator-set high level, the Airport Booster Pump Station is deactivated.

Water Distribution System

The City's distribution system main lines are primarily 8- to 12-inch diameter polyvinyl chloride, transite, and ductile iron, although there are also areas with smaller lines. Most of the City's water main lines were installed with the development of the water system in 1912. However, distribution system improvements have been made over the years to improve flow and pressure in the system. The distribution system is generally laid out with looped piping to assist with water circulation through the system. The City has indicated that the water main lines in the distribution system are

generally in fair condition. Nearly all service lines were installed during system development in 1912. The service lines are primarily galvanized and copper pipe.

The layout and major components of the City's distribution system are shown on the Existing Water System Map at the end of this WMCP Update.

2.5 Existing Water Supply Reliability and Adequacy

Currently, the existing water system components provide the City with a limited degree of redundancy and reliability. In the event of a power outage, the City has the ability to operate the entire water system. A standby power generator located at the Washington Street Well, the WTF, and the Airport Booster Pump Station allow all wells, the WTF, and the Airport Booster Pump Station to operate when there is a power outage. All three of the standby power systems consist of a natural gas-fueled generator, controls, alarms and shutdowns, and an automatic transfer switch. The generator systems are equipped with control to provide automatic startup when utility power fails. Upon restoration of power, the unit will automatically transfer back to utility power and shutdown. In addition to the standby power generator systems, the Rhinehart Reservoir is equipped with an uninterruptable power supply that provides power to the control system for operation of the various water system components.

The City's total supply capacity is a little more than 1,100 gpm (835 gpm from Airport Well Field and 336 gpm from Washington Street Well). This capacity is sufficient to meet current and estimated future peak demands; therefore, an additional supply source is not needed. Additionally, the Airport Well Field has water rights with a maximum instantaneous flow rate of more than 2,200 gpm. If additional capacity is needed in the future, the City may be able to increase the capacity of the Airport Well Field without having to apply for an additional water right.

Although the two water supply sources combined can meet current and estimated future demands, the system is lacking redundancy. If the Airport Well Field could not be used for water supply, the Washington Street Well alone is not capable of meeting current or estimated future demands. The City may want to evaluate additional water supply sources to provide some redundancy if one supply source cannot be used.

2.6 Interconnections

Currently, the City has no interconnections with neighboring water systems. There are no private water systems adjacent to the City. The nearest communities are Ontario and Nyssa, Oregon, which are 16 and 20 miles away, respectively.

2.7 System Efficiency

To conduct a water audit to estimate water loss, water service meter readings and known unmetered water use were compared to meter readings for water produced from 2014 through 2023. The water audit data are presented on Table 2-8.

**TABLE 2-8
 WATER AUDIT RESULTS**

Reporting Period (Year) (January to December)	Water Delivered	Water Consumption ¹	Water Loss	
	Production (MG)	Usage (MG)	Real Loss (MG) ²	Percent Loss
2014	125.52	82.40	43.12	34.40
2015	86.01	71.70	14.31	16.70
2016	110.26	78.60	31.66	28.70
2017	106.00	69.90	36.10	34.10
2018	DNA ³	81.80	DNA ³	DNA ³
2019	97.03	74.39	22.64	23.33
2020	75.19	75.82	-0.63	-0.84
2021	92.29	77.98	14.31	15.5
2022	90.16	78.85	11.31	12.54
2023	99.43	74.16	25.27	25.41

¹ Water consumption includes billed usage, known non-billed usage, and metered hydrant use. Since 2019, the backwash waste volume of 140,400 gallons per year from the WTF and 300,000 gallons per year of known use by the Fire Department have been added to the water consumption values.

² Water loss may be overestimated as non-metered water use is not accounted for currently.

³ DNA - Data are unavailable for the 2018 water delivered due to the system being offline for the WSI project during this time period. As a result, water loss data are also unavailable.

The American Water Works Association has compiled a manual to provide procedures for conducting water audits and recommends water loss be less than 10 percent. The Oregon Water Resources Department WMCP Review Worksheet also notes that additional measures are required if water loss exceeds 10 percent. As shown on Table 2-8, eight reporting periods had water loss exceeding 10 percent.

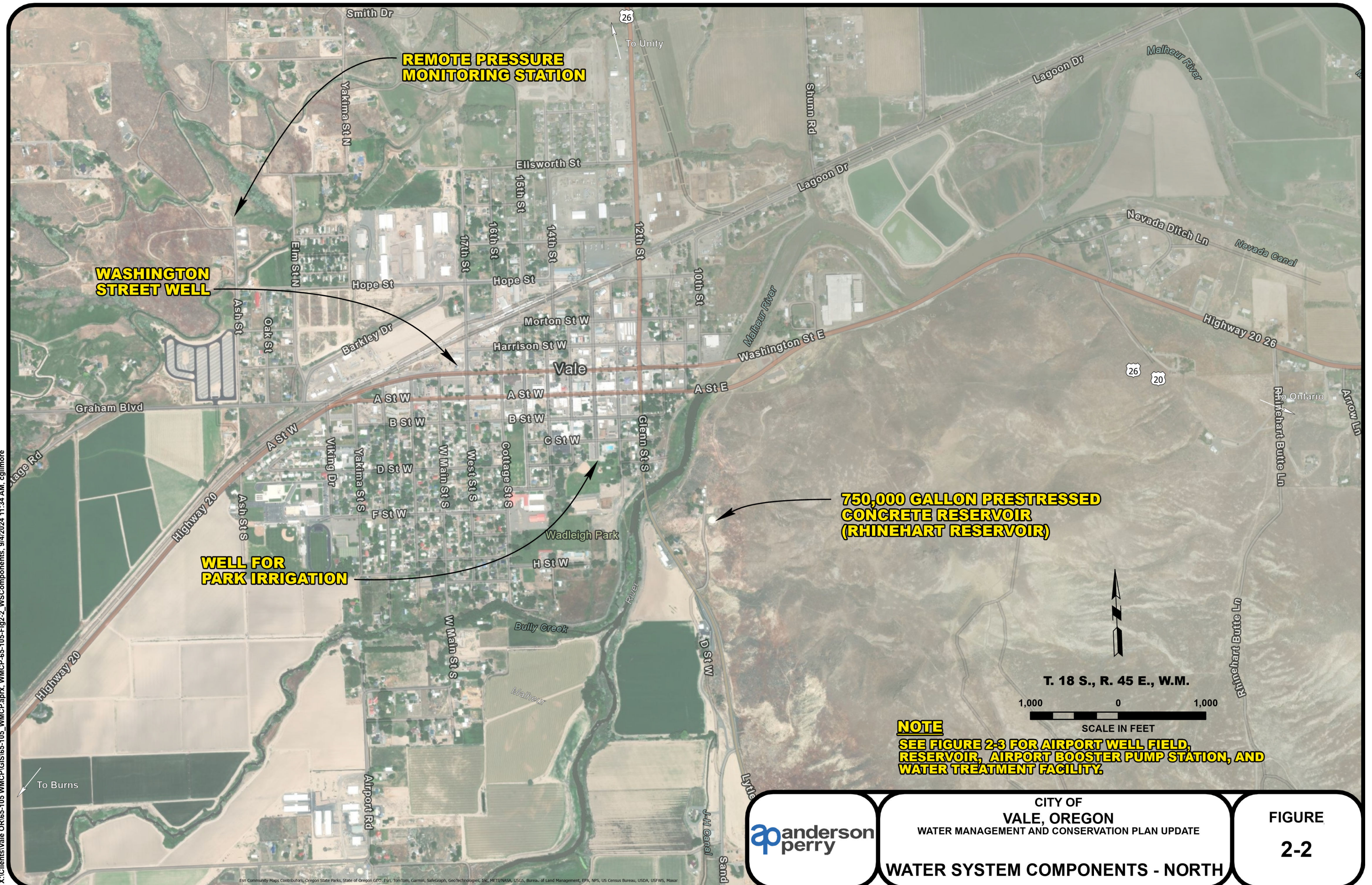
Part of the water loss has been contributed by the water line being damaged in 2017, a fire in 2018, and a level sensor failure in Rhinehart Reservoir in 2018. Another potential area of water loss could be the service meters being inaccurate/faulty based on the low ADD and the higher water loss. The City has approximately 581 older service meters that are in need of replacement. The City has indicated that they are working on replacing the older service meters at a rate of 33 per year with the goal to determine if that is the source of their water loss.

WATER RIGHTS INVENTORY

Application No.	Permit No.	Certificate No.	Transfer No.	Priority Date	Source	Use	Allowed Rate (cfs)	Maximum Instant and Annual Quantity Diverted to Date	Average Monthly and Daily Diversion	Authorized Completion Date	Notes
-	-	90942	T-8166	September 24, 1897	Seven shallow, hydraulically connected wells, plus one additional diversion to mitigate potential hydraulic interference with Bully Creek (Airport Well Field) (as modified by T-8166)	Irrigation, Street, and Municipal	5.0 cfs, further limited to a diversion not to exceed 225.0 acre-feet in any 30-day period, provided further that the total diverted shall not exceed 1,070.06 acre-feet during the calendar year.	Instant = 835 gpm Annual = 404 acre-feet (2012)	Monthly = 16.51 acre-feet (2023 Water Year) Daily = 0.54 acre-feet (2023 Water Year)	N/A	
S-73411	S-52623	93212	N/A	May 21, 1993	Wastewater from the Oregon Trail Mushroom Plant	Heating of water for the City's swimming pool and radiant floor space heating for the City's fire hall	0.09 cfs	Instant = 22 gpm Annual = 41 acre-feet (2009)	Monthly = 1.25 acre-feet (2023 Water Year) Daily = 0.04 acre-feet (2023 Water Year)	N/A	
S-6278	S-3916	2376	N/A	September 16, 1918	Willow Springs, tributary to the Malheur River	Municipal	0.25 cfs	Instant = 0 Annual = 0	Monthly = 0 Daily = 0	N/A	
G-4678	G-4405	87397	T-8339	November 12, 1968	One well (Washington Street Well) (as modified by T-8339 and confirmed by Certificate 87397)	Municipal	0.75 cfs	Instant = 336 gpm Annual = 160 acre-feet (2020)	Monthly = 8.92 acre-feet (2023 Water Year) Daily = 0.29 acre-feet (2023 Water Year)	N/A	
G-4679	G-4406	41133	N/A	November 12, 1968	Well No. 4	Irrigation of 5.9 acres	0.07 cfs	Instant = 35 gpm Annual = 22 acre-feet (1991)	Monthly = 0.52 acre-feet (2023 Water Year - May through September) Daily = 0.02 acre-feet (2023 Water Year - May through September)	N/A	
S-50354	S-38013	61405	N/A	April 25, 1973	Malheur River	Irrigation of 21 acres	0.53 cfs	Instant = 112 gpm Annual = 227 acre-feet (2019)	Monthly = 27.63 acre-feet (2023 Water Year - May through September) Daily = 0.22 acre-feet (2023 Water Year - May through September)	N/A	

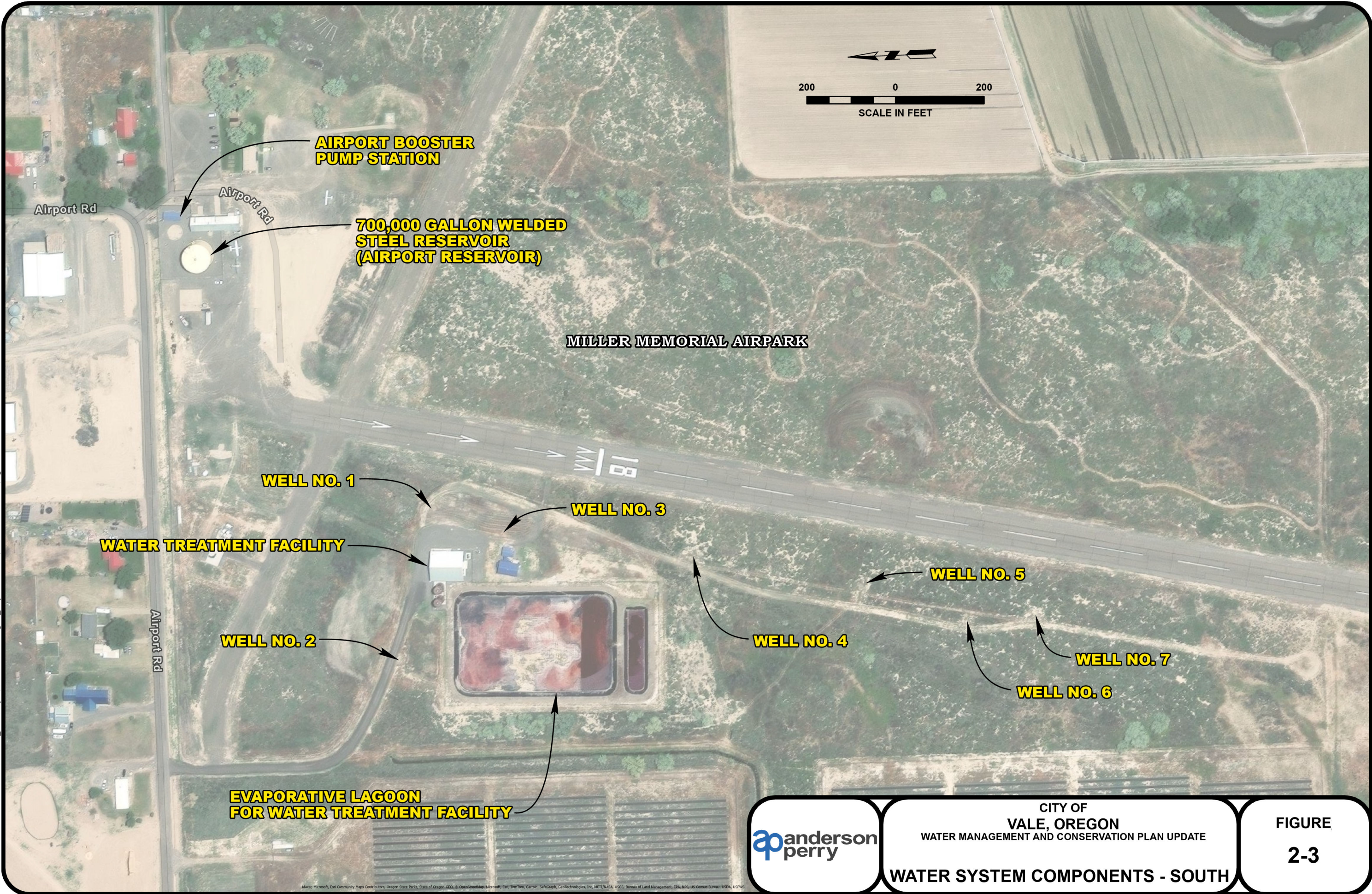
cfs = cubic feet per second
 COBU = Claim of Beneficial Use
 gpm = gallons per minute
 N/A = Not applicable

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NOTE
 SEE FIGURE 2-3 FOR AIRPORT WELL FIELD,
 RESERVOIR, AIRPORT BOOSTER PUMP STATION, AND
 WATER TREATMENT FACILITY.

	<p>CITY OF VALE, OREGON WATER MANAGEMENT AND CONSERVATION PLAN UPDATE</p>	<p>FIGURE 2-2</p>
<p>WATER SYSTEM COMPONENTS - NORTH</p>		



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	<p>CITY OF VALE, OREGON WATER MANAGEMENT AND CONSERVATION PLAN UPDATE</p>	<p>FIGURE 2-3</p>
<p>WATER SYSTEM COMPONENTS - SOUTH</p>		

Section 3.0 - Water Conservation Element

This section outlines conservation measures the City of Vale is already implementing and conservation measures to be considered. While limited resources hinder the City's ability to offer a full-scale conservation program implemented in larger municipalities, the City is committed to conserving water and educating its public about the conservation measures available to them. The City's water use reporting and water rate structure are summarized, and the City's planned conservation measures and five-year benchmark goals are presented.

The City has generally implemented the mandatory conservation practices. The City's water system is fully metered and has methods in place for keeping track of water system components and water use. The City monitors all customers' water meters on a monthly basis. The City does not spend a significant amount of the water budget repairing service meters but does replace some annually based on need. The City has implemented and updated a rate structure based on the quantity of water metered. The City has completed water audits as part of this Water Management and Conservation Plan (WMCP) Update. It is the City's goal to continue to complete annual water audits and reduce the water loss in the system. Lastly, the City will implement a public education program in 2025.

3.1 Previous Water Management and Conservation Plan Efforts

The City completed a WMCP in 2015, which was submitted to and approved by the Oregon Water Resources Department (OWRD). In 2019, a WMCP Progress Report was submitted to the OWRD. This WMCP Update was prepared to meet Oregon Administrative Rules (OAR) Chapter 690, Division 86, which requires a ten-year update to WMCPs.

3.2 Water Use and Reporting

The City's water use reporting is completed in compliance with OAR 690-085. The report is submitted electronically on the OWRD website and on forms provided by the OWRD for each supply source used during the water year starting October 1 and ending September 30 of the following year. The City submits annual reports, as required, for the supply sources. The Washington Street Well and Airport Well Field have flowmeters; thus, the "flowmeter method" is utilized for reporting purposes in accordance with OAR 690-082-0015(5).

3.3 Rate Structure and Metering

According to OAR 690-086-0150(4)(d), a water supplier submitting a WMCP Update must have a rate structure in place that bills customers on the quantity of water metered at the service connection. As shown on Table 3-1, the City has an inclining block rate structure. After the base rate usage (total of 8,000 gallons), customers are charged an additional rate per 1,000 gallons of water used. This additional rate increases as water usage increases. It is preferable, from a conservation standpoint, to have an inclining block rate structure that charges customers more for more water used. It is generally believed that an inclining block rate structure helps conserve water since the cost of water increases as use increases.

**TABLE 3-1
 WATER RATE INFORMATION**

	Base Charge	Consumptive Charge (per 1,000 gallons)			
	8,000 Gallons	8,000 to 10,000	10,000 to 30,000	30,000 to 50,000	Greater than 50,000
Cost per Customer	\$43.89	\$1.06	\$1.32	\$1.57	\$2.10

The City charges customers based on the quantity of water metered at the service connection; therefore, the City is in compliance with OAR 690-086-0150(4)(d). The City has designed this rate structure to satisfy the requirements of the *Water Management and Conservation Plan Guidebook, March 2015 (2nd Edition)* (Guidebook). The City’s Water Rate Schedule is included in Appendix C.

3.4 Required Conservation Measures

Conservation measures required as outlined in the Guidebook and OAR Chapter 690, Division 86 are summarized herein. The City’s efforts in relation to each conservation measure are also noted.

Full Metering of Water System

According to OAR 690-086-015(4)(b), all municipalities should be fully metered for all supply sources and customers. All water service connections in the City’s water system are metered. The water meters are read and tabulated on a monthly basis for each service connection. The City’s current practices satisfy this conservation requirement.

Meter Testing and Maintenance Program

The City’s meter testing and maintenance program is on an as-needed basis. The City’s Public Works staff read the water meters each month, and if a meter is defective, the meter reading program alerts the staff that there is a problem. The meter is then repaired and/or replaced, as necessary. The majority of the meters in the City are at least 20 years old. During the 2002 Water System Improvements project, all service meters in Vale were replaced with TouchRead meters. Since that time, the City has replaced approximately 250 of those meters with new, improved Sensus iPERL TouchRead meters. The City intends to replace the remaining 581 by 2042. The new meters will provide a diagnostic report indicating whether the meter needs to be calibrated or replaced. The City also intends to service, test, and calibrate all supply master meters in Fiscal Year (FY) 2024-25.

Annual Water Audit

The City conducts annual water audits. The results of a comparison between the amount of water produced and accounted for water use between 2014 and 2023 are summarized in Section 2.0 of this WMCP. The results show that the City continues to experience significant water loss.

All connections within the City’s system are metered. The City also has unmetered but accounted for water. This unmetered but accounted for water includes the backwash wastewater produced through the water treatment facility (WTF). Backwash wastewater produced through the WTF is tracked on a weekly basis and accounts for approximately 2,700 gallons per week (140,400 gallons

annually). Additionally, the City gathers annual water use from the fire department, which is 300,000 gallons annually. By using monitoring techniques to identify suspected leaks, the City is proactively using available best management practices to identify water losses and help reduce the amount of water loss in the system. Other leak detection techniques are described later in this section. Additionally, another source of water loss is suspected to be older service meters not reading water use accurately. Based on the low average daily demand and water loss, it is believed that the inaccurate service meters could be one of the main causes of the high water loss. The City has replaced approximately 250 of the service meters with Sensus iPerl TouchRead meters, leaving approximately 581 old service meters still in the system. The City has an annual budget of \$10,000 per year to replace meters, which results in approximately 33 service meters per year. At this rate, the service meters will be replaced by 2042.

Rate Structure Based on Quantity of Water Metered

As summarized above, the City has an inclining block rate structure, which is included in Appendix C. The City's rate structure meets the requirements of this conservation measure per OAR 690-086-0150(4)(d).

Public Education Program

The City does not currently have an official public education program. In 2025, the City will begin implementing a public education program. This program will include sending three public education documents annually to the City's customers, including one newsletter, one OWRD handout on saving water inside the home sent with the customer's water bill, and one OWRD handout on saving water outside the home sent in the spring/early summer with the customer's water bill. These OWRD handouts are included in Appendix D.

Progress Report on Previous Water Management and Conservation Plan

In the City's 2015 WMCP, the City outlined a set of conservation measures aimed at reducing water demand and water loss in the system. Since the 2015 WMCP was submitted, progress has been achieved in most of the areas identified at that time. Goals outlined in the 2015 WMCP that have been achieved include the following:

- The City is fully metered, and staff continue to read water meters on a monthly basis;
- The City continues to complete annual water audits;
- The City continues to monitor meters and repairs/replaces meters as needed;
- The City has a rate structure that charges customers on an inclining rate schedule.

While the City has met most of their conservation benchmarks, they have not been able to provide the public with water conservation education. Additionally, the City has a water loss of more than 10 percent. The City has set benchmarks for both improvements in public education and reductions in water loss.

3.5 Ongoing Conservation Measures

Water Use Measurement and Reporting Program

The City has master meters at each active water source. Daily readings are obtained and totaled for daily flow summaries and then added for total monthly flow. The City reports monthly water use each year, from each supply source, to the OWRD on standard OWRD Annual Report forms. The report is submitted electronically on the OWRD website and on forms provided by the OWRD for each supply source used during the water year starting October 1 and ending September 30 of the following year. The City's water use reporting is completed in compliance with OAR 690-085.

Reporting Program Compliance

The OWRD has indicated that the City's water use measurement and reporting program is in compliance with the measurement standards in the state's annual water use reporting program (OAR 690-085). All reporting has been in compliance; therefore, no time extensions have been needed by the City.

3.6 Additional Conservation Measures

Leak Repair/Line Replacement Program

The City's current water loss appears to be large when comparing supply meters with accounted for water use. The City has been changing out service meters and anticipates updating all service meters within the next 15 years. The City will have master meters calibrated in FY 2024-25 to ensure they are reading accurately. For leak detection, the City monitors customer meters and observes for high or abnormal water use. If a leak surfaces in the distribution system, it is fixed. The City currently does not have any leak detection equipment. When suspected leaks are discovered by routine monitoring of flow and consumption records, visual inspection, or user reports, the City will determine the location of the leak and complete repairs as soon as practically possible.

Other Conservation Measures

The City has not identified any additional conservation measures that would result in significant water savings at this time. The City will continue to work on the implementation of the mandatory conservation practices listed above.

3.7 Summary of Benchmarks

The City intends to continue improving its conservation practices to fully meet requirements and encourage resource conservation by the community. A summary of the benchmarks for the City's conservation activities is provided on Table 3-2. The City intends to continue improving their conservation practices to fully meet requirements and encourage resource conservation by the community.

**TABLE 3-2
 2024 CONSERVATION ELEMENT STATUS**

	Benchmark	Progress
1.	Measurement and Reporting	The City has continued to measure and report daily water usage from the well sources to the OWRD.
2.	Full System Meter Installation	The City is fully metered and in compliance with OAR 690-086-0150(4)(b). Water meters are read on a monthly basis.
3.	Annual Water Audit	The City has kept track of both production data and billed usage data since 2014. The total amount of water loss has remained above 10 percent. Part of the water loss has been contributed by the water line being damaged in 2017, a fire in 2018, and a level sensor failure in Rhinehart Reservoir in 2018. The City will continue to search for the source of the water loss. Additionally, the City will begin categorizing and tracking water use by account type beginning in 2025.
4.	Meter Testing and Maintenance Program	The City records the date and location of each meter that is replaced. Meters are read monthly by the City’s Public Works staff. Defective meters are identified and replaced as needed. Two hundred and fifty meters have been replaced since August 2016. The remaining 581 water meters will be replaced by 2042. The master meters have not been tested or calibrated since 2018 and will be tested/calibrated in FY 2024-25.
5.	Leak Detection and Repair	The City visually monitors for leaks and repairs leaks when detected. The City does not currently replace water and service lines per a water line replacement program. Water and service lines are replaced as needed, not per schedule.
6.	Rate Structure Based on Use	The City has an inclining block rate structure based on water use and the current rates were last adjusted in 2022. Customers will continue to be charged more for any water used beyond the base usage.
7.	Public Education Program	The City has not provided public education materials since 2013. A Public Education Program will be implemented in 2025.

In setting dates for implementation of additional practices necessary to meet the stated requirements, the City prepared the following benchmark summary, as shown on Table 3-3.

**TABLE 3-3
 2024 CONSERVATION BENCHMARKS**

Benchmark	Status/ Action	Implementation Date	Anticipated Completion Date	Frequency
Measurement and Reporting	Compliant	Completed	N/A	Annual
Fully Metered	Compliant	Completed	N/A	Ongoing
Annual Water Audit	Compliant	Completed	Ongoing	Annual
Track Customer Water Use by Account Type	Continuous Plan	2025	Ongoing	Annual
Water Loss Reduction				
Record Unaccounted Water Use (i.e., Water Truck Filling, etc.)	Continuous Plan	2025	Ongoing	Ongoing

Benchmark	Status/ Action	Implementation Date	Anticipated Completion Date	Frequency
Identify Potential Factors for Water Loss and Selected Action for Remedy	Two-year Plan	2025	2027	Annual
Develop and Implement a Water Loss Control Program if Water Loss Exceeds 10 Percent after the Two-Year Benchmark	Five-year Plan	2027	2032	Five Years
Meter Testing and Maintenance Program				
Service and Calibrate Master Meter	Five-year Plan	2025	Ongoing	Five Years
Service Meter Replacement Program	Continuous Plan	Ongoing	Ongoing	Annually
Service Meter Replacement Project	18-year Plan	2024	2042	Annual
Leak Detection and Repair	Continuous Plan	Ongoing	Ongoing	Ongoing
Rate Structure Based on Use	Compliant	Completed	N/A	N/A
Public Education Program				
Newsletters	Five-year Plan	2025	Ongoing	Annually

N/A = Not Applicable

The City of Vale believes that focusing their efforts on the largest potential water saving items is the best conservation path forward. While all conservation efforts are important, completion of the annual water audit, identifying potential factors for water loss and selected action remedy such as the water meter replacement project, and master meter service and calibration will provide the most significant water supply savings. To support these conservation measures, the City will implement a Public Education Program in 2025 to educate all customers about water conservation.

Section 4.0 - Municipal Water Curtailment Element

This section outlines the curtailment element of the Water Management and Conservation Plan (WMCP) Update. This section includes a brief assessment of the City of Vale's water supply with respect to quantity deficiencies and capacity limits and presents the City's adopted Water Curtailment Plan, which outlines levels of curtailment and an implementation program to enact curtailment items.

4.1 Assessment of Supply

The current water supply for the City consists of two sources. The first source, the Airport Well Field, is a group of seven wells located approximately 1 mile south of the City at the Miller Memorial Airport. These wells have a collective yield of approximately 835 gallons per minute (gpm). The second source, referred to as the Washington Street Well, is a 30-foot deep well, hand-dug in 1912, located within the Vale city limits in the northwest part of the City. This well has a yield of approximately 336 gpm.

Though long-term drought or other source shortages caused by natural disaster, source contamination, legal restrictions, or other circumstances could conceivably occur, only a few possible scenarios have a higher potential of occurrence that may impact the City's ability to meet water demands. These include mechanical failure of key components, interruption of utility power, and failure of the transmission pipelines. Any of these scenarios, depending on the time of the year and duration of the impact, could affect the City's ability to meet water demands. However, the water system has been designed and constructed with system backups and a level of flexibility to meet the demands of City customers in an emergency or maintenance condition.

4.2 Past Water System Curtailment Events

The City has not experienced water supply deficiency in the last ten years. Neither the Airport Well Field nor the Washington Street Well have had a major failure, and the supply and storage reserves have been large enough in the past to meet peak water demands during the summer months.

In 2022, the City issued a Level 1 curtailment letter to its customers when sensors in two of the eight wells read that the water levels were lower than they actually were. It was determined by the City, after implementing Level 1 of the Water Curtailment Plan, that the sensors had failed and no actual water shortage had occurred.

4.3 Objectives of Curtailment Program

The objectives of the Water Curtailment Plan are to recognize various levels of water supply alert status and provide the steps and procedures for City staff to utilize during curtailment scenarios. The objectives of the Water Curtailment Plan are to provide the steps and procedures for the City staff to utilize during curtailment scenarios.

4.4 Water Curtailment Plan

Reduced levels of supply, increased demands, or capacity limitations of the water system can cause water shortages. A sustained problem in any of these three areas, or a combination of problems, would necessitate conservation or curtailment of water use. Therefore, it is important to identify events that trigger activation of the alert level and subsequent curtailment actions. A Water Curtailment Plan was included in the 2015 WMCP to meet the water curtailment element requirements outlined in Oregon Administrative Rules 690-086-0160 for WMCPs. As part of this WMCP Update, the Water Curtailment Plan was updated and approved by the City to include improvements made to the system since 2015. The City's Water Curtailment Plan is summarized on Figure 4-1.

4.5 Loss of Water Supply Scenarios.

Possible scenarios that could result in the loss of water supply capacity include well pump malfunction, well pump electrical service malfunction, a fire in the building housing the well controls, a prolonged power outage, contamination of the reservoirs or aquifer that the wells draw water from, failure of the water treatment facility (WTF), or declining aquifer levels below well pump set depths.

Currently, the Airport Well Field supplies 65 percent (835 gpm) of the City's water and the Washington Street Well supplies the remaining 35 percent (336 gpm) under normal operating conditions. The current average daily demand (ADD) is 180 gpm and the peak daily demand (PDD) is 460 gpm. The 2044 ADD is 230 gpm and PDD is 600 gpm. If the Airport Well Field were out of service for an extended period of time, the City would not be able to meet typical system demands and water curtailment actions would be required.

In the event of a power outage, the Washington Street Well, Airport Well Field, WTF, and Airport Booster Pump Station have standby power generators. The City also has water reserves being held in their storage reservoirs. With the standby power generators and water reserves, the City should be able to provide water for an extended power outage event.

In the event of aquifer contamination or declining aquifer level in the Airport Well Field, the Washington Street Well, which is located some distance from the Airport Well Field and is believed to be drawing water from a different aquifer, has the capacity to meet current and projected ADD but not the PDD. Curtailment actions would likely need to be implemented until the Airport Well Field was brought back online. If the Washington Street Well's aquifer had contamination or a declining aquifer level, the Airport Well Field does have the capacity to meet both the current and projected ADD and PDD alone.

4.6 Shortfalls Triggering Action

The City has adequate well supply capacity for the City's current and estimated needs and has storage available to help meet demands. With the well sources, storage reservoirs, and standby power for the entire system, the City should be able to provide water to its customers in case of an emergency. The existing water system components provide the City with an acceptable level of redundancy. In the event of a major water supply loss, the City would be faced with an immediate water supply shortage and would need to initiate the Water Curtailment Plan as shown on Figure 4-1.

4.7 Capacity Limitations

Currently, the City has adequate water supply available to meet its needs. However, if a long-term water supply shortfall were to occur, the City would need to immediately enact the appropriate level of its Water Curtailment Plan (see Figure 4-1).

4.8 Plan of Action for Water Curtailment

The City's plan of action for water curtailment is summarized on Figure 4-1.

4.9 Water Curtailment Plan Implementation Program

The City intends to follow the Water Curtailment Plan summarized on Figure 4-1. Authorization to activate the Water Curtailment Plan and levels of alert as outlined herein rests with the Vale City Council or other assigned City staff. Once the plan is activated, the City should notify the Oregon Health Authority - Drinking Water Services (DWS), City police/County sheriff, all water system customers, and others, as appropriate.

4.10 Emergency Response Plan

In 2019, the City updated its Emergency Response Plan (ERP) for the water system in accordance with regulatory requirements of the DWS. The ERP is an excellent resource for the City to utilize for steps, procedures, notifications, etc., to implement in the event of a water system emergency. It is recommended that the City coordinate any future Water Curtailment Plan revisions with steps and actions that may be listed in the City's ERP. The ERP should be consistent with emergency efforts outlined herein for water system curtailment activities.

**CITY OF VALE, OREGON
WATER MANAGEMENT AND CONSERVATION PLAN UPDATE
WATER CURTAILMENT PLAN¹**

Alert Level	Alert Level Triggers		Notification	Curtailment Action	System Operational Action	Enforcement Action
	Supply	Remaining System Capacity				
Normal Operation	Airport Well Field and Washington Street Well are fully functional.	1,100 gpm ²	N/A	N/A	N/A	N/A
Mild	Temporary Loss of the Washington Street Well ³	835 gpm	N/A	N/A	N/A	City staff will monitor the reservoir levels and remind users of the alert level.
Moderate	Temporary Loss of several or all Airport Well Field wells ³	336 gpm ⁴	Distribution of instructional flyers. Personal contact with large commercial users.	No unnecessary water use. ⁵ No non-essential commercial, institutional or industrial uses. ⁶	Utilize Washington Street Well and monitor reservoir levels closely.	City staff will monitor the reservoir levels and remind users of the alert level.
High	Extended loss of Airport Well Field or Water Treatment Facility	336 gpm	All notification actions listed under Moderate, plus publishing newspaper notices and submitting public notices via local radio stations.	No unnecessary water use. ⁵ No non-essential, institutional or industrial uses. ⁷	Utilize Washington Street Well, monitor reservoir levels closely, and disinfect water at Washington Street Well if the Water Treatment Facility is not operational.	City staff will monitor the reservoir levels, remind users of the alert level and will issue fines as approved by ordinance.
Emergency	Complete loss of Airport Well Field, Washington Street Well, and/or Water Treatment Facility for an extended period, or reservoir has reached the half-full level with no practical means of refilling.	0 gpm	All notifications under Moderate and High, plus door-to-door communication.	No unnecessary water use. ⁵ No non-essential and reduce commercial, institutional or industrial uses. ⁷ Restrict residential use. ⁸	Disinfect the reservoir to ensure water quality.	City staff, City police/County sheriff will monitor the reservoir levels and will issue fines as approved by ordinance.

¹ The authority to enact these notification, curtailment, and enforcement actions is retained by the Vale City Council.

² Capacity of the WTF. The full capacity of the Airport Well Field and Washington Street Well exceeds the WTF capacity.

³ Temporary loss shall be defined as shutdown for one day or less. A loss for a period longer than one day shall be considered an "extended period."

⁴ This capacity assumes the loss of all Airport Well Field wells. Additional capacity may be available if a portion of the Airport Well Field is operational.

⁵ Unnecessary water use shall include but not be limited to washing vehicles, wash down of exterior surfaces of dwelling/outbuildings, filling, refilling or adding water to a private swimming pool or jacuzzi pool, and use of water in a fountain or pond for aesthetic purposes.

⁶ Non-essential commercial, institutional, or industrial use includes, but is not limited to, serving water to a customer in a restaurant unless requested; filling scenic pools, ponds, or fountains; use of a fire hydrant for anything other than fire fighting; irrigation of parks, schools, community food gardens, recreation or memorial type facilities in excess of 75 percent of normal historic amounts; use of domestic water for schools, nursery facilities, restaurants, shopping centers, gasoline service stations, health swim clubs, and all other commercial uses in excess of 90 percent of the normal historic amount; use for manufacturing, food processing, cooling or cleaning of equipment in excess of the normal historic amount; agricultural irrigation in excess of 75 percent of the normal historic amount; and use for dust control.

⁷ Commercial, institutional, and industrial use will be further reduced from the non-essential commercial, institutional or industrial use noted above to 50 percent of typical use.

⁸ Residential use will be restricted as follows:

One permanent resident: 80 gpd

Two permanent residents: 110 gpd

Three permanent residents: 140 gpd

Each additional permanent resident: 30 gpd

Multi-residential units: 130 gallons per unit per day

gpd = gallons per day
gpm = gallons per minute
N/A = not applicable
WTF = water treatment facility



**CITY OF
VALE, OREGON
WATER MANAGEMENT AND CONSERVATION
PLAN UPDATE**

WATER CURTAILMENT PLAN

**FIGURE
4-1**

Section 5.0 - Municipal Water Supply Element

This section provides a summary of the needed information to estimate future long-term water supply needs for the City of Vale. Projections of the future number of services are provided to estimate future average daily and peak daily demands. Based on the future demand estimates, a 20-year water supply plan is presented.

5.1 Future Service Area

Current and Future Service Area

As outlined in Section 2.0, the current and future service area consists of developed and undeveloped lands within the City's urban growth boundary (UGB).

The area within the City's UGB is approximately 1,792 acres. The current geographical boundary of the City is shown on Figure 1-1 in Section 1.0, and the current zoning is shown on Figure 5-1.

Undeveloped parcels exist within the Vale city limits. If development occurs in these areas, water system improvements will likely be needed and will most likely include distribution system, storage, and/or booster pump station improvements.

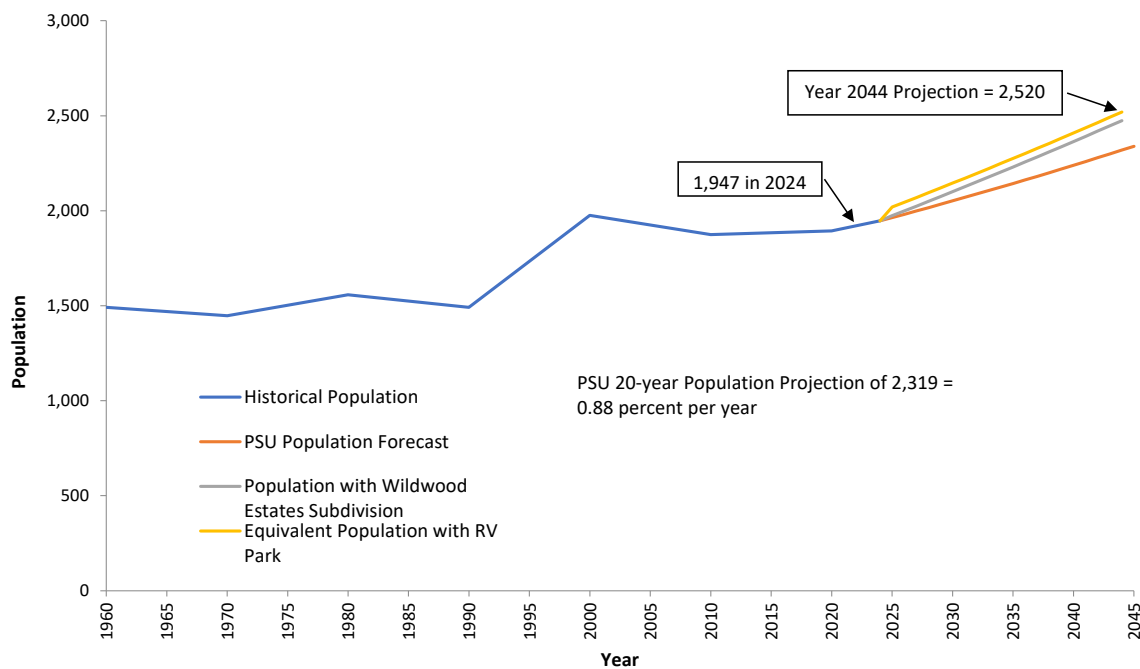
Population Projections

The historical population of the City of Vale from 1960 through the latest available population estimated (2023) is summarized on Table 2-1. Trends for population, comparing data from 1960 through the present, show the population number has increased from 1,491 in 1960 to 1,947 in 2023.

This Water Management and Conservation Plan (WMCP) Update provides a review of the past, present, and anticipated future needs of the City's water system and is intended to analyze the water system over an extended period of time to properly forecast future water system needs. Portland State University's Population Research Center (PRC) is responsible for establishing and maintaining population forecasts for the cities in Oregon. According to the PRC, the City's forecasted average annual growth rate is 0.88 percent for the years 2024 to 2044. Using the latest certified population estimate from PRC of 1,947 for the current 2024 population, the projected population in 2044 is 2,319. However, the City has recently seen an influx of development that is anticipated to increase water demand beyond what the PRC forecast indicates. The City recently annexed approximately 20 acres of land into the city limits. Since the annexation, a 122-site recreational vehicle (RV) park has been developed on the annexed land. Additionally, the total 61-lot Wildwood Estates Subdivision, Phase 1 was recently completed with Phase 2 currently under construction. With the addition of the RV park and the Wildwood Estates Subdivision, it is anticipated the growth and water demand could exceed this estimate. The City has chosen to include the addition of the RV park and the Wildwood Estates Subdivision in addition to what PRC forecasted. Utilizing an average value of 2.55 persons per single family home for the City of Vale, as published in the PRC's "Vale City 2020 Census" summary, it is anticipated that the full buildout of the Wildwood Estates Subdivision

could add another 156 people. Additionally, the completion of the RV park will increase the demand on the water system. The standard used for estimating water use for the RV park is National Fire Protection Association 1194 Standard for Recreational Vehicle Parks and Campgrounds. Per Chapter 7, Environmental Health and Sanitation, Section 7.2 Potable Water Supply and Distribution, 7.2.4 Supply, a minimum of 50 gallons per day per site for sites with individual connections should be utilized for water demand estimates. This results in the RV park using a total of 6,000 gallons per day. Using the current average day demand (ADD) of 136 gallons per capita day (gpcd), the RV park has an estimated water demand equivalent to approximately 45 people. Based on this information, the WMCP Update has adopted a forecasted population of 2,520 for the 20-year planning period, with a projected influx of an additional 573 residents. This growth rate will steadily increase water supply needs for future anticipated demands. The historical population from 1960 through 2023, as well as the projected population at an annual growth rate of 0.88 percent through 2044, and the additional development are shown on Chart 5-1.

**CHART 5-1
 HISTORICAL AND PROJECTED POPULATION**



Based on the 2024 population of 1,947 and a 0.88 percent growth rate plus the additional estimated subdivision buildout and RV park equivalent population, the 20-year population projection would result in a population of 2,520 by the year 2044. This projection of 2,520 people will be utilized in estimating the City’s future water demands. Table 5-1 presents the future population estimated in five-year increments through the year 2044.

**TABLE 5-1
 FUTURE POPULATION ESTIMATES**

Year	Population Estimate (0.88 Percent per Year Growth Rate)
2024	1,947
2029	2,120
2034	2,249
2039	2,382
2044	2,520

It should be recognized that actual growth could vary considerably from the estimates shown herein. Additional businesses could locate in the City, resulting in a significantly higher than anticipated growth rate. Alternatively, growth could be much less than anticipated based on other factors. The consistent growth historically and currently being experienced in the area may not continue for the next five to ten years. Therefore, projections of future demands should be periodically reviewed and updated to reflect actual conditions.

5.2 Future Water Demands

The City’s current ADD and peak daily demands (PDD), as summarized in Section 2.0 of this WMCP Update, are as follows:

- ADD = 136 gpcd
- PDD = 343 gpcd

Using these estimated demands, future water demands for the City can be estimated based on future projections of the population. Table 5-2 summarizes the anticipated ADD and PDD for future growth projections.

**TABLE 5-2
 FUTURE ANTICIPATED WATER SYSTEM DEMANDS**

Year	Population	Average Daily Demand		Peak Daily Demand	
		(gpcd)	(gpm)	(gpcd)	(gpm)
2024	1,947	136	180	343	460
2029	2120	136	190	343	500
2034	2,249	136	210	343	540
2039	2,382	136	220	343	570
2044	2,520	136	230	343	600

gpm = gallons per minute

It should be noted that the assumed ADD and PDD could vary from these values in the future. If water use characteristics for the City change in the future, it would be wise to reevaluate these demands and,

using the updated demand data, re-compute the future estimated water system demands summarized herein.

The projected PDD required flow of 600 gpm in the year 2044 can be met with the operation of the current supply sources and water treatment facility (WTF) with a capacity of 1,100 gpm. Based on the assumed population growth rate and subdivision development, a year 2044 population of 2,520, and the current supply source and WTF capacity, the City appears to have sufficient capacity to meet both current and projected ADD and PDD for the 20-year planning period of this WMCP Update.

5.3 Conservation Measures and Interties

Although not technically a supply source, water conservation can create water savings and a reduction in water demand that can eliminate or delay the need for the development of new water sources. The City could consider conservation measures, as well as future conservation program enhancements as outlined in Section 3.0 of this WMCP Update. Based on the water production and demand values provided in Section 2.0, the City is currently able to meet the needs of its customers. The current capacity (1,100 gpm) for the WTF supplied by the Washington Street Well and the Airport Well Field wells is sufficient to meet the City's 20-year projected water demands.

5.4 Potential Conservation Savings Compared to Increasing Supply Use

Based on the water system demands and available supply, it is projected that the City will not need an additional water supply source for the 20-year planning period of this WMCP Update. The City will explore additional measures to help reduce the water loss percentage to below 10 percent.

5.5 Long-Range Supply Plan

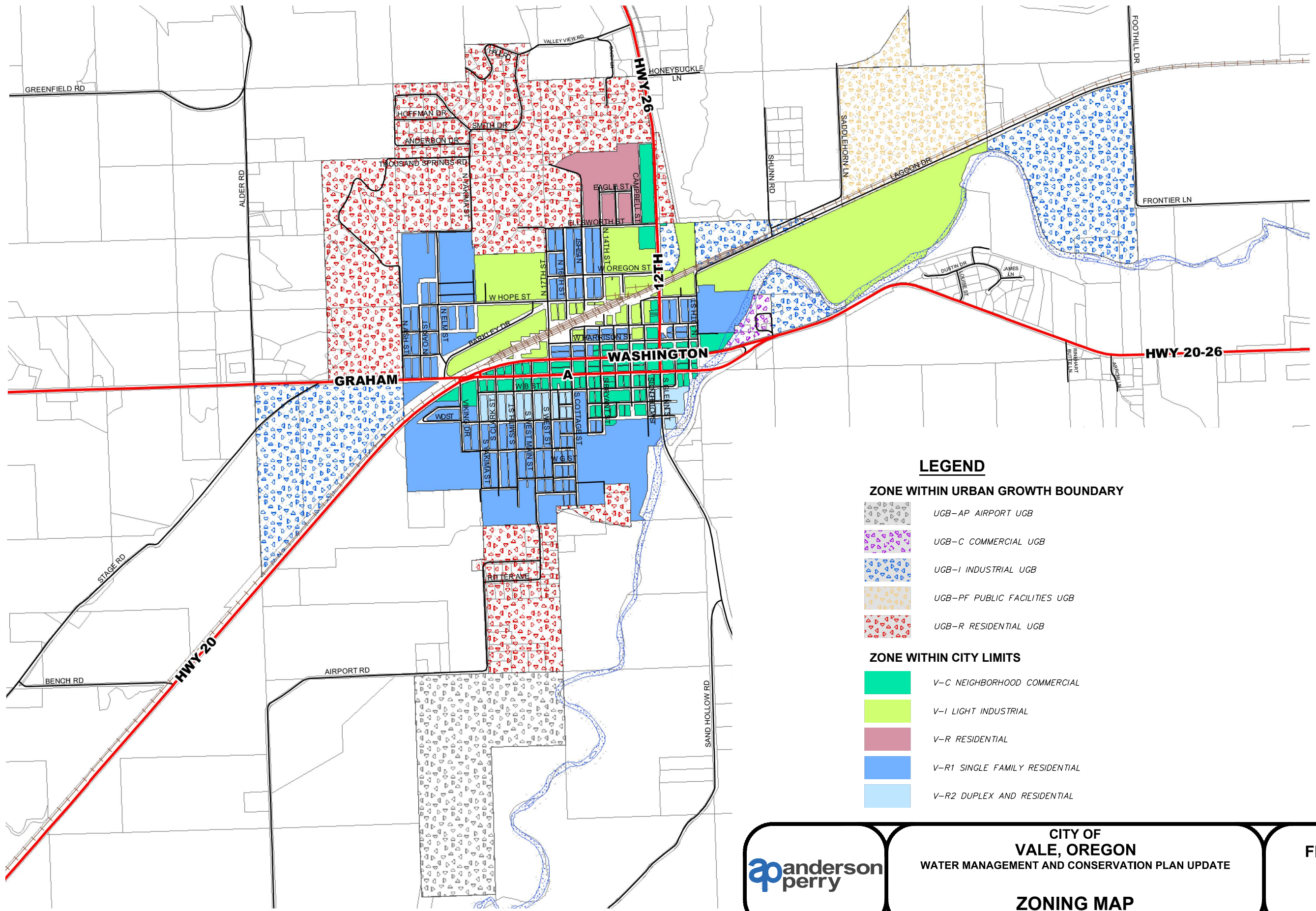
As stated earlier in this WMCP Update, the City does not anticipate the need for additional water supply sources in the next 20 years to meet projected demands. Additional conservation measures could potentially help extend the need for additional supply further into the future. The City is committed to improving conservation to help reduce overall system demands.

5.6 Schedule of Beneficial Use

All the City's municipal, irrigation, and geothermal water sources have certificated water rights associated with them. See Appendix A, Water Rights Information, for a summary of the City's current water rights.

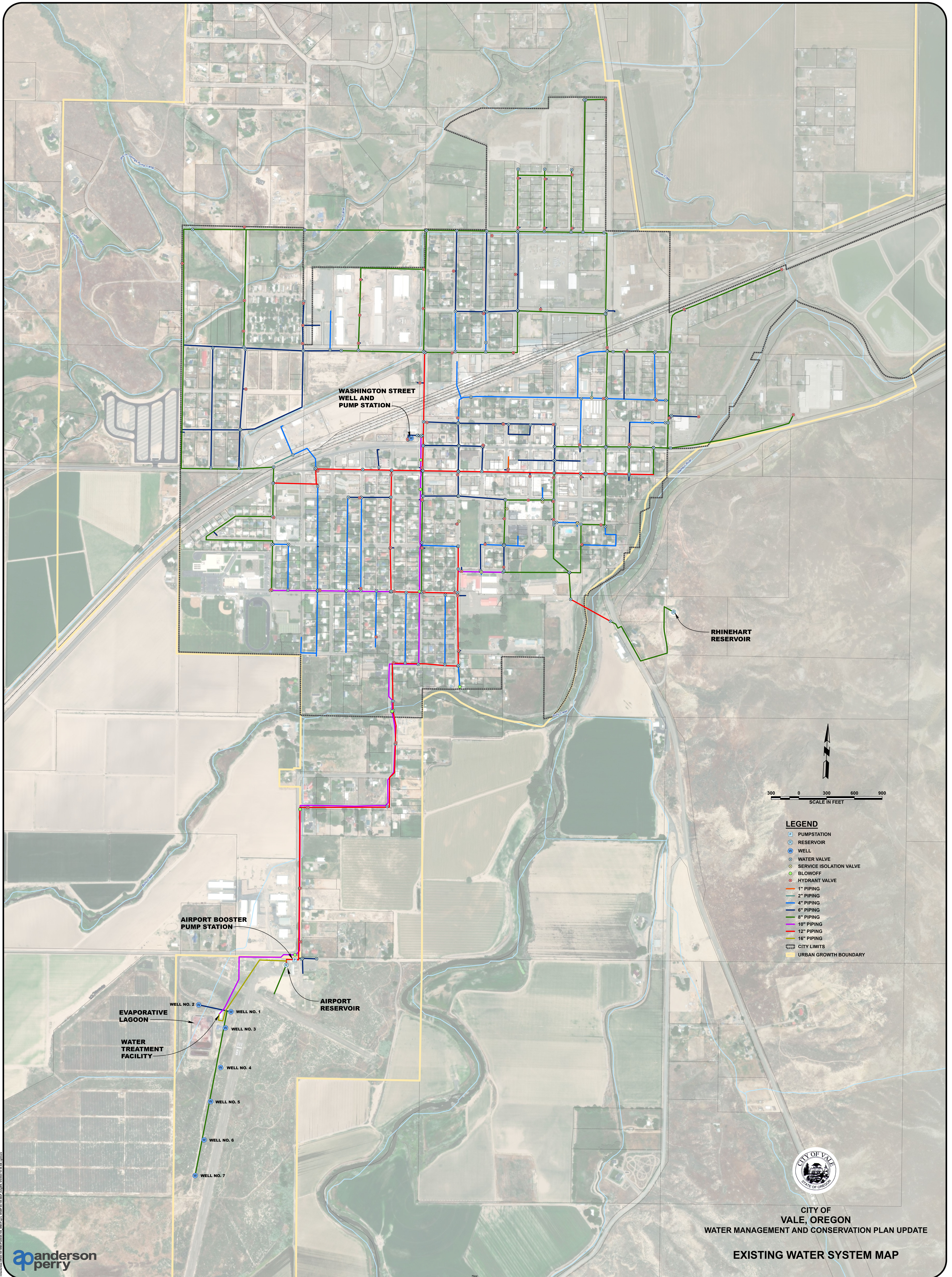
5.7 Acquisition of New Water Rights

The City does not anticipate the need to apply for any new water permits over the 20-year planning period of this WMCP Update to meet the projected demands. However, the City may want to investigate additional supply sources for added redundancy to meet demands if the Airport Well Field is offline for any amount of time or shows signs of a declining aquifer.



CITY OF
VALE, OREGON
WATER MANAGEMENT AND CONSERVATION PLAN UPDATE
ZONING MAP

FIGURE
5-1



WASHINGTON STREET
WELL AND
PUMP STATION

RHINEHART
RESERVOIR

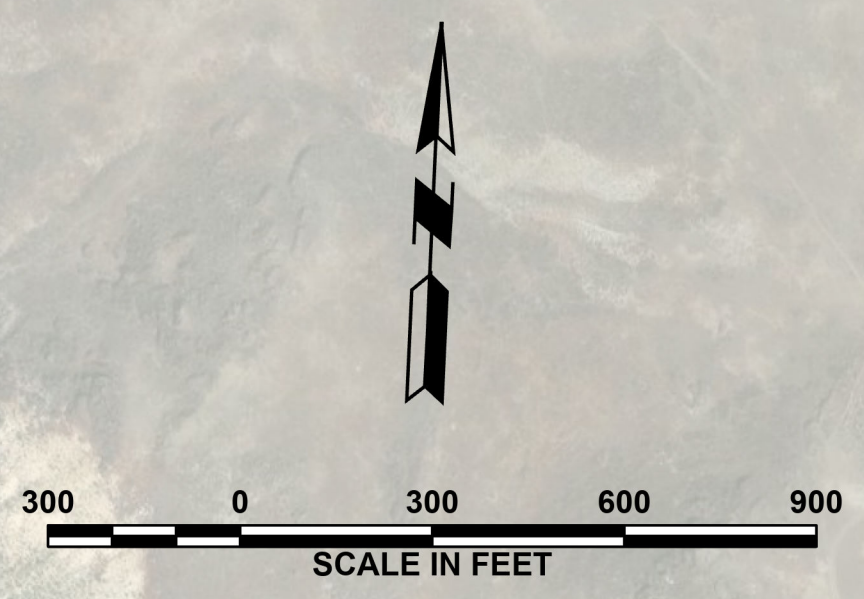
AIRPORT BOOSTER
PUMP STATION

AIRPORT
RESERVOIR

EVAPORATIVE
LAGOON

WATER
TREATMENT
FACILITY

- WELL NO. 1
- WELL NO. 2
- WELL NO. 3
- WELL NO. 4
- WELL NO. 5
- WELL NO. 6
- WELL NO. 7



- LEGEND**
- PUMPSTATION
 - RESERVOIR
 - ⊙ WELL
 - ⊙ WATER VALVE
 - ⊙ SERVICE ISOLATION VALVE
 - ⊙ BLOWOFF
 - ⊙ HYDRANT VALVE
 - 1" PIPING
 - 2" PIPING
 - 4" PIPING
 - 6" PIPING
 - 8" PIPING
 - 10" PIPING
 - 12" PIPING
 - 16" PIPING
 - CITY LIMITS
 - URBAN GROWTH BOUNDARY



CITY OF
VALE, OREGON
WATER MANAGEMENT AND CONSERVATION PLAN UPDATE

EXISTING WATER SYSTEM MAP

Appendices Table of Contents

Appendix A Water Rights Information

Appendix B Well Logs

Appendix C Water Rate Schedule

Appendix D Public Education Materials

APPENDIX A
Water Rights Information



**Oregon Water Resources Department
Water Rights Information Query Results**

- Main
- Help
- Return
- Contact Us

Records/Page:

	<u>Contacts</u>	<u>Application</u>	<u>Permit</u>	<u>Certificate</u>	<u>Claim</u>	<u>Decree</u>	<u>Transfers</u>	Download
Select	OWNER: CITY OF VALE 252 B ST WAY VALE, OR 97918	S6278	S3916	2376				NC
Select	OWNER: CITY OF VALE 252 B ST WAY VALE, OR 97918	G4679	G4406	41133				NC
Select	OWNER: CITY OF VALE 252 B ST WAY VALE, OR 97918	S50354	S38013	61405				NC
Select	OWNER: CITY OF VALE 252 B ST WAY VALE, OR 97918	G4678	G4405	87397			▶ Transfers (Collapse/Expand)	NC
Select	OWNER: CITY OF VALE 252 B ST WAY VALE, OR 97918			90942		MALHEUR RIVER	▶ Transfers (Collapse/Expand)	NC
Select	OWNER: CITY OF VALE 252 B ST WEST VALE, OR 97918	S73411	S52623	93212				NC



Contact Information (Click to Collapse...)

▼ **Contact information**

OWNER:
▶ CITY OF VALE
252 B ST WAY
VALE, OR 97918

Water Right Information (Click to Collapse...)

Status: Non-Cancelled
County: Malheur
Basin: Malheur
File Folder Location: Salem
[Watermaster District:](#) 9

Processing History (Click to Collapse...)

- ▶ **Application: S 6278**
- ▶ **Permit: S 3916** [document](#) , [paper map](#)
- ▼ **Certificate: 2376** [document](#) , [paper map](#)
 - ▶ Staff Person Responsible: no caseworker currently assigned
 - ▶ Signature: 8/1/1919
 - ▶ Type: Original
 - ▶ [View right with Web Mapping](#)
 - ▶ [View Places of Use from Water Rights in the Same Area](#)
 - ▶ [View Reported Water Use](#)



Scanned Documents (Click to Expand...)

Point(s) of Diversion (Click to Collapse...)

▼ **POD 1 - WILLOW SPRINGS > NEGRO ROCK CANYON**

▼ **Description**

- ▶ **T-R-S-QQ:** 20.00S-44.00E-7-SE NE
- ▶ **Location Description:**

▼ **POD Rate**

Max Rate (cfs)	Rate (cfs)	Max Volume (af)	Volume (af)
0.25	0.25		

▼ **MUNICIPAL USES (Primary)**

Priority Date	Max Rate (cfs)	Rate (cfs)	Max Volume (af)	Volume (af)	Elevation (ft)	Rate/Acre	Duty	Start Date	End Date	Remarks
9/16/1918	0.25	0.25						1/1	12/31	



Place(s) of Use (Click to Collapse...)

[Add TRS grouping](#)



▼ **Use - MUNICIPAL USES**
(Primary); Priority Date: 9/16/1918

T-R-S	QQ	DLC	Gov't Lot	Taxlot	Acres	Status	Linked PODs	Inchoate Info	Remarks
18.00S-45.00E-19	SW NE					NC			CITY OF VALE
18.00S-45.00E-19	SE NE					NC			CITY OF VALE
18.00S-45.00E-19	SE NW					NC			CITY OF VALE
18.00S-45.00E-19	NE SW					NC			CITY OF VALE
18.00S-45.00E-19	SE SW					NC			CITY OF VALE
18.00S-45.00E-19	NE SE					NC			CITY OF VALE
18.00S-45.00E-19	NW SE					NC			CITY OF VALE
18.00S-45.00E-19	SW SE					NC			CITY OF VALE
18.00S-45.00E-19	SE SE					NC			CITY OF VALE
18.00S-45.00E-20	SW NE					NC			CITY OF VALE
18.00S-45.00E-20	SE NE					NC			CITY OF VALE
18.00S-45.00E-20	NE NW					NC			CITY OF VALE
18.00S-45.00E-20	NW NW					NC			CITY OF VALE
18.00S-45.00E-20	SW NW					NC			CITY OF VALE
18.00S-45.00E-20	SE NW					NC			CITY OF VALE
18.00S-45.00E-20	NE SW					NC			CITY OF VALE
18.00S-45.00E-20	NW SW					NC			CITY OF VALE
18.00S-45.00E-20	SW SW					NC			CITY OF VALE
18.00S-45.00E-20	SE SW					NC			CITY OF VALE
18.00S-45.00E-20	NE SE					NC			CITY OF VALE
18.00S-45.00E-20	NW SE					NC			CITY OF VALE
18.00S-45.00E-20	SW SE					NC			CITY OF VALE
18.00S-45.00E-20	SE SE					NC			CITY OF VALE
18.00S-45.00E-21	NE NW					NC			CITY OF VALE
18.00S-45.00E-21	NW NW					NC			CITY OF VALE
18.00S-45.00E-21	SW NW					NC			CITY OF VALE
18.00S-45.00E-21	SE NW					NC			CITY OF VALE
18.00S-45.00E-21	NE SW					NC			CITY OF VALE
18.00S-45.00E-21	NW SW					NC			CITY OF VALE
18.00S-45.00E-29	NE NW					NC			CITY OF VALE
18.00S-45.00E-29	NW NW					NC			CITY OF VALE
18.00S-45.00E-29	SW NW					NC			CITY OF VALE
18.00S-45.00E-29	SE NW					NC			CITY OF VALE
18.00S-45.00E-30	NE NE					NC			CITY OF VALE
18.00S-45.00E-30	NW NE					NC			CITY OF VALE
18.00S-45.00E-30	SW NE					NC			CITY OF VALE
18.00S-45.00E-30	SE NE					NC			CITY OF VALE

18.00S-45.00E-30	NE NW					NC			CITY OF VALE
18.00S-45.00E-30	SE NW					NC			CITY OF VALE
18.00S-45.00E-30	NE SE					NC			CITY OF VALE
18.00S-45.00E-30	NW SE					NC			CITY OF VALE
18.00S-45.00E-30	SW SE					NC			CITY OF VALE
18.00S-45.00E-30	SE SE					NC			CITY OF VALE

Sum of Acres: 0.0

Water Right Genealogy (Click to Collapse...)

.....*No genealogy records available for this water right, try the family link below instead.*



[View Water Rights in same Family](#)

[Report Errors with Water Right Data](#)

APPENDIX B
Well Logs

WELL # 1

STATE OF OREGON
WATER WELL REPORT
(as required by ORS 537.765)

MALH
51259

(START CARD) # 63826

Instructions for completing this report are on the last page of this form.

(1) OWNER: Well Number L14931
Name City of Vale
Address 252 B Street West
City Vale State Oregon Zip 97918

(2) TYPE OF WORK
 New Well Deepening Alteration (repair/recondition) Abandonment

(3) DRILL METHOD:
 Rotary Air Rotary Mud Cable Auger
 Other

(4) PROPOSED USE:
 Domestic Community Industrial Irrigation
 Thermal Injection Livestock Other Hydrogeologic

(5) BORE HOLE CONSTRUCTION:
Special Construction approval Yes No Depth of Completed Well 33 ft.
Explosives used Yes No Type _____ Amount _____

HOLE			SEAL			
Diameter	From	To	Material	From	To	Sacks or pounds
12"	0	36	Bentonite	1	18	850 #

How was seal placed: Method A B C D E
 Other pour
Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing: 8"	42	18	260	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8"	28	33	250	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liner:				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(7) PERFORATIONS/SCREENS:

Perforations Method _____
 Screens Type Johnson Material S.S

From	To	Slot size	Number	Diameter	Drill pipe size	Casing	Liner
18	28	.100			PIPE	<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

Pump Bailor Air Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
75 to 100	—	28	1 hr.

Temperature of water _____ Depth Artesian Flow Found _____
Was a water analysis done? Yes By whom _____
Did any strata contain water not suitable for intended use? Too little
 Salty Muddy Odor Colored Other _____
Depth of strata: _____

(9) LOCATION OF WELL by legal description:
County Malheur Latitude _____ Longitude _____
Township 18 N or S Range 45 E or W. WM.
Section 31 NW 1/4 NW 1/4
Tax Lot 7100 Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) 3800 Airport Rd Vale, Oregon

(10) STATIC WATER LEVEL:
8 ft. below land surface. Date 8-27-97
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:
Depth at which water was first found 8'

From	To	Estimated Flow Rate	SWL
B	26	75 TO 100	B

(12) WELL LOG:
Ground Elevation _____

Material	From	To	SWL
top soil	0	2	
hard pan	2	4	
silty clay	4	8	
gravel & sand	8	26	
blue clay	26	36	

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JUN 09 1999

WATER RESOURCES DEPT.
SALEM, OREGON

Date started 8-27-97 Completed 8-28-97

(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.
Signed Dave Johnson WWC Number 1500 Date 6-7-99

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.
Signed _____ WWC Number _____ Date _____

WELL #2

STATE OF OREGON WATER WELL REPORT (as required by ORS 537.765)

MALH 51258

(START CARD) # W 63824

Instructions for completing this report are on the last page of this form.

(1) OWNER: City of Vale Well Number L14933 Name City of Vale Address 252 B Street West City Vale State Oregon Zip 97918

(2) TYPE OF WORK: [X] New Well [] Deepening [] Alteration (repair/recondition) [] Abandonment

(3) DRILL METHOD: [X] Rotary Air [] Rotary Mud [] Cable [] Auger [] Other

(4) PROPOSED USE: [] Domestic [] Community [] Industrial [] Irrigation [] Thermal [] Injection [] Livestock [X] Other Hydrogeologic

(5) BORE HOLE CONSTRUCTION: Special Construction approval [] Yes [X] No Depth of Completed Well 33 ft. Explosives used [] Yes [X] No Type Amount

Table with columns: HOLE, SEAL, Diameter, From, To, Material, From, To, Sacks or pounds. Includes entries for Bentonite and Bentonite.

How was seal placed: Method [] A [] B [] C [] D [] E [X] Other four Backfill placed from ft. to ft. Material Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER: Table with columns: Diameter, From, To, Gauge, Steel, Plastic, Welded, Threaded. Includes entries for 8 inch casing.

Final location of shoe(s)

(7) PERFORATIONS/SCREENS: Table with columns: From, To, Slot size, Number, Diameter, Hole/pipe size, Casing, Liner. Includes entry for Johnson screens.

(8) WELL TESTS: Minimum testing time is 1 hour. [] Pump [] Bailer [X] Air [] Flowing Artesian. Yield 75 gal/min, Drawdown -, Drill stem at 30, Time 1 hr.

Temperature of water Depth Artesian Flow Found Was a water analysis done? [] Yes By whom Did any strata contain water not suitable for intended use? [] Too little [] Salty [] Muddy [] Odor [] Colored [] Other Depth of strata:

(9) LOCATION OF WELL by legal description: County Malheur Latitude Longitude Township 18 N or S Range 45 E or W. WM. Section 31 NW 1/4 NW 1/4 Tax Lot 7100 Lot Block Subdivision Street Address of Well (or nearest address) 3800 Airport Rd Vale

(10) STATIC WATER LEVEL: 9 FT ft. below land surface. Date 8-29-97 Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES: Depth at which water was first found 16'

Table with columns: From, To, Estimated Flow Rate, SWL. Includes entry for 16 to 26 ft depth with flow rate 75 and SWL 9.

(12) WELL LOG: Ground Elevation

Table with columns: Material, From, To, SWL. Includes entries for Top soil, hard pan, Silty clay, Gravel, BLUE CLAY.

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JUN 09 1999

WATER RESOURCES DEPT. SALEM, OREGON

Date started 8-29-97 Completed 8-29-97

(unbonded) Water Well Constructor Certification: I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

Signed Dan Adamson WWC Number 1500 Date 6-7-99

(bonded) Water Well Constructor Certification: I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Signed Date

WELL #3

MALH
51257

STATE OF OREGON
WATER WELL REPORT
(as required by ORS 537.765)

(START CARD) # 63825

Instructions for completing this report are on the last page of this form.

(1) OWNER: Well Number L14932

Name City of Vale
Address 252 B Street West
City Vale State Oregon Zip 97918

(2) TYPE OF WORK
 New Well Deepening Alteration (repair/recondition) Abandonment

(3) DRILL METHOD:
 Rotary Air Rotary Mud Cable Auger
 Other

(4) PROPOSED USE:
 Domestic Community Industrial Irrigation
 Thermal Injection Livestock Other Hydrogeologic

(5) BORE HOLE CONSTRUCTION:
Special Construction approval Yes No Depth of Completed Well 37 ft.
Explosives used Yes No Type _____ Amount _____

HOLE		SEAL					
Diameter	From	To	Material	From	To	Sacks or pounds	
12"	0	37	Bentonite			750 #	
12"	0	37	BENTONITE	1	18	750 LBS	

How was seal placed: Method A B C D E
 Other pour
Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

Casing:	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
	8"	12	28	3/8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		28	33	3/8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:

Perforations Method _____
 Screens Type Johnson Material S.S

From	To	Slot size	Number	Diameter	Tube/pipe size	Casing	Liner
18	28	.100		8"	pipe	<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

Yield gal/min	Drawdown	Drill stem at	Time
75		30	1 hr.

Temperature of water _____ Depth Artesian Flow Found _____
Was a water analysis done? Yes By whom _____
Did any strata contain water not suitable for intended use? Too little
 Salty Muddy Odor Colored Other _____
Depth of strata: _____

(9) LOCATION OF WELL by legal description:
County Malheur Latitude _____ Longitude _____
Township 18 N or S 45 Range E or W. WM.
Section 31 NW 1/4 NW 1/4
Tax Lot 7100 Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) 3800 Airport Rd Vale Oregon

(10) STATIC WATER LEVEL:
8.5 ft. below land surface. Date 8.29.97
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:
Depth at which water was first found 15

From	To	Estimated Flow Rate	SWL
15	25	75 TO 100	8.5

(12) WELL LOG:
Ground Elevation _____

Material	From	To	SWL
Top Soil & silty clay	0	15	
Gravel & Sand	15	25	
Blue Clay	25	36	

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WATER RESOURCES DEPT.
SALEM, OREGON

Date started 8.29.97 Completed 8.29.97

(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

Signed Dave Adamson WWC Number 1500
Date 6.7.99

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Signed _____ WWC Number _____
Date _____

WELL #4

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

MALH
51261

WELL I.D. # L 14935
START CARD # 63802

Instructions for completing this report are on the last page of this form.

(1) OWNER: Well Number 14935
Name City of Vale
Address 252 B Street West
City Vale State Oregon Zip 97918

(2) TYPE OF WORK
 New Well Deepening Alteration (repair/recondition) Abandonment

(3) DRILL METHOD:
 Rotary Air Rotary Mud Cable Auger
 Other

(4) PROPOSED USE:
 Domestic Community Industrial Irrigation
 Thermal Injection Livestock Other Hydrogeologic

(5) BORE HOLE CONSTRUCTION:
Special Construction approval Yes No Depth of Completed Well 33 ft.
Explosives used Yes No Type _____ Amount _____

HOLE			SEAL			Sacks or pounds
Diameter	From	To	Material	From	To	
12	0	38	Bentonite	1	18	900 #

How was seal placed: Method A B C D E
 Other pour
Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

Diameter	From	To	Gauge	Steel		Welded	Threaded
				Plastic			
Casing: 8	+2	18	3/4	<input checked="" type="checkbox"/>	322	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8	28	33	3/4	<input checked="" type="checkbox"/>	320	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:				<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) _____

(7) PERFORATIONS/SCREENS:

Perforations Method _____
 Screens Type Johnson Material S.S.

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
18	28	100		8"	pipe	<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

Pump Bailer Air Artesian

Yield gal/min	Drawdown	Drill stem at	Time
75-100	-	28	1 hr.

Temperature of water _____ Depth Artesian Flow Found _____
Was a water analysis done? Yes By whom _____
Did any strata contain water not suitable for intended use? Too little
 Salty Muddy Odor Colored Other _____
Depth of strata: _____

(9) LOCATION OF WELL by legal description:
County Malheur Latitude _____ Longitude _____
Township 18 N or S Range 45 E or W. WM.
Section 31 SW 1/4 NE 1/4
Tax Lot 7100 Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) 3800 Airport Rd Vale Oregon

(10) STATIC WATER LEVEL:
9'2" ft. below land surface. Date 11-25-97
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:
Depth at which water was first found 16'

From	To	Estimated Flow Rate	SWL
16	25	75-100	9'2"

(12) WELL LOG:
Ground Elevation _____

Material	From	To	SWL
Silty soil w/ some small gravel rocks	0	2	
harder silty clay	2	4	
soft silty clay	4	16	
gravel & sand	16	25	9'2"
Blue clay	25	38	

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WATER RESOURCES DEPT.
SALEM, OREGON

Date started 11-24-97 Completed 11-25-97
(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

Signed Dave Edmonson WWC Number 1500
Date 6-7-99

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Signed _____ WWC Number _____
Date _____

malh
51522

MALH 51522
MALH 51522

WELL #5

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

WELL I.D. # L 23044
START CARD # W113190

Instructions for completing this report are on the last page of this form.

(1) OWNER: City of Vale Well Number _____
Name _____
Address 252 B Street W
City Vale State Oregon Zip 97918

(2) TYPE OF WORK
 New Well Deepening Alteration (repair/recondition) Abandonment

(3) DRILL METHOD:
 Rotary Air Rotary Mud Cable Auger
 Other _____

(4) PROPOSED USE:
 Domestic Community Industrial Irrigation
 Thermal Injection Livestock Other Hydrogeologic

(5) BORE HOLE CONSTRUCTION:
Special Construction approval Yes No Depth of Completed Well 30.5 ft.
Explosives used Yes No Type _____ Amount _____

HOLE			SEAL			Sacks or pounds
Diameter	From	To	Material	From	To	
12	0	31.5	Bentonite	0	12	550 ^{lb}
			Silicon			
			Sand	6.9	28.5	1150 ^{lb}

How was seal placed: Method A B C D E
 Other over bore/pour
Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	8"	12	13.5	322	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	8"	23.5	28.5	322	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) none

(7) PERFORATIONS/SCREENS:

Perforations		Method		Type		Material		Casing	Liner
From	To	Slot size	Number	Diameter	Tele/pipe size				
13.5	23.5	.040		8"	pipe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

<input type="checkbox"/> Pump	<input type="checkbox"/> Bailer	<input checked="" type="checkbox"/> Air	<input type="checkbox"/> Flowing
Yield gal/min	Drawdown	Drill stem at	Artesian
75			
			1 hr.

Temperature of water _____ Depth Artesian Flow Found _____
Was a water analysis done? Yes By whom _____
Did any strata contain water not suitable for intended use? Too little
 Salty Muddy Odor Colored Other _____
Depth of strata: _____

(9) LOCATION OF WELL by legal description:
County Malheur Latitude _____ Longitude _____
Township 18 N or S Range 45 E or W. WM.
Section 31 1/4 _____ 1/4 _____
Tax Lot SW Lot NE Block _____ Subdivision _____
Street Address of Well (or nearest address) 3800 Airport Rd
Vale, Oregon 97918

(10) STATIC WATER LEVEL:
6' 9 1/2" ft. below land surface. Date 6-21-00
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:
Depth at which water was first found 12'

From	To	Estimated Flow Rate	SWL
12	22	75	7 1/2 ft

(12) WELL LOG:
Ground Elevation _____

Material	From	To	SWL
<u>Drain clay silt</u>	0	12	
<u>Clay & gravel</u>	12	22	
<u>blue clay & gravel</u>	22	31.5	

Date started 6-21-00 Completed 6-21-00
(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

WWC Number _____
Signed _____ Date _____

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 1714
Signed Dave Adamson Date 7-10-00



MALH 51522

Oregon

John A. Kitzhaber, M.D., Governor

Water Resources Department

Commerce Building
158 12th Street NE
Salem, OR 97301-4172
(503) 378-3739
FAX (503) 378-8130

This is a final order in other than a contested case. This order is subject to judicial review under ORS 183.484. Any petition for judicial review of this order must be filed within the time specified by ORS 183.484 (2).

July 19, 2000

Dave Adamson
Adamson Pump and Drilling
1320 Smith Ave.
Nampa, ID 83651

Dear Dave:

Please find enclosed copies of the following approved special standards:

1. City of Vale (start card numbers 113190, 113191, and 113192)

If you have any questions concerning this letter, please contact me at the address or phone number listed above, or by e-mail at michael.l.mccord@wrд.state.or.us.

Sincerely,

Michael L. McCord
Well Construction Specialist

c: Ron Jacobs, Dist. 9 Watermaster
Eastern Region Well Inspector



MALH 51522

FINAL ORDER
Oregon Water Resources Department

REQUEST FOR WRITTEN APPROVAL TO USE CONSTRUCTION METHODS NOT INCLUDED IN OREGON ADMINISTRATIVE RULES 690-200 THROUGH 690-240

Before request can be considered, the following must be answered. Requests shall be submitted to the Well Construction Specialist, Water Resources Department. Requests may also be considered by the appropriate Regional Manager.

Carrie Jones

Date of request: 6:21:00 Oral approval date (if applicable): 6:21:00

Bonded Well Constructor (name, license #, and mailing address): Adanason

1320 Smith Ave
Pump & Drilling #1714 Nampa, Id 83651 208.466.6439

(1) Location of Well: SW 1/4 NE 1/4 of Section 31,
Township 18 N(S) Range 45 E(W), Malheur County.

Address at well site: 3800 Airport Rd
Vale, Oregon

(2) Start Card Number(s): W113190, L23044

(3) Name and Address of Land Owner: City of Vale
252 B. Street W. Vale, Oregon 97918

(4) Distance to the nearest well, septic tank or drainfield (if water supply well): _____

(5) The unusual conditions which necessitate this request: Requested well seal
shorten to 12' instead of 18' due to water supply
& depth of screen

(6) The proposed construction methods that the well constructor believes will be adequate for this well (attach additional pages if needed)

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JUL 17 2000

WATER RESOURCES DEPT.
SALEM, OREGON

W-55

MALH 51522

- (7) Diagram showing the pertinent features of the proposed well design and construction (attach additional pages if needed):

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JUL 17 2000

WATER RESOURCES DEPT.
SALEM, OREGON

PLEASE NOTE:

- (1) If approved, all other phases of well construction must comply with the appropriate standards described in OAR 690-200 through 690-240.
- (2) If it should be determined at some future date that the well, due to its construction, is allowing groundwater contamination, waste or loss of artesian pressure, the undersigned shall return to the site and rectify the problem.
- (3) If oral approval was granted, a written request must be submitted to the Department either within three (3) working days of the date of oral approval or prior to the completion of the associated well work. Failure to submit a written request as described above may void prior approval.

I have read and understand the above information. I further attest that the information provided is accurate to the best of my knowledge.

Bonded Constructor Signature:

Dave Adamson

*Baker City
Filed 6/27
9:00a.*

For Water Resources Department Use Only

Date: _____

Approved by: _____ Denied by: _____

Remarks: _____

MALH 51522

FINAL ORDER
Oregon Water Resources Department

REQUEST FOR WRITTEN APPROVAL TO USE CONSTRUCTION METHODS NOT INCLUDED IN OREGON ADMINISTRATIVE RULES 690-200 THROUGH 690-240

Before request can be considered, the following must be answered. Requests shall be submitted to the Well Construction Specialist, Water Resources Department. Requests may also be considered by the appropriate Regional Manager.

Carrie Jones

Date of request: 6-22-00 Oral approval date (if applicable): 6-22-00

Bonded Well Constructor (name, license #, and mailing address): Adamson Pump &
1320 Smith Ave
Drilling 1714 Nampa, Id 83651

(1) Location of Well: SW 1/4 NE 1/4 of Section 31
Township 18 N(S) Range 45 E W Malheur County

Address at well site: 3800 Airport Rd
Vale, Oregon

(2) Start Card Number(s): W 113192 L 42112

(3) Name and Address of Land Owner: City of Vale 252 B Street
W. Vale, Oregon 97918

(4) Distance to the nearest well, septic tank or drainfield (if water supply well):

(5) The unusual conditions which necessitate this request: Requested well seal
shortened to 12' instead of 18' due to water
supply & depth of screen

(6) The proposed construction methods that the well constructor believes will be adequate for this well (attach additional pages if needed)

W-55

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JUL 17 2000

WATER RESOURCES DEPT.
SALEM, OREGON

MALH 51522

- (7) Diagram showing the pertinent features of the proposed well design and construction (attach additional pages if needed):

RECEIVED

JUL 17 2000

WATER RESOURCES DEPT.
SALEM, OREGON

PLEASE NOTE:

- (1) If approved, all other phases of well construction must comply with the appropriate standards described in OAR 690-200 through 690-240.
- (2) If it should be determined at some future date that the well, due to its construction, is allowing groundwater contamination, waste or loss of artesian pressure, the undersigned shall return to the site and rectify the problem.
- (3) If oral approval was granted, a written request must be submitted to the Department either within three (3) working days of the date of oral approval or prior to the completion of the associated well work. Failure to submit a written request as described above may void prior approval.

I have read and understand the above information. I further attest that the information provided is accurate to the best of my knowledge.

Bonded Constructor Signature: *Dave Adamson*

For Water Resources Department Use Only

Date: _____

Approved by: _____ Denied by: _____

Remarks: _____

MALH 51522

FINAL ORDER
Oregon Water Resources Department

REQUEST FOR WRITTEN APPROVAL TO USE CONSTRUCTION METHODS NOT INCLUDED IN OREGON ADMINISTRATIVE RULES 690-200 THROUGH 690-240

Before request can be considered, the following must be answered. Requests shall be submitted to the Well Construction Specialist, Water Resources Department. Requests may also be considered by the appropriate Regional Manager.

Carrie Jones

Date of request: 6-22-00 Oral approval date (if applicable): 6-22-00

Bonded Well Constructor (name, license #, and mailing address): Adamson Pump
1320 Smith Ave
Drilling # 1714 Nampa, Id 83651

(1) Location of Well: SW 1/4 NE 1/4 of Section 31
Township 18 N/S Range 45 E/W Malheur County.
Address at well site: 3800 Airport Rd
Vale, Oregon

(2) Start Card Number(s): W113191, 14211

(3) Name and Address of Land Owner: City of Vale 252 B
Street W Vale, Oregon 97918

(4) Distance to the nearest well, septic tank or drainfield (if water supply well): _____

(5) The unusual conditions which necessitate this request: Requested Well Seal
shortened to 12' instead of 18' due to water
supply & depth of screen

(6) The proposed construction methods that the well constructor believes will be adequate for this well (attach additional pages if needed)

RECEIVED

JUL 17 2000

W-55 ✓
WATER RESOURCES DEPT.
SALEM, OREGON

- (7) Diagram showing the pertinent features of the proposed well design and construction (attach additional pages if needed):

RECEIVED

JUL 17 2000

WATER RESOURCES DEPT.
SALEM, OREGON

PLEASE NOTE:

- (1) If approved, all other phases of well construction must comply with the appropriate standards described in OAR 690-200 through 690-240.
- (2) If it should be determined at some future date that the well, due to its construction, is allowing groundwater contamination, waste or loss of artesian pressure, the undersigned shall return to the site and rectify the problem.
- (3) If oral approval was granted, a written request must be submitted to the Department either within three (3) working days of the date of oral approval or prior to the completion of the associated well work. Failure to submit a written request as described above may void prior approval.

I have read and understand the above information. I further attest that the information provided is accurate to the best of my knowledge.

Bonded Constructor Signature: David Edanson

For Water Resources Department Use Only

Date: _____

Approved by: _____ Denied by: _____

Remarks: _____

malh
51524

MALH 51524
MALH 51524

WELL #6

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

WELL I.D. # L 42111
START CARD # W113191

Instructions for completing this report are on the last page of this form.

(1) OWNER: Well Number 42111
Name City of Vale

Address 252 B. Street W
City Vale State Oregon Zip 97188

(2) TYPE OF WORK
 New Well Deepening Alteration (repair/recondition) Abandonment

(3) DRILL METHOD:
 Rotary Air Rotary Mud Cable Auger
 Other

(4) PROPOSED USE:
 Domestic Community Industrial Irrigation
 Thermal Injection Livestock Other Hydrogeologic

(5) BORE HOLE CONSTRUCTION:
Special Construction approval Yes No Depth of Completed Well 35 ft.
Explosives used Yes No Type _____ Amount _____

HOLE			SEAL			Sacks or pounds
Diameter	From	To	Material	From	To	
12"	0	35	Bentonite	0	16	750 [±]
			Silica Sand	16	35	1200 [±]

How was seal placed: Method A B C D E
 Other overbore/poured

Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
8"	+2	18	.322	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8"	28	35	.322	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Liner: _____

Final location of shoe(s) _____

(7) PERFORATIONS/SCREENS:

Perforations Method _____
 Screens Type Waspoka Material SS

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
18	28	.040		8"	pipe	<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

Pump Bailer Air Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
75		24 ft	1 hr.

Temperature of water _____ Depth Artesian Flow Found _____

Was a water analysis done? Yes By whom _____
Did any strata contain water not suitable for intended use? Too little
 Salty Muddy Odor Colored Other _____
Depth of strata: _____

(9) LOCATION OF WELL by legal description:
County Malheur Latitude _____ Longitude _____
Township 18 N or S 45 Range E or W WM
Section 31 SW 1/4 NE 1/4
Tax Lot 7100 Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) 3800 Airport Rd Vale Oregon 97188

(10) STATIC WATER LEVEL:
6'6" ft. below land surface. Date 6-22-00
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:
Depth at which water was first found 18'

From	To	Estimated Flow Rate	SWL
18	24 1/2	75 GPM	6 1/2'

(12) WELL LOG:
Ground Elevation _____

Material	From	To	SWL
Clay silt	0	10	
clay silt	10	18	
black & brown gravel & sand	18	24.5	6 1/2"
blue clay	24.5	35	

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JUL 17 2000
WATER RESOURCES DEPT.
SALEM, OREGON

Date started 6-22-00 Completed 6-22-00

(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.
Signed _____ WWC Number _____ Date _____

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.
Signed Dave Adamson WWC Number 1714 Date 7-10-00



MALH 51524

Oregon

John A. Kitzhaber, M.D., Governor

Water Resources Department
Commerce Building
158 12th Street NE
Salem, OR 97301-4172
(503) 378-3739
FAX (503) 378-8130

This is a final order in other than a contested case. This order is subject to judicial review under ORS 183.484. Any petition for judicial review of this order must be filed within the time specified by ORS 183.484 (2).

July 19, 2000

Dave Adamson
Adamson Pump and Drilling
1320 Smith Ave.
Nampa, ID 83651

Dear Dave:

Please find enclosed copies of the following approved special standards:

1. City of Vale (start card numbers 113190, 113191, and 113192)

If you have any questions concerning this letter, please contact me at the address or phone number listed above, or by e-mail at michael.l.mccord@wrld.state.or.us.

Sincerely,

Michael L. McCord
Well Construction Specialist

c: Ron Jacobs, Dist. 9 Watermaster
Eastern Region Well Inspector



MALH 51524

FINAL ORDER
Oregon Water Resources Department

REQUEST FOR WRITTEN APPROVAL TO USE CONSTRUCTION METHODS NOT INCLUDED IN OREGON ADMINISTRATIVE RULES 690-200 THROUGH 690-240

Before request can be considered, the following must be answered. Requests shall be submitted to the Well Construction Specialist, Water Resources Department. Requests may also be considered by the appropriate Regional Manager.

Carrie Jones

Date of request: 6-21-00 Oral approval date (if applicable): 6-21-00

Bonded Well Constructor (name, license #, and mailing address): Adamsen

1320 Smith Ave
Pump & Drilling #1714 Nampa, Id 83651 208-466-6439

(1) Location of Well: SW 1/4 NE 1/4 of Section 31,
Township 18 N(S) Range 45 E/W, Malheur County.

Address at well site: 3800 Airport Rd
Vale, Oregon

(2) Start Card Number(s): W113190, L23044

(3) Name and Address of Land Owner: City of Vale
252 B Street W. Vale, Oregon 97918

(4) Distance to the nearest well, septic tank or drainfield (if water supply well): _____

(5) The unusual conditions which necessitate this request: Requested well seal
shorten to 12' instead of 18' due to water supply
& depth of screen

(6) The proposed construction methods that the well constructor believes will be adequate for this well (attach additional pages if needed)

RECEIVED

JUL 17 2000

WATER RESOURCES DEPT.
SALEM, OREGON

W-55 ✓

MALH 51524

- (7) Diagram showing the pertinent features of the proposed well design and construction (attach additional pages if needed):

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JUL 17 2000

WATER RESOURCES DEPT.
SALEM, OREGON

PLEASE NOTE:

- (1) If approved, all other phases of well construction must comply with the appropriate standards described in OAR 690-200 through 690-240.
- (2) If it should be determined at some future date that the well, due to its construction, is allowing groundwater contamination, waste or loss of artesian pressure, the undersigned shall return to the site and rectify the problem.
- (3) If oral approval was granted, a written request must be submitted to the Department either within three (3) working days of the date of oral approval or prior to the completion of the associated well work. Failure to submit a written request as described above may void prior approval.

I have read and understand the above information. I further attest that the information provided is accurate to the best of my knowledge.

Bonded Constructor Signature: _____

Dave Adamson

*Baker City
Towed 6-27
9:00a*

For Water Resources Department Use Only

Date: _____

Approved by: _____ Denied by: _____

Remarks: _____

MALH 51524

FINAL ORDER
Oregon Water Resources Department

REQUEST FOR WRITTEN APPROVAL TO USE CONSTRUCTION METHODS NOT INCLUDED IN OREGON ADMINISTRATIVE RULES 690-200 THROUGH 690-240

Before request can be considered, the following must be answered. Requests shall be submitted to the Well Construction Specialist, Water Resources Department. Requests may also be considered by the appropriate Regional Manager.

Carrie Jones

Date of request: 6-22-00 Oral approval date (if applicable): 6-22-00

Bonded Well Constructor (name, license #, and mailing address): Adamson Pump &
1320 Smith Ave
Drilling 1714 Nampa, Id 83651

(1) Location of Well: SW 1/4 NE 1/4 of Section 31
Township 18 N(S) Range 45 E.W. Malheur County.

Address at well site: 3800 Airport Rd
Vale, Oregon

(2) Start Card Number(s): W 113192 L 42112

(3) Name and Address of Land Owner: City of Vale 252 B Street
W. Vale Oregon 97918

(4) Distance to the nearest well, septic tank or drainfield (if water supply well):

(5) The unusual conditions which necessitate this request: Requested well seal
shortened to 12' instead of 18' due to water
supply & depth of screen

(6) The proposed construction methods that the well constructor believes will be adequate for this well (attach additional pages if needed)

W-55

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JUL 17 2000

WATER RESOURCES DEPT.
SALEM, OREGON

- (7) Diagram showing the pertinent features of the proposed well design and construction (attach additional pages if needed):

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JUL 17 2000

WATER RESOURCES DEPT.
SALEM, OREGON

PLEASE NOTE:

- (1) If approved, all other phases of well construction must comply with the appropriate standards described in OAR 690-200 through 690-240.
- (2) If it should be determined at some future date that the well, due to its construction, is allowing groundwater contamination, waste or loss of artesian pressure, the undersigned shall return to the site and rectify the problem.
- (3) If oral approval was granted, a written request must be submitted to the Department either within three (3) working days of the date of oral approval or prior to the completion of the associated well work. Failure to submit a written request as described above may void prior approval.

I have read and understand the above information. I further attest that the information provided is accurate to the best of my knowledge.

Bonded Constructor Signature: _____

Dave Adamson

For Water Resources Department Use Only

Date: _____

Approved by: _____ Denied by: _____

Remarks: _____

MALH 51524

FINAL ORDER
Oregon Water Resources Department

REQUEST FOR WRITTEN APPROVAL TO USE CONSTRUCTION METHODS NOT INCLUDED IN OREGON ADMINISTRATIVE RULES 690-200 THROUGH 690-240

Before request can be considered, the following must be answered. Requests shall be submitted to the Well Construction Specialist, Water Resources Department. Requests may also be considered by the appropriate Regional Manager.

Carrie Jones

Date of request: 6:22:00 Oral approval date (if applicable): 6:22:00

Bonded Well Constructor (name, license #, and mailing address): Adamson Pump
1320 Smith Ave
Drilling # 1714 Nampa, Id 83651

(1) Location of Well: SW 1/4 NE 1/4 of Section 31
Township 18 N/S Range 45 E/W Malheur County.

Address at well site: 3800 Airport Rd
Vale, Oregon

(2) Start Card Number(s): W113191, L4211

(3) Name and Address of Land Owner: City of Vale 252 B
Street W Vale, Oregon 97918

(4) Distance to the nearest well, septic tank or drainfield (if water supply well): _____

(5) The unusual conditions which necessitate this request: Requested Well Seal
shortened to 12' instead of 18' due to water
supply & depth of screen

(6) The proposed construction methods that the well constructor believes will be adequate for this well (attach additional pages if needed)

RECEIVED

JUL 17 2000

WATER RESOURCES DEPT.
SALEM, OREGON

w-55

- (7) Diagram showing the pertinent features of the proposed well design and construction (attach additional pages if needed):

RECEIVED

JUL 17 2000

WATER RESOURCES DEPT.
SALEM, OREGON

PLEASE NOTE:

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- (3) If oral approval was granted, a written request must be submitted to the Department either within three (3) working days of the date of oral approval or prior to the completion of the associated well work. Failure to submit a written request as described above may void prior approval.

I have read and understand the above information. I further attest that the information provided is accurate to the best of my knowledge.

Bonded Constructor Signature: _____

Dawn Edmonson

For Water Resources Department Use Only

Date: _____

Approved by: _____ Denied by: _____

Remarks: _____

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51523

MALH 51523
MALH 51523

WELL #7

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.763)

WELL I.D. # L 42112
START CARD # W113192

Instructions for completing this report are on the last page of this form.

(1) OWNER: Well Number 42112
Name City of Vale
Address 252 B Street W
City Vale State Or Zip 97918

(2) TYPE OF WORK
 New Well Deepening Alteration (repair/recondition) Abandonment

(3) DRILL METHOD:
 Rotary Air Rotary Mud Cable Auger
 Other

(4) PROPOSED USE:
 Domestic Community Industrial Irrigation
 Thermal Injection Livestock Other hydrogeologic

(5) BORE HOLE CONSTRUCTION:
Special Construction approval Yes No Depth of Completed Well 35 ft.
Explosives used Yes No Type _____ Amount _____

HOLE			SEAL			
Diameter	From	To	Material	From	To	Sacks or pounds
<u>12"</u>	<u>0</u>	<u>35</u>	<u>Bentonite</u>	<u>0</u>	<u>13.5</u>	<u>800 #</u>
			<u>Silica Sand</u>	<u>13.5</u>	<u>35</u>	<u>900 #</u>

How was seal placed: Method A B C D E
 Other overbore/poured
Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

Casing/Liner	Diameter	From	To	Gauge	Material			
					Steel	Plastic	Welded	Threaded
Casing:	<u>8"</u>	<u>12</u>	<u>13.5</u>	<u>322</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<u>8"</u>	<u>23.5</u>	<u>35</u>	<u>322</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) _____

(7) PERFORATIONS/SCREENS:

Perforations Method _____
 Screens Type hpaoka Material SS

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
<u>13.5</u>	<u>23.5</u>	<u>.040</u>		<u>8"</u>	<u>pipe</u>	<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

Yield gal/min	Drawdown	Drill stem at	Time
<u>100</u>		<u>24</u>	<u>1 hr.</u>

Pump Bailer Air Flowing Artesian

Temperature of water _____ Depth Artesian Flow Found _____
Was a water analysis done? Yes By whom _____
Did any strata contain water not suitable for intended use? Too little
 Salty Muddy Odor Colored Other _____
Depth of strata: _____

(9) LOCATION OF WELL by legal description:
County Malheur Latitude _____ Longitude _____
Township 18 N or S Range 45 E or W. WM.
Section 31 SW 1/4 NE 1/4
Tax Lot 7100 Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) 3300 Airport Rd Vale, Oregon 97918

(10) STATIC WATER LEVEL:
7.5 ft. below land surface. Date 6-23-00
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:
Depth at which water was first found 13'

From	To	Estimated Flow Rate	SWL
<u>13</u>	<u>23</u>	<u>100</u>	<u>7 1/2</u>

(12) WELL LOG:
Ground Elevation _____

Material	From	To	SWL
<u>Clay silt</u>	<u>0</u>	<u>10</u>	
<u>Clay silt</u>	<u>10</u>	<u>13</u>	
<u>Gravel & dark color sand</u>	<u>13</u>	<u>23</u>	<u>7 1/2</u>
<u>Blue clay</u>	<u>23</u>	<u>35</u>	

Date started 6-23-00 Completed 6-23-00

(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

WWC Number _____
Signed _____ Date _____

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 1714
Signed Dave Adamson Date 7.10.00



MALH 51523

Oregon

John A. Kitzhaber, M.D., Governor

Water Resources Department
Commerce Building
158 12th Street NE
Salem, OR 97301-4172
(503) 378-3739
FAX (503) 378-8130

This is a final order in other than a contested case. This order is subject to judicial review under ORS 183.484. Any petition for judicial review of this order must be filed within the time specified by ORS 183.484 (2).

July 19, 2000

Dave Adamson
Adamson Pump and Drilling
1320 Smith Ave.
Nampa, ID 83651

Dear Dave:

Please find enclosed copies of the following approved special standards:

1. City of Vale (start card numbers 113190, 113191, and 113192)

If you have any questions concerning this letter, please contact me at the address or phone number listed above, or by e-mail at michael.l.mccord@wrд.state.or.us.

Sincerely,

Michael L. McCord
Well Construction Specialist

c: Ron Jacobs, Dist. 9 Watermaster
Eastern Region Well Inspector



MALH 51523

FINAL ORDER
Oregon Water Resources Department

REQUEST FOR WRITTEN APPROVAL TO USE CONSTRUCTION METHODS NOT INCLUDED IN OREGON ADMINISTRATIVE RULES 690-200 THROUGH 690-240

Before request can be considered, the following must be answered. Requests shall be submitted to the Well Construction Specialist, Water Resources Department. Requests may also be considered by the appropriate Regional Manager.

Carrie Jones

Date of request: 6-21-00 Oral approval date (if applicable): 6-21-00

Bonded Well Constructor (name, license #, and mailing address): Adanason

1320 Smith Ave
Pump & Drilling #1714 Nampa, Id 83651 208-466-6439

(1) Location of Well: SW 1/4 NE 1/4 of Section 31,

Township 18 N(S) Range 45 E/W, Malheur County.

Address at well site: 3800 Airport Rd
Vale, Oregon

(2) Start Card Number(s): W113190, L23044

(3) Name and Address of Land Owner: City of Vale

252 B. Street W. Vale, Oregon 97918

(4) Distance to the nearest well, septic tank or drainfield (if water supply well): _____

(5) The unusual conditions which necessitate this request: Requested well seal
shorten to 12' instead of 18' due to water supply
& depth of screen

(6) The proposed construction methods that the well constructor believes will be adequate for this well (attach additional pages if needed)

RECEIVED

JUL 17 2000

WATER RESOURCES DEPT.
SALEM, OREGON

w-55 ✓

MALH 51523

- (7) Diagram showing the pertinent features of the proposed well design and construction (attach additional pages if needed):

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JUL 17 2000

WATER RESOURCES DEPT. SALEM, OREGON

PLEASE NOTE:

- (1) If approved, all other phases of well construction must comply with the appropriate standards described in OAR 690-200 through 690-240.
(2) If it should be determined at some future date that the well, due to its construction, is allowing groundwater contamination, waste or loss of artesian pressure, the undersigned shall return to the site and rectify the problem.
(3) If oral approval was granted, a written request must be submitted to the Department either within three (3) working days of the date of oral approval or prior to the completion of the associated well work. Failure to submit a written request as described above may void prior approval.

I have read and understand the above information. I further attest that the information provided is accurate to the best of my knowledge.

Bonded Constructor Signature: Dave Adamson

Baker City 1
Toned 6/27
9:00a

For Water Resources Department Use Only

Date:

Approved by: Denied by:

Remarks:

MALH 51523

FINAL ORDER
Oregon Water Resources Department

REQUEST FOR WRITTEN APPROVAL TO USE CONSTRUCTION METHODS NOT INCLUDED IN OREGON ADMINISTRATIVE RULES 690-200 THROUGH 690-240

Before request can be considered, the following must be answered. Requests shall be submitted to the Well Construction Specialist, Water Resources Department. Requests may also be considered by the appropriate Regional Manager.

Carrie Jones

Date of request: 6-22-00 Oral approval date (if applicable): 6-22-00

Bonded Well Constructor (name, license #, and mailing address): Adamson Pump &
1320 Smith Ave
Drilling 1714 Nampa, Id 83651

(1) Location of Well: SW 1/4 NE 1/4 of Section 31
Township 18 N (S) Range 45 E W Malheur County

Address at well site: 3800 Airport Rd
Vale, Oregon

(2) Start Card Number(s): W 113192 L 42112

(3) Name and Address of Land Owner: City of Vale 352 B Street
W. Vale Oregon 97918

(4) Distance to the nearest well, septic tank or drainfield (if water supply well):

(5) The unusual conditions which necessitate this request: Requested well seal
shortened to 12' instead of 18' due to water
supply & depth of screen

(6) The proposed construction methods that the well constructor believes will be adequate for this well (attach additional pages if needed)

W-55

RECEIVED

JUL 17 2000

WATER RESOURCES DEPT.
SALEM, OREGON

- (7) Diagram showing the pertinent features of the proposed well design and construction (attach additional pages if needed):

RECEIVED

JUL 17 2000

WATER RESOURCES DEPT.
SALEM, OREGON

PLEASE NOTE:

- (1) If approved, all other phases of well construction must comply with the appropriate standards described in OAR 690-200 through 690-240.
- (2) If it should be determined at some future date that the well, due to its construction, is allowing groundwater contamination, waste or loss of artesian pressure, the undersigned shall return to the site and rectify the problem.
- (3) If oral approval was granted, a written request must be submitted to the Department either within three (3) working days of the date of oral approval or prior to the completion of the associated well work. Failure to submit a written request as described above may void prior approval.

I have read and understand the above information. I further attest that the information provided is accurate to the best of my knowledge.

Bonded Constructor Signature: *Dave Adamson*

For Water Resources Department Use Only

Date: _____

Approved by: _____ Denied by: _____

Remarks: _____

MALH 51523

FINAL ORDER
Oregon Water Resources Department

REQUEST FOR WRITTEN APPROVAL TO USE CONSTRUCTION METHODS NOT INCLUDED IN OREGON ADMINISTRATIVE RULES 690-200 THROUGH 690-240

Before request can be considered, the following must be answered. Requests shall be submitted to the Well Construction Specialist, Water Resources Department. Requests may also be considered by the appropriate Regional Manager.

Carrie Jones

Date of request: 6-22-00 Oral approval date (if applicable): 6-22-00

Bonded Well Constructor (name, license #, and mailing address): Adamson Pump
1320 Smith Ave
Drilling # 1714 Nampa, Id 83651

(1) Location of Well: SW 1/4 NE 1/4 of Section 31
Township 18 N/S Range 45 E/W Malheur County.

Address at well site: 3800 Airport Rd
Vale, Oregon

(2) Start Card Number(s): W113191, L42111

(3) Name and Address of Land Owner: City of Vale 252 B
Street W Vale, Oregon 97918

(4) Distance to the nearest well, septic tank or drainfield (if water supply well): _____

(5) The unusual conditions which necessitate this request: Requested Well Seal
shortened to 12' instead of 18' due to water
supply & depth of screen

(6) The proposed construction methods that the well constructor believes will be adequate for this well (attach additional pages if needed)

RECEIVED

JUL 17 2000

WATER RESOURCES DEPT.
SALEM, OREGON

w-55

- (7) Diagram showing the pertinent features of the proposed well design and construction (attach additional pages if needed):

RECEIVED

JUL 17 2000

WATER RESOURCES DEPT.
SALEM, OREGON

PLEASE NOTE:

- (1) If approved, all other phases of well construction must comply with the appropriate standards described in OAR 690-200 through 690-240.
- (2) If it should be determined at some future date that the well, due to its construction, is allowing groundwater contamination, waste or loss of artesian pressure, the undersigned shall return to the site and rectify the problem.
- (3) If oral approval was granted, a written request must be submitted to the Department either within three (3) working days of the date of oral approval or prior to the completion of the associated well work. Failure to submit a written request as described above may void prior approval.

I have read and understand the above information. I further attest that the information provided is accurate to the best of my knowledge.

Bonded Constructor Signature: *David Edanson*

For Water Resources Department Use Only

Date: _____

Approved by: _____ Denied by: _____

Remarks: _____

APPENDIX C
Water Rate Schedule

RESOLUTION NO. 97-18

A RESOLUTION ADJUSTING WATER RATES.

WHEREAS, Section 4.2:14 of Title IV (Health and Sanitation) of the City Code states that water rates shall be revised by resolution of the City Council; and

WHEREAS, the water rates currently in effect discourage conservation by charging the customer less per gallon of water the more water the customer uses; and

WHEREAS, the contract between the City and the State of Oregon Economic Development Department for Community Development Block Grant funding of water system improvements requires the City to develop and implement a water conservation program, including but not limited to changing the current water rate structure in favor of one that does not discourage conservation; NOW, THEREFORE,

BE IT RESOLVED BY THE COMMON COUNCIL OF THE CITY OF VALE, OREGON:

Section 1. Effective 1 July 1997, the water rates charged each utility customer in the City of Vale shall include a BASE CHARGE and a CONSUMPTION CHARGE.

Section 2. The BASE CHARGE shall have three components:

(A) An ADMINISTRATIVE CHARGE of \$3.71, charged to each customer receiving a bill;

(B) A FIRE CHARGE of \$2.12, charged to each customer--whether or not receiving City water service--able to demand fire protection from the City, for maintenance of the fire protection component of the City water system;

(C) A CAPACITY CHARGE charged to each customer connected to the City water system, based on the customer's ability to demand domestic water from the water system. The CAPACITY CHARGE shall be based on the size of the meter at the customer's premises, as follows:

(1) 5/8-3/4 meter.....	\$ 12.39
(2) 1-inch meter (2.5 x capacity of 5/8-3/4).....	30.98
(3) 1.5-inch meter (5 x capacity of 5/8-3/4).....	61.95
(4) 2-inch meter (8 x capacity of 5/8-3/4).....	99.12
(5) 3-inch meter (16 x capacity of 5/8-3/4).....	198.24

Section 3. The CONSUMPTION CHARGE shall be 87 cents (\$0.87) per 1,000 gallons of water consumed, irrespective of the amount of water consumed.

Section 4. Where a water connection exists which is not being used, the customer shall be billed for ADMINISTRATIVE, FIRE and CAPACITY charges, but not for CONSUMPTION, since no water is being used. The customer of a vacant premises or lot shall be presumed to be the property owner, unless a different party—e.g., a tenant—has requested to be billed for the service, and the owner consented thereto, pursuant to Section 4.2.18 of Title IV (Health and Sanitation) of the City Code.

Section 5. A premises receiving domestic water from a well rather than the City water system shall be billed for ADMINISTRATIVE and FIRE charges, since there is no connection to the City water system but the premises has the ability to demand fire protection from the water system.

Section 6. A premises served by the City water system where the water meter is either missing or inoperable will be billed for ADMINISTRATIVE, FIRE and CAPACITY charges, and if occupied, for a CONSUMPTION CHARGE based on imputed consumption of not less than 3,000 gallons per month, or the historical average consumption during the previous year, whichever is larger.

Section 7. A premises served by City water which is outside the City limits shall be assessed a surcharge of FIFTY PERCENT (50%) of the combined bill for water service, pursuant to Section 4.2.30 of Title IV (Health and Sanitation) of the City Code, unless the owners of said premises have entered into a binding agreement consented to by the City providing for annexation into the City within a specified time, or other executed agreement consented to by the City guaranteeing "in City" water rates in exchange for other consideration. Water customers outside the City limits shall be assessed a FIRE CHARGE if the proximity of the premises to areas of the City served by fire hydrants makes it likely that a fire at the premises would be fought using the fire protection component of the City water system.

31.25
Budget 3,000
4:42

Section 8. The rates herein shall take effect 1 JULY 1997, and will be reflected in end-of-July billings.

ADOPTED BY THE COMMON COUNCIL OF THE CITY OF VALE, OREGON,
this 24th day of June, 1997.

Duane M. Phutia
Mayor

ATTEST:

J. L. Sturabel
City Clerk-Coordinator

F:\ADMIN\WSWIN\WARATE1.V97]

RESOLUTION NO. 99-13

A RESOLUTION AGREEING TO ADJUST WATER RATES

WHEREAS, Section 4.2.14 of Title IV (Health and Sanitation) of the City Code states that water rates shall be revised by resolution of the City Council; and

WHEREAS, the City of Vale has made application for certain grants and loans administered by the Oregon Economic Development Department to improve the municipal water supply and distribution system and;

WHEREAS, such loans and grants require that the City of Vale adopt a rate structure that eliminates the descending water rate structure to encourage conservation and;

WHEREAS, such loans and grants require that the City of Vale adopt water rates to adequately cover expenses associated with the meter and service line repair/replacement program, including equipment and personnel costs;

WHEREAS, such loans and grants require that the City of Vale adopt water rates to adequately cover operation, maintenance, debt reserve, and equipment replacement of the improved water system,

WHEREAS, the majority of water services on the City water system are for single family residences or dwelling units, and these provide the major portion of the revenue required for operation and maintenance of the water system;

WHEREAS, the Council considers it in the best interest of the City that all water rates be determined on a basis that is relative to the minimum monthly fee assessed to a single family residence or dwelling unit or ERU;

WHEREAS, the Equivalent Residential Unit (ERU) has been calculated using the average residential monthly consumption for the months of November, January and February of the 1998-1999 winter season. That consumption averaged 9,000 gallons;

WHEREAS, the Council considers it in the best interest of the city that the charged rate be related to the volume of water consumed;

WHEREAS, each monthly base rate shall include 3000 gallons of water; and

WHEREAS, the Council considers it in the best interest of the city to permit accounts which will have significant increases in the number of base rates to petition to the City Coordinator to phase in this increase;

**NOW AND THEREFORE, BE IT RESOLVED THAT THE COMMON COUNCIL
OF THE CITY OF VALE OREGON:**

Section 1. Effective 1 January 1, 2000 Vale Municipal consumption will be billed at the following rate:

- (A) **SINGLE FAMILY UNITS.** Each single family unit shall pay a minimum base rate of \$28.22. This comprises charges for:

Administration	\$3.71
Fire	\$2.12
Operations and Maintenance	\$12.39
Debt service or loan repayment	\$10.00

Each base rate shall include 3,000 gallons of water.

- (B) **MULTIPLE UNITS.** Two or more dwellings, including mobile homes and each unit of an apartment building that is connected to a single meter shall pay for each dwelling unit the monthly minimum base rate. The volume charges for water use shall be apportioned equally to each dwelling unit unless the individual owners of the dwellings file with the City Coordinator a written agreement approved by the City that designates a different method of apportioning the charges.
- (C) **BUSINESS BUILDINGS.** The monthly minimum base rate shall be assessed each business occupant in a building and obtaining water from a common meter. The volume of water shall be charged as provided as with **MULTIPLE UNITS**. If separate meters exist for each business occupant, the charges will be calculated as a **SINGLE FAMILY RESIDENCE**.
- (D) **COMMERCIAL, INDUSTRIAL AND PUBLIC FACILITIES.** The ERUs will be calculated using the average consumption of the individual firm for the months of November, January and February divided by 9,000. This calculation will determine the number of base rates to be paid by the firm or public entity.
- (E) **MIXED USE ACCOUNTS.** Any accounts which are a combination of more than one of the above shall be charged a rate reasonably apportioned among the rates identified in sections (A) through (D).

In the case where four or more residences or businesses share a common meter, a single administration fee will be assessed. Accounts which are facing a significant increase in the number base rates as a result of calculating the base rate on the ERU formula may petition the City Coordinator to phase in this increase with the first increase in the number of base rates to be taken with the rate increase, the second increase July 1, 2000, and a third increase, should this be necessary, January 1, 2001.

Section II:

Consumption rates will be billed for each base rate on the following scale:

0-3,000 gallons	Included with base rate
4,000-10,000 gallons	\$1 per 1,000 gallons
11,000-30,000 gallons	\$1.25 per 1,000 gallons
31,000-50,000 gallons	\$1.50 per 1,000 gallons

*All consumption above 50,000 gallons will be charged at a rate of
\$2.00 per 1,000 gallons

ADOPTED BY THE COMMON COUNCIL OF THE CITY OF VALE, this 14 day of September, 1999 by the following vote:

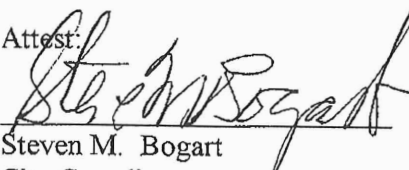
Voting for the resolution: Winters, Ingram, Tolman, Hawkins
Council Members: _____

Voting against the resolution: _____
Council Members: _____

Absent and not voting: Silence
Council Members: _____

APPROVED by the Mayor September 28, 1999


DUANE MCPHEETERS
MAYOR

Attest:

Steven M. Bogart
City Coordinator

RESOLUTION NO. 00- 19

A RESOLUTION MODIFYING THE PHASE IN OF THE WATER CHARGES FOR USERS WHO HAVE A SIGNIFICANT INCREASE IN BASE RATES

WHEREAS, the City of Vale by adoption of City of Vale Resolution #99- 13, has adjusted water rates to meet the debt service requirements for the Safe Drinking Water loans obtained by the city, and

WHEREAS, the city, as part of Resolution #99- 13, has permitted those accounts that have seen a significant increase in the number of base rates charged to phase in those increases with adjustments scheduled for January 1, 2000, July 1, 2000, and January 1, 2001 and;

WHEREAS, the City has been petitioned to delay implementation of the second and third portions of the adjustment, as defined in Resolution #99- 13, to allow time for rent adjustments and increases in budget authority to accommodate the increase and;

NOW AND THEREFORE, BE IT RESOLVED BY THE COMMON COUNCIL OF THE CITY OF VALE OREGON:

A) The second phase of the base rate adjustment for those accounts that have a significant increase in base rate charges will be implemented December 1, 2000.

B) The third phase of the base rate increase for those accounts that have a significant increase in base rate charges will be implemented June 1, 2001.

ADOPTED BY THE COMMON COUNCIL OF THE CITY OF VALE, this 27 day of , 2000 by the following vote:

Voting for the resolution: Com Hawkins moved, Com Silence seconded

Council Members: Ingram, Hawkins, Silence, Tolman

Voting against the resolution: _____

Council Members: _____

Absent and not voting: Com Winters

Council Members: _____

APPROVED by the Mayor June 27, 2000

Attest: Steve M. Regan
City Coordinator

Duane M. Pheeters
DUANE McPHEETERS
MAYOR

RESOLUTION NO. 14.04

A RESOLUTION INCREASING AND RESTRUCTURING UTILITY SYSTEM RATES

WHEREAS, the Vale City Code, section 4.2.14 (a) authorizes the City Council to set utility rates by resolution, and

WHEREAS, it is necessary to increase the fees for City provided utilities to fulfill financial management, Auditor requests and Community Develop Block Grant requirements, and

WHEREAS, it is necessary to designate a Commercial Business Use (CBU) account billing for Commercial Businesses separate from Residential Units, to promote stability in business account management and provide a more stable business billing system, and

NOW AND THEREFORE, BE IT RESOLVED BY THE COMMON COUNCIL OF THE CITY OF VALE OREGON:

The city provided utility base rate and consumptive rates shall be increased annually each year on July 1 an amount equal to the annual Consumer Price Index (CPI) as published on January 1 of each year by the United States Bureau of Labor and Statistics. This rate increase will take effect with the July utility billing.

Commercial Business Account base rates will utilize a newly established Commercial Business Use (CBU) of 7000 gallons of usage as a billing unit to serve as a replacement to the ERU computation. This newly established rate structure will take effect with the July utility billing.

ADOPTED BY COMMON COUNCIL OF THE CITY OF VALE, this 27 day of May, 2014, by the following vote:

Voting for the resolution: Com. Johnson moved, CW Farotelli. Seconded
Johnson, Farotelli, Williams

Voting against the resolution: _____

Absent or Abstaining: Cm Secis, Cm Hunt

Approved by the Mayor May 27, 2014

Attest: [Signature]
Lynn Findley, City Manager

[Signature]
Mike McLaughlin, Mayor

Airport- No meeting was held- City Manager Fuller informed Council of a walking trail that was made at the Airport as part of a senior project.

Public Works- meeting was held with City Manager Fuller Reporting- One topic was that the City has secured an additional \$97,000.00 in funding for safe routes to school. Anderson Perry is also working on a model to help the water pressure on the northwest side of town. The Boring at the wastewater site is complete.

7. Public Participation/Comments:

8. For Discussion and Possible Action: Old Business

- a. Water rate increase – The City had sent out letters to customers about a water rate increase. There was no public comment about the water increase. *Council President Keller motioned to increase the water base rate by \$3.99 bringing the base rate from \$39.90 to \$43.89 for every average water customer. Council Member Bennett seconded the motion. The motion passed unanimously.*
- b. Metroquip Crack Sealer Invoice- There was an issue with the original Metroquip estimate to repair the crack sealer. The new estimate is \$5,402.15. *Council Member Phillips motioned to accept the increase in the estimate from Metroquip in the amount of \$5,402.15. Council President Keller seconded the motion. The motion passed unanimously.*
- c. Council meetings in November and December- Council discussed having one Council Meeting for November and December and cancelling the second meeting. *Council member Bennett motioned to cancel the last council meeting in November and December. Council President Keller seconded the motion. The motion passed unanimously.*

9. Water rate increase- City Manager Fuller drafted a letter of the proposed increase to send out to the citizens of Vale. Council consented to move forward with the letter. Mayor Vialpando read the letter that was sent out to residents by Todd Fuller. There was no comment from the public.

10. For Discussion and Possible Action: New Business

- a. Resolution 21-17- The Library received a donation to purchase more books. *Council Member Phillips motioned to accept Resolution 21-17 a resolution to Increase Revenue and Appropriations for the Fiscal Year 2021-2022. Council President Keller seconded the motion. The motion passed unanimously.*
- b. Anderson Perry WWTF Project payment- This is just a payment to Anderson Perry for their continued work on the Wastewater Headworks Improvement Project. This is passthrough through Senator Findley’s ARPA money that we will be receiving. *Council Member Phillips motioned to accept the Anderson Perry Bill in the amount of \$8,000.00. Council Member Bennett seconded the motion. The motion passed unanimously.*
- c. DnA Worx payment \$1,500.00- DNA Worx built a picnic table for the Park. *Council Member Bennett motioned to approve the payment to DNA Worx in the amount of \$1,500.00. Council President Keller seconded the motion. The motion passed unanimously.*

- d. Utility Deposit Discussion- Currently City Code requires a deposit for every new customer that hooks up to City Services. In the past the City has waived the deposit for Customers in current good standing moving to a new home, or landlords with multiple properties already. The Code currently does not state that so the Council consented to move forward with City Attorney Sullivan creating an Ordinance to update the Code to allow for those circumstances.

11. For Discussion Only: Other Matters

- a. New city of Vale attorney update- No decisions were made.
- b. Eastern Oregon Border Board Grant- City Manager Fuller informed Council of the \$61,000 grant award from the Eastern Oregon Border Board.

12. Executive Session; Yes; ORS 192.660 (2) (a)

13. For Possible Action: Adjourn meeting to Tuesday November 9, 2021, at 7:00 PM.
*Council President Keller motioned to adjourn the meeting to November 09, 2021, at 7:00 PM.
Council Member Bennett seconded the motion. The motion passed unanimously.*

Copies of all documents discussed herein may be attained at City Hall, 150 LONGFELLOW STREET N., VALE, OREGON 97918

Mayor Vialpando



CITY OF VALE

MONTHLY SERVICE RATE SCHEDULE

WATER

BASE RATE	\$43.89
CONSUMPTION CHARGE	COST PER 1000 GALLONS
LEVEL 1 8,000	INCLUDED IN BASE RATE
LEVEL 2 8,0001-10,000	\$1.06/1000
LEVEL 3 10,001-30,000	\$1.32/1000
LEVEL 4 30,001-50,000	\$1.57/1000

ALL CONSUMPTION ABOVE 50,001 GALLONS WILL BE CHARGED AT THE RATE OF \$2.10 PER 1000 GALLONS.

SEWER \$42.03 PER MRU

GARBAGE

35 GALLON CART	\$12.40
60 GALLON CART	\$15.18
90 GALLON CART	\$19.71
EXTRA BAGS	\$4.63
1 YARD DUMPSTER	\$12.40 MONTHLY RENTAL \$8.36 PER TIP
2 YARD DUMPSTER	\$13.19 MONTHLY RENTAL \$15.71 PER TIP
3 YARD DUMPSTER	\$14.82 MONTHLY RENTAL \$23.07 PER TIP
4 YARD DUMPSTER	\$23.74 MONTHLY RENTAL \$30.42 PER TIP

RECYCLE (At M&W Market) \$1.00

FIRE FEE \$10.00

UPDATED JULY 8, 2022

APPENDIX D
Public Education Materials

Saving Water inside the home

We can all do our part to lessen the effects of limited water supplies this summer. We can start by conserving the water we use today. Here you will find helpful and common tips for saving water inside your home.

Monitor your water bill

Checking your water bill for unusually high water use can alert you to leaks in your home. Knowing how much water your household typically uses make this easier to determine. If your water use seems high, first determine if the increase is due to changes in your daily routine. If not, you may have a leak.

Periodically test and check for water leaks

If it's easy to find, check your water meter before and after a two-hour period when no water is being used. If the meter does not read exactly the same, you probably have a leak. Common household leaks include: running toilets, dripping faucets, and other leaking valves. If leaks are found, repairing them in a timely manner will not only conserve water, but will save you money by reducing your water bill.

Toilet leaks are often easy to detect. One way to check is to remove the tank lid, then drop 1 dye tablet or 10 drops of food coloring into the tank. (*Dye tablets may be available from your local water provider.*) Put the lid back on the toilet tank and come back in 10 to 15 minutes. If the water in the bowl has changed color, you have a leak. If the water hasn't turned a color, everything is okay.

Grabbing a wrench to repair a leaky faucet is simple, inexpensive, and can save up to 140 gallons of water per week. These types of leaks are often caused by faulty washers that don't allow your faucet to shut off properly. Faulty washers can be replaced fairly easily and inexpensively (*typically for less than \$1*), which can help you save water and reduce your water bill.

Wash only full loads

The average American household uses about 23 percent of its water running the clothes washer and dishwasher. Just one partially full load can waste 5 – 10 gallons of water.

Wash fruits and vegetables in a pan of water

Avoid continually running water to clean those fruits and veggies. You can also save water by composting your food, instead of running it down the garbage disposal. You'll save water every time.

Defrost food in the fridge

Rather than using running water to thaw food, for water efficiency as well as food safety, defrost food in the refrigerator.



Keep drinking water in the fridge, re-purpose those ice cubes

Instead of running the tap until the water turns cold, keep a pitcher on hand in the fridge. This way, every drop of water goes down you and not the drain. For those ice cubes that hit the floor instead of your glass, don't toss them. Instead, drop them in a house plant.

Turn off the water faucet while brushing your teeth

Doing so will save up to 4 gallons per minute. That's up to 200 gallons a week for a family of four.

Plug the sink on purpose

When shaving, plug the sink instead of running the water to rinse your razor and save up to 300 gallons per month.

Flush only when necessary

Don't use the toilet to flush tissues. Drop tissues in the trash instead of flushing them.

Shorten your shower

Trimming a minute or two off your normal shower time can save up to 150 gallons per month. Keeping the shower time to less than 5 minutes can save the average household up to 1,000 gallons per month. Turning the water off while washing your hair can save up to 150 gallons a month.

Retrofit old showerheads, faucets, and aerators

You can save up to 40 percent of the water used for showering by replacing an older showerhead with a water efficient model. Look for WaterSense® models, which use less than 2 gallons per minute. Your local water provider may offer water conservation kits that often include a water-efficient showerhead and other water-reducing devices. Replacing old, inefficient faucets and aerators with WaterSense® labeled models can save the average family 700 gallons of water each year, equivalent to 40 showers. Some water suppliers offer indoor water conservation kits that include water-efficient faucet aerators.

Replace that old toilet

By replacing old, inefficient toilets with more water-efficient WaterSense® labeled models, the average family can reduce water used for toilets by 20 to 60 percent – or close to 13,000 gallons of water conserved every year! That's a savings of more than \$110 per year in water costs, and \$2,200 over the lifetime of the toilet. Many municipal water providers offer a rebate for replacing an old toilet with one that uses no more than 1.6 gallons per flush.

Consider a dual-flush toilet

It has two flush options: a half-flush for liquid waste and a full-flush for solid waste. A standard water-efficient toilet uses approximately 1.6 gallons per flush, which is about the amount of water a dual-flush toilet uses for the solid waste option. The half-flush option for liquid waste only uses about 0.9 gallon per flush. An average family of four can save approximately 7,000 gallons per year by switching to a dual-flush toilet.

Determine how much water you use

Access the Alliance for Water Efficiency's water calculator to get an estimate of how much water your household uses. The calculator also compares your estimated water usage to an average home and a highly efficient home. Visit <http://www.home-water-works.org/calculator>.

Saving Water outside the home

We can all do our part to lessen the effects of limited water supplies this summer. We can start by conserving the water we use today. Here you will find helpful and common tips for saving water outside your home.

Adjust sprinklers & water when it's cool

Sprinklers should water your lawn and garden, not the street or sidewalk. Most automatic irrigation timers are set to go off in the early morning (5:00 am – 7:00 am); therefore, utilities must often super-size their facilities to meet early morning demands. Setting irrigation timers at other times of the morning or night (11:00 pm – 5:00 am), when temperatures are cooler, helps minimize evaporation and shave peak water usage.

Inspect your irrigation system

Look for leaks, broken lines, or blockage in the lines. A well maintained system will save you money, time, and water. Even little things like a shut-off nozzle for your garden hose can save you about 5 – 7 gallons each minute.

Water established lawns about 1 inch per week

You may need slightly more during hot, dry weather. Some water providers will use a “*weekly watering number*” that is based on local weather conditions to help customers determine exactly how much water their gardens and landscapes need each week.

Adjust your watering schedule

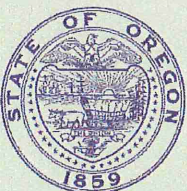
Whether you have a manual or automatic system, be sure to adjust your watering schedule throughout the irrigation season. Adjusting the amount of water used to match weather conditions (watering more when it is hot and dry, less when it is cooler and wet) helps you water your landscape more efficiently.

Apply the amount of water your soil can absorb

Water thoroughly, but infrequently. If runoff or puddling occurs, break longer watering sessions into several short sessions allowing water to soak into the soil between each session.

Consider using water-saving technology

Weather-based irrigation controllers, which act as a thermostat for your sprinkler system, use local weather data to determine when and how much water to use. Soil moisture sensors water plants based on their needs by measuring the amount of moisture in the soil and tailoring the irrigation schedule accordingly. Rainfall shutoff devices and rain sensors help decrease water wasted in the landscape by turning off the irrigation system when it is raining.



☑ Adjust your mower to a higher setting

A taller lawn provides shade to the roots and helps retain soil moisture, so your lawn needs less water.

☑ Aerate your soil

Soil can become compacted during home construction or from normal foot traffic. Aerating your soil with a simple lawn aerator can increase the infiltration of water into the ground, improving water flow to the root zone and reducing water runoff.

☑ Replace lawns

Consider replacing some lawn areas with low water use plants and ornamental grasses. They are easier to maintain than turf, don't need as much water, and look beautiful. Seek out native plants that are appropriate to your local climate and soil conditions. Once established, these plants require little water beyond normal rainfall, are very low maintenance, require little to no pesticides or fertilizer, and are more resistant to pests and diseases than are other species.

☑ Use mulch around shrubs & garden plants

Doing so helps reduce evaporation, inhibit weed growth, moderate soil temperature, and prevent erosion. Types of mulch include bark chips, grass clippings, straw, leaves, stones, and brick chips. Leave a few inches of space between trunks of woody plants and organic mulches to prevent rot.

☑ Group plants together

Creating a garden with "watering zones" allows you to give each plant the water it requires – not too much, not too little.

☑ Minimize or eliminate fertilizer

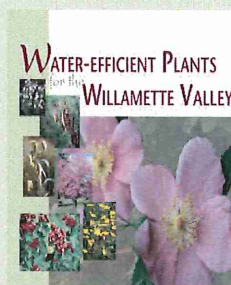
Fertilizer encourages thirsty new growth, causing your landscape to require additional water. Minimize or eliminate the use of fertilizer where possible. If you do need fertilizer, look for a product that contains "natural organic" or "slow-release" ingredients. These fertilizers feed plants slowly and evenly, helping to create healthier plants with strong root systems and no excessive "top growth." Moreover, using "slow-release" fertilizers can reduce nutrient run-off into ground and surface waters, protecting natural resources.

☑ Use a broom and a bucket

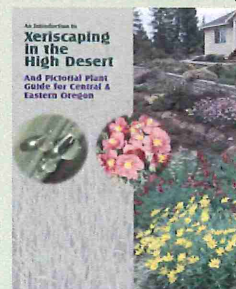
Sweep patios, sidewalks and driveways clean with a broom, instead of using a hose. Instead of using a running hose, fill a bucket with water to wash your car. A hose equipped with a shut-off nozzle would also work.

Helpful Landscaping Guides

Western Oregon



Central & Eastern Oregon



Southern Oregon

