DRAFT FOR OWRD REVIEW

Water Management and Conservation Plan

City of Pendleton

March 2025

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Contents

1. Municipal Water Supplier Plan Elements 1-1
1.1 Introduction 1-1
1.2 Plan Requirement 1-1
1.3 Plan Organization 1-1
1.4 Affected Local Governments 1-2
1.5 Plan Update Schedule 1-2
1.6 Time Extension 1-2
2. Municipal Water Supplier Description 2-1
2.1 Terminology 2-1
2.2 Water Sources 2-1
2.3 Interconnections and Agreements 2-2
2.4 Current Service Area Description and Population 2-2
2.5 System Demand 2-5
2.5.1 Historical Water Demand 2-5
2.6 Customer Characteristics and Use Patterns 2-7
2.7 Water Loss 2-11
2.8 Water Rights 2-12
2.8.1 Summary of Water Rights 2-12
2.8.2 Aquatic Resource Concerns 2-17
2.8.3 Assessment of Water Supply 2-19
1. Surface Water 2-19
2. Groundwater 2-20
2.9 Overview of Major System Infrastructure 2-21
3. Water Conservation Element 3-1
3.1 Progress Report 3-1
3.2 Use and Reporting Program 3-5
3.3 Required Conservation Measures 3-5
3.3.1 Annual Water Audit 3-5
3.3.2 System-wide Metering 3-6
3.3.3 Meter Testing and Maintenance 3-6
3.3.4 Water Rate Structure 3-6
3.3.5 Water Loss Analysis 3-7
3.3.6 Public Education 3-7
3.4 Additional Conservation Measures 3-8
3.4.1 Technical and Financial Assistance Programs 3-8
3.4.2 Supplier-Financed Retrofit or Replacement of Fixtures 3-9
3.4.3 Rate Structure and Billing Practices that Encourage Conservation 3-9
3.4.4 Water Reuse, Recycling, and Non-potable Opportunities 3-9
4. Water Curtailment Element 4-1
4.1 Introduction 4-1
4.2 History of System Curtailment Episodes 4-1
4.3 Capability Assessment 4-1
4.4 Curtailment Stages and Initiating Conditions 4-1

4.5 Curtailment Plan Levels 4-2
4.5.1 Voluntary Curtailment Level (Stage 1) 4-2
4.5.2 First Curtailment Level 4-4
4.5.3 Second Curtailment Level 4-4
4.6 Notifications of Curtailment 4-4
4.7 Drought Declaration 4-4
5. Municipal Water Supply Element 5-1
5.1 Delineation of Service Area 5-1
5.2 Population Projections 5-1
5.3 Demand Forecast 5-2
5.4 Schedule to Exercise Permits and Comparison of Projected Need to Available Sources 5-2
5.5 Alternative Sources 5-4
5.6 Quantification of Maximum Rate and Monthly Volume 5-4
5.7 Mitigation Actions under State and Federal Law 5-5
5.8 New Water Rights 5-5

Index of Exhibits

Exhibit 2-1. Service Area 2-3
Exhibit 2-2. Historical Annual Water Demand, 2012 to 2022 2-6
Exhibit 2-3. Annual Demands, 2012 to 2022 2-6
Exhibit 2-4. Monthly and Seasonal Demands, 2018 to 2022 2-7
Exhibit 2-5. Number of Connections per Customer Category, December 2022 2-8
Exhibit 2-6. Total Annual Consumption, 2018 – 2022 2-8
Exhibit 2-7. Annual Consumption by Customer Category, 2012 – 2022 2-9
Exhibit 2-8. Annual Consumption by Customer Category, 2012 – 2022 2-9
Exhibit 2-9. Percent Average Annual Consumption by Customer Category, 2012 – 2017 2-10
Exhibit 2-10. Percent Average Annual Consumption by Customer Category, 2018 – 2022 2-10
Exhibit 2-11. Monthly Consumption by Customer Category, 2018-2022 2-11
Exhibit 2-12. Water Audit, 2018-2022 2-12
Exhibit 2-13. Water Rights Table 2-13
Exhibit 2-14. Use of Water by Source 2-16
Exhibit 2-14. Federally-Listed Fish Species Potentially Located in Umatilla River 2-17
Exhibit 2-15. State-Listed Fish Species Potentially Located in Umatilla River 2-18
Exhibit 2-16. Benchmark Flows in the Umatilla River 2-19
Exhibit 3-1. Conservation Benchmarks 3-3
Exhibit 4-1. Curtailment Stages of Alert and Initiating Conditions 4-2
Exhibit 5-1. Projected Service Area Populations, 2035 and 2045 5-1
Exhibit 5-2. 20-Year Projected Demand, 2035 and 2045 5-2
Exhibit 5-3. Operational Capacity of Active Wells 5-3

Appendices

Appendix A: Letter to Affected Local Government

Appendix B: Water Utility Rates

1. Municipal Water Supplier Plan Elements

This section satisfies OWRD's requirements to provide a list of affected local governments to whom the plan was made available, and a proposed date for submittal of an updated plan.

1.1 Introduction

The City of Pendleton (City or Pendleton) is located in northeast Oregon along the Umatilla River and Interstate Highway 84. The climate of the area is semi-arid with peak summer temperatures averaging near 90 degrees Fahrenheit (F) and winter lows averaging below 30 degrees F. Like much of eastern Oregon, Pendelton receives low precipitation rates compared to the western part of the state.

The City operates a public water system and provides water to meet the needs of the City's approximately 17,000 residents and business activities. Historically, the City relied on a combination of spring water and groundwater to provide drinking water to its customers. Concerns with the quality of the spring water led to an increased dependence on groundwater sources, which at the time were experiencing long-term regional declines. In 2003, the City constructed a water filtration plant (WFP) to treat water diverted water from the Umatilla River. This surface water source of supply is currently the City's primary source of drinking water, providing Pendelton's customers with a reliable source of high-quality drinking water. The City still uses natural groundwater as a supplemental source of supply in combination with surface water. Additionally, the City relies on an aquifer storage and recovery (ASR) system to meet peak season demands. The ASR system uses treated water from the Umatilla River.

1.2 Plan Requirement

This is the City's second Water Management and Conservation Plan (WMCP). The first WMCP was published in 2012 and the Oregon Water Resources Department (OWRD) issued a final order approving the WMCP in 2012. OWRD issued a superseding final order in 2013 that modified the limitations on the rates of diversion under Permits G-2410 and G-18898 (formerly G-3225). The superseding final order granted the City use of up to 7.56 cfs using Permit G-2410 and up to 4.76 cfs using Permit G-18898 (formerly G-3225). This WMCP is submitted in compliance with OWRD's 2018 WMCP requirements for municipal water providers.

1.3 Plan Organization

This WMCP is organized into the following sections, each addressing specific OWRD requirements for WMCPs. Section 2 is an evaluation of the City's water supply, water use, water rights and water system. The information developed for Section 2 is the foundation for the sections that follow. The later sections use this information to help guide key elements of this plan, including the City's future conservation efforts, curtailment measures in the event of a water shortage, and future use and management of the City's supplies.

Section
Section 1 – Municipal Water Supplier Plan Elements
Section 2 – Municipal Water Suppliers Descriptions
Section 3 – Municipal Water Conservation Element
Section 4 – Municipal Water Curtailment Element
Section 5 – Municipal Water Supply Element

This WMCP was written in conjunction with the City's Water System Master Plan (WSMP). The City ensured that elements of overlap between the WSMP and WMCP were consistent in content.

1.4 Affected Local Governments

The following governmental agency may be affected by this WMCP:

- Umatilla County

Thirty days before submitting this WMCP to OWRD, the City made the draft WMCP available for review by the affected local government listed above along with a request for comments relating to consistency with the local government's comprehensive land use plan. The letter requesting comments is in Appendix A, no comments were received.

In addition, the City provided the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) with a draft plan as a courtesy.

1.5 Plan Update Schedule

The City anticipates submitting an update of this WMCP within 10 years of the final order approving this WMCP. As required by OWRD, a progress report will be submitted within 5 years of the final order.

1.6 Time Extension

The City is not requesting additional time to implement metering or a previous benchmark.

2. Municipal Water Supplier Description

This section satisfies OWRD's requirements to provide descriptions of the water supplier's water sources, service area and population, water rights, and adequacy and reliability of the existing water supply. The section also includes descriptions of the water supplier's customers and their water use, the water system, interconnections with other water suppliers, and quantification of water loss.

2.1 Terminology

The following terminology is used in this WMCP.

Demand and *system demand* refers to the quantity of water delivered to the City's distribution system from its water filtration plant (WFP), ASR system, and groundwater sources.

Consumption is equal to the volume of metered water use and unmetered, authorized water uses. Metered consumption includes water use by residential, commercial, industrial, public, and irrigation customers, for example, and unmetered, authorized uses can include firefighting and hydrant flushing, among other uses.

Generally, demand and consumption in municipal systems are expressed in rate of usage using million gallons per day (mgd), but also may be expressed in cubic feet per second (cfs) or gallons per minute (gpm). One mgd is equivalent to 1.55 cfs or 694 gpm. For water measured by volume, million gallons (MG) or acre-feet are used; an acre-foot is 325,850 gallons.

The following terms are used to describe specific values of system demands in this WMCP:

- Average day demand (ADD) equals the total annual production divided by 365 days.
- Maximum day demand (MDD) equals the highest system demand that occurs on any single day during a calendar year. It is also called the peak day demand.
- Monthly demand equals the total volume of water produced in a month divided by 30.
- Maximum monthly demand (MMD) equals the highest demand in one of the 12 months of a calendar year.
- Peaking factors are the ratios of one demand value to another. The type of peaking factor used in this WMCP is the ratio of the MDD to the ADD.

2.2 Water Sources

Pendleton utilizes both surface water and groundwater supplies to meet system demands. Surface water is sourced from the Umatilla River and is used to meet most of the City's demands. In the summer and fall seasons, when demand is highest, the City relies on surface water in combination with the use of its ASR system. Six wells are configured for its ASR system: Wells 1, 2, 4, 5, 8, and 14. Wells 1, 8, and 14 are run continuously during this period, recovering water previously stored in the aquifer, with intermittent use of Wells 2 through 5. Natural groundwater is appropriated from Wells 3, located in the City, and 7, which is located six miles east of the City near Mission, an unincorporated community in

Umatilla County, and used as a supplemental supply during the peak season. During the winter and spring seasons, when demand is lowest and surface water is abundant for City use, the City injects surface water into the aquifer using its six dedicated ASR wells.

2.3 Interconnections and Agreements

The City has two agreements with the Confederated Tribes of the Umatilla Indian Reservation (CTUIR). The water supply agreement provides CTUIR up to 750,000 gallons of water per month produced from the City's Well 7. To date, CTUIR has not utilized water from this well.

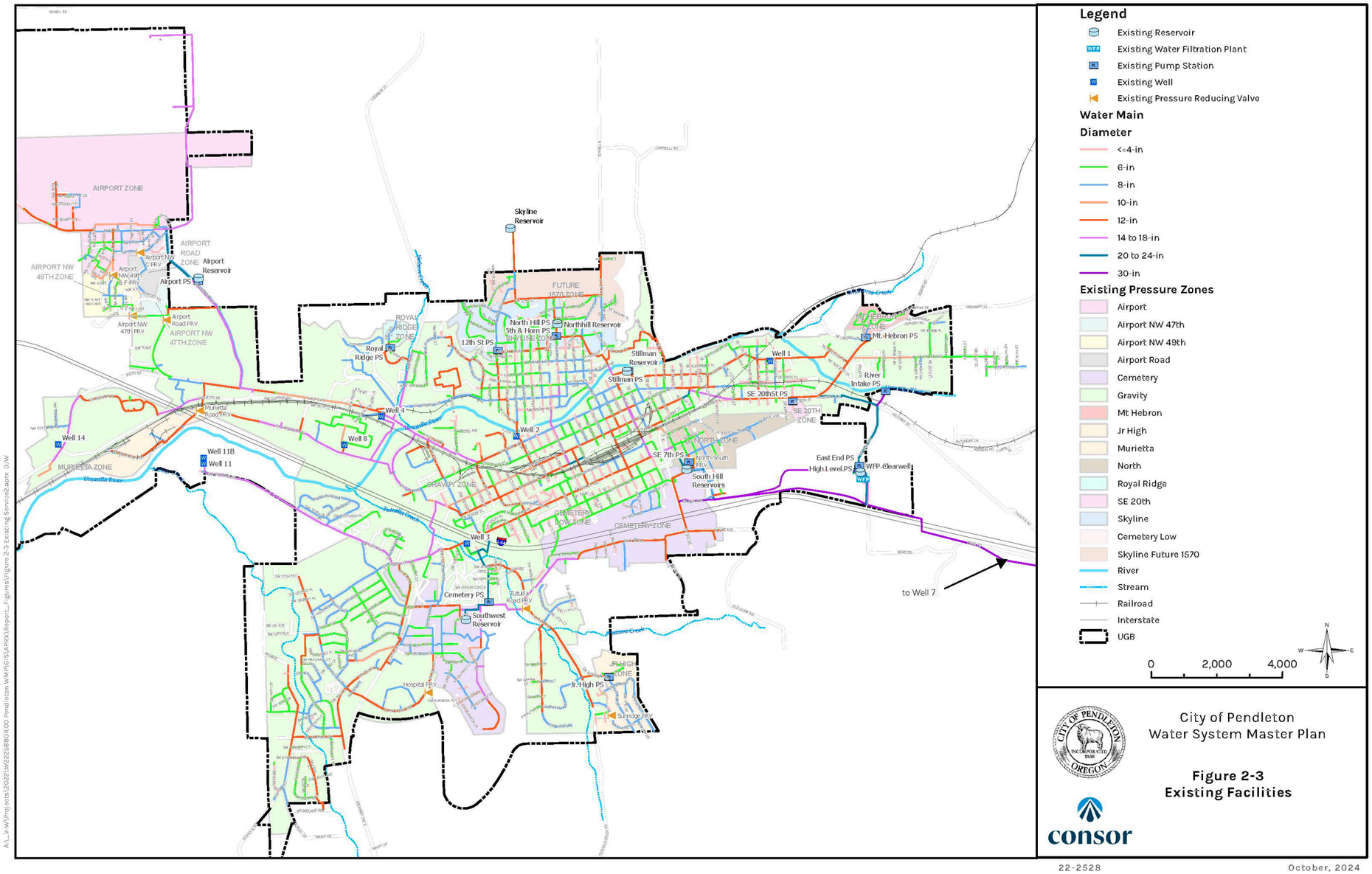
The memorandum of agreement (MOA) with CTUIR was executed in 2001. Among other terms, the MOA limits the City's diversions from the Umatilla River to 17.5 cfs when the river reaches identified flow benchmarks from December through June. The MOA also describes the City's returning of spring lands to CTUIR and abandonment of the associated spring intake and original Umatilla River intake

Pendleton is party to two 2009 settlement agreements with Waterwatch of Oregon, Inc. associated with the City's extensions of time for Permits G-3225 and G-2410. These agreements stipulate limitations on the use of the City's surface water rights when Umatilla River flow criteria are met as defined in the agreement. These agreements were incorporated into the extensions of time for these permits.

2.4 Current Service Area Description and Population

The City's service area includes the City of Pendleton, the Urban Growth Boundary (UGB), and a residential development that includes 171 residents of the CTUIR outside of the City's UGB, for a total service population of 17,177 in 2023. Exhibit 2-1 shows the City's service area as outlined by the City's 13 pressure zones.

Exhibit 2-1. Service Area



Source: 2024 Water System Master Plan (Consor)

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2.5 System Demand

System demand is the volume of water necessary to meet the needs of the City's water system. The City relies on surface and groundwater to meet these demands. Since the City installed its ASR system, water recovered through this system is also used to meet system demands.

2.5.1 Historical Water Demand

Exhibits 2-2 and 2-3 present annual water demands from 2012 through 2022. Demand volumes from 2012 through 2017 were obtained from the City's WMCP Progress Report and data from 2018 to 2022 were obtained from the City's records as part of the development of this WMCP update.

Exhibit 2-2 shows production from surface water and groundwater sources, volumes of surface water used for ASR recharge, and the total annual net demand as shown in the column titled "Total Demand". "Total Demand" includes the annual water volume recovered from the ASR program, however surface water diverted for recharge of the aquifer as part of the City's ASR system was excluded from Total Demand. For example, in 2022, the City drew 1,544.1 MG of water from the Umatilla River. In that year, the City recharged the aquifer with 950.3 MG using water from the Umatilla. The difference between the sum of the total volume diverted from the Umatilla and the City's wells (1,544.1 + 620.6 = 2,164.7 MG) less the aquifer recharge volume (950.3 MG) equals the Total Demand of 1,214.4 MG in 2022.

From 2018 to 2022, ADD ranged from a low of 3.33 mgd in 2022 to a high of 4.29 mgd in 2021. ADD is a factor of demand and therefore follows the same demand curve over time. Values for MMDs and MDDs from 2018 to 2022 were obtained from daily measurements sourced from the City's SCADA system. MDD ranged from a low of 8.27 mgd in 2019 to a high of 9.52 mgd in 2018. The MDD occurred once in June, twice in July, and twice in August, however the City considers the 2019 MDD an outlier and is not included in Exhibit 2-2. In this year, MDD was reduced as a result of voluntary curtailment measures performed by the City's customers upon the request of the City due to a well failure. Daily and monthly data from 2012 to 2017 was unavailable for Exhibit 2-2.

Exhibit 2-2. Historical Annual Water Demand, 2012 to 2022

Year[1]	Surface and Groundwater Water Diversions (MG)[2,3]	ASR Recharge (MG)	Total Demand (MG)	ADD (mgd)	MMD (MG)	MDD (mgd)	Peaking Factor
2012	1,978.1	539.5	1,438.6	3.94	Not available		
2013	2,231.7	883.8	1,347.9	3.69			
2014	2,345.9	842.0	1,503.9	4.12			
2015	2,357.7	805.7	1,552.0	4.25			
2016	2,305.9	805.7	1,500.2	4.11			
2017	2,353.1	848.3	1,504.8	4.12			

Year[1]	Surface Water Diversions (MG)[2]	Groundwater Appropriations[3] (MG)	ASR Recharge (MG)	Total Demand (MG)	ADD (mgd)	MMD (MG)	MDD (mgd)	Peaking Factor
2018	1,411.7	767.8	719.7	1,459.8	4.00	273.3	9.52	2.38
2019	1,249.5	571.8	499.0	1,322.3	3.62	266.9	(4)	(4)
2020	1,314.3	663.7	575.5	1,402.5	3.84	236.2	9.04	2.35
2021	1,333.4	776.1	543.7	1,565.8	4.29	254.8	9.19	2.14
2022	1,544.1	620.6	950.3	1,214.4	3.33	229.5	9.04	2.72
2018 – 2022 Average				**1,392.9**	**3.82**	**252.1**	**9.20**	**2.40**

[1] Data from 2012 – 2017 is in water years in keeping with the data presented in the City's 2018 WMCP Progress Report and is a combination of surface water and groundwater. Data from 2018 – 2022 is in calendar years.
[2] "Surface Water Diversions" include water diverted for ASR injection and water diverted to meet demands.
[3] "Groundwater Appropriations" include water recovered from the ASR system and natural l groundwater appropriated.
[4] Due to effect of a well failure and associated conservation efforts on MDD during peak season, MDD for 2019 is not included.

Exhibit 2-3. Annual Demands, 2012 to 2022

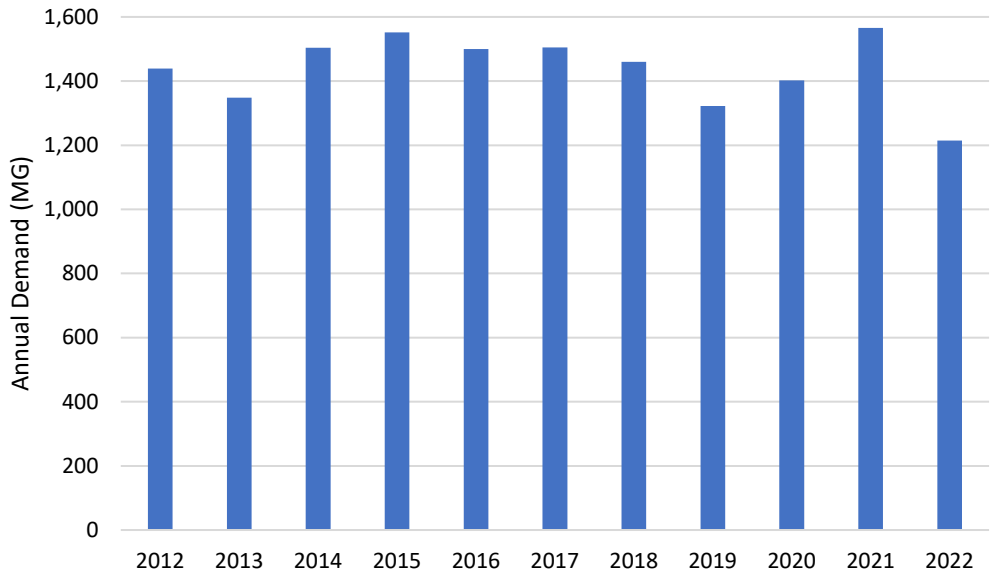
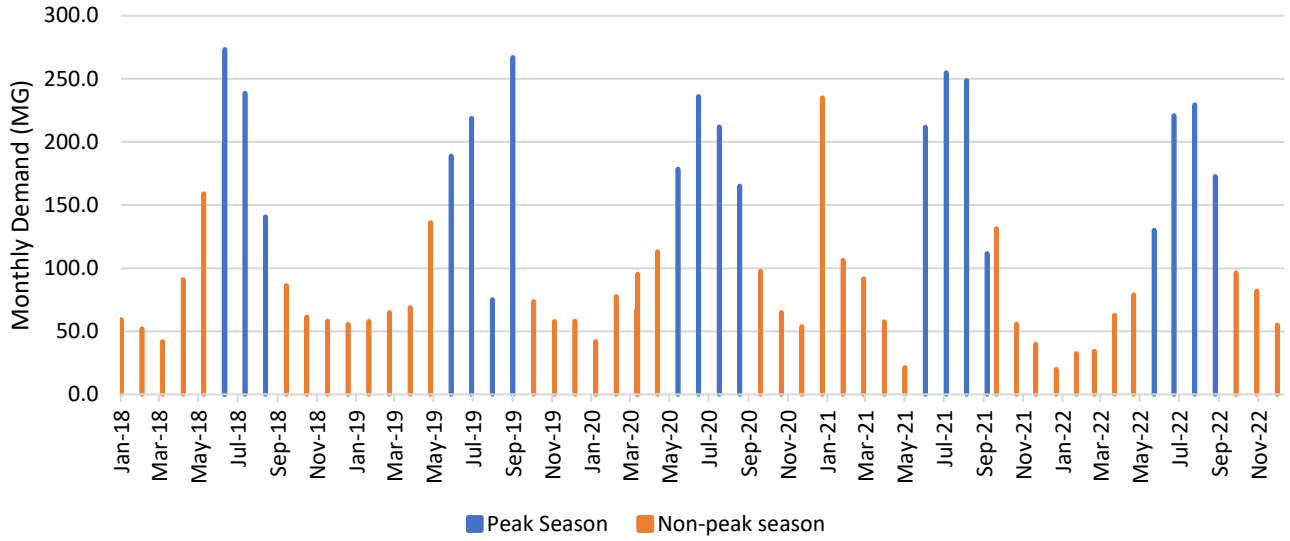


Exhibit 2-4 shows monthly demands from 2018 through 2022 with peak season demands in blue and non-peak season volumes in orange. Monthly peak season demands, which typically occur from June through September, averaged approximately 200 MG from 2018 to 2022. Monthly non-peak season demands, typically from November through May, averaged at about 75 MG over these five years.

Demand appears to significantly decrease in the month of August 2019 and dramatically increase in September 2019. Flow meters at the well houses were not read during August, so August well production volumes were added to the September demands.

Exhibit 2-4. Monthly and Seasonal Demands, 2018 to 2022



2.6 Customer Characteristics and Use Patterns

The City categorizes customers into seven classes for utility billing purposes. The City's utility billing system reports consumption using the following classes: residential, multifamily, commercial, City meters, hotel/motel, compound meters, and special cases. Multifamily is distinct from residential by the number of dwelling units, with 4 units or less categorized in the residential class. The commercial class includes commercial and industrial businesses and institutions, except hotels and motels which have their own class. Service connections at City facilities (e.g., administration buildings and parks) fall within the City meters class. In keeping with the City's previous WMCP and Progress Report, the consumption volumes of the compound meters class are combined with the commercial class consumption volumes since compound meters are only used at commercial customers' connections. Consumption at the City's fill stations is metered and is included within the special cases class. Fill stations are used by the City for City operations, such as street cleaning, and its customers by request. Also included within this class is metered usage at hydrants by contractors that use City water for dust suppression at construction sites and other purposes.

Exhibit 2-5 shows the number of connections for commercial and residential customer classes for December of 2022. The City stores meter counts by only two categories, residential and commercial. Commercial includes City meters, hotel/motel, compound meters, and special cases and the remainder are categorized into the residential connections category. Residential connections represent 86 percent

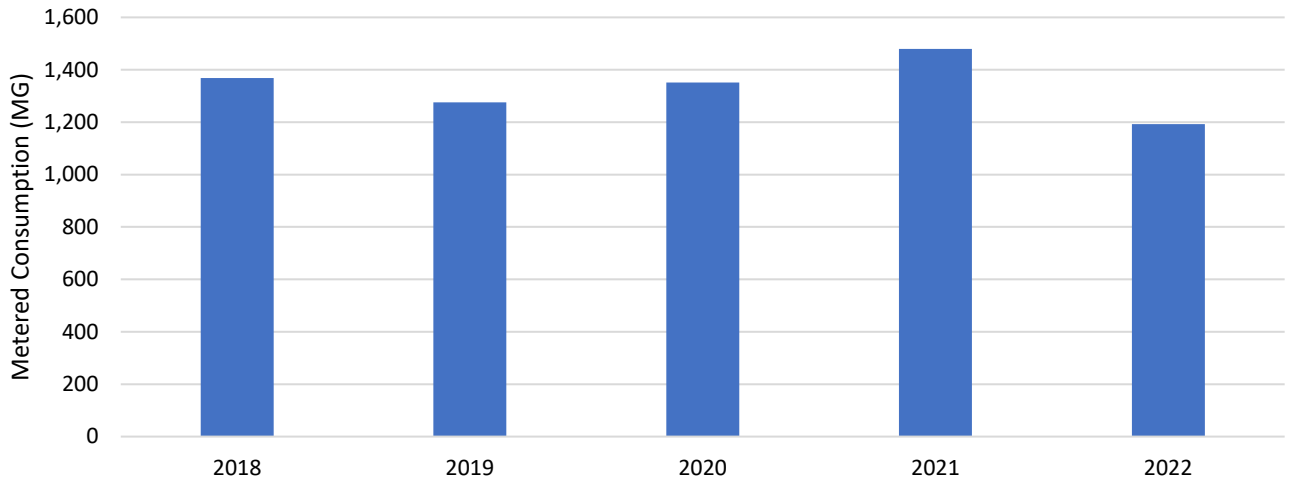
of all customer accounts, but consumption is nearly equivalent between residential and commercial accounts.

Exhibit 2-5. Number of Connections per Customer Category, December 2022

Customer Category	Number of Accounts	Percent of Accounts	Percent of Consumption
Commercial	805	13.5%	49.1%
Residential	5,153	86.5%	50.9%
Total	5,958	100.0%	100.0%

Exhibit 2- 6 graphically depicts total annual customer consumption from 2018 through 2022. Annual fluctuations in consumption volumes are closely related to weather patterns that affect outdoor water use. For example, extended days of hot weather tends drive up consumption due to increased use of water for irrigation of landscapes and gardens. Total annual consumption has remained fairly consistent over this period.

Exhibit 2-6. Total Annual Consumption, 2018 – 2022



Exhibits 2-7 and 2-8 show annual consumption by customer category from 2012 through 2022, which serves as a comparison of the quantities of water used in each category reported in the City's 2018 WMCP Progress Report.

Exhibit 2-7. Annual Consumption by Customer Category, 2012 – 2022

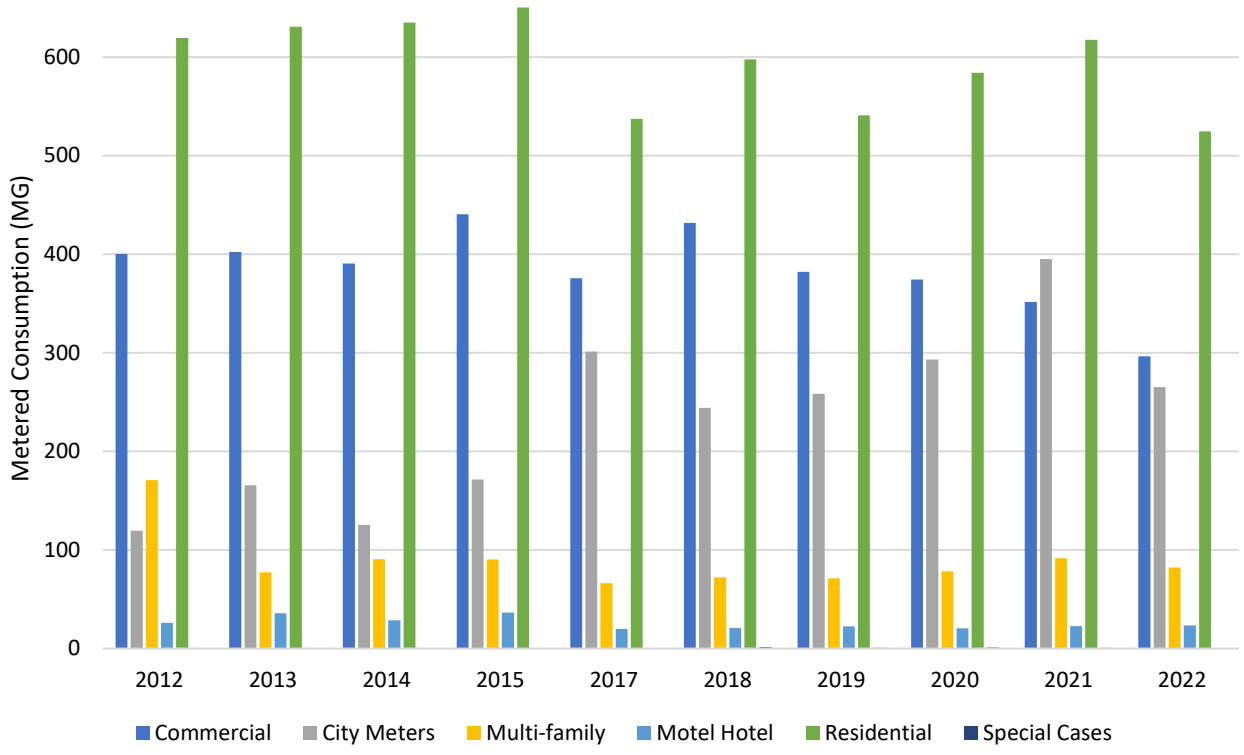
Year[1]	Commercial	City Meters[2]	Residential	Multi-family	Motel Hotel	Special Cases	Total
2012	400.3	119.6	619.3	170.8	26.1	N/A	1,336.2
2013	402.1	165.7	630.8	77.3	35.7	N/A	1,311.7
2014	390.5	125.4	634.9	90.7	28.7	N/A	1,270.3
2015	440.7	171.6	675.9	90.2	36.6	N/A	1,415.0
2017	375.6	301.2	537.4	66.2	19.9	N/A	1,300.4
2018	431.7	244.3	597.8	72.3	20.9	1.3	1,368.2
2019	382.3	258.6	541.0	71.3	22.4	0.6	1,276.2
2020	374.4	293.1	584.2	78.3	20.5	1.1	1,351.6
2021	351.6	395.3	617.5	91.7	22.7	0.8	1,479.6
2022	296.5	265.3	524.6	82.2	23.5	0.3	1,192.4

[1] Data from 2012-2017 is only available in water years. 2018-2022 is shown in calendar years. The 2016 water year is excluded because the City changed its software system for tracking and billing water sales at the end of 2016, and several months of data were lost for the 2016 water year.

[2] The 2022 City Meters water use was estimated based on an average of 2018-2020 historical data for "City meters" because meters at some parks were found to be reading inaccurately in 2022.

From 2012 to 2022, decreasing trends in consumption for the residential, multi-family, and commercial classes are shown in Exhibit 2-8, while City meters use generally increased. The decrease in residential consumption could be attributed to more efficient use of water in recent years despite population increases over time.

Exhibit 2-8. Annual Consumption by Customer Category, 2012 – 2022



Exhibits 2-9 and 2-10 compare the City's average proportion of consumption for each customer class from 2012 through 2017 and 2018 through 2022. Several of the classes retained a similar proportion over this period, however the City meters class increased by seven points, thereby dropping the share of consumption for the other three major classes of residential, commercial, and multifamily

Exhibit 2-9. Percent Average Annual Consumption by Customer Category, 2012 – 2017

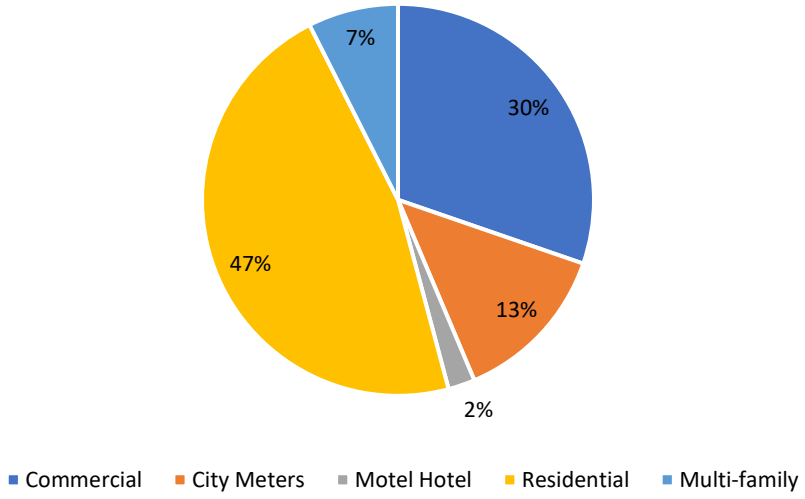
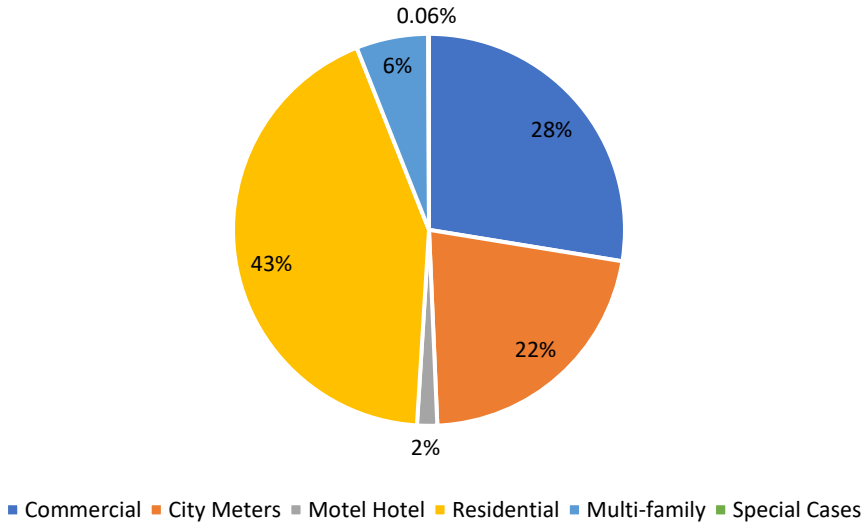
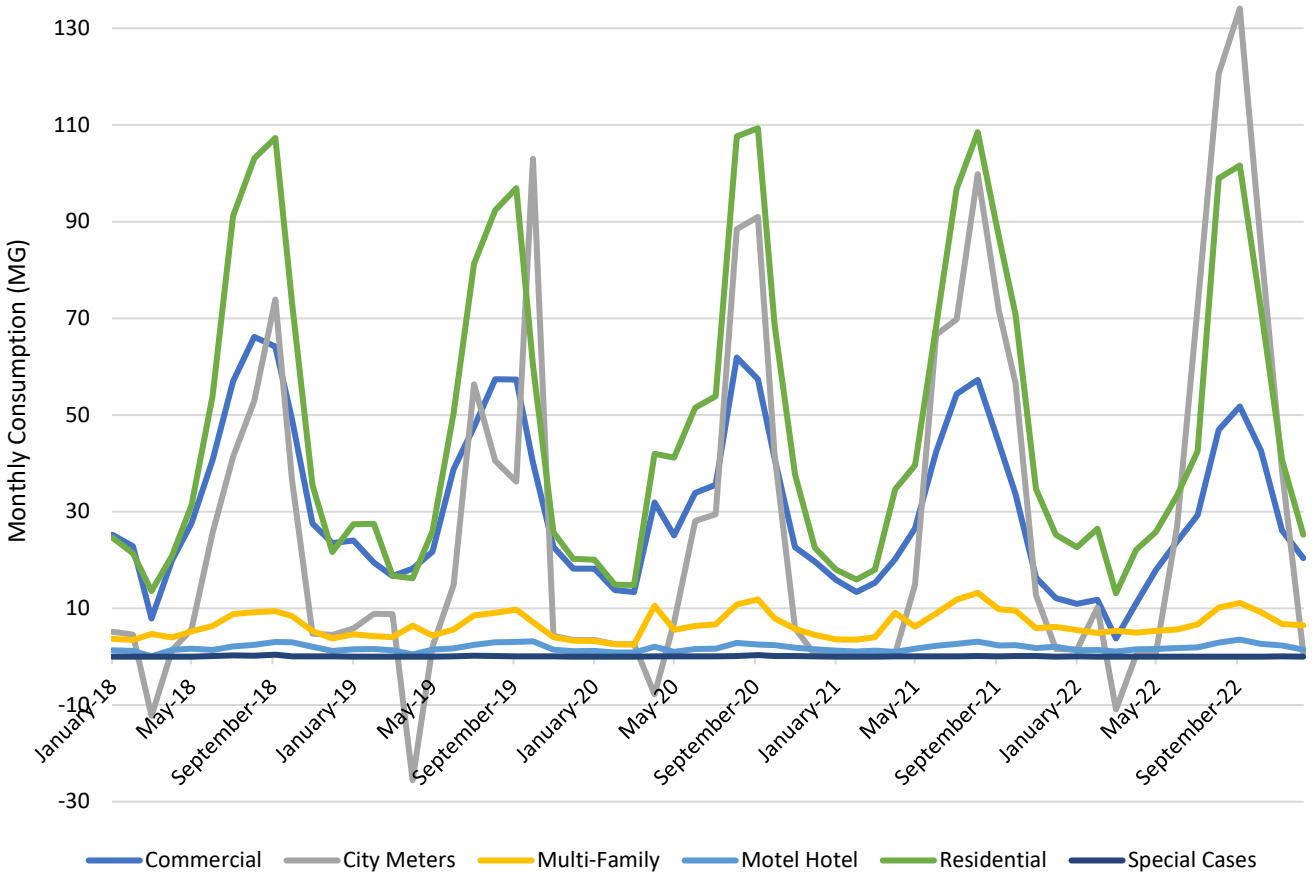


Exhibit 2-10. Percent Average Annual Consumption by Customer Category, 2018 – 2022



The monthly consumption by customer category from 2018 through 2022 is shown in Exhibit 2-11. Consumption during the peak season is typically higher than during the non-peak season, especially for residential and City use, due to outdoor uses of water, such as for irrigation. The City Meters category shows negative volumes for most years in the spring due to an accounting adjustment performed by the City at that time.

Exhibit 2-11. Monthly Consumption by Customer Category, 2018-2022



2.7 Water Loss

Water loss is defined for this WMCP as a comparison of all water that enters into the water supplier's distribution system to the total authorized consumption. Total water demand includes water supply diverted from the Umatilla River and groundwater appropriated from eight wells. Volumes recharged and recovered from the City's ASR system are also incorporated into the water loss calculations. The City estimates unmetered usage of water annually, such as water use from hydrant flushing, street sweeping, and process water volumes at the WFP. The City's recent losses were under 10 percent, ranging from 0.5 percent to 5.6 percent as shown in Exhibit 2-12.

Exhibit 2-12. Water Audit, 2018-2022

Year	Total Demand (MG)	ASR Injections (MG)	Consumption (MG)			Water Loss (MG)	Water Loss %
			Metered	Unmetered	Total[1]		
2018	1,459.8	719.7	1,368.2	10.0	1,378.2	81.6	5.6%
2019	1,322.3	499.0	1,276.2	13.3	1,289.4	32.9	2.5%
2020	1,402.5	575.5	1,351.6	13.3	1,364.8	37.7	2.7%
2021	1,565.8	543.7	1,479.6	12.0	1,491.6	74.1	4.7%
2022	1,214.4	950.3	1,192.4	15.5	1,207.9	6.4	0.5%
Average	**1392.9**	**657.7**	**1333.6**	**12.8**	**1346.4**	**46.5**	**3.3%**

[1]Total excludes volumes injected into the ASR system, but includes ASR recovery volumes.

2.8 Water Rights

2.8.1 Summary of Water Rights

The City holds numerous municipal surface and groundwater rights. Eight of these rights are municipal surface water rights authorizing a combined use of up to 13.5 cfs. In addition, Oregon Revised Statute Chapter 538 Section 450 (ORS 538.450) authorizes Pendleton an exclusive right to use all waters of the North Fork of the Umatilla River. The City's surface water rights are certificated, except for the legislative right (ORS 538.450). In addition, Certificate 87887 allows the use of water for hydroelectric production in conjunction with water used under the City's other surface water rights.

The City holds 14 municipal groundwater rights that authorize a combined rate of use of up to 52.32 cfs. All but two of these groundwater rights (G-2410 and G-18898) are certificated. Based on extensions of time issued in June 2009, use of Permits G-2410 and G-18898 beyond 2.56 cfs and 1.07 cfs, respectively, must be approved by OWRD through issuance of a final order approving a WMCP. The modified WMCP Final Order issued by OWRD in 2013 limits the current authorized rates of appropriations from Permit G-2410 to 7.56 cfs and from Permit G-18898 to 4.67 cfs.

ASR Limited License #006 was issued to Pendleton for ASR testing. The current limited license expires on June 28, 2029. The limited license authorizes the diversion of water for ASR use under Certificates 85846, 85849, 85820, 85851, 85852, 85853, 86028 and Oregon Revised Statutes (ORS) 538.450. ASR LL#006 allows storage of up to 3.227 billion gallons (BG) of water, injection at a maximum rate of 16,900 gallons per minute (gpm), and recovery at a maximum rate of 19,300 gpm using eight authorized wells. The City's ASR pilot testing well network currently consists of six ASR wells, including Well 1 (Byers), Well 4 (Hospital), Well 5 (Stillman), Well 8 (Prison) and Well 14 (Reith Road/John Deere), and one well used for recovery and observation, Well 2 (Roundup). No natural groundwater has been pumped from these five ASR wells in the past five years.

Details of these water rights and limited license are shown in Exhibit 2-13. Exhibit 2-14 presents average monthly and daily water diversions by source of supply (point of diversion/point of appropriation) authorized on the City's water rights for the years 2018 through 2022 (5 years). Exhibit 2-14 includes the Water Use Report ID to match OWRD's water use reporting system.

Exhibit 2-13. Water Rights Table

Source as Identified on Water Right	Common Name as Identified by City for Water Use Reporting	Application	Permit	Certificate	Transfer/ Permit Amendment	Priority Date	Type of Beneficial Use	Authorized Rate (cfs unless otherwise noted)	Combined Rate Limit (cfs)	Authorized Volume (MG unless otherwise noted)	Authorized Date for Completion	Maximum Diverted to Date	
												Rate (cfs)	Annual Volume (MG)
Surface Water													
Umatilla River	Umatilla River	Umatilla River Decree		85846	-	12/31/1890	Municipal	0.5	N/A	N/A	N/A	0.5	2796.44
Umatilla River	Umatilla River	Umatilla River Decree		85849	-	11/11/1885	Municipal	2.0	N/A	N/A	N/A	2	
North Fork Umatilla River	Umatilla River	S-1069	S-458	86028	-	11/12/1910	Municipal	7.2	N/A	N/A	N/A	7.2	
Springs near Thorn Hollow	Umatilla River	S-1100	S-472	85850	-	4/22/1929	Municipal	3.8	3.8 (1)	N/A	N/A	3.8	
Shaplish Springs	Umatilla River	S-2310	S-1197	85851	-	4/22/1929	Municipal	3.0		N/A	N/A	3	
Long Hair Spring and Squaw Creek Spring	Umatilla River	S-12678	S-9006	85852	-	4/22/1929	Municipal	2.0		N/A	N/A	2	
Three Simons Springs	Umatilla River	S-12679	S-9007	85853	-	4/22/1929	Municipal	2.7		N/A	N/A	2.7	
North Fork Umatilla River	Umatilla River	ORS 538.450			-	3/8/1941	Municipal	All waters of the North Fork of the Umatilla River and its tributaries	N/A	N/A	N/A	N/A	
ASR													
Umatilla River (using the authorization of Certificates 85846, 85849, 85850, 85851, 85852, 85853, 86028, ORS 538.450)	Umatilla River	LL-006	-	-	-	N/A	Municipal	8 wells (1, 2, 4, 5, 8, 11b, 14, 15) with a combined injection rate of 16,900 gpm and recovery of 19,300 gpm	See "Authorized Rate"	Storage of 3.227 BG	6/28/2029	N/A (2)	959.53 (3)

Exhibit 2-13. Water Rights Table (continued)

Source as Identified on Water Right	Common Name as Identified by City for Water Use Reporting	Application	Permit	Certificate	Transfer/ Permit Amendment	Priority Date	Type of Beneficial Use	Authorized Rate (cfs unless otherwise noted)	Combined Rate Limit (cfs)	Authorized Volume (MG unless otherwise noted)	Authorized Date for Completion	Maximum Diverted to Date	
												Rate (cfs)	Annual Volume (MG)
Groundwater													
A Well	Well 1 / Byers (UMAT 531)	U-158	U-152	20838	-	2/23/1944	Municipal	3.1	N/A	N/A	N/A	3.1	336.53 (4)
Well No. 1 (Byers Street)		G-2386	G-2204	46096	-	7/16/1962	Municipal	0.9	N/A	N/A	N/A	0.9	
Pendleton Well No. 2	Well 2 / Round-up (UMAT 53635/L-94956)	U-629	U-579	20840	-	9/16/1953	Municipal	2.51	N/A	N/A	N/A	2.51	254.74
Well No. 2 (Round-Up Well)		G-2385	G-2203	46094	-	7/16/1962	Municipal	3.1	N/A	N/A	N/A	3.1	
A Well	Well 3 / SW 21st St (UMAT 53636/L-94957)	U-455	U-418	20839	-	12/31/1951	Municipal	1.11	N/A	N/A	N/A	1.11	189.35
S.W. 21st St. Well		G-2384	G-2202	46095	-	7/16/1962	Municipal	0.2	N/A	N/A	N/A	0.2	
Pendleton Hospital Deep Well	Well 4 / Hospital (UMAT 55619)	U-755	U-670	86482	-	10/18/1954	Municipal	1.47	N/A	N/A	N/A	1.47	213.34 (4)
A Well	Well 5 / Stillman (UMAT 530)	G-1273	G-1160	29147	-	10/3/1958	Municipal	5.3	N/A	N/A	N/A	5.3	489.05 (4)
A Well	Well 8 / Prison Well (UMAT 554)	G-11326	G-10508	82840	-	12/5/1984	Municipal	3.01	N/A	N/A	N/A	3.01	348.49 (4)
A Well		G-7338	G-6773	86483	-	4/16/1976	Municipal	1.52	N/A	N/A	N/A	1.52	
Well 14	Well 14 / Reith Rd (UMAT 54072/L-94962	G-532	G-465	85847	-	3/5/1957	Municipal	1.21	1.7 (5)	607.2 AF (5)	N/A	1.21	111.86 (4) (6)
Well 14	Well 14 / Reith Rd (UMAT 54072/L-94963	G-3241	G-3044	85848	-	9/27/1965	Municipal	1.33			N/A	1.33	
A Well	Well 14 / Reith Rd (UMAT 54072/L-94964	G-2463	G-2410	-	T-8159 (Permit amendment)	10/10/1962	Municipal	20	20 (7)	N/A	10/1/2076	2.56	
Well 6	Well 6 / Sherwood (UMAT 583)												(8)
Well 7	Well 10 / Crispin (Proposed												0.00
Well 8	Well 12 / MCC (Proposed)												0.00
Well 9	Well 9 / S. Hill (Proposed)												0.00

Exhibit 2-13. Water Rights Table (continued)

Source as Identified on Water Right	Common Name as Identified by City for Water Use Reporting	Application	Permit	Certificate	Transfer/ Permit Amendment	Priority Date	Type of Beneficial Use	Authorized Rate (cfs unless otherwise noted)	Combined Rate Limit (cfs)	Authorized Volume (MG unless otherwise noted)	Authorized Date for Completion	Maximum Diverted to Date	
												Rate (cfs)	Annual Volume (MG)
Groundwater (continued)													
Well 10 (Well 7 -- Mission Well)	Well 7 / Mission (UMAT 5590)	G-3443	~~G-3225~~ G-18898	-	T-14091 (Permit amendment)	4/4/1966	Municipal	2.0	8.7 (9)	N/A	10/1/2076	1.07	168.33
Well 11	Well 11 / McKay Cr. (UMAT 512)							6.7					89.71
Well 11B	Well 11B (proposed)												0.00

(1) Certificates 85850, 85851, 85852, and 85853 are limited to a total diversion of not to exceed 3.8 cfs in combination, as specified in each of those certificates.

(2) The maximum rate diverted to date for Limited License 006 is not applicable because only maximum ASR recharge volumes are available from the City's annual ASR reports and are shown in the table

(3) The maximum annual volume diverted to date shown for Limited License 006 is the ASR recharge in a given water year between 2004 and 2022, diverted from the Umatilla River and injected into ASR Wells 1 (Byers), 4 (Hospital), 5 (Stillman), 8 (Prison) and 14 (Reith Rd/John Deere).

(4) The maximum annual volume to date reported for this well is ASR recovery water. No natural groundwater has been pumped from the City's ASR wells since 2011, and prior to that the highest volumes pumped from these wells were from ASR water.

(5) Certificates 85847 and 85848 are limited to a combined rate of 1.7 cfs, and are further limited to a diversion of up to 607.2 acre-feet for year round use, as specified in each of those certificates.

(6) The maximum annual volume diverted to date shown is from volumes reported for Well 14 in the City's annual Water Use Reports submitted to OWRD. Well 14 is authorized on these water rights (Certificates 85847, 85848, and Permit G-2410), and the volume reported is the total used from Well 14 under all of these water rights

(7) Permit G-2410 has a development limitation of 7.56 cfs of the 20 cfs authorized per the final order approving the City's 2013 WMCP.

(8) Since 1989, Well 6 has not been in use by the City. Records previous to 1989 were not available for this WMCP.

(9) Permit G-18898 has a development limitation of 4.67 cfs of the 8.7 cfs authorized per the final order approving the City's 2013 WMCP.

Exhibit 2-13. Water Rights Table (continued)

Non-Municipal Water Right

Source	Application	Permit	Certificate	Transfer/Permit Amendment	Priority Date	Type of Beneficial Use	Authorized Rate (cfs)	Authorized Volume (MG)	Authorized Date for Completion	Maximum Diverted to Date (1)	
										Rate (cfs)	Annual Volume (MG)
All surface water sources authorized by City's other surface water rights	PC-887	-	87887	-	Priority Dates of Surface Rights	Hydroelectric Production of 385 theoretical HP	13.5	N/A	N/A	13.5	2796.44

(1) The use of water for hydroelectric purposes under Certificate 87887 is in conjunction with water used under the municipal surface water rights of the City of Pendleton, as evidenced by Certificates 85846, 85849, 85850, 85851, 85852, 85853, and 86028. The amount of water used under Certificate 87887 is not greater than the quantity of water diverted to satisfy the authorized specific use under the above Certificates.

Exhibit 2-14. Use of Water by Source

Water Use Report ID	Common Name	Water Right	2022 Average Withdrawal			Five-Year (2018-2022) Average Withdrawal		
			Annual (MG)	Monthly (MG)	Daily (mgd)	Annual (MG)	Monthly (MG)	Daily (mgd)
11926	Umatilla River	Certificates 85846, 85849, 86028, 85850, 85851, 85852, 85853	1,544.06	128.67	4.23	1,424.57	118.71	3.90
11929	Well 1 / Byers (Umat 531)	Certificates 20838, 46096	203.54	16.96	0.56	169.30	14.11	0.46
11933	Well 2 / Round-Up (Umat 53635/L-94956)	Certificates 20840, 46094	64.24	5.35	0.18	109.29	9.11	0.30
11935	Well 3 / SW 21St St (Umat 53636/L-94957)	Certificates 20839, 46095	10.94	0.91	0.03	7.97	0.66	0.02
30235	Well 4 / Hospital (Umat 55619)	Certificate 86482	43.78	3.65	0.12	62.23	5.19	0.17
11930	Well 5 / Stillman (Umat 530)	Certificate 29147	109.60	9.13	0.30	116.70	9.73	0.32
11939	Well 6 / Sherwood (Umat 583)	Permit G-2410	0.00	0.00	0.00	0.00	0.00	0.00
11941	Well 7 / Mission (Umat 5590)	Permit G-18898	71.02	5.92	0.19	65.01	5.42	0.18
11932	Well 8 / Prison Well (Umat 554)	Certificates 82840, 86483	46.58	3.88	0.13	76.48	6.37	0.21
11938	Well 9 / S. Hill (Proposed)	Permit G-2410	0.00	0.00	0.00	0.00	0.00	0.00
11940	Well 10 / Crispin (Proposed)	Permit G-2410	0.00	0.00	0.00	0.00	0.00	0.00
11931	Well 11 / Mckay Cr (Umat 512)	Permit G-18898	0.00	0.00	0.00	0.00	0.00	0.00
--	Well 11b (Proposed)	Permit G-18898	0.00	0.00	0.00	0.00	0.00	0.00
11937	Well 12 / Mcc (Proposed)	Permit G-2410	0.00	0.00	0.00	0.00	0.00	0.00
11936	Well 14 / Reith Rd (Umat 54072/L-94962)	Permit G-2410	70.93	5.91	0.19	73.05	6.09	0.20

2.8.2 Aquatic Resource Concerns

OWRD requires the City to identify the following for this source: 1) any listing of the source as water quality limited (and the water quality parameters for which the source was listed); 2) any streamflow-dependent species listed by a state or federal agency as sensitive, threatened or endangered that are present in the source; and 3) any designation of a source as being in a critical groundwater area.

Pendleton relies on surface water from the Umatilla River, a tributary of the Columbia River, to meet demands. Water from Umatilla River is diverted between River Miles 57 and 58. The City also relies on groundwater appropriated from eight wells.

As part of a federal and state effort to protect Oregon streams from pollutants, every two years the Clean Water Act requires Oregon Department of Environmental Quality's (DEQ) to assess or re-assess water quality and report to the Environmental Protection Agency on the condition of Oregon's waters. The Clean Water Act Section 303(d) requires the DEQ to identify waters that do not meet water quality standards and where a Total Maximum Daily Load (TMDL) pollutant load limit needs to be developed for additional regulation (Parameter category 5).

The Umatilla River is classified by DEQ as Assessment Unit OR_SR_1707010305_02_101480, Umatilla Basin to Birch Creek reach. In DEQ's 2022 Integrated Report, DEQ categorized this river as a water quality limited stream due to iron (total).[1]

Exhibits 2-14 and 2-15 shows federally and state listed fish species, respectively, potentially located in the Umatilla River near and downstream of the river diversion point.

Exhibit 2-14. Federally-Listed Fish Species Potentially Located in Umatilla River

Species	Evolutionarily Significant Unit/Distinct Population Segment	Federal Listing
Sockeye salmon	None listed	Endangered
Chinook salmon (O. tshawytscha)	Snake River, fall run; Snake River spring/summer run	Threatened
Chinook salmon (O. tshawytscha)	Upper Columbia River, spring run	Endangered
Steelhead trout (O. mykiss)	Upper and Middle Columbia River, Snake River	Threatened
Chum salmon (O. keta)	Columbia River	Threatened
Western brook lamprey (Lampetra richardsoni)	No ESU listed	N/A
Pacific lamprey (Entosphenus tridentatus)	No ESU listed	N/A

[1] Source: Oregon Department of Environmental Quality's (DEQ) Assessment Database from DEQ's 2022 Integrated Report

Exhibit 2-14 (continued). Federally-Listed Fish Species Potentially Located in Umatilla River

Species	Evolutionarily Significant Unit/Distinct Population Segment	Federal Listing
Pacific Eulachon (Thaleichthys pacificus)	Southern DPS	Threatened
Green Sturgeon (Acipenser medirostris)	Southern DPS	Threatened

Exhibit 2-15. State-Listed Fish Species Potentially Located in Umatilla River

Species	Evolutionarily Significant Unit (ESU)/Species Management Unit (SMU)	State Listing
Chinook salmon (O. tshawytscha)	Deschutes ESU, fall run; Middle Columbia River SMU/ESU, spring run	Sensitive
Chinook salmon (O. tshawytscha)	Snake River, fall, spring/summer runs	Threatened
Bull trout (Salvelinus confluentus)	John Day SMU, Umatilla SMU	Sensitive - Critical
Steelhead - summer/Columbia Basin Rainbow Trout (O. mykiss/gairdneri)	Middle Columbia SMU/ESU	Sensitive - Critical
Western River Lamprey (Lampetra ayresii)	Range-wide	Sensitive
Western brook lamprey (Lampetra richardsoni)	Range-wide	Sensitive
Pacific lamprey (Entosphenus tridentata)	Range-wide	Sensitive
Western Cutthroat Trout (Oncorhynchus clarki lewisi)	Range-wide	Sensitive - Critical

*ESU = Evolutionary Significant Unit; SMU = Species Management Unit

References:

- OR Sensitive Species List: https://www.dfw.state.or.us/wildlife/diversity/species/docs/Sensitive_Species_List.pdf
- Threatened, Endangered, and Candidate Fish and Wildlife Species in Oregon: https://www.dfw.state.or.us/wildlife/diversity/species/docs/Threatened_and_Endangered_Species.pdf
- Status of ESA Listings and Critical Habitat Designations for West Coast Salmon and Steelhead https://www.fisheries.noaa.gov/resource/document/status-esa-listings-and-critical-habitat-designations-west-coast-salmon-and

Pendleton's groundwater supplies are not located in a critical groundwater area.

2.8.3 Assessment of Water Supply

The City's water supply has adequately met the City's recent historical demands and the City intends to continue relying on its mix of sources of supplies to meet future demands. As previously described, the City relies primarily on water recovered from its ASR system to meet peak season demands and supplements this supply with natural groundwater and the Umatilla River. During non-peak season, the City recharges its ASR system using its Umatilla River surface water rights. This operational approach allows the City to use its Umatilla River rights at times of the year when the limitations associated with these rights and the conditions of water supply agreements can be met. A more thorough discussion of the limitations associated with Pendleton's water rights and how the City meets its demands considering these limitations is provided below.

1. Surface Water

In 1941, the Oregon legislature promulgated ORS 538.450 that authorized the City exclusive right to use all waters of the North Fork of the Umatilla River, the springs which form its headwaters, and its tributaries to the confluence of the North Fork with the main stem of the Umatilla River for municipal purposes. This right is subject to rights with priority dates prior to March 8, 1941, giving the City's right an effective priority date of March 8, 1941. This statute also authorized a point of diversion on the mainstem of the Umatilla River which remains the City's current point of diversion. In 2001, ORS 538.450 was amended to include language compelling the City and CTUIR to enter into an agreement to address the City's use of its surface water rights. The resulting 2001 agreement between the City and CTUIR established a minimum flow for the Umatilla River of 250 cfs, below which the City may only divert water under its two senior-most surface water rights, Certificates 85849 (2.0 cfs) and 85846 (0.5 cfs). These rights have priority dates of 1885 and 1890, respectively. Among other conditions, this agreement also restricts the City's maximum rate of diversion from the Umatilla River to 17.5 cfs when river flows are greater than 250 cfs, but less than benchmark flows that are shown in Exhibit 2-16. The municipal rights affected by this condition include Certificates 86028, 85850, 85851, 85852, and 85853. In summary, the City may not cause river flows to reduce below 250 cfs except for Certificates 85849 and 85846 (2.5 cfs combined) at any time of the year.

Exhibit 2-16. Benchmark Flows in the Umatilla River

December	310 cfs
January	310 cfs
February	430 cfs
March	500 cfs
April	500 cfs
May	490 cfs
June	270 cfs

OWRD's 2009 proposed final order for an extension of time for Pendleton's groundwater Permits G-3225 and G-2410 were protested by Waterwatch resulting in a April 28, 2009 settlement agreement between the City, Waterwatch, and OWRD. Conditions of the settlement agreement, which were subsequently incorporated into OWRD's final orders approving these extensions, required the City to

forego use of its surface water rights with priority dates of 1910 and later when Umatilla River flows are less than 250 cfs and allow this water to remain instream.[2] This condition affirmed several conditions found in the City's agreement with CTUIR noted above. The agreement also reduced the authorized rates of appropriation and diversion from select surface water rights held by the City, including the combined rates of diversion authorized by Certificates 85850, 85851, 85852, and 85853 to 3.8 cfs from 11.7 cfs, use of groundwater Well 7 authorized by Permit G-18898 from 6.7 cfs to 2.0 cfs, and Certificate 86028 from 8.0 cfs to 7.2 cfs.

As a result of these limitations, the City has access to its senior-most surface water rights, Certificates 85849 (2.0 cfs) and 85846 (0.5 cfs), during peak season (a period when the City observes the highest system demands). In addition to the City's other surface water rights, Certificates 85849 and 85846 are also used by the City during non-peak season, thus the Umatilla River serves as primary source of the supply for the City all year. Certificate 85849 has senior status on the Umatilla River, making it a reliable source of supply. Certificate 85846 is junior to many rights on the Umatilla River and is susceptible to regulation in favor of more senior rights. For example, at least three other Umatilla River rights senior to Certificate 85846 are potentially large enough to cause the OWRD Watermaster to regulate the City's use of Certificate 85846 during periods of low flow. The City is not aware of use of Certificate 85849 being regulated to date.

The City's MDDs exceed the 2.5 cfs available to the City, requiring the City to rely on other sources of supply to meet this demand. For example, in the previous 5 years, MDD reached 9.52 MG, well above the daily volume of water that could be diverted under Certificates 85849 and 85846. In response to these limitations, Pendleton constructed an ASR system and manages this system to meet the limitations described above and satisfy system demands. During periods of high river flows, such as during the winter, the City diverts water using its surface water rights and stores this water using its ASR system following treatment. By managing the City's sources and operating its water system in this manner, Pendleton can avoid triggering the diversion restrictions as noted in its water rights and agreements and meet demand.

2. Groundwater

Historically, the City relied on groundwater to meet the City's demands, however declining aquifer levels led the City to begin relying on surface water diversions from the Umatilla River as its primary source of supply starting in 2003 following construction of its WFP. As a result of limitations on the use of its surface water supply affecting the City's surface water rights in the 2000s as noted above, the City pivoted to the use of an ASR system using Limited License LL-006 issued by OWRD in 2003 as a strategy to address these limitations. Subsequent limited license renewals have been granted by OWRD allowing ongoing testing and development of this system. The City diverts surface water under its surface water rights during non-peak season, treats this water, and injects treated water into the aquifer for aquifer recharge. The City begins recovering this stored water during peak season when river flows are low.

[2] This condition affects the City's use of Certificates 86028, 86028, 85850, 85851, 85852, and 85853 and those authorized by passage of ORS 538.450

Of the City's eight active wells, six of these wells (Wells 1, 2, 4, 5, 8, and 14) are used for the City's ASR system. These six wells are also authorized for use under one or more of the City's groundwater rights. Theoretically, the City could use natural groundwater from these wells to supplement its surface water supplies, however LL-006 restricts the use of natural groundwater from the City's ASR wells until the quantity of ASR stored water is depleted. Since the City is not depleting the stored quantity through recovery operations, the City does not currently access natural groundwater at these wells.

Unlike ASR wells, natural groundwater can be immediately available for use at Pendleton's non-ASR wells if the conditions of its groundwater rights are met. However, given the long-term regional declines in the aquifer resulting from historical groundwater use as observed by the City, the City uses relatively small volumes of natural groundwater to supplement surface water supplies. Of the City's wells not authorized for use under the City's ASR system (Wells 3, 7, 9 – 11) only Wells 3 and 7 are actively used. (Wells 9 - 11 have not been constructed.)

As a result of the method in which the City operates its water system, using a combination of surface water, stored water through its ASR system, and natural groundwater, the City's sources of supply have been reliable and adequate to meet demands. Used in this manner, natural groundwater obtained from the City's non-ASR wells serves as a supplemental source of supply and can act as a redundant source to meet demand, for example if one of the City's ASR wells or the WFP are unavailable.

Though the City's ASR system is a primary source of supply for the City, the limited license authorizing use of ASR is not as secure as a (permanent) water use permit or certificate. Limited licenses are issued by OWRD for periods of only five years, and retain junior status relative to all other water rights and can be revoked, suspended or modified for multiple reasons.

2.9 Overview of Major System Infrastructure

Surface water is diverted from the Umatilla River between RM 57 and 58 and is treated at the 12 MGD capacity WFP. Water from Well 7 is also treated at the WFP. Pendleton has eight wells located within the City: Wells 1, 2, 3, 4, 5, 8, 11 and 14. One well (Well 7) is located outside City limits and within Tribal territory. Wells 1, 2, 4, 5, 8, and 14 are used to recharge the City's ASR system, however future Wells 11b and 15 also are listed on the City's LL-006.[3]

There are eight inline distribution system reservoirs with a total storage capacity of 10.24 MG that are used to help meet consumption within 13 pressure zones. Over 227 miles of distribution lines and nine booster pump stations are used to convey water to the City's customers in these zones. A schematic of the system is included in Exhibit 2-1.

[3] Well 11b is being constructed by the City.

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3. Water Conservation Element

This section addresses OWRD's requirements to provide a description of specific required conservation measures and benchmarks, and additional conservation measures implemented by the City.

3.1 Progress Report

This is the City's third WMCP. The City's previous WMCP contained water conservation measures and associated benchmarks that the City committed to implement starting in 2012. The City's 2017 WMCP progress report provided an update on the status of the City's efforts meeting these benchmarks and other conservation program measure efforts. Exhibit 3-1 provides an update on the City's progress meeting the 2012 benchmarks since 2017.

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Exhibit 3-1. Conservation Benchmarks

OWRD Requirement	2012 Benchmarks	2023 Benchmark Status
Water audit	• Continue the annual water audit and continue to make improvements in the methodology for unmetered water. • Complete installation of fill stations for construction contractors at six locations.	• The City continues to conduct annual water audits. • The City has installed five fill stations and is working towards the installation of a sixth fill station at the East End booster station.
Metering	• Continue to meter all service connections.	• The City continues to meter all service connections. The water system is 100 percent metered.
Meter testing and maintenance program	• All new meters will continue to be tested for accuracy based on the manufacturer's recommended schedule. • Replace all meter registers and upgrade the meter reading system to a mesh wireless system. Leakage will be detectable from City Hall and the City will be able to notify customers when leakage occurs based on alarms set in the automated system.	• The City has found that meters have remained very accurate over time based on tests of a sample of meters. The City has also found that meter testing is not cost-effective, thus the City no longer tests meters. Faulty meters are replaced as needed. • The City has continued to replace meter registers and upgrade the meter reading system to a wireless system, converting approximately 85% of its meters on two of its 26 service routes. Switching meters has been a gradual process due to supply chain issues.
Rates	• Continue use of increasing block structure for water rates. • Continue annual rate increases tied to Portland Consumer Price Index.	• The City continues to use a three tier, progressive rate structure. • The City continues to increase rates by tying rate increases to economic indices.
Leak detection	Not applicable. The City's average water loss has been below 10 percent since 2002.	The City's annual water audit indicates that water loss averaged 3.3 percent from 2018-2022, thus this measure is not applicable to the City. However, the City still implements measures to detect and reduce leaks, as described in Section 3.3.5.

Public education	• Continue existing public education programs, including:
	  ○ Water efficiency tips on City website.
	  ○ Water conservation kit giveaways.
	  ○ Tours of water treatment plant and ASR system where water conservation is discussed.
	  ○ Water conservation education at local schools and on the annual Salmon Walk.
	• Assess feasibility of mailing brochures with water conservation to customers.
	• Assess the efficacy of radio and newspaper ad campaigns in the future.
		• The City's website continues to include indoor and outdoor leak prevention and detection tips.
		• City continued to provide conservation kits, but the adoption rate was below the City's expectations despite marketing efforts.
		• City has continued to provide tours of the WTP and ASR system, which are forums to discuss water issues including conservation.
		• City has not had the staffing capacity to continue conservation education programs at local schools, and Covid-19 impacted the City's outreach efforts. City intends to resume this program with local 6th-grade classes.
		• City decided to use its resources for other conservation education efforts instead of creating conservation messages for radio.
		• City provides conservation messages in utility billing stuffers about twice a year, rather than mailing brochures to customers.

System-wide leak repair or line replacement program	Not applicable. The City's average water loss has been below 10 percent since 2002.	• The City's annual water audit indicates that water loss averaged 3.3 percent from 2018-2022, thus this measure is not applicable to the City.
Technical and financial assistance programs	• Continue to flag water accounts that have high usage and notify customers, providing technical assistance with leak problems upon request. • Add five more parks to the City's computerized irrigation system.	• City continues to flag high usage accounts and provides on-site assistance to customers to help determine the presence and location of leaks. • The Parks Department has not added more parks to its computerized irrigation system. City currently is working with Parks to upgrade the irrigation systems for the four largest parks in the next five years.
Retrofitting or replacement program	Continue to provide an annual water conservation kit giveaway.	City continued to provide conservation kits, but the adoption rate was below the City's expectations despite marketing efforts.
Rate structures	• Continue use of increasing block structure for water rates. • The City will continue annual rate increases tied to Portland Consumer Price Index.	• City continues to use a three tier (block), progressive rate structure. • City continues to increase rates by tying rate increases to an economic index.
Water reuse, recycling, and non-potable water	Continue to promote information about water reuse, recycling, and non-potable use on the City's webpage to residential customers.	The City website has continued to include information about water reuse, recycling, and non-potable water use.
Other conservation	Continue to work with the Parks Department on demonstration xeriscape projects. A xeriscape project at the City shops is scheduled to be installed in 2012.	Parks Department moved resources and has not completed the arboretum project as intended.

3.2 Use and Reporting Program

The City's water use measurement and reporting program complies with the measurement standards established by OWRD. The water use records can be found on the OWRD water use reporting website: (http://apps.wrd.state.or.us/apps/wr/wateruse_report/). The City measures the water diverted from the Umatilla River using a magnetic flow meter at its point of diversion and magnetic flow meters at the City's wells.

3.3 Required Conservation Measures

OWRD requires that all water suppliers establish 5-year benchmarks for implementing the following water management and conservation measures:

- Annual water audit
- System-wide metering
- Meter testing and maintenance
- Unit-based billing
- Water loss
- Public education

During the next 5 years, the City plans to initiate, continue, or expand the following conservation measures that are required of all municipalities.

3.3.1 Annual Water Audit

A water audit is an analysis of the water system that includes a thorough accounting of all water entering and leaving the system. One of the primary purposes of an audit is to identify volumes of water loss. A water audit also enables analysis of the water supplier's own water use.

The City performs an annual water audit. The City calculates its annual water loss as the difference between the water demand and the metered watered consumption, plus unmetered, authorized consumption. Demand volumes are obtained from the City's Supervisory Control and Data Acquisition (SCADA) system and customer meters volumes are obtained from the City's billing system. Unmetered, authorized uses include water used for hydrant flushing, street sweeping, and process water at the WFP, among other uses. These unmetered estimated uses are incorporated into the City's water loss calculations.

The City continues to assess its water use and seek opportunities to improve water efficiency. The City plans to install a new fill station for construction contractors by 2025 to ensure water use by contractors is metered and can be monitored for efficiency. Additionally, the City is currently working with the Parks Department to implement water conservation measures for parks irrigation. This project is described further in Section 3.4.1.

Five-Year Benchmarks

- Continue to conduct annual water audits.
- Install a new fill station and meter use at this location by 2025.

3.3.2 System-wide Metering

All water connections are fully metered and the City installs meters at all new water service connections.

Five-Year Benchmark

- Continue to require existing water system connections remain metered and new customer water connections are metered.

3.3.3 Meter Testing and Maintenance

The City's master meters record water use at the City's wells and surface water point of diversion. These master meters are magnetic flow meters that can retain a high level of accuracy through their life span due to the lack of moving parts. Because this meter type cannot be tested in the field, the City will replace a master meter whenever it stops functioning properly. All master meters are approximately 20 years old or less, well within their normal life span.

The City is alerted to potential customer meter errors via its utility billing system (meters registering unusual consumption), at which time the City inspects the meter. The City repairs or replaces meters if meter failure is suspected. The City has found that customer meters have remained very accurate over time based on sampling and testing. The City has also found that meter testing is not cost-effective, thus the City no longer tests meters, but replaces failed meters instead.

The City is converting to Automatic Meter Reading (AMR) technology in a low-density commercial/industrial portion of its service area and has converted roughly 85% of two out of its 26 service routes to AMR. The City intends to gradually shift towards the use of AMR meters throughout the distribution system. The AMR system will allow the City to quickly identify excessive water use that could be due to leaks based on alarms set in the automated system. AMR will ensure a high level of accuracy and success in obtaining meter readings, and will provide more comprehensive data on customer use patterns that the City can use to develop more targeted water conservation outreach efforts. The City will be able to more reliably identify leaks and improve its efficiency in reducing losses with AMR data.

Five-Year Benchmarks

- Continue to replace customer meters upon discovery of failure.
- Continue to replace source meters upon discovery of failure.
- Convert all meters to an AMR system, as the availability of supplies allows.

3.3.4 Water Rate Structure

The City's rate structure is based, in part, on the quantity of water metered at each service connection. For all customer classes, the City uses an inclining block rate structure, thus billing its customers on the quantity of water metered monthly in addition to a base rate. Three blocks define this structure and each block has a per unit dollar rate that increases with each block. Block one is based on the quantity of water used up to 19 units (14,212 gallons), block two includes usage from 20 to 149 units (111,452 gallons), and block three applies to usage greater than 150 units (112,200 gallons). Water base rates are different for each customer class. Residential classes that are billed separately include single family

units, duplexes, multi-family units, motels, and recreation vehicle spaces. Commercial and industrial customers have different base rates based on the meter size. Volumetric rates differ for customers located inside and outside the City. Appendix B shows the rates that went into effect April 2024.

Five-Year Benchmark

- Continue to bill customers based, in part, on the volume of water consumed.

3.3.5 Water Loss Analysis

The City's water loss has been below 10 percent since 2002. The City makes an ongoing effort to reduce water losses in its system. One of these methods includes identifying and addressing leaks in the distribution system by performing leak detection surveys, usually in the winter when irrigation systems are turned off. Loggers are installed by the City on line segments over short periods of time to identify potential leaks in those distribution system segments. Over the course of a year, the City surveys approximately 70% of the distribution system. Thus, the entire distribution system is surveyed approximately every 1.25 years. Upon discovery, the leaks are typically addressed immediately.

Five-Year Benchmark

- Continue to survey at least a quarter of the distribution system for leaks annually.

3.3.6 Public Education

The City's public education program is multi-faceted in order to reach a wide audience. The elements of the City's conservation education program include its website, written material distributed to all its customers, and in-person educational opportunities.

The City's website includes water conservation information and tips. The City incorporates water conservation information in utility bill inserts and newsletter articles approximately twice a year. The annual water quality report also includes an infographic with tips about how to conserve water at home, such as upgrading appliances, reusing water, and checking for leaks. The City also develops brochures about xeriscaping and water reuse and recycling that are available at City Hall.

The City has worked with local schools to provide education on water conservation and other information to students. The City intends to resume this program by presenting water conservation topics among others to 6th grade classes once per year.

The City has a monthly radio show with talk segments and it also runs focused advertisements. The City will air a radio show segment focused on water conservation and will initiate a radio ad campaign for the conservation kits available to customers. The City will broadcast the conservation-focused radio show and advertise its conservation kits annually in the spring.

Five-Year Benchmark

- Continue to provide water conservation information on the City's website.
- Continue to include water conservation information in City's utility bill inserts and newsletter

articles approximately two times per year and include water conservation information in annual water quality reports.

- Begin to give annual presentations on water conservation to 6th grade classes at local middle schools annually.
- Continue annual springtime conservation-focused radio show and conservation kit radio advertisements.

3.4 Additional Conservation Measures

OWRD requires municipal water suppliers that serve a population of more than 1,000 and propose to expand or initiate the diversion of water under an extended permit for which resource issues have been identified, or if the population served is more than 7,500, to provide a description of the specific activities, along with a 5-year schedule to implement several additional conservation measures. In 2023, the City served a population of over 7,500, therefore, the City is required to implement the following additional conservation measures.

3.4.1 Technical and Financial Assistance Programs

The City has multiple means of providing technical and financial assistance. The City flags accounts with high water usage on its billing system and provides on-site assistance to these customers to help determine the presence and location of leaks, as needed. The City's online conservation tips include indoor leak detection advice. The City assists customers by turning off the water for active leaks at no charge so the leaks can be repaired. The City offers an adjustment to customers' water bills for qualifying leaks upon submittal of a leak adjustment letter to City Hall—this practice encourages customers to find and fix leaks.

The Public Works Department has worked with the Parks Department to install computerized irrigation systems at City parks and intends to continue to assist the Parks Department in installing these systems in others parks. The computerized system will alert the City if lines are leaking, which will reduce water lost due to leaks. The new system will also control irrigation automatically as determined by evapotranspiration rates, which reduces water waste. The City intends to assist the Parks Department in upgrading the parks irrigation system for the 4 largest City parks within the next five years

Five-Year Benchmark

- Continue to flag high usage accounts and provide on-site assistance to customers by helping to identify leaks and offer ways to fix leaks.
- Continue to provide online indoor leak detection advice.
- Continue to offer bill adjustments for leaks that are identified and fixed.
- Assist the Parks Department in upgrading the parks irrigation system for the four largest City parks within the next five years.

3.4.2 Supplier-Financed Retrofit or Replacement of Fixtures

Historically, the City distributed conservation kits which included water efficient fixtures and devices, such as soil moisture probes, hose nozzles, rain/watering gages with information booklets, low-flow sprinkler nozzles and efficient showerheads. The City evaluated the program's success and found that the adoption rate of the conservation kits was lower than the City's expectations despite marketing efforts.

The City will resume the program with a renewed promotional push. The City will distribute conservation kits that include a water-efficient showerhead, a bathroom faucet aerator, a toilet tank displacement bag that saves water used for flushing, an adjustable hose nozzle for controlling water flow, and a rain gauge to determine how much to water lawns and gardens. Conservation kits will also come with a fact sheet with water conservation tips. The City will promote the conservation kits via its website, newsletters, utility billing stuffers, radio show advertisements as described in Section 3.3.6, and to new customers to increase participation in the program.

Five-Year Benchmark

- Distribute and promote water conservation kits.

3.4.3 Rate Structure and Billing Practices that Encourage Conservation

The City's rate structure is based, in part, on the quantity of water metered at each service connection. As described above, the City uses an inclining block rate structure for all customer classes that bills its customers on the quantity of water metered monthly in addition to a monthly base rate.

The City reads and bills customers monthly. This frequency affords its customers timely opportunities to modify consumption in response to usage provided on water utility bills. Moreover, the progressive nature of the block rate structure encourages efficient use of water as successive blocks have a higher dollar rate per unit than the previous block

Five-Year Benchmark

- Continue implementing an increasing block rate structure for water rates to encourage efficient water use.
- Continue to bill customers monthly.

3.4.4 Water Reuse, Recycling, and Non-potable Opportunities

The City uses water from the settling ponds at the WFP for irrigation of adjacent agriculture fields. This land application averages approximately 950,000 gallons per year. Treated effluent at the Wastewater Treatment Plant (WWTP) is used for a number of applications at the WWTP, including cleaning screens, foam control, and irrigation of lawn areas, processes which uses an averages 110 gpm continuously.

The City helps customers with water reuse projects on individual basis. For example, the City worked with one of its large customers to lower the customer's wastewater discharge by advising on wastewater recycling measures conducted within the customer's facility in approximately 2018. To

generate interest in reuse projects, the City provides brochures about water reuse and recycling opportunities at City Hall

The City has recently updated its website to add new conservation information related to reuse, recycling, and non-potable water opportunities. The website will include links to resources such as the Oregon Department of Environmental Quality (DEQ) Water Reuse Program.

Five-Year Benchmark

- Continue to reuse water from the WTP and WWTP for irrigation and other applications.
- Continue providing and updating content on City website about water reuse, recycling, and non-potable water opportunities.
- Continue working with customers on water reuse projects on an individual basis upon request.

4. Water Curtailment Element

This section satisfies OWRD's requirements to provide a description of past supply deficiencies and current capacity limitation. This section also includes inclusion of stages of alert and the associated triggers and curtailment actions for each stage.

4.1 Introduction

Curtailment planning is the development of proactive measures to reduce demand during supply shortages as the result of prolonged drought, or partial or full system failure from unanticipated events including catastrophic events, mechanical or electrical equipment failure, or events not under control of the City.

4.2 History of System Curtailment Episodes

The City has experienced two water supply shortages within the last 10 years. Both of these events were caused by the failure of one or two City wells during peak season. For both shortages, the City did not need to implement its curtailment plan. The City avoided curtailment plan implementation by requesting the City's Parks Department and the Pendleton School District cease irrigation. The reduced rates of consumption from these customers was enough to offset the reduced production capability of the water system

4.3 Capability Assessment

The City evaluated its ability to continue to provide water during a prolonged drought, maintenance-related issues associated with the infrastructure of the water system, surface water contamination, or power supply interruptions. The City determined that it should be able to continue to meet at least a base level of demand for these supply shortages. Specifically, the City's ASR system allows the City to divert and store surface water when river flows are at their greatest (late fall through early spring) during times of drought. This system should help insulate the City from significant interruptions in supply delivery during droughts. Maintenance issues that could result in supply shortage include failure or partial failure of the WFP or one or more primary wells. The City also recognizes that its surface water supply is susceptible to contamination (human-caused or otherwise) and such an event would eliminate this source of supply entirely until the contamination event was resolved. These types of failures may require the use of the City's ASR system or heavier use of the City's natural groundwater wells, depending upon the cause of the shortage. In the event of a power supply interruption at the WFP, the City could rely on a 400 kW backup power at the WFP; this system can supply up to 4 mgd.

The City does not have any capacity limitations currently that prevent it from meeting system demands.

4.4 Curtailment Stages and Initiating Conditions

Ordinance 3514, promulgated by the City Council in 1995 and amended by Ordinance 3669 in 2002, details the City's curtailment plan in the event of a water supply shortage, among other topics. The

ordinance describes a three-stage curtailment plan to be invoked by the Council in the event of a significant water supply shortage. These stages are of increasing severity and could be initiated and implemented in progressive steps or a later stage could be implemented directly. The plan includes both voluntary and mandatory measures, depending upon the cause, severity, and anticipated duration of the shortage.

Exhibit 4-1 presents the three curtailment levels, as well as their initiating conditions (i.e., triggers). Initiation of a curtailment level is based on the specific circumstances of the actual event. The City relies on demand referenced to system capacity to determine the timing of initiation of its levels of alert. Maximum system capacity is defined as the combined rate of water available from the City's wells and WFP production, plus consideration of water available in the distribution system, such as the City's inline reservoirs

The City Council's decision to implement curtailment will also consider the knowledge and judgment of City staff members familiar with the water system. Staff members may evaluate such considerations as assessments of the extent of system damage, duration of repair, costs, fire hazards, and weather forecasts.

Exhibit 4-1. Curtailment Stages of Alert and Initiating Conditions

Stages	Initiating Conditions
Voluntary Curtailment Level	System demand exceeds or is anticipated to exceed 90 percent of system capacity.
First Curtailment Level (Mandatory)	System demand exceeds or is anticipated to exceed 100 percent of system capacity, however the City expects to be able to meet demands for human consumption, sanitation, and fire protection.
Second Curtailment Level (Mandatory)	System demands cannot be satisfied without depleting the water supply of the City to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.

4.5 Curtailment Plan Levels

4.5.1 Voluntary Curtailment Level (Stage 1)

Upon initiation of this level, the City will identify the percentage of voluntary reduction that is required to avoid a shortfall in the capability of the existing source(s) to avoid the mandatory First Curtailment Level and inform its customers of actions its customers can take to reduce use.

The City will initially contact its largest customers, including the school district, Eastern Oregon Correctional Institute, and the Parks Department, requesting voluntary curtailment of the use of water for irrigation. If the City judges that further curtailment measures are necessary, the City will extend its curtailment request to the remainder of its customers. The following examples represent curtailment actions for use by the City's customers. (These actions become mandatory when a First Level of Curtailment is declared.) City customers are encouraged to abide by the following reductions:

- Residential Customers

  - The use of water to wash all types of motorized vehicles (for land, air, and water) except at commercial fixed washing facilities existing prior to 1995 or those that recycle or reuse the water.
  - The use of water to wash down all types of permanent (horizontal or vertical) exterior hard surfaced areas.
  - The use of water to fill, refill or add to any indoor or outdoor private swimming pool or jacuzzi pool except for neighborhood fire control (when deemed necessary by the City Manager), except where the pools have recycling water systems and evaporative covers, or where the use of the pool is required by a medical doctor's prescription.
  - Refilling a fountain or pond designed for aesthetic or scenic purposes.

- Non-residential Customers
  - The use of water to serve a customer in a restaurant unless requested by the customer.
  - The use of water for scenic and recreational ponds and lakes.
  - The use of water from hydrants for construction purposes, fire drills, system flushing, or any purpose other than fire-fighting.
  - The use of irrigation water for schools, parks, cemeteries, recreation areas, golf courses, community food gardens, residential gardens, and similar recreation or memorial type facilities in excess of seventy-five (75%) percent of the normal historical amount consumed.
  - The use of domestic water for schools, nursery facilities, restaurants, shopping centers, gasoline service stations, health and swim clubs, and all other commercial uses in excess of ninety (90%) percent of the normal historical amount consumed.
  - The use of water for manufacturing, food processing, cooling, or cleaning of equipment in excess of ninety (90%) percent of the normal historical amount consumed.
  - The use of water for agricultural irrigation in excess of seventy-five (75%) percent of the normal historical amount consumed.
  - The use of water for dust control.

- All customers
  - No person or customer shall cause or permit water to run to waste in any gutter or drain.
  - Irrigation of landscapes, including turf, and gardens to occur between the hours of 10 pm and 6 am.

The City will issue a general request for a voluntary reduction in water use by all users. The request will include a summary of the current water situation, the reason for the requested reduction in use, suggestions for conserving water, and a warning that mandatory cutbacks will be required if the voluntary measures do not sufficiently reduce water usage. The City will inform its customers through

the use of social media, the City's website, its radio show, print media, or other forms of communication.

4.5.2 First Curtailment Level

This level makes mandatory all the uses of water described in Voluntary Curtailment Level.

4.5.3 Second Curtailment Level

This level maintains the mandatory measures described in the First Curtailment Level and sets forth the following water usage allotments by customer type for which customers are mandated not to exceed.

- Residential: Daily allotments for 1 or 2 residential units.
    - One permanent resident 80 gallons
    - Two permanent residents 110 gallons
    - Three permanent residents 140 gallons
    - Each additional permanent resident 30 gallons
- Multi-residential (three or more units): Daily allotment for each unit shall be 130 gallons per day.
- Other nonessential uses: seventy-five percent of the normal historical consumption.

The normal historical amount of water consumed shall be determined by the City utilizing historical records of the same time periods. Where no such record exist, the amount shall be the average use of similar existing services as determined by the City from its records.

4.6 Notifications of Curtailment

The City has multiple methods of informing residents of a supply shortage, such as the use of messages in monthly utility billings; local media, including newspapers, radio, and television; printed materials posted in public places.

4.7 Drought Declaration

If the City falls within a severe drought area declared by the Governor, such as Umatilla County, the City will consider whether curtailment measures are needed to meet system demands. If ordered to implement a water conservation or curtailment plan during a declared drought, the City will comply by implementing the water conservation and curtailment provisions of this WMCP. Regardless of whether curtailment is needed, the City will continue to encourage customers to conserve water.

5. Municipal Water Supply Element

This section satisfies OWRD's requirements to provide descriptions of the City's current and future service area and population projections, demand projections for 10 and 20 years, and the schedule for when the City expects to fully exercise their water rights. This section also includes a comparison of the City's projected water needs and the available sources of supply, an analysis of alternative sources of water, and a description of required mitigation actions.

5.1 Delineation of Service Area

Pendleton anticipates growth within City limits to occur as a result of infill development and redevelopment and forecasts limited growth outside City limits, but within its UGB over the next 20 years. The exact location of this growth is difficult to predict and will be based on economic factors and the development type, however the City is planning for new development at two parcels located near the WFP following a rezoning of this area from commercial and industrial to residential.

5.2 Population Projections

Pendleton's population forecast was conducted as part of the City's 2024 WSMP update. This update projected demand for 2043 and at build-out of the City's service area by using an estimated base service area population of 17,177 in 2023. To meet OWRD's WMCP requirements, the City interpolated the 2034 population and extrapolated the 2044 population for the existing service area using an annual average growth rate of 0.54 percent. The AAGR is based on a population forecast for the area within the City's UGB conducted by PSU. Some modifications to the forecast were made, as follows.

1) The CTUIR population that is served City water located outside of the UGB is not anticipated to increase over the 20-year planning period and thus was held steady through 2045.

2) Additional population was added to the projection to account for an anticipated zoning change from commercial and industrial to residential for land located near the WFP and within the City's UGB.

3) The City held constant the population for its largest water user, the Eastern Oregon Correctional Institute (approximately 1,600), over the planning period.

The forecast resulted in a projected population increase from 2023 to 2045 of 2,161 persons. The population projections are presented in Exhibit 5-1.

Exhibit 5-1. Projected Service Area Populations, 2035 and 2045

	2023 (actual)	2035	2045
Existing service area	17,006	17,998	18,870
CTUIR area served City water	171	171	171
UGB zone change	N/A	162	297
Total	17,177	18,331	19,338

5.3 Demand Forecast

As part of the master planning process, Pendleton projected demands for 2033, 2043, and build-out using a per capita water use methodology. The City used this information to forecast the demand for 2035 and 2045 for this WMCP. Similar to the population projection, the demand projection for 2035 was interpolated and the projection for 2045 was extrapolated using the WSMP 2033 and 2043 values.

The methodology used by the City to project demand for the master plan included the use of a non-prison historical per capita demand of 224 gallons per capita per day. This value was applied to non-prison future population projections to estimate future non-prison ADD consumption. The City added the projected consumption volumes from the prison population (based on historical use) to the non-prison ADD values for 2033 and 2043. The City then increased future consumption by 3 percent to match the historical water loss rates to obtain ADD for 2033 and 2043. To project MDD, the City applied a peaking factor of 2.2. As above, the City used AAGRs based on future demands provided in the WSMP to interpolate demand for 2035 and extrapolated demand for 2045. The results of the demand projections for these years are provided in Exhibit 5-2.

Exhibit 5-2. 20-Year Projected Demand, 2035 and 2045

	MDD	
	mgd	**cfs**
2035	9.2	14.2
2045	9.7	15.0

Demand is anticipated to reach up to 15.0 cfs by 2045. In comparison, the City's highest MDD from 2018 to 2022 was 14.2 cfs (9.19 mgd). The City recognizes that these are planning level projections and expects that future peak demands may be slightly higher or lower than those presented in Exhibit 5-2, depending upon weather and water system operation and growth (see Sections 5.1 and 5.2).

5.4 Schedule to Exercise Permits and Comparison of Projected Need to Available Sources

The City meets demands from three primary sources of supplies: surface water, natural groundwater, and water recovered from its ASR system. Surface water is used year-round to meet system demands, but the City's use of its surface water supply is limited during low river flows (peak season) to 2.5 cfs due to restrictions stipulated in a settlement agreement associated with use of the City's surface water rights. The City's access to natural groundwater at the wells that are authorized by and used for its ASR system is limited by a condition found in Limited License LL-006. This condition requires full use of water stored through the City's ASR program prior to appropriations of natural groundwater. The City intends to continue to store treated surface water in the aquifer through its ASR system, resulting in no immediate access to natural groundwater in the future under normal operating conditions at ASR-designated wells. Though the City has certificated groundwater rights, the City intends to rely on these rights sparingly to preserve the groundwater resource given historical observations of declining aquifer levels when the City relied more heavily on groundwater to meet demands. In sum, over the 20-year planning period, the City intends to continue to rely on its ASR system to meet peak season demands and supplement this supply with surface water and natural groundwater from some of the wells not

dedicated to ASR system use. During the remainder of the year, the City intends to rely primarily on surface water.

The City's active well operational capacities (both ASR-dedicated wells and non-ASR wells) limit the City's ability to fully use the rates authorized by its water rights and limited license. The sum capacity of the City's active wells is 16.44 cfs as shown in Exhibit 5-3.[4]

Exhibit 5-3. Operational Capacity of Active Wells

Common Well Name	Authorizing Water Right	Current Operational Capacity	
		gpm	cfs
Well 1*	Certificates 20838, 46096	1100	2.45
Well 2*	Certificates 20840, 46094	1,650	3.68
Well 3	Certificates 20839, 46095	500	1.11
Well 4*	Certificate 86482	1,000	2.23
Well 5*	Certificate 29147	1,500	3.34
Well 7	Permit G-18898	330	0.74
Well 8*	Certificate 82840, 86483	800	1.78
Well 14*	Certificates 85847, 85848; Permit G-2410	500	1.11
Capacity of All Wells		7,380	16.44

* Active ASR wells used for storage and/or recovery
Source: 2024 Water System Master Plan (Consor)

This operational capacity of 16.44 cfs exceeds the City's 2045 MDD of 15.0 cfs. However, the City's ability to meet this demand is compromised if the City's largest well, Well 2 (3.68 cfs) is out of service, resulting in a firm operational capacity of 12.67 cfs (16.44 cfs – 3.68 cfs). The rate of 12.67 cfs is less than what is needed to meet the City's projected 2045 demand, resulting in a potential deficit of 2.24 cfs (15.0 cfs – 12.76 cfs) in 2045. To accommodate for this scenario, the City is planning completion of construction of Well 11B authorized by G-18898 and re-activating Well 11, which has been held in reserve since approximately 2022 due to low productivity, to appropriate up to 2.24 cfs (1,004 gpm).

OWRD acknowledged in its 2005 extension of time for Permit G-3225 (superseded by Permit G-18898) that the City had developed 1.07 cfs under this permit. The City will rely on this developed rate to help meet the demand deficit of 2.24 cfs, resulting in a remaining potential deficit of 1.17 cfs (2.24 cfs – 1.07 cfs). To meet this remaining deficit, the City will require access to an additional rate of 1.17 cfs to meet

[4] For comparison, Certificates 20840 and 46094 authorize use of natural water from Well 3 for 1.31 cfs, Permit G-18898 authorizes use of natural water from Well 7, 11, and 11b (8.7 cfs), and Limited License LL-006 authorizes a total stored water recovery rate of 37.7 cfs; combined these rights and limited license total 47.7 cfs.

its 2045 projected demand of 15.0 cfs. **Therefore, the City requests access to 1.17 cfs (525 gpm) of the undeveloped portion of extended Permit G-18898.**

The 2009 settlement agreement and subsequent permit extension for Permit G-2410 allows for use of up to 2.56 cfs and diversion beyond these rates must be authorized by OWRD through a WMCP approval process. Pendleton does not anticipate the need for use of Permit G-2410 beyond the development limitation applied by OWRD over the next 20 years. The City is not requesting access to water beyond this rate for Permit G-2410 in this WMCP. The City anticipates full use of Permits G-2410 and G-18898 by October 1, 2076, the completion dates of these permits, in accordance with the City's permit extensions for these rights.

5.5 Alternative Sources

OWRD requires an analysis of alternative sources of water if any expansion or initial diversion of water allocated under existing permits is necessary to meet future water demand. The City intends to expand its diversion of water under Permit G-18898 during the planning horizon of this WMCP; consequently, this rule applies to the City.

The City continues to implement a water conservation program to help its customers use water efficiently and to promote more efficient uses by the City. These measures are detailed in Section 3. For example, the City uses several outreach methods to its customers to promote conservation, such as through its website and its radio show; the City recycles water at its WFP and WWTP; and Pendelton has adopted an inclining block rate structure that encourages conservation. In addition, the City intends to expand its program with new measures that promote conservation, also as described in Section 3.

The City's historical conservation efforts may have reaped a water savings reduction of five to ten percent, an estimate based on the American Water Works Association's M52 Water Conservation Programs Conservation Manual. Obtaining further savings would require additional City resources to implement additional measures. The costs to implement, administer, and maintain additional conservation measures would exceed the costs of utilizing Permit G-18898 given that the infrastructure necessary to appropriate water using Permit G-18898 is constructed.

In addition, the City has considered interties as a way to help meet demands and obtain alternative sources of water, however the City is not aware of a water provider within close proximity that has extra supply capacity to offer Pendleton

5.6 Quantification of Maximum Rate and Monthly Volume

OWRD requires a quantification of the maximum rate of withdrawal and maximum monthly use if any expansion or initial diversion of water allocated under an existing permit is necessary to meet demands in the 20-year planning horizon. The City is expanding its appropriation of water under Permit G-18898. Consequently, this rule applies to the City.

The City anticipates an additional maximum rate of withdrawal of 1.17 cfs from the undeveloped portion of extended Permit G-18898 by 2045. Use at this rate over a 30-day period equates to 22.7 MG per month.

5.7 Mitigation Actions under State and Federal Law

For expanded or initial diversion of water under an existing permit, OWRD requires the water supplier to describe mitigation actions it is taking to comply with legal requirements of the Endangered Species Act (ESA), Clean Water Act (CWA), and other applicable state or federal environmental regulations. The City intends to expand its use of water under Permit G-18898. Consequently, this rule applies to the City. However, the City is not required to mitigate for use of Permit G-18898 related to the ESA, CWA, or other environmental regulations.

5.8 New Water Rights

If a municipal water supplier finds it necessary to acquire new water rights within the next 20 years in order to meet its projected demand, the supplier must perform an analysis of alternative sources for the additional water. The analysis must consider availability, reliability, feasibility and likely environmental impacts and a schedule for development of the new sources of water. The City does not anticipate the need to acquire new water rights within the planning period.

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Appendix A

Letter to Affected Local Government

GSI Water Solutions, Inc.

January 30, 2025

Robert Waldher
Umatilla County Community Development Director
216 SE 4th Street, Room 104
Pendleton, OR 97801
Robert.waldher@umatillacounty.gov

Subject: Water Management and Conservation Plan for the City of Pendleton

Dear Mr. Waldher,

The City of Pendleton has developed a draft Water Management and Conservation Plan (WMCP) to fulfill the requirements of Oregon Administrative Rules Chapter 690, Division 86 of the Oregon Water Resources Department.

Under these rules, the water supplier will make its draft WMCP available for review by affected local governments and seek comments related to consistency with the local governments' comprehensive land use plans. We are providing you an electronic version of Pendleton's draft WMCP for your review.

Please provide any comments within 30 days from the date of this letter. If the WMCP appears consistent with your Comprehensive Land Use Plan, a letter or email response to that effect would be appreciated. You may send your comments to me at thenkle@gsiws.com.

If you have any questions, please feel free to contact me at 971-236-2550. Thank you for your interest.

Sincerely,
GSI Water Solutions Inc.

Tim Henkle
Water Resources Consultant

Enclosure

GSI Water Solutions, Inc.

January 30, 2025

Justin Northern
Public Works Director
Confederated Tribes of the Umatilla Indian Reservation
Nixyaawii Governance Center
46411 Ti'mine Way
Pendleton, OR 97801
JustinNorthern@ctuir.org

Subject: Water Management and Conservation Plan for the City of Pendleton

Dear Mr. Northern,

The City of Pendleton has developed a draft Water Management and Conservation Plan (WMCP) to fulfill the requirements of Oregon Administrative Rule Chapter 690, Division 86 of the Oregon Water Resources Department.

Given the relationship between Pendleton and your water district, we are providing you with an electronic copy of the draft WMCP as a courtesy. If you have any questions, please feel free to contact me at 971-236-2550 or thenkle@gsiws.com.

Sincerely,
GSI Water Solutions Inc.

Tim Henkle
Water Resources Consultant

Enclosure

Appendix B

Water Utility Rates

The City of PENDLETON Oregon

Utility Rates

Effective April 1, 2024

Water Base Rates

	In City	Out of City	Wholesale
Residential			
Single Family Dwelling Unit	$37.30	$55.90	$41.00
Duplex, per Dwelling Unit	$28.50	$42.70	$31.30
Multiple-Family (3 or more), per unit	$21.50	$32.35	$23.65
Motels, per unit	$14.10	$21.10	$15.50
Recreation Vehicle Spaces, per space	$9.45	$14.25	$10.40
Commercial, industrial, etc.			
1" or less meter	46.35	69.50	50.95
1 1/2"	82.85	124.40	91.10
2"	130.60	195.85	143.65
3"	213.20	353.35	234.50
4"	429.05	643.65	472.00
6"	609.35	914.20	670.30
8"	1,153.90	1,730.90	1,269.30
10" or greater	1,698.55	2,547.90	1,868.40
Fire Service (per diameter inch)	17.50		

Sewer Base Rates

	In City	Out of City
Residential (single family dwelling)	$54.40	$81.60
Transient (Hotels, rooming houses, etc)		
1st Unit	54.40	81.60
Each and every unit	27.95	41.75
Commercial (Light)		
Minimum charge (1,100 cubic feet)	54.40	81.60
Per additional 100 cubic feet	3.05	4.65
Commercial (Heavy)		
Flow (per 100 cubic feet)	1.60	2.60
B.O.D. (per lb.)	1.40	2.20
Suspended solids (per lb.)	1.60	2.60
RV Spaces (Each unit)	13.80	20.80
Wholesale		
Base Rate	59.80	
Usage	3.35	
Hotel	30.75	
RV Space	15.15	

Street Maintenance Charge

Meter Size			
3/4"	$9.90	3"	$106.05
1"	$16.85	4"	$165.60
1 1/2"	$32.70	6"	$330.15
2"	$52.55	8"	$793.20

Water Volumetric Rates

	In City	Out of	Wholesale
Usage			
First 19 units:	$2.35	$3.60	$2.55
20 units to 149 units:	$2.60	$4.00	$2.85
150 units or more:	$2.70	$4.25	$3.00

1 unit = 100 cubic feet or approximately 748 gallons

Service Connections: Installation Charges

	No Pavement	With Sidewalk No Pavement	With Pavement	With Sidewalk and Pavement
Service Size				
3/4"	$2,420.70	$3,851.20	$4,333.55	$5,186.55
1"	$2,658.00	$4,088.50	$4,570.85	$5,423.80
1 1/2"	$3,371.90	$5,379.90	$5,862.27	$6,715.25
2"	$4,949.95	$6,380.45	$6,862.79	$7,715.75
Over 2"	Actual cost of field labor, materials, plus 40% (for overhead). A full deposit based on an estimated cost is required before installation.			

Public Safety Eq Charges

Meter Size			
5/8 to 1"	$3.25	4"	$65.35
1 1/2"	$13.05	6"	$104.60
2"	$20.55	8"	$222.25
3"	$39.20	10"	$496.85

Water Service Fees

Service	
Meter Tampering Fee	$117.70
Meter Removal/Shut-off fee	$56.80
Reinstallation charge	$47.30
Overtime fee	$66.20
Doorhanger fee	$18.90
Late Notice	$7.35

Annual Rate Adjustment

Each April 1 Resolution charges for Residential, Transient, Commercial (Light), Commercial (Heavy), and Commercial Grey Water & RV spaces shall be adjusted by an amount equal to the year to year percentage changes in the Engineering News Record (ENR) Construction Cost (20-city average) Index as of December of the preceding calendar year. The billing rate will be the adjusted rate rounded to the nearest $0.05.

Temporary Water Service

	In City
Service	
7 days or less (500 cu. ft. of water)	$56.80
Fire hydrant connection (15 days)	525.35
Fire hydrant connection (per season)	1,022.35
Location of fire hydrant service change	142.10
Installation charges and deposits:	
Metered service (deposit)	132.50
Fire hydrant connection	
Installation fee	132.50
Minimum water charge (15 days)	350.25
Refundable equipment deposit	946.55
Water fill station fee	89.60