



DRAFT

Water Management and Conservation Plan

South Fork Water

June 2026

Prepared for:



Prepared by:

GSI Water Solutions, Inc.

1600 SW Western Boulevard, Suite 240, Corvallis, OR 97333

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Appendices

Appendix A – Letters to Affected Local Governments

Appendix B – Conservation Outreach Examples

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1. Municipal Water Supplier Plan Elements

This section satisfies the Oregon Water Resources Department's requirements to include 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 South Fork Water Board (South Fork Water or SFW) was formed in 1915 and supplies water to the Cities of Oregon City (Oregon City) and West Linn (West Linn) (partners) within Clackamas County, Oregon. The estimated 2025 service area population for Oregon City was 40,775 and for West Linn was 28,233, for a combined population total of 69,008. In addition, South Fork Water serves a portion of the Clackamas River Water's (CRW) service area and provides water on an emergency or as-needed basis to the North Clackamas County Water Commission (NCCWC). South Fork Water's source of water supply is the Clackamas River.

The purpose of this Water Management and Conservation Plan (WMCP) is to guide the development, financing, and implementation of water management, conservation, and curtailment policies and programs to ensure long-term sustainable water use by South Fork Water.

1.2 Plan Requirement

The Oregon Water Resources Department (OWRD) issued a final order approving South Fork Water's first WMCP on March 16, 2006. The final order required South Fork Water to submit an updated WMCP by December 31, 2010. South Fork Water postponed submittal of an updated WMCP by this date because OWRD's final order approving the permit extensions for South Fork Water's Permits S-3778, S-9982, and S-22581 was protested in 2008, and resolution of those permit extensions was a critical component of South Fork Water's planning efforts. Litigation related to these permit extensions was finally resolved in August 2023 based on the Oregon Supreme Court's decision to deny the petition for review of the Court of Appeals' final ruling. This WMCP has been prepared to fulfill the requirement to submit an updated WMCP within 3 years of the final order approving the extensions.

1.3 Plan Organization

This WMCP is organized into the sections shown in the table below. Following this introductory section, Section 2 describes South Fork Water's water supply; water use by Oregon City, West Linn, and other wholesale customers; water rights under which South Fork Water supplies water to its customers; and water system infrastructure, among other topics. Section 3 discusses the past, current, and future conservation measures implemented and to be implemented by South Fork Water, Oregon City, and West Linn individually and through regional partnerships. Section 4 presents a curtailment plan to be implemented in the event of a water shortage. Finally, Section 5 includes a discussion of South Fork Water's future water needs and water supply planning.

Section

Section 1 – Municipal Water Supplier Plan Elements

Section 2 – Municipal Water Suppliers Description

Section 3 – Municipal Water Conservation Element

Section 4 – Municipal Water Curtailment Element

Section 5 – Municipal Water Supply Element

1.4 Affected Local Governments

The following local governmental agencies may be affected by this WMCP:

- Metro
- Clackamas County

Thirty days before submitting this WMCP to OWRD, South Fork Water made the draft WMCP available for review by these entities along with a request for comments related to consistency with the local governmental agencies' land use plans. Appendix A contains the letters requesting comment. No comments were received. South Fork Water also provided courtesy copies of this WMCP to Clackamas River Water, the North Clackamas County Water Commission (NCCWC), and the Clackamas River Water Providers (CRWP).

1.5 Plan Update Schedule

South Fork Water anticipates submitting an update of this WMCP within 10 years of issuance of the final order approving the WMCP. A progress report will be submitted within 5 years of the final order.

1.6 Time Extension

South Fork Water is not requesting additional time to implement metering or a previous benchmark.

2. Municipal Water Supplier Description

This section satisfies OWRD's requirements to include descriptions of the water supplier's water sources, service area and population, water rights, relevant agreements and contracts, and adequacy and reliability of the existing water supply. OWRD also requires 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 refers to the total quantity of water delivered to South Fork Water's transmission system following treatment and the total quantities of water delivered to the partners.

Consumption is equal to metered water use by the partners and CRW's customers plus reported unmetered, authorized water uses (e.g., system flushing, firefighting).

Generally, demand and consumption in municipal systems are expressed in units of million gallons per day (mgd), cubic feet per second (cfs), or gallons per minute (gpm). One mgd is equivalent to 1.55 cfs or 694 gpm. For annual or monthly values, a quantity of water is typically reported in million gallons (MG). Water use per person (per capita use) is expressed in gallons per capita per day (gpcd).

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

- Average day demand (ADD) equals the total annual demand 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 one-day MDD or peak day demand.
- 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. Among the most common and important peaking factors is the ratio of the MDD to the ADD.

2.2 Water Sources, System Descriptions, and Interconnections

2.2.1 South Fork Water

South Fork Water's source of water is the Clackamas River. South Fork Water's point of diversion is located on the lower reach of the Clackamas River at River Mile 1.7. The river intake structure has a capacity of 52 million gallons per day (mgd) and a pump capacity of 30 mgd. Pumped water is conveyed from the river using a 27-inch diameter transmission line with a capacity of 22 mgd. Water diverted from the river is conveyed approximately 1,850 feet to the 22 mgd-capacity water treatment plant (WTP). South Fork Water is planning to upgrade the intake pump and pipeline to a larger size to accommodate the planned future expansion of the WTP. Overflow from the WTP and process water used at the plant to maintain water quality is piped to adjacent sludge lagoons where water evaporates

or infiltrates or is conveyed from the lagoons to the Clackamas River for discharge once solids settle out.

Following treatment, South Fork Water holds treated water in three clear wells at the WTP that total 2.875 MG in capacity. Water from the clear wells is pumped into two transmission lines to supply water to the partners. A 30-inch diameter transmission line conveys water to the Division Street Pump Station located in Oregon City where water is pumped into each City's distribution system. A connection along this transmission line serves water to CRW's customers in CRW's South service area. A 42-inch diameter transmission line from the WTP conveys water to the Hunter Avenue Pump Station that offers a second point of entry into Oregon City's distribution system. In addition, Oregon City can convey water to CRW's South service area per an agreement with CRW at this pump station.

Exhibit 2-1 presents a schematic of the source, treatment, pumping, storage, and major transmission facilities for South Fork Water system. The distribution systems of Oregon City and West Linn are summarized below.

2.2.2 Oregon City

As previously described, Oregon City receives its water supply from South Fork Water at South Fork Water's Division Street Pump Station and Oregon City's Hunter Avenue Pump Station. Oregon City has five above-ground reservoirs totaling 18.25 MG. In addition to meeting Oregon City's customers' water use needs, the City also supplies water to some customers of CRW within CRW's South service area via seven interconnections. Six of these connections have master meters and one location is not metered (thought the customers within the area served with South Fork Water are metered). Exhibit 2-2 is a schematic of Oregon City's service area.

2.2.3 West Linn

West Linn receives water from South Fork Water immediately downstream of the Division Street Pump Station located in Oregon City. This interconnection comes directly off South Fork Water's transmission main. From this interconnection, West Linn's transmission main crosses the Willamette River via the Interstate 205 Clackamas River bridge before it enters West Linn's distribution system. This system includes six above-ground reservoirs totaling 7.5 MG of capacity and approximately 120 miles of water lines. West Linn has a bi-directional interconnection with Lake Oswego for use during emergencies that can provide either city with up to 4,000 gpm (5.76 mgd). Exhibit 2-3 is a schematic of West Linn's service area.

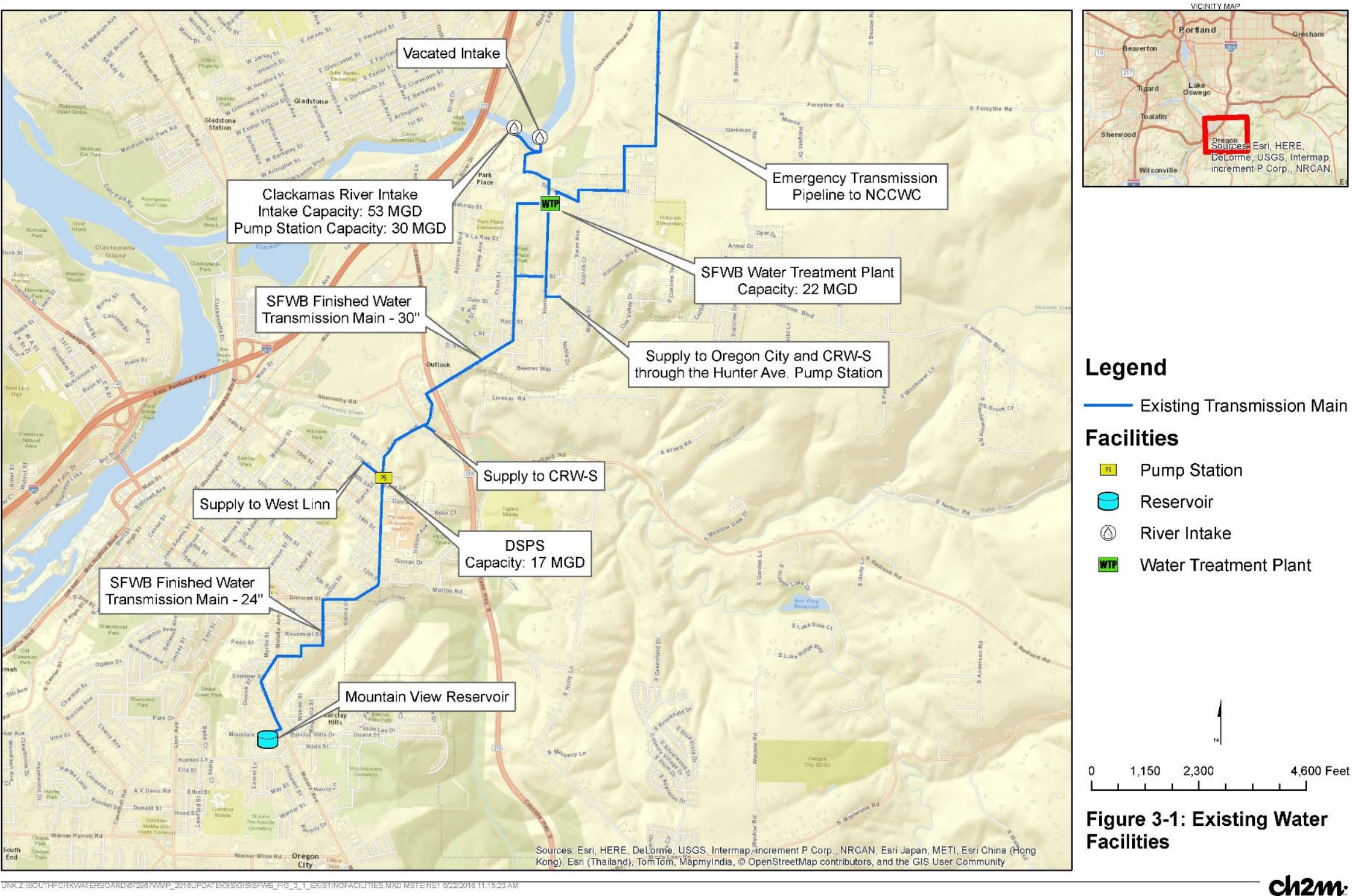
2.3 Interconnections

South Fork Water has a bi-directional interconnection with NCCWC that is used to share water during emergencies or planned system maintenance. This interconnection also allows the NCCWC to wheel water for emergency purposes to South Fork Water from CRW. Up to 12 mgd can be conveyed in the pipeline connecting the two entities. SFW also has an interconnection with CRW's South service area located south of the crossing of South Fork Water's transmission line under Highway 213. Oregon City serves water to CRW customers located in CRW's South service area via a master meter directly off South Fork Water's infrastructure (labeled as MM02 on Exhibit 2-1), wheeled using Oregon City's infrastructure through master meters (MM08, MM09, MM11, MM12, and MM13 in Exhibit 2-2), and

directly off City infrastructure without a master meter. West Linn has an emergency interconnection with Lake Oswego that can supply up to 4 mgd to either community.

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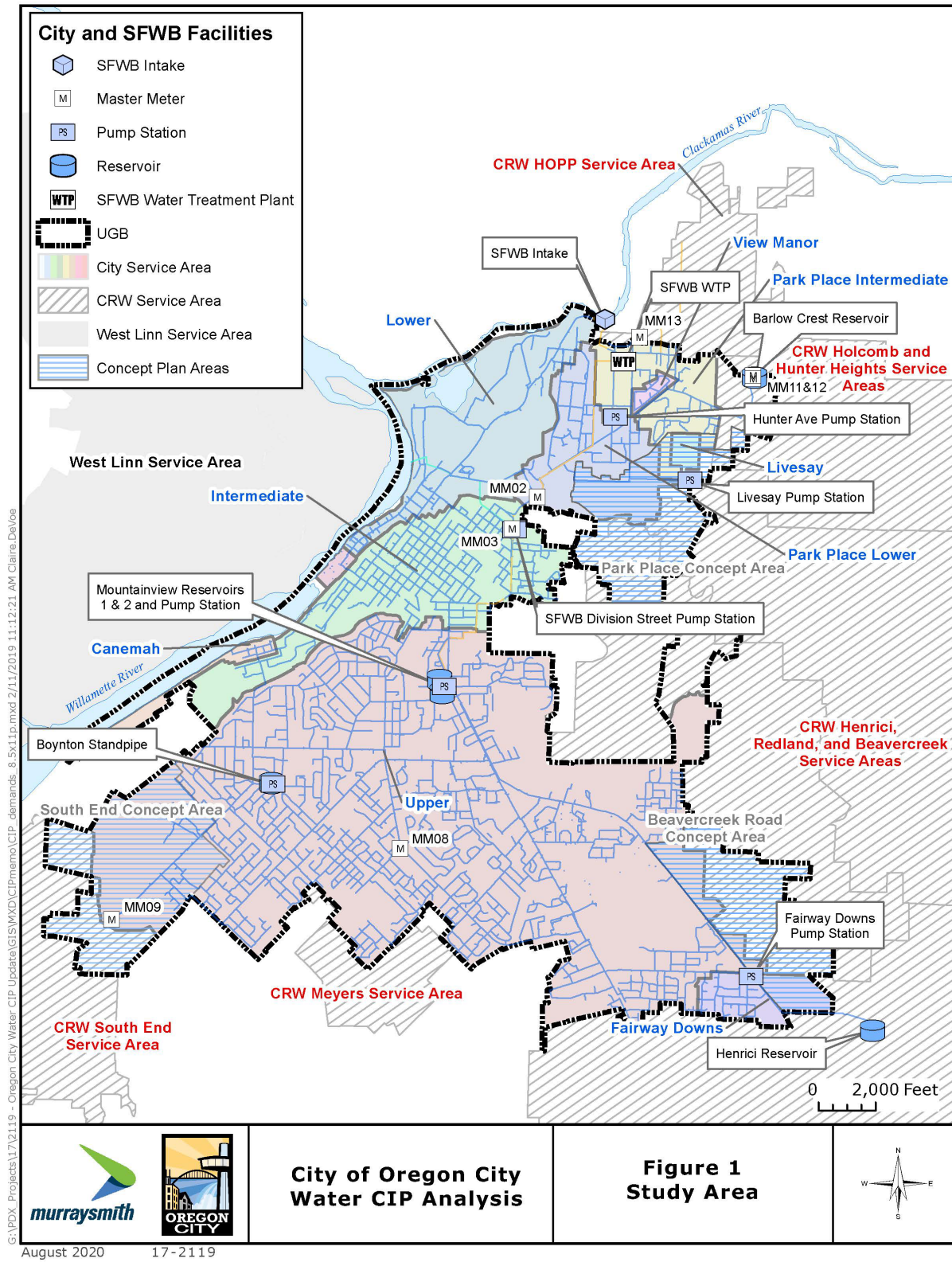
Exhibit 2-1. South Fork Water Schematic



Source: South Fork Water, 2016 Water Master Plan (CH2)

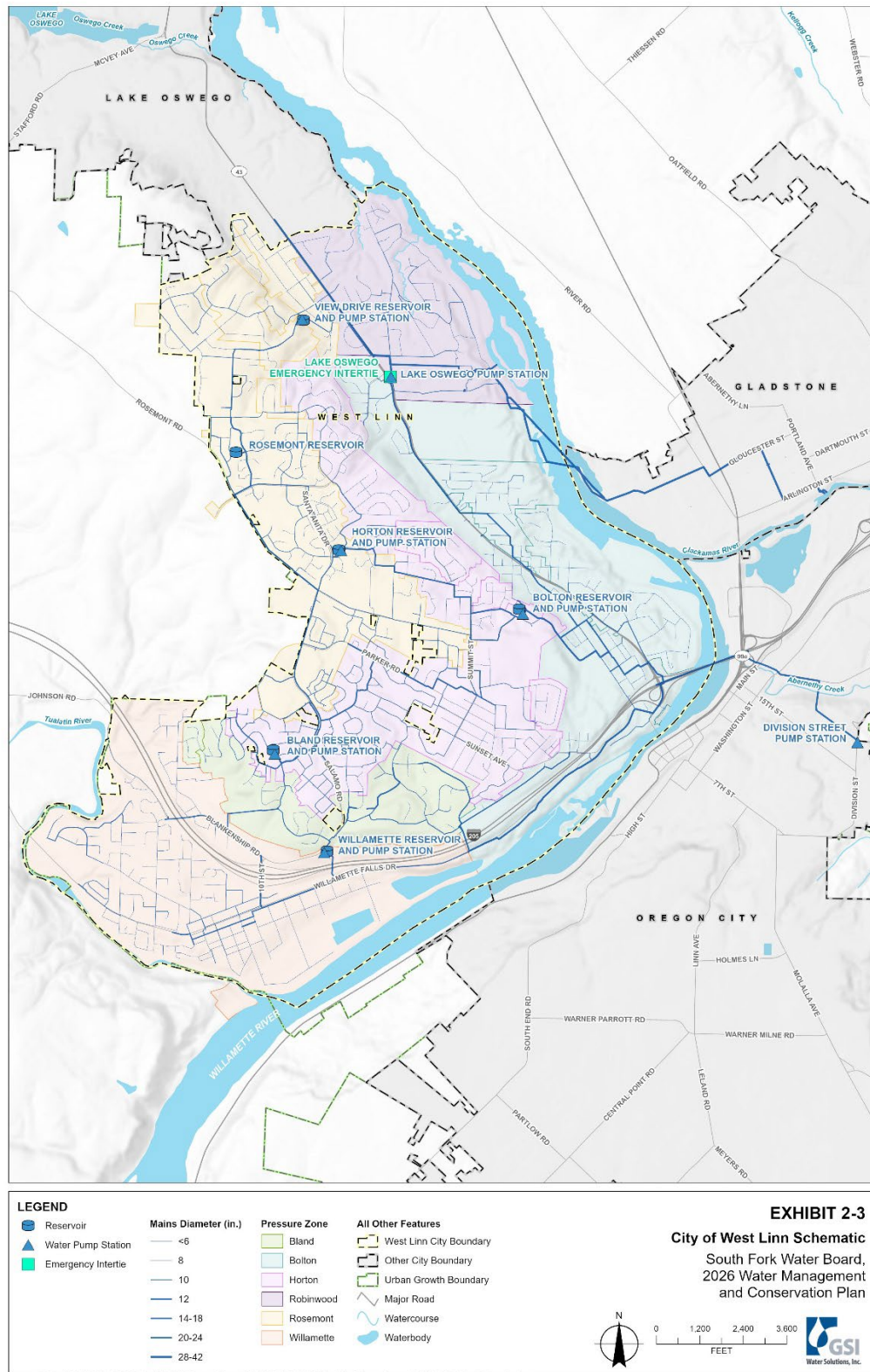
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Exhibit 2-2. Oregon City Schematic



Source: City of Oregon City 2012 Water Distribution System Master Plan Amendment, Revised January 2021 (MurraySmith)

Exhibit 2-3. West Linn Schematic



2.4 Agreements

2.4.1 Intergovernmental Cooperative Agreement to Establish South Fork Water

South Fork Water was originally formed in 1913 by the partners. The most recent agreement confirming the continuation of South Fork Water and the Commission dates to 1995 when both partners signed a modified intergovernmental cooperative agreement.

2.4.2 South Fork Water and NCCWC

The February 29, 2000, agreement provided that South Fork Water would provide up to 12 mgd to the NCCWC between October 1 and April 30 of each year (winter water). Between May 1 and September 30 (summer water), South Fork Water agreed to provide surplus water as available to the NCCWC. South Fork Water supplies water to the NCCWC through the transmission line connecting South Fork Water's WTP to NCCWC's WTP.

2.4.3 South Fork Water, CRW, and NCCWC

The April 24, 2000, Intergovernmental Cooperative Agreement for Construction of Water Transmission Line was developed among CRW, NCCWC, and South Fork Water. All parties agreed to participate in the cost of engineering and construction of an interconnecting transmission line between South Fork Water WTP and NCCWC's WTP. In addition, as part of this agreement, the parties also agreed to supply water as follows:

- CRW: Supplies water to CRW's South service area and supplies 1.5 mgd to the NCCWC. CRW also will supply CRW's South service area (formerly the Clairmont Water District) to meet demands exceeding the 2 mgd for provision by South Fork Water. CRW also will supply the City of Gladstone pursuant to the April 9, 1985, agreement; the City of Milwaukie pursuant to the July 1, 1998, agreement; and South Fork Water per the April 24, 2000, agreement.
- NCCWC: Supplies water to Oak Lodge; wheel water through CRW's system to Mt. Scott and Damascus (now Sunrise Water Authority); together with 1.5 mgd to be delivered to the NCCWC from CRW pursuant to the May 1, 1995, agreement.
- South Fork Water: Supplies water to Oregon City and West Linn. This agreement allows South Fork Water to provide water to CRW's South service area at an annual average of 2 mgd and to the NCCWC pursuant to the water agreement dated February 29, 2000, at a rate of up to 12 mgd.

2.4.4 Oregon City and CRW

Two IGAs define terms for Oregon City to provide water to some areas within CRW's South service area. The first IGA was executed October 4, 2023, and has Oregon City providing water to the Thimble Creek concept area. The second IGA was executed October 13, 2016, and has Oregon City providing water to the Glen Oaks development.

2.4.5 West Linn and Lake Oswego

This IGA defines the terms of use and operations of the partners' interconnection and related infrastructure. This IGA was executed December 3, 2003.

2.5 Current Service Area Description and Population

The service area of South Fork Water as shown in Figure 2-1 includes the service areas of Oregon City and West Linn. The partners' service areas are presented in Exhibits 2-2 and 2-3, respectively. As noted in Exhibit 2-2, Oregon City serves some portions of CRW's South service area and CRW serves some areas within the Oregon City's UGB, including the Barlow Crest area and portions of the city's South End.

Portland State University's Population Research Center (PSU) estimated the 2020 populations for the service areas of Oregon City and West Linn and projected these partners' populations within their respective Urban Growth Boundaries (UGBs) for 2030 through 2050. The service area populations are slightly greater than the partners' populations due to the presence of residential customers of the partners located outside of the partners' limits. South Fork Water interpolated the partners' 2025 population estimates based on PSU's estimated 2020 populations and PSU's projected 2030 populations, resulting in 2025 service area populations of 40,775 for Oregon City and 28,233 for West Linn, for a combined population of 69,008.

2.6 Demand

2.6.1 Annual Demands of South Fork Water and the Partners

South Fork Water's annual demand, or treated water production at the WTP, has hovered around 3,000 MG per year over the past 5 years, with an average ADD of 8.15 mgd and an average MDD of 18.92 mgd. The peaking factor of MDD to ADD has averaged 2.32. In comparison, South Fork Water's 2006 WMCP reported an ADD of 8.53 mgd and an MDD of 19.86 mgd for 2002 (the most recent year reported). Exhibit 2-4 summarizes key characteristics of demand at the WTP from 2020 to 2024. (Data for 2025 was not available during development of the WMCP.)

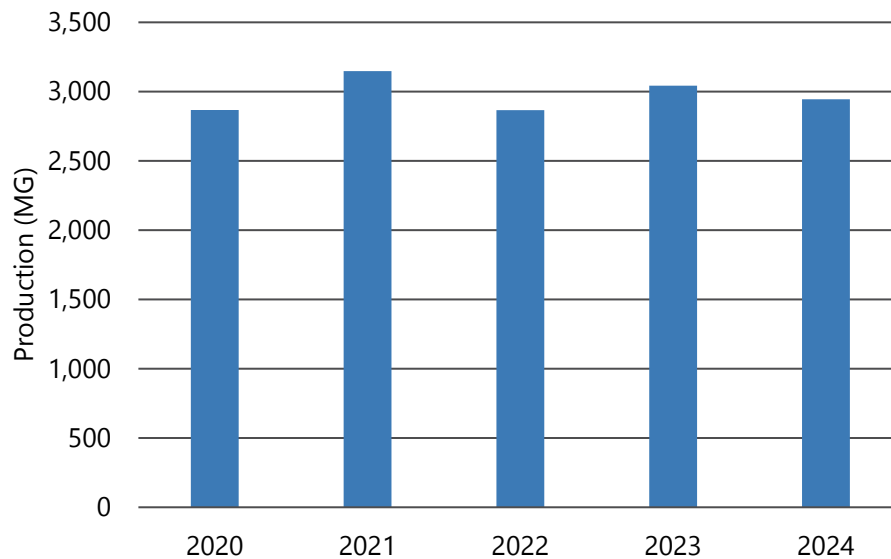
Exhibit 2-4. South Fork Water Historical Water Demand, 2020 to 2024

Year	Annual Demand (MG)	Average Day Demand (mgd)	Maximum Day Demand (mgd)	Maximum Day	MDD/ADD Peaking Factor
2020	2,867.36	7.86	19.08	9/10/2020	2.43
2021	3,147.97	8.62	19.13	6/27/2021	2.22
2022	2,866.13	7.85	18.78	7/27/2022	2.39
2023	3,042.92	8.34	19.67	8/15/2023	2.36
2024	2,944.40	8.07	17.95	7/9/2024	2.23

MG = million gallons mgd = million gallons per day
MDD = maximum day demand ADD = average day demand

Exhibit 2-5 presents historical annual demand for South Fork Water at the WTP graphically.

Exhibit 2-5. South Fork Water Annual Demand, 2020 to 2024



MG = million gallons

Exhibit 2-6 presents demand information for Oregon City from 2020 to 2024. Daily demand data is not recorded at the master meters located at Oregon City's interconnections with South Fork Water. Monthly data were used to calculate daily demand for the maximum month, which may be slightly lower than the peak day demand. Overall, annual demand declined in 2024.

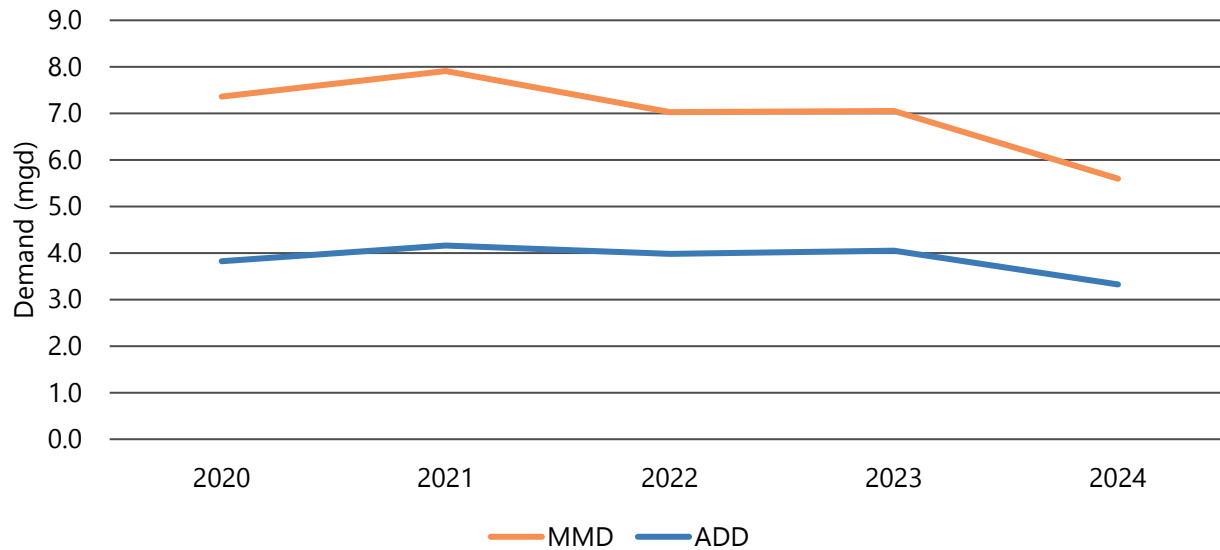
Exhibit 2-6. Oregon City Historical Water Demand, 2020 to 2024

Year	Annual Demand (MG)	Average Day Demand (mgd)	Maximum Month Demand (mgd)	Maximum Month	MMD/ADD Peaking Factor
2020	1,396.3	3.83	7.36	August	1.92
2021	1,518.8	4.16	7.91	July	1.90
2022	1,453.5	3.98	7.03	August	1.77
2023	1,478.9	4.05	7.05	July	1.74
2024	1,213.7	3.33	5.60	August	1.68

MG = million gallons mgd = million gallons per day
MMD = maximum month demand ADD = average day demand

As shown in Exhibit 2-6, Oregon City's ADD remained relatively stable with a slight decline in 2024, while MMD decreased over time. The ADD and MMD for Oregon City in 2002 reported in the 2006 WMCP were 4.00 mgd and 6.43 mgd, respectively. Exhibit 2-7 illustrates recent trends in ADD and MMD for Oregon City graphically.

Exhibit 2-7. Oregon City ADD and MMD, 2020 to 2024



ADD = average day demand MMD = maximum month demand
mgd = million gallons per day

Exhibit 2-8 presents historical demand information for West Linn, including the monthly volume provided by South Fork Water (daily demand data is not recorded for West Linn) and the total demand from all sources, which includes water supplied through the interconnection with Lake Oswego. Similar to Oregon City, a surrogate value for maximum daily demand was calculated by dividing the days in the month with the greatest monthly demand. The ADD and MMD data presented in the table are based on West Linn's total demand from all sources. Daily demand data were only available for 2024. The MDD for 2024 was 6.03 mgd, which occurred on July 9.

Exhibit 2-8. West Linn Historical Water Demand, 2020 to 2024

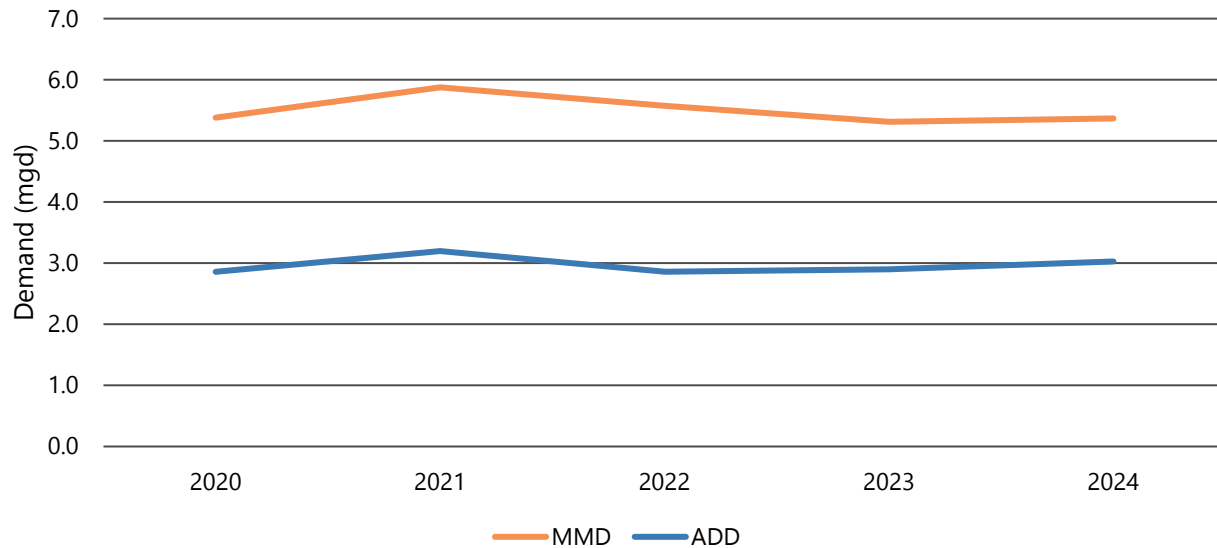
Year	Annual Demand from SFW (MG)	Total Annual Demand (MG)	Average Day Demand (mgd)	Maximum Month Demand (mgd)	Maximum Month	MMD/ADD Peaking Factor
2020	1,043.2	1,043.2	2.86	5.38	August	1.88
2021	1,167.0	1,167.0	3.20	5.88	July	1.84
2022	1,043.4	1,043.4	2.86	5.57	August	1.95
2023	1,058.2	1,058.3	2.90	5.31	August	1.83
2024	1,064.2	1,104.7	3.03	5.37	July	1.77

SFW = South Fork Water
MG = million gallons mgd = million gallons per day
MMD = maximum month demand ADD = average day demand

As shown in Exhibit 2-8 and graphically in Exhibit 2-9, West Linn's ADD and MMD generally remained stable over the past 5 years. South Fork Water's 2006 WMCP reported an ADD of 3.35 mgd and an

MMD of 6.88 mgd for West Linn in 2002, including water supplied by South Fork Water and Lake Oswego.

Exhibit 2-9. West Linn ADD and MMD, 2020 to 2024



ADD = average day demand MMD = maximum month demand
mgd = million gallons per day

Exhibit 2-10 presents information about water supplied by South Fork Water to CRW's South service area from 2020 to 2024. Note that some water supplied to the South service area is not metered at the interconnection and therefore not all water supplied to CRW's customers is accounted for in CRW's demand shown in Exhibit 2-10. However, this water is metered in South Fork Water's demand volumes shown in Exhibit 2-4. The ADD and MMD for CRW in 2002 reported in the 2006 WMCP were somewhat higher than the more recent period, with an ADD of 2.00 mgd and an MMD of 2.95 mgd.

Exhibit 2-10. Clackamas River Water Historical Water Demand, 2020 to 2024

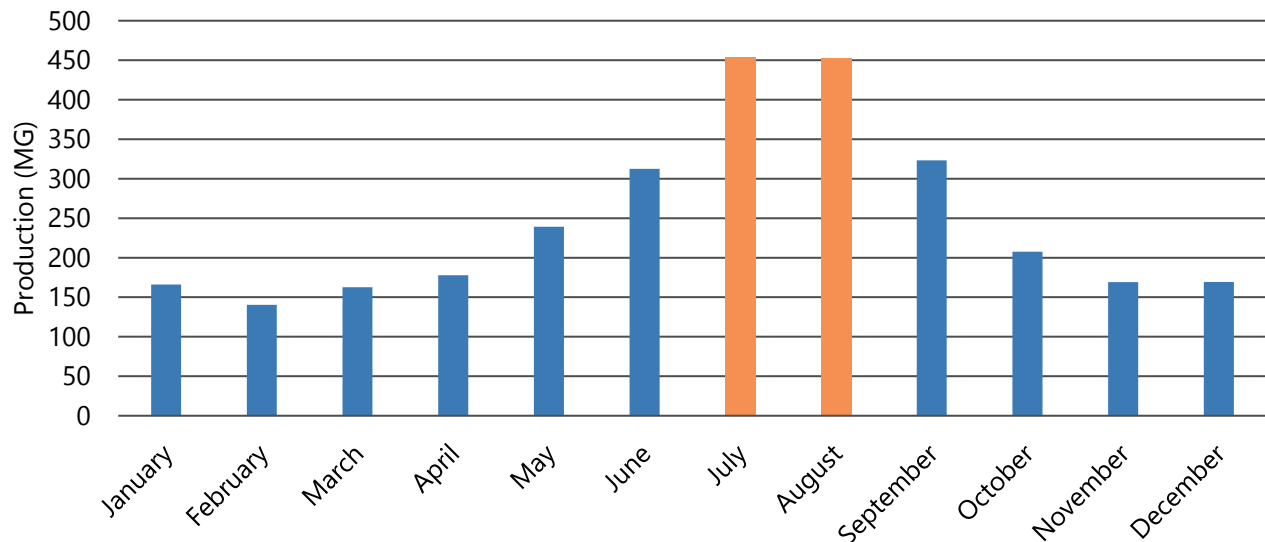
Year	Annual Demand (MG)	Average Day Demand (mgd)	Maximum Month Demand (mgd)	Maximum Month	MMD/ADD Peaking Factor
2020	443.4	1.21	2.35	August	1.94
2021	478.7	1.31	2.66	July	2.03
2022	408.7	1.12	2.27	August	2.03
2023	448.8	1.23	2.60	August	2.12
2024	435.7	1.19	2.48	July	2.08

South Fork Water did not supply water to the NCCWC from 2020 through 2023. In 2024, South Fork Water provided 257.9 MG to CRW via NCCWC during a planned maintenance event.

2.6.2 Monthly Demand of South Fork Water and Partners

As described in Section 2.6.1, demand tends to peak during the summer months of July and August when the weather is hotter and drier, which tends to result in higher outdoor water use. Exhibit 2-11 shows the average monthly demand from South Fork Water’s WTP from 2020 to 2024, with the peak months highlighted in orange.

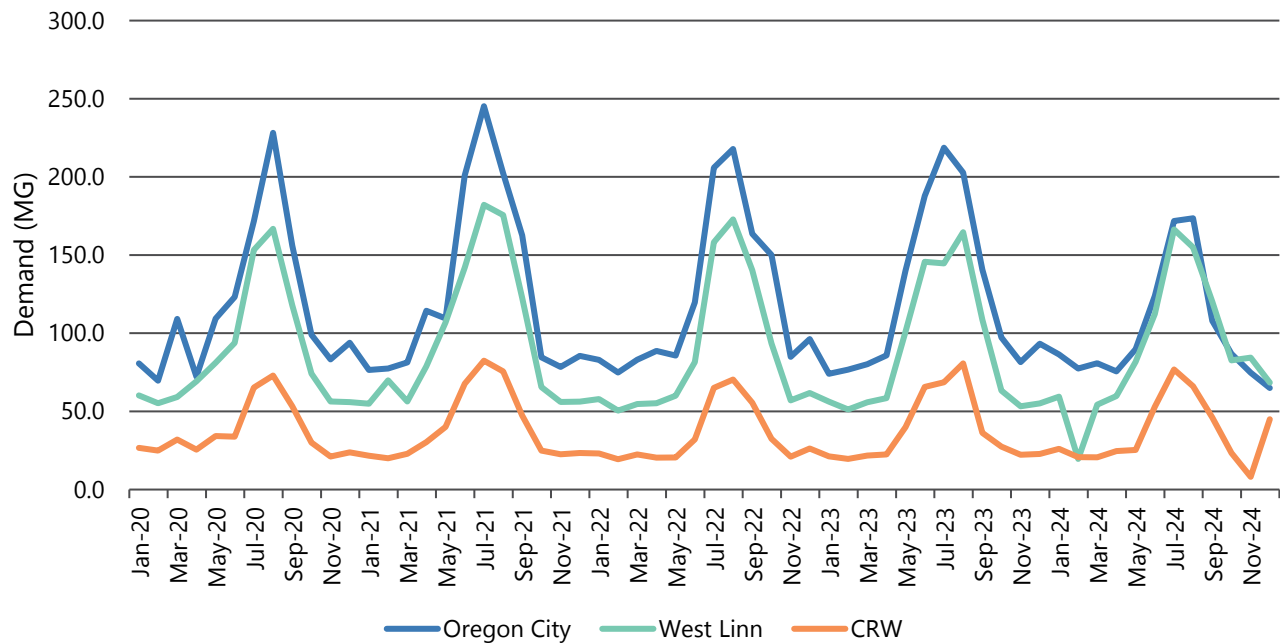
Exhibit 2-11. South Fork Water Average Monthly Production, 2020 to 2024



MG = million gallons

The monthly trends for Oregon City, West Linn, and CRW’s South service area are similar to the overall trend for production at the WTP. Exhibit 2-12 depicts monthly volumes of water supplied by South Fork Water to each of the partner entities (i.e., demand shown for West Linn does not include water supplied by Lake Oswego) from 2020 to 2024. Oregon City’s demand has generally been higher than West Linn’s but declined to approximately the same volume as West Linn in 2024. CRW’s demand patterns throughout the year have been largely consistent over the past 5 years.

Exhibit 2-12. Monthly Demand Supplied by SFW



2.7 Customer Characteristics and Use Patterns

2.7.1 Customer Types

In 2024, Oregon City served 11,625 customer connections classified into seven categories: Residential, Multi-Family, Commercial, Institutional (churches, hospitals, schools, and similar public or semi-public places), City, Irrigation (irrigation-only customer meters), and Reduced Rate. When South Fork Water’s 2006 WMCP was developed, Oregon City did not use the City, Irrigation, and Reduced Rate categories. At that time, Oregon City classified Commercial and Industrial customers separately, and its billing system included a Senior Citizens category. Currently, City accounts include City properties, irrigation meters, and drinking fountains. Reduced water rates are available to low-income residential customers based on household size but do not cover the portion of water use deemed to be “excess” usage for summer outdoor watering, which is billed at the City’s regular rates. Oregon City serves two Commercial and 91 Residential customers that are located outside the city limits. In addition, Oregon City provides wholesale water to CRW as described in Section 2.4.3.

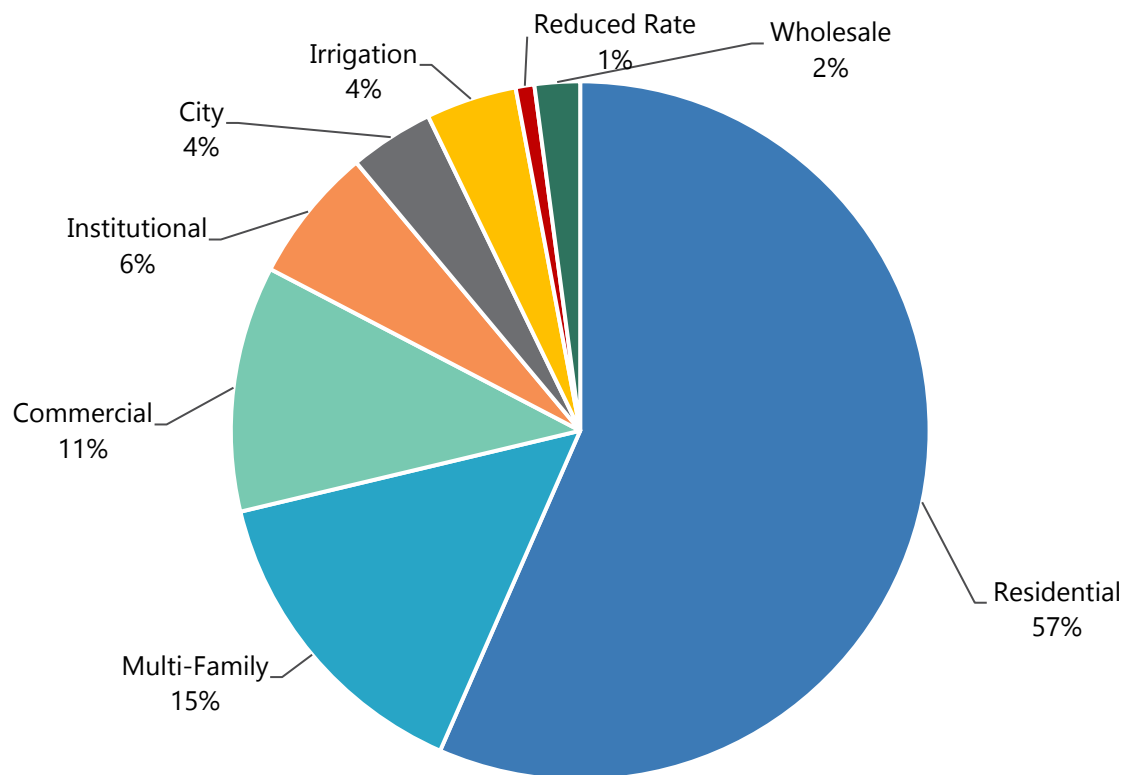
As shown in Exhibit 2-13, the majority of Oregon City’s service connections are in the Residential category. Residential customers represented 87 percent of all customer meters in 2024, which is the same percentage reported for Oregon City’s Residential customer connections in the 2006 WMCP.

Exhibit 2-13. Oregon City Number of Connections by Customer Category, 2024

	Connections	Percent
Residential	10,164	87%
Multi-Family	460	4%
Commercial	492	4%
Institutional	112	1%
City	88	1%
Irrigation	122	1%
Reduced Rate	187	2%
Total	11,625	100%

Exhibit 2-14 shows the percentage of water used by each customer category in 2024. Residential customers accounted for 57 percent of water use in 2024, compared to 55 percent of water use in 2003 as reported in the 2006 WMCP. Multi-family usage remained relatively stable, accounting for about 16 percent of water use in 2003, while Commercial and Institutional usage declined from around 17 percent and 11 percent in 2003, respectively.

Exhibit 2-14. Oregon City Percent Water Use by Customer Category, 2024



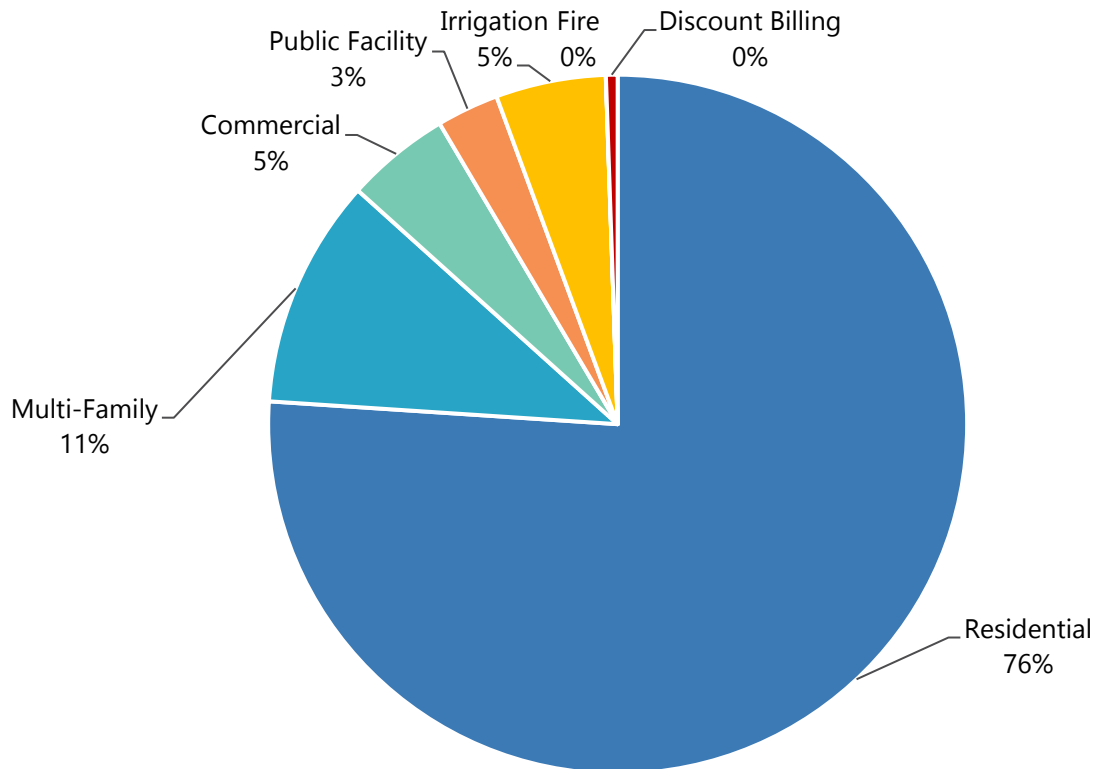
West Linn classifies its customers into Residential, Multi-Family, Commercial, Public Facility, Irrigation, Fire, and Discount Billing categories. Public Facility accounts include buildings and parks operated by a public entity, such as the City or school district. Discount Billing applies to customers in the Low Income Utility Assistance Program, which reduces rates for water, sewer, and street and park maintenance charges. West Linn served 11 Residential customers outside of city limits. As of the end of 2024, West Linn had 8,999 customer accounts. As shown in Exhibit 2-15, 95 percent of these customers are classified as Residential. The mix of customer types served by West Linn has changed very little since the 2006 WMCP, which reported approximately 95 percent Residential, 2 percent Multi-Family, 2 percent Commercial, and less than 1 percent each Public Facility and Discount Billing. West Linn did not previously track Irrigation accounts, which meter water use for irrigating grass and landscaping, or connections for fire suppression.

Exhibit 2-15. West Linn Number of Connections by Customer Category, 2024

	Connections	Percent
Residential	8,512	95%
Multi-Family	124	1%
Commercial	141	2%
Public Facility	40	0%
Irrigation	91	1%
Fire	1	0%
Discount Billing	90	1%
Total	8,999	100%

Exhibit 2-16 shows the percentage of water used by each customer category in 2024. Consumption reported in the 2006 WMCP for West Linn in 2002 included 80 percent of water use by Residential customers, 10 percent by Multi-Family, 8 percent by Commercial, 2 percent by Public Facility, and less than 1 percent by Discount Billing customers.

Exhibit 2-16. West Linn Percent Water Use by Customer Category, 2024



2.7.2 Annual Consumption—Oregon City

Exhibit 2-17 presents the annual metered consumption by customer category for Oregon City from 2020 through 2024. Monthly data for the Wholesale category (water provided to CRW) was not available for 2020. Instead, the total Wholesale volume for 2020 was estimated by multiplying the ADD for Oregon City's connections to the CRW system by 365 to find approximate annual use. Water usage at these connections is tracked at four master meters, and ADD information for each master meter in 2020 was included in Oregon City's 2021 Water Master Plan (WMP).

Total consumption has grown slightly over the past 5 years, with increases particularly evident in the Multi-Family and Irrigation customer categories. While the consumption data in the 2006 WMCP were presented in terms of daily demand rather than annual volumes, a general comparison of consumption prior to 2006 with consumption over the past 5 years shows that Residential use has increased, Institutional use has remained relatively stable, and Multi-Family and Commercial use have declined slightly.

2.7.3 Annual Consumption—West Linn

Exhibit 2-18 presents West Linn's annual consumption by customer category from 2020 through 2024. Total consumption has fluctuated over the past 5 years, with a peak in 2021 primarily driven by higher Residential water use.

Exhibit 2-17. Oregon City Annual Consumption by Customer Class (MG), 2020 to 2024

	Residential	Multi-Family	Commercial	Institutional	City	Irrigation	Reduced Rate	Wholesale	Total
2020	746.6	163.6	139.3	60.7	29.0	31.6	10.9	127.8	1,181.7
2021	811.6	168.2	156.9	78.5	50.2	47.4	12.8	149.2	1,331.5
2022	727.3	165.6	152.1	82.7	61.9	47.2	11.4	125.6	1,260.0
2023	775.6	175.4	152.6	95.8	61.8	46.8	11.5	139.7	1,335.8
2024	737.3	191.7	148.3	81.8	50.9	54.8	11.3	141.1	1,303.5

MG = million gallons

Exhibit 2-18. West Linn Annual Consumption by Customer Class (MG), 2020 to 2024

	Residential	Multi-Family	Commercial	Public Facility	Irrigation	Fire	Discount Billing	Total
2020	777.1	112.3	42.3	15.8	37.1	0.0	6.5	991.1
2021	850.7	115.8	48.0	22.2	50.6	0.1	6.3	1,093.6
2022	749.6	111.9	44.9	17.8	42.1	0.1	5.8	972.1
2023	801.7	108.7	47.4	31.4	51.0	0.1	5.4	1,045.7
2024	759.2	106.0	48.2	28.7	50.8	0.1	5.4	998.4

MG = million gallons

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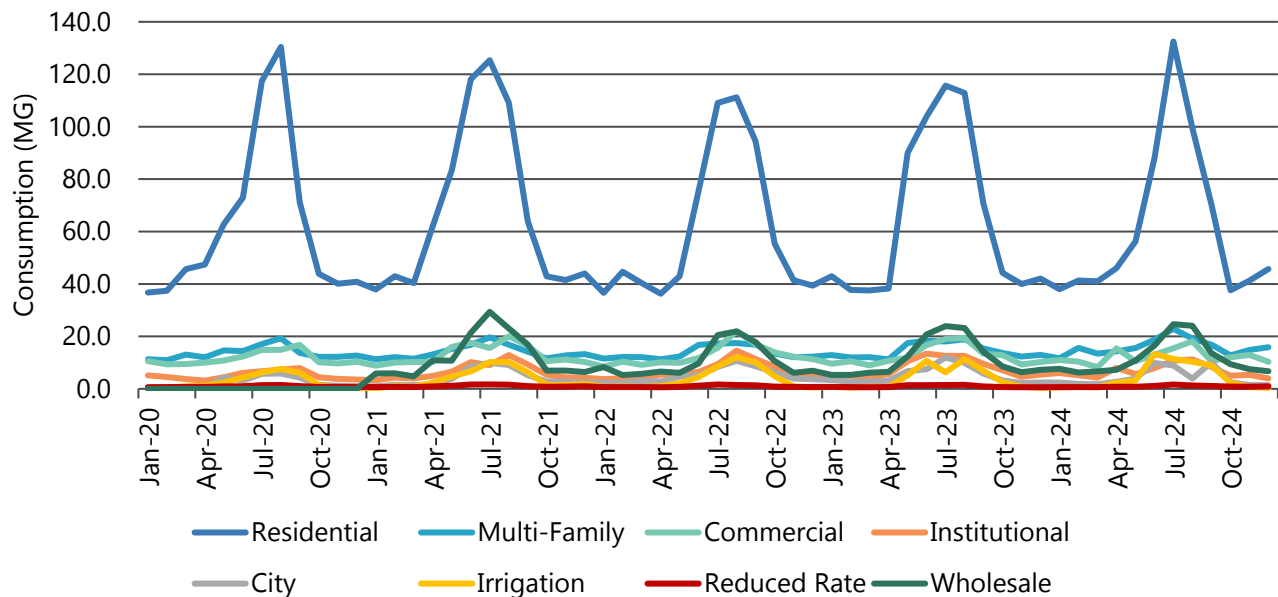
Residential, Commercial, and Public Facility water use has varied over the past 5 years, while Multi-Family water use has declined slightly. Irrigation water use tends to follow summer temperature trends, with higher usage during the particularly warm years of 2021, 2023, and 2024.

As with Oregon City, South Fork Water’s 2006 WMCP presented West Linn’s consumption data in terms of daily usage rather than annual volumes. Compared with consumption reported in the 2006 WMCP, water use over the past 5 years has decreased slightly for the Residential and Multi-Family categories and decreased more significantly in the Commercial category.

2.7.4 Monthly Consumption—Oregon City

Exhibit 2-19 depicts Oregon City’s monthly metered consumption by customer type graphically, showing a strong pattern of increased water use during the summer months. This pattern is commonly observed as a result of increased irrigation of lawns and landscaping and an influx of visitors in the summer.

Exhibit 2-19. Oregon City Monthly Consumption by Customer Class, 2020 to 2024

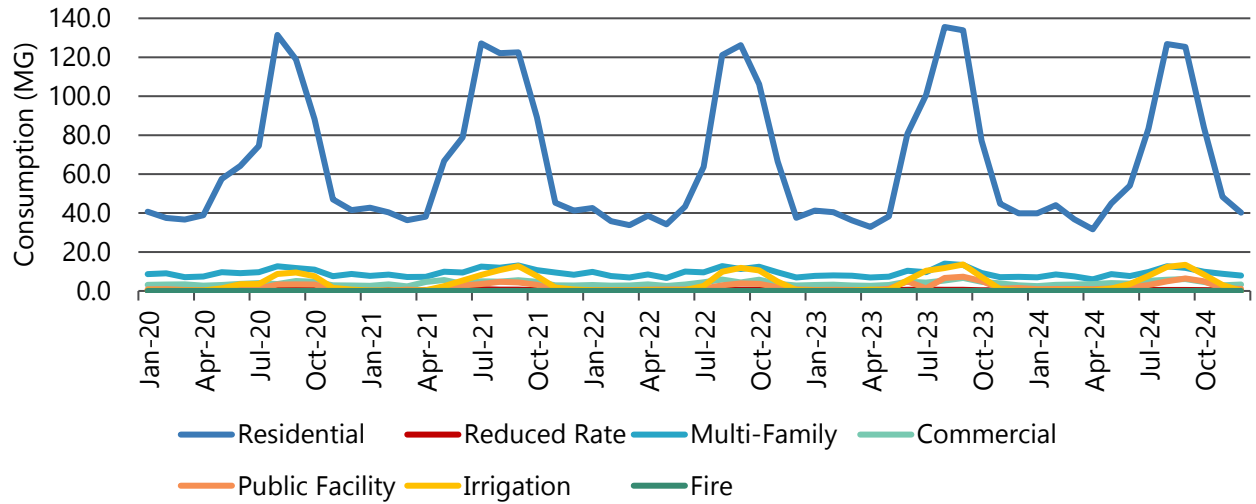


MG = million gallons

2.7.5 Monthly Consumption—West Linn

Exhibit 2-20 presents West Linn’s monthly consumption by customer type graphically, showing similar summer water use peaks as seen in Oregon City, especially in the Residential and Irrigation categories.

Exhibit 2-20. West Linn Monthly Consumption by Customer Class, 2020 to 2024



MG = million gallons

2.7.6 Largest Water Users–Partners

The 10 largest water users in Oregon City, as measured by the volume of metered consumption in fiscal year 2024¹, are shown in Exhibit 2-21 and include customers from the Commercial, Institutional, City, and Multi-Family customer classes.

Exhibit 2-21. Oregon City Largest Water Users, FY 24

Customer Class	Annual Consumption (MG)	Percentage of Total Consumption
Commercial	15.4	1.1%
Institutional	14.7	1.0%
City	10.5	0.7%
Institutional	9.4	0.7%
Institutional	9.3	0.7%
Institutional	8.8	0.6%
Multi-Family	8.6	0.6%
Multi-Family	8.3	0.6%
Multi-Family	8.2	0.6%
Multi-Family	7.7	0.5%

FY = fiscal year MG= million gallons

¹ Oregon City's billing software tracks this information on a fiscal year (July 1 through June 30) rather than a calendar year basis.

Exhibit 2-22 shows West Linn’s 10 largest water users in 2024. These include customers from the Multi-Family, Public Facility, and Commercial customer classes.

Exhibit 2-22. West Linn Largest Water Users, 2024

Customer Class	Annual Consumption (MG)	Percentage of Total Consumption
Multi-Family	15.1	1.5%
Multi-Family	10.8	1.1%
Multi-Family	6.6	0.7%
Multi-Family	6.3	0.6%
Public Facility	5.9	0.6%
Multi-Family	5.4	0.5%
Multi-Family	5.3	0.5%
Commercial	5.1	0.5%
Public Facility	5.0	0.5%
Multi-Family	4.8	0.5%

2.8 Water Loss—South Fork and Partners

In this section, water loss is calculated separately for South Fork Water, Oregon City, and West Linn. For South Fork Water, water loss is calculated as the difference between WTP production and the sum of the volumes of water sold for consumption by Oregon City, West Linn, CRW, the NCCWC, and CRW via NCCWC. Production is measured by the WTP effluent meter, and therefore process water (i.e., recycled backwash water) does not need to be accounted for separately in the water loss calculations. As shown in Exhibit 2-23, South Fork Water’s annual water loss averaged -0.3 percent over the past 5 years.

Exhibit 2-23. South Fork Water Annual Water Loss, 2020 to 2024

Year	Production (MG)	Volume Sold (MG)					Water Loss (MG)	Water Loss (%)
		Oregon City (MG)	West Linn (MG)	CRW (MG)	NCCWC (MG)	Total Consumption (MG)		
2020	2,867.4	1,396.3	1,043.2	443.4	0.0	2,883.0	-15.6	-0.5%
2021	3,148.0	1,518.8	1,167.0	478.7	0.0	3,164.5	-16.5	-0.5%
2022	2,866.1	1,453.5	1,043.4	408.7	0.0	2,905.6	-39.5	-1.4%
2023	3,042.9	1,478.9	1,058.2	448.8	0.0	2,986.0	56.9	1.9%
2024	2,944.4	1,213.7	1,064.2	435.7	257.9	2,971.5	-27.1	-0.9%
Average	2,973.8	1,412.3	1,075.2	443.1	51.6	2,982.1	-8.3	-0.3%

MG = million gallons

CRW = Clackamas River Water

NCCWC = North Clackamas County Water Commission

Because of the relatively short distances from the WTP to the master meters and the presence of newer pipelines with many years of service life remaining, South Fork Water has determined that its primary cause of water loss is likely due to slight variations in meter calibrations (apparent losses) rather than leakage (real losses). Most meter types are considered accurate within ± 3 percent in the water industry, such that two meters can measure the same volume of water with results differing by up to 6 percent, while still remaining within the manufacturer's acceptable accuracy range. Loss estimates in systems with little actual leakage, such as South Fork Water's system, may therefore include both positive and negative water losses clustered around 0 percent, as seen in Exhibit 2-21. South Fork Water's average water loss reported in the 2006 WMCP was -1.5 percent, which was also attributed to apparent losses resulting from meter calibration and accuracy variability.

Oregon City's water loss is calculated as the difference between demand measured at the master meter and the sum of metered customer consumption, water use from hydrants tracked by temporary meters, and estimates of unmetered, authorized uses, which include water trucks, sewer line cleaning, street sweeping, line flushing, and street tree watering. Exhibit 2-24 presents Oregon City's water loss for the past 5 years.

Exhibit 2-24. Oregon City Annual Water Loss, 2020 to 2024

Year	Demand (MG)	Consumption				Water Loss (MG)	Water Loss (%)
		Metered Consumption (MG)	Hydrant Meters (MG)	Unmetered Authorized Uses (MG)	Total Consumption (MG)		
2020	1,396.3	1,309.5	1.7	1.5	1,312.7	83.6	6.0%
2021	1,518.8	1,474.8	5.3	0.9	1,481.0	37.8	2.5%
2022	1,453.5	1,373.8	13.2	1.8	1,388.8	64.7	4.5%
2023	1,478.9	1,459.0	10.7	2.4	1,472.2	6.8	0.5%
2024	1,213.7	1,417.2	6.1	5.5	1,428.7	-215.0	-17.7%
Average	1,412.3	1,406.9	7.4	2.4	1,416.7	-4.4	-0.9%

MG = million gallons

Sources of water loss may include infrastructure leakage, meter inaccuracies, and authorized uses that are not currently metered or estimated. The average water loss reported for Oregon City in the 2006 WMCP was 18 percent, and the City has made progress in reducing losses through improved leak detection and repair, and meter testing and replacement. Oregon City is investigating the obvious outlier data for 2024 and possible causes of the somewhat high negative water loss reported for 2024. When 2024 is not included in the average, Oregon City's water loss between 2020 and 2023 averaged 48.2 MG or 3.3 percent.

West Linn calculates water loss as the difference between demand measured at the master meter and metered customer consumption, and does not currently have estimates available for unmetered, authorized uses. Exhibit 2-25 presents West Linn's water loss for the past 5 years.

Exhibit 2-25. West Linn Annual Water Loss, 2020 to 2024

Year	Demand (MG)	Consumption (MG)	Water Loss (MG)	Water Loss (%)
2020	1,043.2	991.1	52.1	5.0%
2021	1,167.0	1,093.6	73.3	6.3%
2022	1,043.4	972.1	71.4	6.8%
2023	1,058.3	1,045.7	12.5	1.2%
2024	1,104.7	998.4	106.3	9.6%
Average	1,083.3	1,020.2	63.1	5.8%

MG = million gallons

West Linn’s average water loss reported in the 2006 WMCP was 13 percent. Losses have been reduced through leak repairs and meter testing and replacement, and annual water loss has remained under 10 percent for the past 5 years. Slightly higher than average water loss in 2024 is attributed to unmetered water use for large construction projects and is not anticipated to continue.

2.9 Water Rights

2.9.1 Summary of Water Rights

South Fork Water holds four municipal surface water rights. Exhibit 2-26 presents a summary of these rights and Exhibit 2-27 shows volumes of diversions by source. To meet the system demands of Oregon City and West Linn, South Fork Water diverts water from the Clackamas River using Certificate 80417 and Permit S-22581. Certificate 80417 authorizes diversions of up to 20 cfs and Permit S-22581 authorizes diversions of up to 60 cfs. South Fork Water operates its diversion and treatment system at full capacity during periods of high demand which typically occur during the peak season. South Fork Water uses the full authorized rate available from the certificate (20 cfs) and any demand in excess of 20 cfs is met using the permit. Partial certification of Permit S-22581 for 22.4 cfs is pending OWRD review.

Permit S-9982 is held by Oregon City and West Linn. This permit authorizes use of up to 20 cfs on South Fork Clackamas River, a tributary to the Clackamas River, and 10 cfs on Memaloose Creek, a tributary to South Fork Clackamas River, for a total authorized rate of 30 cfs. The partners have developed 3 cfs of this right. Permit S-3778 is held by South Fork Water and authorizes diversions of up to 20 cfs from South Fork Clackamas River; 5 cfs of this right has been developed.

No additional water rights were identified in OWRD’s Water Rights Information Query for South Fork Water, Oregon City, or West Linn. However, three rights are attributable to Oregon City, and one groundwater registration is attributed to West Linn per OWRD’s database of water use reporting. Certificates 35292, 14376, and 9824 are incorrectly coded to Oregon City and groundwater registration GR-2377 is incorrectly coded to West Linn.

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Exhibit 2-26. South Fork Water - Water Rights

Right Holder	Permit	Certificate	Transfer	Authorized Rate		Type of Beneficial Use	Point of Diversion	Source	Priority Date	Date of Completion	Status/ Notes
				mgd	cfs						
South Fork Water	S-22581	-	-	38.8	60	Municipal	South Fork Water new intake	Clack. River	8/3/1953	10/1/2049	Partial proof of 22.4 cfs was submitted in Dec. 1999
Cities of Oregon City and West Linn	S-9982	-	-	19.4 (12.9 @ South Fork Clack. R., 6.5 @ Mema-loose Cr.)	30 (20 @ South Fork Clack. R., 10 @ Mema-loose Cr.)	Municipal	At original points of diversions	Mema-loose Cr. and South Fork Clack. R.	8/11/1926 (South Fork Clack. R); 1/16/1931 (Mema-loose Cr.)	10/1/2038	3 cfs developed, 27 cfs undeveloped
City of Oregon City	S-3778	-	-	12.9	20	Municipal	At original points of diversions	South Fork Clack. R.	1/16/1918	10/1/2050	5 cfs developed, 15 cfs undeveloped
South Fork Water	S-2557	1067 80417	T-6162	3.9	6	Municipal	South Fork Water old intake	South Fork Clack. R. and Clack. R.	7/17/1914	N/A	-

Exhibit 2-27. Historical Water Use by Source

POD ID	Source	Application	Permit	Certificate	Transfer	2024*		2020-2024*	
						Monthly (MG)	Daily (mgd)	Monthly (MG)	Daily (mgd)
13154	Clackamas River	S-28676	S-22581	-	-	252.1	8.4	264.46	8.8
	South Fork Clackamas River and Clackamas River	S-3797	S-2557	1067 80417	± 6162				
11919	Memaloose Cr. and South Fork Clackamas River	S11007	S-9982	-	-	0	0	0	0
65280	South Fork Clackamas River	S-5942	S-3778	-	-	0	0	0	0

*Calendar years

2.9.2 Aquatic Resource Concerns

The water rights managed by South Fork Water authorize diversions in the Clackamas and South Fork Clackamas Rivers and Memaloose Creek. The reach of the Clackamas River where South Fork Water's authorized point of diversion is located, between river miles 1 and 2, was placed on the Oregon Department of Environmental Quality's (DEQ) 303(d) list for certain water quality parameters. In DEQ's updated 2022 Integrated Report, DEQ categorized this segment of the Clackamas River (from Wade Creek to the confluence with the Willamette River) as a water quality limited stream due to elevated year-round water temperatures and elevated temperatures during salmon spawning, low dissolved oxygen levels during salmon spawning, turbidity, and presence of methylmercury.

Permits S-9982 and S-3778 have points of diversion on South Fork Clackamas River and Memaloose Creek, a tributary of South Fork Clackamas River. Both PODs are located within river mile 1 of their respective water bodies. DEQ has not identified these streams as being water quality limited.

None of South Fork Water's partner agencies' groundwater rights appropriate water from a designated critical groundwater area.

The Clackamas River watershed supports several fish species that are listed as threatened, sensitive-critical, and/or sensitive under state and federal laws. The listed fish species that likely occur at the points of diversion of South Fork Water's water rights on the Clackamas River and may occur on South Fork Clackamas River and tributary Memaloose Creek are summarized in Exhibit 2-28.

Exhibit 2-28. Listed Fish Species

Species	Evolutionary Significant Unit	Federal Listing	State Listing
Spring and Fall Chinook (<i>O. tshawytscha</i>)	Lower Columbia River	Threatened	Sensitive-Critical
Bull Trout (<i>Salvelinus confluentus</i>)	Willamette Valley	Threatened	Sensitive
Winter and Summer Steelhead (<i>O. mykiss</i>)	Lower Columbia River	Threatened	Sensitive-Critical
Coastal Cutthroat Trout (<i>O. clarkii clarkii</i>)	Lower Columbia River	–	Sensitive
Coho Salmon (<i>O. kisutch</i>)	Not ESU Listed	Threatened	–
Chum Salmon (<i>O. keta</i>)	Lower Columbia River	Threatened	Sensitive-Critical
White Sturgeon (<i>Acipenser transmontanus</i>)	Lower Columbia River/Coastal	–	Sensitive
Oregon Chub (<i>Oregonichthys crameri</i>)	Not ESU Listed	–	Sensitive
Pacific Lamprey (<i>Entosphenus tridentata</i>)	Not ESU Listed	–	Sensitive
Pacific Brook Lamprey (<i>Lampetra pacifica</i>)	Not ESU Listed	–	Sensitive
Western River Lamprey (<i>L. ayresii</i>)	Not ESU Listed	–	Sensitive
Western Brook Lamprey (<i>L. richardsoni</i>)	Not ESU Listed	–	Sensitive

Sources

Federal ESA listed species (T&E), from NOAA Fisheries Office of Protected Resources:

nmfs.noaa.gov/pr/species/esa/fish.htm

Oregon State ESA listed species, from the Oregon Department of Fish & Wildlife:

dfw.state.or.us/wildlife/diversity/species/threatened_endangered_candidate_list.asp

Oregon State Sensitive Species, from the Oregon Department of Fish & Wildlife:

dfw.state.or.us/wildlife/diversity/species/sensitive_species.asp

2.10 Assessment of Water Supply

The South Fork Water holds water rights authorizing the use of up to total of 75 cfs (48.5 mgd). The South Fork Water partner agencies rely exclusively on South Fork Water-produced water year-round to meet demand. The water supply that serves the partners has proven to be a reliable and adequate source of supply. The adequacy and reliability of South Fork Water's source of supply is a function of its water supply system capacity, streamflow, and the relative priority of these water rights.

The South Fork Water's water supply system capacity is currently limited by the production capacity of its diversion and treatment system, which currently is approximately 34 cfs (22 mgd). South Fork Water intends to gradually increase the capacity of this system in stages to accommodate increasing system demands due to anticipated growth in Oregon City and West Linn. South Fork Water has budgeted to expand this system capacity initially to 46.4 cfs (30 mgd) by 2030 and intends on upgrading this system again as system demands approach maximum system capacity, resulting in an ultimate WTP capacity of 61.9 cfs (40 mgd).

The Clackamas River Basin produces a significant quantity of water even during the driest months of the year. According to streamflow records from 2001 through 2024 on the Clackamas River at

Oregon City, OR (U.S. Geological Survey [USGS] gage 14211010) at river mile 1.6, approximately 90 percent of the time mean daily flows are greater than 805 cfs in July, 709 cfs in August, 742 cfs in September, and 790 cfs in October. To date, the Clackamas River has had sufficient streamflow to meet South Fork Water's water demands.

South Fork Water submitted applications to OWRD for extensions of time for Permits S-22581, S-9982, and S-3778. OWRD's final orders approving these applications were protested by third parties, resulting in over 15 years of litigation. In 2023, the Oregon Supreme Court denied case review and OWRD indicated that all appeals associated with the extensions of time for South Fork Water, along with other permit holders, including Lake Oswego, North Clackamas County Water Commission, and Sunrise Water Authority were completed and OWRD's approvals of the extension applications were final. This permit extension process resulted in OWRD describing the "developed portion" of each of South Fork Water's permits (including the portion of the permits used for beneficial use prior to June 29, 2005). The developed portions of each of these permits are identified on the water rights table, Exhibit 2-26.

The extensions of time for Permits S-22581, S-9982, and S-3778 issued by OWRD conditioned the use of the undeveloped portions of the permits to maintain the persistence of listed fish species. The conditions in the final orders for these extensions were based on fish protection flows of 650 cfs from June 1 to September 15, and 800 cfs from September 16 to May 31. These target flows are to be met at the mouth of the Clackamas River and are calculated by reducing the amount of flow measured at USGS gage 14211010 (Clackamas River at Oregon City) by the amount of diversion for *municipal* use from the river below the gage. (The reference to diversion for municipal use considers all of the City of Lake Oswego's Clackamas River water rights, which authorize diversion of up to 59 cfs.) From the day after the first Monday in September through June 30, when the target flow is not met, South Fork Water will be required to reduce use of the undeveloped portions of these permits in proportion to the amount by which the target flow is not met. Modeling done by Portland State University (PSU) for the original fish persistence conditions on these extensions shows that under some river flow and Timothy Lake release scenarios, these fish-protection flows may not be met during some portion of the fall months.² Consequently, access to water under the undeveloped portions of these permits may be reduced during this time period per the PSU analysis. Consequently, the proposed conditions may reduce South Fork Water's access to water for the undeveloped portions of these permits during these times, making the undeveloped portions of the permits less reliable.

The instream water right (Certificate 59491) in the reach of the Clackamas River where the South Fork Water's point of diversion is located protects flows from above USGS gage 142095 above Three Lynx, Oregon, to the mouth of the Clackamas River. The instream water right protects flows in the amount of 400 cfs from July 1 through September 15 and 640 cfs during the remainder of the year for the purpose of supporting aquatic life. The priority date of Certificate 59491 is August

² Lower Clackamas River Model, Predictive Flow Model and Management Scenarios, Technical Report EWR-07-08, Water Quality Research Group, Department of Civil and Environmental Engineering, Maseeh College of Engineering and Computer Science, Portland State University, November 2008. (Research was partially funded by an Oregon Water Supply and Conservation Initiative grant from OWRD.)

26, 1968. The certificate and three permits managed by South Fork Water are not affected by the instream water right because they are senior in priority and, therefore, are not subject to regulation if the streamflows fall below the protected levels. The water rights managed by South Fork Water also are senior to all municipal rights on the Clackamas River except for Permit S-22581, which is junior to Permit S-20145 (4 cfs), held by the NCCWC.

Further confirming the reliability of the water rights managed by South Fork Water, the cumulative consumptive use (compared to long-term streamflow records) of non-municipal senior consumptive water users on the Clackamas River is negligible.

In addition to the Clackamas River as a source of supply, rights held by South Fork Water or the partners authorize diversions at two other surface water supplies. By OWRD Special Order 2-129 (January 16, 1931), the partners have exclusive right to all appropriations of South Fork Clackamas River and Memaloose Creek under Permit S-9982. In addition, Permit S-3778 authorizes Oregon City to divert water from South Fork Clackamas River. Though these sources of supply have been partially developed, currently no infrastructure is in place for continued use. As part of South Fork Water's water supply and water rights strategy, South Fork Water intends to obtain permit amendments to move these points of diversion to South Fork Water's current diversion point on the Clackamas River. Currently, the diversion points for these permits are located high in the Clackamas River watershed on tributaries to the Clackamas River. Low-flow conditions at these original points of diversion may limit the use of Permits S-9982 and S-3778 to the amount of water available at the original points of diversion, thus potentially reducing the amount of water available for use under these rights.

Given the senior priority date of South Fork Water's rights, the abundant supply of water produced by the Clackamas River, future system capacity, and the availability of supply from alternative sources, South Fork Water is well positioned to meet projected demands.

3. Water Conservation Element

This section addresses OWRD's requirement to describe conservation measures and benchmarks and additional conservation measures implemented by the water provider.

3.1 Progress Report

South Fork Water's previous WMCP was prepared in 2004 and approved by OWRD in 2006. The 2006 WMCP described current water conservation activities and programs, and established benchmarks for each of the required conservation measures. Some benchmarks were set individually for each entity (South Fork Water, Oregon City, and West Linn), while others were designated to be implemented by South Fork Water on behalf of the partners. Exhibit 3-1 describes the progress made in implementing the conservation measures outlined in the 2006 WMCP.

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Exhibit 3-1. 2026 Conservation Measure Benchmark Progress

Conservation Measure	2006 Conservation Measure Benchmarks			2026 Status Meeting 2006 Conservation Benchmarks		
	South Fork Water	Oregon City	West Linn	South Fork Water	Oregon City	West Linn
Water Audit	Conduct individual, annual water audits and compile the results in a common report to be archived and distributed internally.			A comparison of water production and billed usage is updated monthly to identify anomalies that could indicate leaks or meter malfunctions.	Oregon City tracks demand and metered consumption, along with estimates of unmetered uses, including water trucks, water line and sewer line flushing, and street sweeping.	West Linn tracks demand and consumption and recently completed a water audit with its 2025 Water Master Plan update.
Meter Installation Program	Currently, 100 percent metered. Continue to install meters on all new connections to the system and document the calibration of these meters. Compile and archive meter installation and testing summaries for all new connections on an annual basis.	Currently, 100 percent metered. Continue to install meters on all new connections to the system and document the calibration of these meters. Compile and archive meter installation and testing summaries for all new connections on an annual basis.	Establish a written procedure for estimating unmetered uses. Document and develop a plan for metering any unmetered uses. Compile and archive meter installation and testing summaries for all new connections.	South Fork Water’s system continues to be 100 percent metered. Meters have been inventoried and evaluated to identify those that are due for testing or replacement.	All service connections, including new connections, are metered. Oregon City receives and archives meter testing summaries from the third-party meter testing contractor on an annual basis.	West Linn is working to develop a procedure for estimating unmetered uses and a plan for metering unmetered uses. The City currently estimates unmetered water use for construction and is working towards upgrades to Automated Meter Reading (AMR). West Linn receives and archives meter testing summaries from the third-party meter testing contractor on an annual basis.
Meter Testing and Maintenance Program	Document the current Meter Testing and Maintenance Program and compile and archive meter testing summaries on an annual basis.	Establish and document the current Meter Testing and Maintenance Program and compile and archive meter testing summaries on an annual basis.		South Fork Water is scheduled to test master meters in spring 2026. Meter testing has been performed on a less than annual basis, and South Fork Water is developing a testing program now.	Oregon City conducts testing of large meters (3 inches and above) on a yearly basis.	West Linn conducts testing of large meters (3 inches and above) on a yearly basis.
Rate Structure	Continue to charge based on the quantity of water received and to document any changes in rate structure.			South Fork continues to charge based on the quantity of water metered and to document any changes in rate structure.	Oregon City’s charter caps water rate increases at 3 percent per year. Water is billed to customers based, in part, on the quantity of water metered at the service connection.	West Linn continues to charge customers based on the quantity of water metered and to document any changes in rate structure.
Leak Detection Program	Currently, a leak detection program is not required. Continue to conduct annual water audits and implement a leak detection program if it is determined that leakage exceeds 10 percent.	Establish, document, and implement an annual leak detection program.	Establish, document, and implement an annual leak detection program using City-owned sonic leak detection equipment.	South Fork continues to audit water production and usage to identify anomalies that could indicate leakage. Leakage has not exceeded 10 percent.	Oregon City has established and implemented a leak detection program using a contractor to survey one-third of the city each year, completing a full survey in 3 years.	West Linn uses City-owned leak detection equipment on an as-needed basis to locate suspected leaks.
Public Education	Develop metrics for the effectiveness of current education programs and compile the results. Conducted by SFW for both partners.			South Fork contracts with CRWP to provide outreach and public education services. CRWP produces annual reports detailing services provided, such as classroom presentations and water conservation rebates provided.	NA	NA

Conservation Measure	2006 Conservation Measure Benchmarks			2026 Status Meeting 2006 Conservation Benchmarks		
	South Fork Water	Oregon City	West Linn	South Fork Water	Oregon City	West Linn
Leak Repair Program	Continue to conduct water audits, periodic leak detection surveys, and implement a leak repair program if it is determined that leakage exceeds 15 percent.	Pursue leak repair efforts, focusing on the most cost-effective leaks. Establish a plan to reduce leakage below 15 percent. Provide annual summaries of leak detection projects. Produce an annual summary of leak removal projects, cost, and magnitude of leaks removed.	Currently not required. Continue current leak repair efforts. Produce an annual summary of leak removal projects, cost, and magnitude of leaks removed.	South Fork Water continues to audit water production and usage to identify anomalies that could indicate leakage. South Fork Water's system is small and consists primarily of large water mains, so leaks are typically easy to identify. Leaks are repaired as needed. For example, South Fork Water installed a 42-inch main in 2020 to reroute water from a main that had suspected leaks.	Leaks are repaired as soon as Oregon City staff become aware of the situation. Water loss has been reduced below 15 percent.	West Linn documents leaks found and repaired on an annual basis.
Technical Assistance	Contact the top 10 users for each of the partners and evaluate potential conservation measures. Complete a technical summary of the results of these investigations, with recommendations for future programs. To be conducted by SFW.			South Fork Water has determined that it is not feasible to conduct this level of technical assistance with its current resources. CRWP conducts conservation outreach on South Fork Water's behalf.	NA	NA
Fixture Replacement	Conduct a fixture replacement study that will evaluate potential savings from these programs and establish applicable programs. To be conducted by SFW.			South Fork Water contracts with CRWP to provide conservation services, including fixture and appliance rebates.	NA	NA
Rate Structures	Conduct a rate evaluation using the AWWA Manual of Practice 1, <i>Principals of Water Rates Fees and Charges</i> , and provide recommendations for alternative rate structures, if any. Conducted individually by each entity.			A rate study was conducted for South Fork Water in 2025, and rate adjustments were made. No alternative rate structures were recommended.	Oregon City's charter caps water rate increases at 3 percent per year.	West Linn's water rates are analyzed periodically. The City's charter caps rate increases at 5 percent per year.
Re-use	Complete a re-use feasibility report. Contact the top 10 users for each of the utilities, evaluate potential re-use opportunities, and provide a technical summary of the results. To be conducted by SFW.			South Fork Water has determined that it is not feasible to conduct this level of analysis with its current resources, particularly considering its inability to influence users to expend substantial funds on reuse facilities. CRWP conducts conservation outreach on South Fork Waters's behalf.	NA	NA

AWWA = American Water Works Association CRWP = Clackamas River Water Providers NA = not applicable SFW = South Fork Water

3.1 Use and Reporting Program

South Fork Water has a water use measurement and reporting program that complies with the measurement standards in Oregon Administrative Rule (OAR) Chapter 690, Division 85. Monthly water use records are reported to OWRD annually and are published on OWRD's water use reporting webpage (apps.wrd.state.or.us/apps/wr/wateruse_query). Diversions from the Clackamas River are tracked at the raw water meter prior to entering the WTP.

3.2 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
- Water rate structure
- Water loss analysis
- Public education

The following sections describe efforts by South Fork Water, Oregon City, and West Linn to implement these measures along with associated benchmarks for each measure.

3.2.1 Annual Water Audit

The purpose of an annual water audit is to provide a detailed accounting of all water entering and leaving a water system, which allows the water supplier to calculate volumes of water loss that could indicate leaks, meter inaccuracies, unauthorized water uses, or other forms of real or apparent losses. Annual water audits can also be used to analyze the water supplier's own water use and identify measures to reduce losses and increase efficiency. Water losses for each entity were generally below 10 percent, OWRD's standard for water providers, as described in Section 2.8.

South Fork Water compares water production at the WTP to the combined volume of usage billed to Oregon City, West Linn, CRW, and any other wholesale water (e.g., NCCWC) on a monthly basis to identify anomalies that could indicate leaks or meter malfunctions. The volumes of raw water entering the WTP (influent) and finished water leaving the WTP (effluent) are tracked to understand the volumes of process water used. South Fork Water's past analyses of its own water use identified opportunities to improve efficiency by recycling backwash water at the WTP, and this has been implemented. There are no unmetered or unbilled uses associated with South Fork Water's system.

Oregon City tracks water entering and leaving the distribution system based on billing information collected and retained by its Finance Department regarding water supply purchased from South Fork Water and water billed to its customers. The volume of water billed by South Fork Water is compared to master meter records to ensure accuracy. Oregon City also tracks water use at

hydrants using temporary meters and produces estimates of unmetered, authorized water uses, including sewer line cleaning, line flushing, street sweeping, and street tree watering.

West Linn's Finance Department monitors reports describing water entering and leaving the distribution system based on billing information for water purchased from South Fork Water and water billed to West Linn's customers. The volume of water billed by South Fork Water is compared to the master meter records. Moving forward, West Linn's annual water audit will include estimates of water used for construction and water tracked by its Environmental Services Department for sewer line cleaning. West Linn also completed a thorough water system review and audit during preparation of its 2025 WMP update. With respect to West Linn's own water use, the city updated its standards for city facilities to require the use of Environmental Protection Agency's WaterSense labeled fixtures upon construction. WaterSense-labeled fixtures exceed the minimum federal water efficiency standards. In addition, West Linn updated its landscaping standards to require the use of drought tolerant plants and drip irrigation upon installation.

As noted, South Fork Water, Oregon City, and West Linn each conduct individual annual water audits. To improve coordination, South Fork Water will begin compiling these audits into an annual report based on data provided by each of the partners. Within the next 5 years, Oregon City and West Linn will analyze city water use (including unbilled authorized uses) and assess whether there are additional opportunities to conserve water or improve water use efficiency.

Five-Year Benchmarks

- **South Fork Water** will continue to conduct annual water audits of its water system and will compile its water audits with those of Oregon City and West Linn into an annual report.
- **Oregon City** will continue to conduct annual water audits and provide them to South Fork Water for the annual report.
- Within the next 5 years, **Oregon City** will analyze city water use (including unbilled authorized uses) and assess whether there are additional opportunities to conserve water or improve water use efficiency.
- **West Linn** will continue to conduct annual water audits and provide them to South Fork Water for the annual report.
- Within the next 5 years, **West Linn** will analyze city water use (including unbilled authorized uses) and assess whether there are additional opportunities to conserve water or improve water use efficiency.

3.2.2 System-wide Metering

South Fork Water's system is fully metered, including raw water influent, finished water effluent, and recycled filter backwash water. Water supply from South Fork Water to Oregon City is metered through five master meters owned by South Fork Water and one master meter owned by Oregon City, and water supply to West Linn is metered at one master meter owned by South Fork Water. Water supply to CRW is metered through five master meters owned by Oregon City and one

master meter owned by South Fork Water. South Fork Water also owns the master meter for Pipeline B, which conveys emergency water supply to the NCCWC.

All of Oregon City's customer connections, including new service connections, are metered. Oregon City provides temporary hydrant meters to track water used to fill water trucks for construction and other purposes. Unmetered, authorized uses are estimated as part of the annual water audit.

Water entering West Linn's system from South Fork Water is metered at the Division Street master meter, and West Linn also owns and maintains a master meter to measure water flowing to or from Lake Oswego at the system intertie. All service connections in West Linn are metered. Unmetered, authorized uses, such as firefighting, are estimated based on the variation from average monthly use.

Five-Year Benchmarks

- **South Fork Water** will continue to meter all connections, including wholesale customer connections and influent and effluent at the water treatment plant.
- **Oregon City** will continue to require all service connections to be metered.
- **West Linn** will continue to require all service connections to be metered.

3.2.3 Meter Testing and Maintenance

Master meter testing for South Fork Water's system has not been performed annually because not all master meters have test ports, requiring alternative testing procedures. In 2025, South Fork Water tested six master meters that supply water to CRW. South Fork Water is currently developing an alternative testing process for meters without test ports and has scheduled testing of its master meters by 2027. South Fork Water's water loss has historically been very low due to the newer age of most system components and the short distance from the WTP to the wholesale customers' master meters. Therefore, South Fork Water intends to implement master meter testing every 5 years unless a sharp increase in water loss is detected during an annual audit (above 10 percent) that cannot be accounted for by known leaks and may indicate a meter malfunction.

Two of the master meters for Oregon City were last tested in 2014, and a new electronic master meter connecting to Oregon City's water system at the Mountain View pump station was installed in 2024 but does not have a test port. Oregon City tests large customer meters annually, including all meters 3 inches and larger and about 75 to 80 percent of the 2-inch meters for apartment complexes and other large water users on a rotating basis. Oregon City contracts for meter reading services, and the Utility Billing Department receives a monthly report of "no-consumption" meters. Meters that register no consumption when in use are replaced promptly. For smaller meters, such as single-family residential customer meters, Oregon City has determined that it is more cost-effective to replace older or malfunctioning meters than to conduct large-scale meter testing. When Public Works staff are conducting other maintenance or repair work and encounter a meter that appears to be defective or at the end of its service life, the meter is scheduled for replacement.

The master meter for West Linn, located at the Division Street pump station, was installed around 1998 and does not have a test port. West Linn tests a portion of its large customer meters (3 inches

and larger) annually, with all large meters completing testing on a 5-year schedule. Meters that are flagged by the meter reading contractor showing no consumption on active customer accounts are replaced. Beginning in 2026, West Linn is transitioning all customer meters to an Automated Meter Reading (AMR) system, which will entail replacement of all meters over the next 5 years. The AMR system will improve accuracy and allow for timely leak detection by identifying continuous or unusually high water use so customers can be notified.

Five-Year Benchmarks

- By 2027, **South Fork Water** will test master meters every 5 years. If an annual water audit shows water loss above 10 percent and a meter issue is suspected, South Fork Water will test the suspected malfunctioning meter(s).
- **Oregon City** will continue its annual large meter testing program and will continue to replace small customer meters identified as failed.
- **West Linn** will continue its annual large meter testing program. Over the next 5 years, all customer meters will be upgraded to Automated Meter Reading (AMR) models.

3.2.4 Water Rate Structure

South Fork Water charges its wholesale customers based on the quantity of water supplied, as measured at the master meters.

Oregon City's water rate structure includes a base charge according to meter size and a usage rate based on the volume of water metered at the service connection. The Oregon City charter caps water rate increases at 3 percent per year.

West Linn's water rate structure includes a base charge based on meter size plus a volumetric usage charge. The first 700 cubic feet of water use is included in the base rate, and the volumetric charge applies per additional 100 cubic feet of water. West Linn's charter caps water rate increases at 5 percent per year.

Five-Year Benchmarks

- **South Fork Water** will continue to charge customers based on the volume of water measured at the master meters.
- **Oregon City** will continue to bill customers based, in part, on the quantity of water metered at the service connection.
- **West Linn** will continue to bill customers based, in part, on the quantity of water metered at the service connection.

3.2.5 Water Loss Analysis

OWRD regulations require water suppliers with water loss over 10 percent to provide a description and analysis identifying potential factors contributing to the losses and selected actions for remedy within 2 years of approval of a WMCP, and additional actions if water loss is not reduced below 10 percent within 5 years. As described in Section 2.8, water loss for South Fork Water, Oregon City,

and West Linn has remained below this 10 percent threshold. Each entity undertakes proactive water loss control measures, such as leak detection and repair, meter inspection and replacements, and water line maintenance and replacement.

South Fork Water's water loss varied between -1.4 percent and 1.9 percent over the past 5 years, averaging -0.3 percent. These slight discrepancies are attributed to meter calibration issues within the expected range of meter variability, and the master meters are scheduled to be tested in spring 2026 and every 5 years thereafter. No major breaks have occurred in South Fork Water's pipeline infrastructure, and leaks observed are addressed as soon as possible. A looped connection between the 30-inch and 42-inch transmission lines was completed in 2018 to bypass a portion of the 30-inch transmission line near the WTP observed to be leaking, preventing further water loss. The Capital Improvement Plan in South Fork Water's WMP includes pipeline condition assessment and scheduled replacements and upgrades. South Fork Water will continue to conduct water audits, as described in Section 3.2.1, to identify anomalies that could indicate leakage.

Between 2020 and 2023, Oregon City's water loss averaged 3.3 percent. As noted in Section 2.8, Oregon City is investigating the cause of an outlier negative water loss reported in 2024, which may be related to calibration of the new master meter installed that year or other data management issues. Oregon City recently completed a leak detection program using a contractor to survey one-third of the city each year, completing a full survey of the water system within 3 years. The surveys included mainlines, laterals, hydrants, valves, and other system components. No major leaks were detected, suggesting Oregon City's distribution system is tight. The largest leaks were repaired. Aging customer meters are believed to be contributing to apparent water loss, and Oregon City is considering replacing meters with an AMR system in the future.

West Linn's water loss over the past 5 years averaged 5.8 percent. A slight increase in water loss in 2024 (remaining below 10 percent) is attributed to unmetered, authorized use of water for large construction projects in that year for which estimates could not be included in the water audit. The City suspects that some unauthorized water use from hydrants occurs. When leaks in the water system are suspected, Public Works staff perform leak detection using City-owned sonic leak detection equipment and conduct repairs as needed.

Five-Year Benchmarks

- **South Fork Water** will continue to conduct annual water audits to identify anomalies that could indicate leakage.
- **Oregon City** will continue conducting annual water audits and will evaluate the feasibility of upgrading customer meters to Automated Meter Reading (AMR) models to address apparent water loss.
- **West Linn** will continue conducting annual water audits and will continue performing leak detection using City-owned equipment when leaks are suspected.

3.2.6 Public Education

South Fork Water is one of the founding partners of the CRWP, which coordinates source water protection and public education programs on water conservation and watershed issues for the

municipal water providers that obtain their drinking water supply from the Clackamas River. Through CRWP, South Fork Water is able to provide a variety of public education programs throughout Oregon City and West Linn.

Major components of CRWP's water conservation public education programming include:

- **Youth education:** classroom presentations, school assembly programs, WTP field trip tours, and curriculum resources for teachers. Students learn about water conservation and are encouraged to share information about good conservation habits with their families. South Fork Water provided 11 tours of its WTP to school groups from 2023 through 2025. During the pandemic, South Fork Water created a virtual treatment plant tour available to teachers through CRWP. Over the past five fiscal years,³ CRWP has conducted 31 youth education presentations and assemblies in Oregon City and 30 programs in West Linn.
- **Water conservation calendar:** local students participate in a coloring contest to create a Water Conservation Calendar. Students enter drawings with a water conservation theme, and schools with at least one participating classroom receive 100 calendars the following school year to distribute to students and families. Additional calendars are available to the general public in the CRWP members' service areas. Over the past 5 fiscal years, 31 classrooms in Oregon City schools and 10 classrooms in West Linn schools have participated.
- **Community events:** CRWP hosts booths at community events to share information about water conservation and source water protection. Promotional items, such as reusable water bottles, shower timers, and indoor water conservation kits are distributed at community events. CRWP has hosted booths at the Oregon City Resource Fair, Oregon City Car Show, Oregon City Spring Forward Community Fair, Oregon City Juneteenth Event, West Linn Old Time Fair, and the Stafford Family Festival in West Linn. CRWP has also hosted booths at events attended by members of the public from around the region, such as the Clackamas County Fair.
- **General public presentations:** free group presentations (10 to 60 minutes) on water conservation-related topics. CRWP has conducted presentations for four neighborhood associations in Oregon City and for the West Linn Sustainability Advisory Board and West Linn Rotary Club. Presentation topics range from water conservation rebates and incentives to water-efficient landscaping and leak repair.
- **Outreach materials:** outreach materials and information are provided for CRWP members to use in their newsletters, utility bill inserts, websites, and social media. Topics may include indoor and outdoor water conservation tips, watershed and water resource issues, and emergency preparedness.
- **Partnerships:** CRWP partners with a variety of local and regional entities on water

³ CRWP tracks participation in its programs on a fiscal-year basis (July 1 through June 30). Fiscal years 2020/21 through 2024/25 are represented in the accomplishments described here.

conservation programming:

- Clackamas County Soil and Water Conservation District: workshops for rainwater harvesting, rain gardens, and gardening with native plants.
- Clackamas Community College: water efficient landscaping courses, a demonstration garden, and a water harvesting demonstration project.
- Clackamas County Water Education Team: educational programs for children and adults, teacher training, technical assistance, and community events.

South Fork Water is also a member of the Regional Water Providers Consortium (RWPC), which supports water conservation programs in the Portland metro area and provides a forum for collaboration on water supply, resource management, and conservation efforts. Elements of the RWPC's conservation programming include:

- **Youth education:** the RWPC has developed content for water conservation school assemblies and provides items imprinted with water conservation messages for students (e.g., magnets, bookmarks, and stickers). The RWPC sponsors the annual Children's Clean Water Festival, an environmental education event for 4th grade students. CRWP also participates in planning and putting on this event, which is attended by approximately 1,000 students annually.
- **Adult education:** the RWPC's annual Summer Marketing Campaign focuses on providing outdoor water conservation education in English and Spanish through television, radio, printed materials, website content, "how-to" water conservation videos on YouTube, and social media posts. The RWPC has also conducted water-efficient landscaping workshops to provide continuing education hours for Landscape Construction Professional Licensees and is currently working on revising this curriculum.
- **Business support:** the Eco-Logical Business (EcoBiz) certification, administered by a team of entities in the Portland region and DEQ, supports local businesses in water conservation and pollution prevention. Program staff conduct water audits and provide information on water conservation and pollution prevention, leading to certifications for automotive businesses, car washes, landscapers, and public agencies. The RWPC has also developed a water conservation guide for multi-family property managers and has promoted installation of water-efficient fixtures.

In addition to providing links to water conservation information on the CRWP and the RWPC websites, South Fork Water, Oregon City, and West Linn each provide water conservation information on their own websites:

- sfwb.org/conservation
- orc.org/3491/Water-Conservation
- westlinnoregon.gov/publicworks/winter-water-conservation-tips-clackamas-river-water-providers

Five-Year Benchmarks

- **South Fork Water** will continue to participate as a member of the Clackamas River Water Providers and the Regional Water Providers Consortium to support these regional water conservation education and outreach efforts.

South Fork Water will maintain a water conservation webpage on its website.

- **Oregon City** will continue its public education efforts through membership in the Clackamas River Water Providers and the Regional Water Providers Consortium.

Oregon City will maintain a water conservation webpage on its website.

- **West Linn** will continue its public education efforts through membership in the Clackamas River Water Providers and the Regional Water Providers Consortium.

West Linn will maintain a water conservation webpage on its website.

3.3 Additional Conservation Measures

OWRD requires municipal water suppliers that serve a population greater than 1,000 and propose to expand or initiate diversion of water under an extended permit for which resource issues have been identified, or whose population served is greater than 7,500, to provide a description of specific additional conservation measures and a 5-year schedule for implementing them. Over 7,500 people receive drinking water from South Fork Water; therefore, this requirement applies.

3.3.1 Technical and Financial Assistance Programs

CRWP began offering free water-efficient landscape audits to customers of its members in 2017. The auditor conducts a site visit to check for leaks; inspect the irrigation system; observe the lawn, garden, and other landscaping on the property; and discuss landscape and irrigation issues with the customer. Following the site visit, the auditor provides a written report with recommendations for water conservation. Since 2020, 26 landscape audits have been conducted in Oregon City, and eight have been conducted in West Linn.

From April through October, the RWPC offers an online subscription to a “weekly watering number” email list, which educates customers on how many inches of water their lawns need each week based on weather and zip code. The email subscription also provides a weekly water conservation tip. Approximately 4,000 people in the Portland metropolitan region sign up for the subscription each year.

Oregon City and West Linn also provide technical assistance directly to customers to help them find and fix leaks. Customers may call the water providers after receiving an unusually high water bill (potentially indicating a leak), or the utility billing systems may flag customers with high consumption to receive a letter or call from staff. Both partners have programs to adjust customer bills if a leak is found and fixed promptly with appropriate documentation.

Five-Year Benchmarks

- **South Fork Water** will continue to participate as a member of the Clackamas River Water Providers and the Regional Water Providers Consortium to enable customers in the Oregon City and West Linn service areas to receive technical assistance through their programs.
- **Oregon City** will continue to provide technical assistance to customers on finding and fixing leaks, and will continue to offer leak adjustments on water bills.
- **West Linn** will continue to provide technical assistance to customers on finding and fixing leaks, and will continue to offer leak adjustments on water bills.

3.3.2 Supplier-Financed Retrofit or Replacement of Fixtures

Through participation in CRWP, customers in Oregon City and West Linn have access to rebate programs for installing water-efficient indoor and outdoor fixtures. CRWP offers rebates for single-family residential customers and small businesses that own their own properties. Rebates include:

- Water monitoring devices to detect leaks and alert the customer (up to \$100)
 - Some approved leak detection products can also automatically shut off the water when a large leak is detected.
- High-efficiency toilets (up to \$85)
- Energy Star certified clothes washers, which typically use about 20 percent less energy and 30 percent less water than a standard washer (up to \$75)
- Hose bib timers, hose end water meters, and rain sensors to shut off automatic irrigation systems (up to \$25 each)
- Multi-stream rotating irrigation nozzles (up to \$60)
- Weather-based irrigation controllers (up to \$100)

As shown in Exhibit 3-2, these rebate programs are popular with customers, promoting water conservation in the service areas.

Exhibit 3-2. Water Conservation Fixture Rebates

Fiscal Year	Rebates in Oregon City	Rebates in West Linn
2020-21	54	65
2021-22	49	51
2022-23	55	59
2023-24	49	72
2024-25	34	75

Five-Year Benchmarks

- **South Fork Water** will continue to be a member of Clackamas River Water Providers, which provides water conservation fixture rebates in its members' service areas.
- **Oregon City** will continue to promote water conservation fixture rebates through Clackamas River Water Providers via a link on its website.
- **West Linn** will continue to promote water conservation fixture rebates through Clackamas River Water Providers via a link on its website.

3.3.3 Rate Structure and Billing Practices that Encourage Conservation

South Fork Water bills Oregon City, West Linn, CRW, and the NCCWC (when water is supplied) based on the volume of water measured at the master meters. Oregon City and West Linn each have billing structures that include a base charge and a volumetric commodity charge based on the customer's metered water usage. These rate structures promote conservation by connecting consumption with financial impact.

South Fork Water bills its wholesale customers monthly. While there is no direct billing to end users, this schedule allows for anomalies (e.g., sudden high use that could indicate a leak) to be investigated in a timely manner. Oregon City and West Linn also bill customers on a monthly basis, which provides them with timely information about their consumption. This enables customers to adopt water-conserving habits to reduce their water use more rapidly compared to less frequent billing cycles. For example, customers who receive a higher bill in July because of increased outdoor water use in June will be incentivized to conserve water during the remaining warm summer months.

Five-Year Benchmarks

- **South Fork Water** will continue to bill its wholesale customers monthly based on the volume of water measured at the master meters.
- **Oregon City** will continue to bill its customers monthly based, at least in part, on the amount of water used.
- **West Linn** will continue to bill its customers monthly based, at least in part, on the amount of water used.

3.3.4 Water Reuse, Recycling, and Non-potable Opportunities

South Fork Water has been recycling backwash water at its WTP since 1976, and two backwash meters were installed in June 2003. Based on readings from these meters, South Fork Water estimates that its diversion needs have been reduced by approximately 3 percent annually through this recycling program. South Fork Water will continue recycling the backwash water at the WTP to reduce the volume of raw water that must be diverted to meet customer needs.

The wastewater treatment plant in Oregon City, operated by Clackamas County Water Environment Services, uses recycled water to irrigate the landscaping around its facility. While Oregon City does

not have direct control over this facility and its practices, Oregon City is supportive of water reuse and recycling. Over the next 5 years, Oregon City plans to evaluate water use at its parks and recreation facilities to identify potential opportunities for water reuse.

West Linn supports water reuse and has installed water recirculating systems for the splash pads at five city parks. These parks include various interactive water features that spray, spout, and mist water for visitors to cool off and play in during the summer months. West Linn will continue to maintain these recirculating systems to reduce water use at city facilities.

Five-Year Benchmarks

- **South Fork Water** will continue to recycle the backwash water at its water treatment plant.
- Within the next 5 years, **Oregon City** will evaluate water use at its parks and recreation facilities to identify potential opportunities for water reuse.
- **West Linn** will continue to use recirculating water systems at the splash pads in city parks.

Exhibit 3-3 summarizes the 5-year conservation measure benchmarks for South Fork Water, Oregon City, and West Linn.

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Exhibit 3-3. Conservation Benchmark Summary

Conservation Measure	South Fork Water Benchmarks	Oregon City Benchmarks	West Linn Benchmarks
Annual water audit	South Fork Water will continue to conduct annual water audits of its water system and will compile its water audits with those of Oregon City and West Linn into an annual report.	Oregon City will continue to conduct annual water audits and provide them to South Fork Water for the annual report. Within the next 5 years, Oregon City will analyze city water use (including unbilled authorized uses) and assess whether there are additional opportunities to conserve water or improve water use efficiency.	West Linn will continue to conduct annual water audits and provide them to South Fork Water for the annual report. Within the next 5 years, West Linn will analyze city water use (including unbilled authorized uses) and assess whether there are additional opportunities to conserve water or improve water use efficiency.
System-wide metering	South Fork Water will continue to meter all connections, including wholesale customer connections and influent and effluent at the water treatment plant.	Oregon City will continue to require all service connections to be metered.	West Linn will continue to require all service connections to be metered.
Meter testing and maintenance	By 2027, South Fork Water will test master meters every 5 years. If an annual water audit shows water loss above 10 percent and a meter issue is suspected, South Fork Water will test the suspected malfunctioning meter(s).	Oregon City will continue its annual large meter testing program and will continue to replace small customer meters identified as failed.	West Linn will continue its annual large meter testing program. Over the next 5 years, all customer meters will be upgraded to Automated Meter Reading (AMR) models.
Water rate structure	South Fork Water will continue to charge customers based on the volume of water measured at the master meters.	Oregon City will continue to bill customers based, in part, on the quantity of water metered at the service connection.	West Linn will continue to bill customers based, in part, on the quantity of water metered at the service connection.
Water loss analysis	South Fork Water will continue to conduct annual water audits to identify anomalies that could indicate leakage.	Oregon City will continue conducting annual water audits and will evaluate the feasibility of upgrading customer meters to Automated Meter Reading (AMR) models to address apparent water loss.	West Linn will continue conducting annual water audits and will continue performing leak detection using City-owned equipment when leaks are suspected.

Conservation Measure	South Fork Water Benchmarks	Oregon City Benchmarks	West Linn Benchmarks
Public education	South Fork Water will continue to participate as a member of the Clackamas River Water Providers and the Regional Water Providers Consortium to support these regional water conservation education and outreach efforts. South Fork Water will maintain a water conservation webpage on its website.	Oregon City will continue its public education efforts through membership in the Clackamas River Water Providers and the Regional Water Providers Consortium. Oregon City will maintain a water conservation webpage on its website.	West Linn will continue its public education efforts through membership in the Clackamas River Water Providers and the Regional Water Providers Consortium. West Linn will maintain a water conservation webpage on its website.
Technical and financial assistance programs	South Fork Water will continue to participate as a member of the Clackamas River Water Providers and the Regional Water Providers Consortium to enable customers in the Oregon City and West Linn service areas to receive technical assistance through their programs.	Oregon City will continue to provide technical assistance to customers on finding and fixing leaks, and will continue to offer leak adjustments on water bills.	West Linn will continue to provide technical assistance to customers on finding and fixing leaks, and will continue to offer leak adjustments on water bills.
Supplier-financed retrofit or replacement of fixtures	South Fork Water will continue to be a member of Clackamas River Water Providers, which provides water conservation fixture rebates in its members' service areas.	Oregon City will continue to promote water conservation fixture rebates through Clackamas River Water Providers via a link on its website.	West Linn will continue to promote water conservation fixture rebates through Clackamas River Water Providers via a link on its website.
Rate structure and billing practices that encourage conservation	South Fork Water will continue to bill its wholesale customers monthly based on the volume of water measured at the master meters.	Oregon City will continue to bill its customers monthly based, at least in part, on the amount of water used.	West Linn will continue to bill its customers monthly based, at least in part, on the amount of water used.
Water reuse, recycling, and non-potable opportunities	South Fork Water will continue to recycle the backwash water at its water treatment plant.	Within the next 5 years, Oregon City will evaluate water use at its parks and recreation facilities to identify potential opportunities for water reuse.	West Linn will continue to use recirculating water systems at the splash pads in city parks.

4. Water Curtailment Element

This section satisfies OWRD's requirement to provide a description of past supply deficiencies and any current capacity limitations. It also includes the required stages of alert and the associated triggers and curtailment actions for each stage.

4.1 Introduction

Curtailment planning is the analysis of potential events that could lead to a shortage of supply and the development of proactive measures that can reduce demand or secure temporary alternative sources of supply during these supply shortages. The intent of this plan is to minimize the impacts of water supply shortages without jeopardizing the health and safety of the users of water supplied by South Fork Water.

While there are numerous events that could lead to a shortage of supply, South Fork Water has identified the most feasible events that would impact the quantity or quality of water available. These events include low river levels resulting from drought conditions; flooding affecting key infrastructure; contamination of the Clackamas River, such as from a chemical spill or algal blooms; or a major fire in the watershed impacting water quality. These scenarios were considered during development of this curtailment plan. South Fork Water and the partners also recognize that other factors could require implementation of this plan, such as a lack of chemicals needed for water treatment or an unanticipated failure of supply infrastructure. Thus, the plan has the flexibility to address a variety of measures, as needed.

South Fork Water has identified four stages of alert and has defined the conditions necessary to initiate implementation of these stages. These stages and initiating conditions apply to South Fork Water and partner agencies. Each stage includes curtailment measures that are intended to reduce demand until supplies are plentiful enough to return to normal operating conditions. While some of the curtailment measures can be implemented by South Fork Water, the responsibility to reduce demands to meet shortages falls primarily upon the partners. The partners are responsible for declaring shortages in their service areas resulting from supply deficiencies and implementing responses to the curtailment stages. When possible, the partners and South Fork Water will coordinate responses to supply deficiencies that affect both partners. Some events may be isolated to only one partner in which case only the affected partner will implement curtailment.

West Linn's municipal code (West Linn Municipal Code 4.250) identifies three stages of alert and describes associated curtailment measures for each. To ensure the city's response to future water shortages is consistent with the responses of South Fork Water and Oregon City, West Linn intends to revise its code to more closely reflect or reference the curtailment measures in this curtailment plan.

4.2 History of System Supply Deficiencies

South Fork Water and its partners have not experienced any system supply deficiencies within the last 10 years that have required implementation of its curtailment plan. During some peak seasons, Oregon City may reduce its own use of water to ensure ample supplies are available to meet minimum fire flow

volumes in its storage tanks. Note that during these periods, Oregon City can meet customers' demands and does not request voluntary or mandatory curtailment by its customers.

4.3 Capability Assessment

South Fork Water does not have capacity limitations that prevent it from adequately and reliably providing water to the partners. During potential source shortages, South Fork Water may be able to rely upon other water suppliers to help meet demand, including NCCWC and CRW. Additionally, West Linn has an emergency interconnection with Lake Oswego that may be available to West Linn during shortages. These back-up supplies may not be available when shortages are related to a catastrophic loss of access to the Clackamas River, which is a shared source of supply among these utilities. In these cases, South Fork Water and the partners may enact their emergency response plans. Some of these plans direct South Fork Water or the partners to potential suppliers of emergency water and methods to distribute water to customers, such as identifying water distribution points.

4.4 Curtailment Stages and Initiating Conditions

South Fork Water, Oregon City, and West Linn developed a four-stage curtailment plan to be invoked in the event of a water supply shortage experienced by any of these entities. The initiating conditions for each of the stages are based on capacity of storage tanks and clear wells. The initiating conditions apply to South Fork Water and partners. This curtailment plan would not be invoked if emergency supplies from the NCCWC or CRW are adequate to meet the demands of the partners.

The curtailment stages are of increasing severity and could be initiated and implemented in progressive steps or a later stage could be implemented directly. Exhibit 4-1 presents these four stages, as well as their initiating conditions (i.e., triggers). Initiation of a curtailment stage is based on the cause, severity, and anticipated duration of the actual event and the knowledge and judgment of South Fork Water and city staff familiar with the water systems. Stages may be implemented in sequence or stages may be skipped.

Unlike the other initiating conditions, Stage 2 has an additional initiating condition related to Clackamas River flow. A permit extension condition placed by OWRD on South Fork Water's Permits S-22581, S-9982, and S-3778 requires South Fork Water to initiate curtailment measures associated with the first mandatory stage (Stage 2) when Clackamas River flows are less than pre-defined levels.

4.5 Authority

South Fork Water may declare a water crisis state of emergency and implement this curtailment plan. South Fork Water has the authority to decrease or increase the curtailment stages or terminate curtailment activities. Declaration of an emergency in Oregon City may be made by the mayor or city manager under Municipal Code 2.52.030. Section 13.04.150 authorizes the city manager to enforce regulation of the use of water. West Linn's municipal code authorizes the city council to declare curtailment of water usage in Section 4.250.

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

Curtailment Stages	Initiating Conditions ¹
Stage 1: Water Status Alert (Voluntary)	Declining trend in storage volumes observed and anticipated to continue, potentially dropping below volumes required to maintain minimum fire flows in one or more reservoirs ²
Stage 2: Serious Water Shortage (Mandatory)	Declining trend in storage and failure to replenish above the level required to maintain minimum fire flows in one or more reservoirs over a one-day period, or Flow in the Clackamas River at the mouth are below fish persistence target flows of 650 cfs between July 1 and the first Monday in September ³
Stage 3: Critical Water Shortage (Mandatory)	Declining trend in storage and failure to replenish above the level required to maintain minimum fire flows in one or more reservoirs over a two day period
Stage 4: Emergency Water Shortage (Mandatory)	Declining trend in storage and failure to replenish above the level required to maintain minimum fire flows in one or more reservoirs over more than a two day period.

¹ These stages will be invoked after emergency supplies are determined to be inadequate to meet demand.

² Fire flow capacity is reached after volumes for operations, equalization, and emergency storage have been used.

³ Required per OWRD final order approving South Fork Water's permit extensions.

4.6 Curtailment Measures

This curtailment plan includes both voluntary and mandatory curtailment measures associated with each stage of alert. These measures are intended to reduce demand during water shortages, thereby extending the water supplies to meet, at a minimum, basic domestic needs and to maintain the health and safety of the public. Curtailment measures may be modified or removed, or new measures may be added, depending upon the cause, severity, anticipated duration of the shortage, and other factors associated with the events that cause shortages. Moreover, the scope of the water shortage will determine if the measures are applied to an entire system, to specific water use sectors, or in those geographic areas that are directly impacted.

Like determinations of stage, South Fork Water's and partners' staff also have the flexibility to determine an appropriate curtailment response to a water shortage. Staff will assess the extent of system damage or contamination, duration of repair, costs, weather forecasts, and other variables that can impact in-system storage and may modify curtailment measures as needed depending on the situation.

The curtailment stage determines whether the partners will request voluntary or mandatory curtailment of water use. Voluntary curtailment measures (Stage 1) will be at customers' discretion based on water conservation recommendations provided by the partners. The partners will require mandatory curtailment (Stages 2 through 4) when a critical or emergency water shortage status arises and will specify to their customers the type of curtailment that is mandatory.

4.6.1 Stage 1 (Voluntary)

Stage 1 activates this plan to inform the partners' customers of the potential for a water shortage and the need for voluntary, temporary reductions in consumption. The partners will issue a request for a voluntary reduction in water use by all customers. The curtailment measures deemed most likely to help reduce demand, such as requesting reductions to outdoor water use and implementing the partners' conservation programs, such as content promoted by CRWP and RWPC. If the event that causes the potential for a shortage occurs during the irrigation season, the partner agencies will request that customers voluntarily irrigate grass and landscaping only between 8:00 p.m. and 8:00 a.m. to reduce evaporation of irrigation water.

4.6.2 Stage 2–River Flow Alert (Mandatory)

Stage 2 will be implemented during two scenarios. First, Stage 2 is initiated when South Fork Water or partners observe a declining trend in storage and the water systems cannot replenish storage above the level required to maintain minimum fire flows in one or more reservoirs over a one day period. Second, this stage also will be implemented to meet the permit extension condition on three of South Fork Water's water use permits. This condition requires implementation of Stage 2 curtailment measures from July 1 to the first Monday in September when the flow in the Clackamas River at the mouth is calculated to be less than 650 cfs.⁴ Once implemented, these measures must continue through the first Monday in September.

- Prohibit washing South Fork Water or city vehicles, except at commercial or fleet washing facilities that recycle the water in their washing processes.
- Prohibit water line testing and flushing in connection with construction projects; except testing and flushing of critical water facilities.
- Limit irrigation of public and private parks and public and private landscaping and turf to the hours between 8:00 p.m. and 8:00 a.m.
- Prohibit street washing except as needed for dust control to meet air quality requirements mandated by DEQ.
- Other water conserving options selected by South Fork Water and partners, such as limiting utility line cleaning and flushing.

4.6.3 Stage 3 (Mandatory)

Under Stage 3, the following water uses will be prohibited in addition to the mandatory measures listed in Stage 2.

⁴ Actual flow is measured at Gauge 14211010 and must be adjusted for municipal diversions (i.e. Lake Oswego) that occur below the gauge as follows: (mean daily flow) – (amount of municipal water being diverted below the gauge) = resulting adjusted mean daily flow.

- Washing of any vehicles except at establishments that recycle wash water.
- Filling of swimming pools and ponds.
- Washing roofs, decks, or building structure siding.
- Cleaning, filling, or maintaining decorative water features, natural or humanmade, including, but not limited to, fountains, lakes, ponds, and streams, unless the water is re-circulated through the decorative water feature. Water features that do not include continuous or constant inflowing water are not included.
- Using water to wash/clean sidewalks, driveways, parking lots, open ground, patios, or other hard-surfaced areas.
- Using water for dust control.
- Irrigating public and private parks and public and private landscaping and turf. The following exemptions apply to the landscape irrigation restrictions:
 - Grass, turf, or landscaping that is less than 1-year old.
 - Grass or turf that is part of a commercial sod farm.
 - Grass or turf areas that are within a “high use” athletic field used for organized play.
 - Grass or turf areas that are used for golf tees or greens.
- Watering, sprinkling, or irrigating agricultural ground cover, crops, or fruit trees except from 8 p.m. to 8 a.m.
- Applying water in a manner, rate, or quantity that runs onto adjacent property, parking lots, or public rights-of-way, including streets, sidewalks, and pathways.
- Water leaks after reasonable opportunity to discover, investigate, and repair.
- Wasting water by leaving unattended hoses running.

In addition to the mandatory measures, partners may work with large water users to minimize water use.

4.6.4 Stage 4 (Mandatory)

Under Stage 4, all water use may be prohibited, except uses necessary for human consumption and sanitation needs. The partners may activate their emergency operations centers to mobilize sufficient resources to respond to the event(s) causing the need for Stage 4 action and will implement an emergency response as available. In addition, South Fork Water and partners may obtain alternative emergency supplies such as bottled water or mobile water tanks and direct partners’ customers to pre-designated water distribution locations.

4.7 Notifications of Curtailment

South Fork Water and partners have several communication channels that they can use to relay important information about a supply shortage and curtailment measures, including local media, door

hangers, social media, strategically located sandwich boards, home websites, and social media sites. For long term shortages, mailers and bill stuffers may be used. Notices and other forms of communication may include a description of the current water situation, the reason for the requested conservation measures, and a warning that mandatory restrictions will be implemented if voluntary measures are not sufficient to achieve water use reduction goals.

4.8 Drought Declaration by Governor

If a declaration of a severe drought in Clackamas County is declared by the Governor per ORS 536.720, the Oregon Water Resources Commission may order political subdivisions within any drainage basin or subbasin to implement a water conservation or curtailment plan or both, approved under ORS 536.780. The conservation and curtailment elements of this WMCP meet these requirements. If the service areas of South Fork Water and partners falls within a severe drought area declared by the Governor, such as Clackamas County, South Fork Water and partners 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, South Fork Water and partners will comply by implementing the water conservation and curtailment provisions of this WMCP. Regardless of whether curtailment is needed, South Fork Water and its partners will continue to implement water efficient practices and encourage customers to conserve water.

5. Municipal Water Supply Element

This section satisfies OWRD's requirements to describe the water provider's current and future service area and population projections, demand projections for 10 and 20 years, and the schedule for when the water provider expects to fully exercise its water rights. OWRD also requires a comparison of the water provider'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 Areas

The current and future service areas are presented in Exhibits 2-1 through 2-3. As the population in these areas increases, as expected, Oregon City and West Linn will experience this growth as infill and redevelopment within their service areas. In addition, Oregon City is anticipating concentrated development in three large "concept areas" during the 20-year planning period according to Oregon City's 2021 update to its 2012 Water Distribution System Master Plan Amendment (WDSMPA).⁵ These concept areas are South End, Park Place, and Beaver Creek Road (also called Thimble Creek) and are identified in Exhibit 2-2. Concept plans were adopted by Oregon City in preparation for annexation of and development in these areas. These developments will be served water diverted by South Fork Water via Oregon City.

5.2 Population Projections

Population projections for Oregon City and West Linn are presented in Table 5-1. Oregon City's populations were based on projected demands presented in Oregon City's 2021 amendment to its WDSMP. These demand projections relied on household and employment projections for Oregon City published in the 2016 Population Forecasts for Clackamas County Service Districts.⁶ The WDSMP also included demand forecasts for the three concept plan areas previously described. To arrive at projected populations for this WMCP, average annual growth rates (AAGRs) of projected demands were calculated from the demand projections published in the WDSMP. These AAGRs were applied to the estimated 2020 population of Oregon City published by PSU to arrive at projected populations for 2036 and 2046. These values are shown in Exhibit 5-1.

Also provided in Exhibit 5-1 are the population projections for West Linn. These were interpolated using PSU's population forecast summary (2023-2060) of water providers in the Portland Metro area. Combined, South Fork Water anticipates the service areas of Oregon City and West Linn will include 92,462 persons by 2046 from an estimated population of 69,008 persons in 2025.

The change in South Fork Water's service area is anticipated to increase more quickly from 2025 to 2036, showing an AAGR of 2.35 percent, whereas growth from 2037 to 2046 is projected to slow to 0.38 percent.

⁵ City of Oregon City, 2021 Update to the 2012 Water Distribution System Master Plan Amendment (2021), MurraySmith

⁶ Population Forecasts for Clackamas County Service Districts, EcoNorthwest, 2016.

Exhibit 5-1. Projected Population, 2029 and 2039

	2025	2036	2046
Oregon City	40,775	59,349	61,699
West Linn	28,233	29,640	30,762
Total	69,008	88,989	92,462

5.3 Demand Forecast

South Fork Water projected the maximum rates of diversion from the Clackamas River for 2036 and 2046. These were projected by applying the AAGR of population noted in the previous section to the maximum rate that South Fork Water operates its WTP, which is equivalent to the maximum capacity of the WTP of 22 mgd (34 cfs). Once these 2036 and 2046 demands were estimated, a rate of 2.75 mgd was subtracted from each of these years to account for an expected reduction in maximum day use by CRW South customers. CRW recently completed construction of a major water line connecting its North and South service areas and this line will allow CRW to begin serving some of its customers that are currently served by South Fork Water and via Oregon City. The results of these projections are provided in Exhibit 5-2. MDD is projected to reach 26.6 mgd (41.2 cfs) by 2046.

Exhibit 5-2. Projected MDD, 2025-2046

Year	mgd	cfs
2025	22.0	34.0
2036	25.6	39.7
2046	26.6	41.2

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

South Fork Water's MDD projection of 41.2 cfs (26.6 mgd) by 2046 exceeds current WTP capacity of 34 cfs (22 mgd). South Fork Water has anticipated this growth and has begun to plan for an expansion of the WTP to 46.4 cfs (30 mgd). The future WTP capacity of 46.6 cfs exceeds the projected 2046 demand of 41.2 cfs for operational reasons. Under normal circumstances, South Fork Water "fast fills" its 3.2 MG capacity storage tank at Mountain View and the 2.875 MG clear wells located at the WTP, requiring a high rate of diversion and treatment over a short period of time. This common operational practice is used to take advantage of "off peak" energy rates that are available during the evenings and weekends. When diversion and treatment begin, the tank and clear wells typically are at minimal capacity and require replenishment before reaching undesirable levels. South Fork Water intends to continue this fiscally responsible method of operating the water system following WTP expansion, resulting in the need to use the full WTP capacity of 46.6 cfs. In addition, South Fork Water anticipates the potential need for Oregon City and West Linn to require large volumes of water during periods of high demand given the overall lower equalization storage volumes available within the partners' distributions systems. During these scenarios, South Fork Water's WTP will be called upon to both meet high demand and replenish reservoirs, likely requiring up to the maximum capacity of the WTP. Finally, South Fork Water foresees a need to provide water to NCCWC or CRW during emergencies or planned

maintenance of primary water infrastructure at these water providers while simultaneously continuing to meet the needs of the partners. For example, in 2024, South Fork Water provided water to CRW via the NCCWC during a planned maintenance event, as described in Section 2. This scenario also may require full use of the upgraded WTP capacity, depending on the timing of the need of these other providers.

To meet the projected future demand of 46.4 cfs, South Fork Water will rely on Certificate 80417 (6 cfs), and the developed portions of Permit S-22581 (22.4 cfs), Permit S-3778 (5 cfs), and Permit S-9982 (3 cfs) for a total of 36.4 cfs. South Fork Water seeks to use up to 10 cfs of the undeveloped portion of extended Permit S-9982 to fully meet the projected maximum rate of diversion within the planning period of 46.4 cfs ($36.4 \text{ cfs} + 10 \text{ cfs} = 46.4 \text{ cfs}$). **Thus, South Fork Water requests use of 10 cfs of the undeveloped portion of extended Permit S-9982 (green light water).**

South Fork Water intends to fully exercise Permits S-9982 and S-3778 by the current completion dates of 2038 and 2050, respectively. However, the inability to plan for the use of these permits for 15 years due to permit extension litigation, and the need to evaluate the available flows in the authorized sources of supply (Memaloose Creek and South Fork Clackamas River) may result in the need to seek additional time to fully develop the permits. South Fork Water will continue to provide updates on development of these sources in future WMCP updates.

South Fork Water may not be able to fully develop Permit S-22581 by the permit's completion date in 2049, and as a result would seek an additional extension of time. However, given the potential that the water authorized under Permits S-9982 and S-3778 may not be available at the original point of diversion (following a permit amendment to a point of diversion downstream on the Clackamas River), Permit S-22581 could play an important role in meeting South Fork Water's future demands beyond the 20-year planning period. By the next update of this WMCP, South Fork Water should have flow data for Memaloose Creek and South Fork Clackamas River and will provide an update on development of Permit S-22581.

5.5 Alternative Sources

If any expansion or initial diversion of water allocated under existing permits is necessary to meet future demands within the planning period, OWRD requires that a water provider conducts an analysis of alternative sources of water. South Fork Water is requesting an expansion of use under Permit S-9982, therefore this requirement applies. South Fork Water will meet future demand using a regional water approach, employing conservation, and expanding use of its existing permitted sources.

As described in Oregon City's 2021 update to its 2012 WDSMPA, water providers in the Clackamas Basin, rely on a regional approach to meeting customers' demands. Collaborative planning has allowed the providers to invest in essential infrastructure, limiting redundancy in water facilities. Part of this planning has resulted in providers establishing interconnections that allow direct or indirect water wheeling from one provider to another. For example, the arrangement between South Fork Water and CRW has South Fork Water serving some of CRW customers in CRW's South service area and South Fork Water can receive water from CRW via the interconnection from NCCWC. This regional approach has also improved regional resiliency, reducing potential shortages during emergency events.

South Fork Water and the partners also rely on conservation as an alternative “source” of supply. The likely reductions in demand resulting from implementation of the conservation measures outlined in Section 3 highlight these entities’ commitment to efficient use of the Clackamas River. South Fork Water and the partners provide conservation programs to help protect regional freshwater resources, preserve water instream for aquatic species, and stretch their drinking water supply for future use. South Fork Water and the partners continue to commit significant resources to their conservation programs and provide a wide array of options for their customers to save water indoors and outdoors. Additional measures (beyond those already implemented) would likely result in higher costs per unit of water saved for the entities given that most of the most cost-effective measures are already offered. Additionally, the savings gained from these programs probably will not result in savings great enough to avoid expansion of use of Permit S-9982. For example, Medford Water performed an analysis in 2026 of 28 common conservation measures and determined that the savings from these programs would reduce ADD by 2.1 percent and MDD by 2.5 percent in the 20th year of program. The City of Bend also performed an analysis of a suite of conservation measures and found these programs could reduce MDD by approximately 7 percent.⁷ In sum, while additional conservation measures could reduce demand on the Clackamas River, these measures will only delay, but not replace, the need to expand South Fork Water’s use of water under Permit S-9982 given the anticipated magnitude of increases of demand within the planning period. Nevertheless, South Fork Water, Oregon City and West Linn are committed to regional water conservation efforts and efficiency.

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 sought. As described above, South Fork Water intends to use 10 cfs of the undeveloped portion of Permit G-9982 to meet the 20-year projected demand. This rate of use (10 cfs or 6.5 mgd) translates to a monthly volume of water of 195 MG per month (6.5 mgd x 30 days), assuming that water is used at the maximum rate 24 hours per day for 30 days.

5.7 Mitigation Actions under State and Federal Law

OWRD requires a water supplier to describe mitigation actions it is taking to comply with legal requirements of the Endangered Species Act, Clean Water Act, and other applicable state or federal environmental regulation if mitigation is required for expansion or initial diversion of water under an existing permit. South Fork Water is unaware of any mitigation actions that would need to be taken in order to comply with legal requirements of state or federal law. However, South Fork Water is aware that undeveloped portions of extended Permits S-3778, S-9982, and S-22581 are subject to “fish persistence” conditions. These conditions were identified by the Oregon Department of Fish and Wildlife as necessary to maintain the persistence of listed stream-flow dependent species. These conditions were included in OWRD’s final orders extending the completion dates of these permits. South Fork Water will manage its stream diversions in consideration of these conditions.

⁷ City of Bend Water Management and Conservation Plan, September 2021 (GSI Water Solutions, Inc.)

5.8 New Water Rights

South Fork Water will not require the acquisition of new water rights within the planning period.

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Appendix A

Letters to Affected Local Governments



May 20, 2026

Dan Johnson, Director
Transportation and Development, Clackamas County
150 Beaver Creek Road, Suite 225
Oregon City, OR 97045
danjoh@clackamas.us

Subject: Water Management and Conservation Plan for South Fork Water

Dear Mr. Johnson,

South Fork Water (SFW) 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 the SFW draft WMCP for 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 971-200-8528. Thank you for your interest.

Sincerely,
GSI Water Solutions Inc.

A handwritten signature in black ink that reads "Tim Henkle".

Tim Henkle
Water Resources Consultant

Enclosure



May 20, 2026

Catherine Ciarlo
Director of Planning, Development and Research
Metro
600 NE Grand Ave
Portland, OR 97232
catherine.ciarlo@oregonmetro.gov

Subject: Water Management and Conservation Plan for South Fork Water

Dear Ms. Ciarlo,

South Fork Water (SFW) 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 the SFW draft WMCP for 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 971-200-8528. Thank you for your interest.

Sincerely,
GSI Water Solutions Inc.

A handwritten signature in black ink that reads "Tim Henkle".

Tim Henkle
Water Resources Consultant

Enclosure



May 20, 2026

Farshad Allahdadi, General Manager
Clackamas River Water
16770 SE 82nd Drive
Clackamas, OR 97015
fallahdadi@crwwater.org

Subject: Water Management and Conservation Plan for South Fork Water

Dear Farshad,

South Fork Water (SFW) 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 SFW and the Clackamas River Water, 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 971-200-8528 or thenkle@gsiws.com.

Sincerely,
GSI Water Solutions Inc.

A handwritten signature in black ink, appearing to read "Tim Henkle", written in a cursive style.

Tim Henkle
Water Resources Consultant

Enclosure



May 20, 2026

Kim Swan, Water Resource Manager
Clackamas River Water Providers
14275 S. Clackamas River Drive
Oregon City, OR 97045
kim@clackamasproviders.org

Subject: Water Management and Conservation Plan for South Fork Water

Dear Kim,

South Fork Water (SFW) 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 SFW and the Clackamas River Water Providers, 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 971-200-8528 or thenkle@gsiws.com.

Sincerely,
GSI Water Solutions Inc.

A handwritten signature in black ink that reads "Tim Henkle".

Tim Henkle
Water Resources Consultant

Enclosure



May 20, 2026

Wade Hathhorn, General Manager
North Clackamas County Water Commission
16770 SE 82nd Drive
Clackamas, OR 97015
whathhorn@sunrisewateror.gov

Subject: Water Management and Conservation Plan for South Fork Water

Dear Wade,

South Fork Water (SFW) 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 SFW and the North Clackamas County Water Commission, 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 971-200-8528 or thenkle@gsiws.com.

Sincerely,
GSI Water Solutions Inc.

A handwritten signature in black ink that reads "Tim Henkle". The signature is fluid and cursive, with the first name "Tim" and last name "Henkle" clearly distinguishable.

Tim Henkle
Water Resources Consultant

Enclosure

Appendix B

Conservation Outreach Examples



Outdoor Conservation

Outdoor Conservation

Weekly Watering Number

Watering Efficiently

Types of Sprinkler Systems

Measuring Your Sprinkler's Water Use

Program Your Sprinkler

Sprinkler Maintenance Tips

Evapotranspiration

Outdoor Water Conservation Tips

During the warm summer months, we in the Portland metro area spend time outdoors tending to our lawns, growing our gardens, washing our cars — all activities that depend on water. As a result, water usage can double or triple.

Here are 10 ways to curb your water use while still maintaining a green and vibrant landscape.

1. **Adjust your sprinklers so that they're watering your lawn and garden**, and not the street or sidewalk.
2. **Water early in the morning (before 10a.m) or later in the evening (after 6 p.m.)** when temperatures are cooler and evaporation is minimized.
3. **Set it, but don't forget it!** Whether you have a manual or automatic system, be sure to adjust your [watering schedules](#) throughout the irrigation season.
4. **Water established lawns about 1 inch per week** (a bit more during hot, dry weather). Find out how much to water this week with the [Weekly Watering Number](#).
5. **Inspect your overall irrigation system for leaks, broken lines or blockage in the lines.** A well [maintained](#) system will save you money, water, and time.
6. **Consider replacing some turf area with low water use plants and ornamental grasses.** They are easier to maintain than turf, look beautiful, and require far less water.
7. **Group plants with like watering needs.** Creating "watering zones" in your garden will allow you to give each plant the water it requires — not too much or too little.
8. **Add a shut-off nozzle to your garden hose** and save about 5-7 gallons each minute your hose is on.
9. **Adjust your mower to a higher setting.** A taller lawn provides shade to the roots and helps retain soil moisture, so your [lawn](#) requires less water.
10. **Apply the amount of water your soil can absorb.** Water thoroughly, but infrequently. If run off or puddling occurs, break longer watering sessions into several short sessions allowing water to soak into the soil between each session.

Location

South Fork Water Board
15962 Hunter Ave.
Oregon City, Oregon

Phone: (503) 657-5030
Email: info@sfbwor.gov

Office Hours
Monday-Friday
8:00 am – 4:00 pm
Closed Holidays

How-To Information

- [Indoor Conservation](#)
- [Indoor Leaks](#)
- [Fixing Leaky Toilets](#)
- [Outdoor Conservation](#)
- [Sprinkler Maintenance Tips](#)
- [Program Your Sprinkler](#)

Search

Clackamas River Water Service
Area Withdrawal

- Construction Projects
- Cross Connection Control
- Lead in Drinking Water
- Public Education & Oregon City's Water Quality Program
- Our Water Source
- Water Master Plan
- Water Quality Report
- Water System Information
- Who Is My Water Provider / Drinking Water Advisory Tool
- Winterize Your Irrigation System to Prevent Freeze Damage
- Cyanotoxins in Drinking Water – Harmful Algal Blooms
- Water Conservation

[Home](#) | [Departments](#) | [Public Works](#) | [Operations Group](#) | [Water Division](#) | [Water Conservation](#)

WATER CONSERVATION

Did you know the average Oregon City water customer uses nearly three times more water in summer than in winter. Oregon City's limited water storage capacity and undersized water pipes make it difficult to serve customers during the dry season, which is typically June through September. It's even harder when fires flare up requiring an immense volume of water, at high pressure. Our highest demand season for potable water (summer) is also the season we see the most fires. Conserving water by reducing usage helps ensure adequate water for all residents, especially during periods of extremely hot weather and/or fire activity.

Indoor and Outdoor Water Saving Tips

Our partners at the Regional Water Providers Consortium created a helpful list of both indoor and outdoor water savings tips. It's easy and inexpensive to make changes that can save you water and money all year round. To view the tips, visit regionalh2o.org/water-conservation

Find and Fix Leaks

Household water leaks waste more than one trillion gallons of water nationwide each year. Promptly finding and fixing leaks helps prevent water damage, conserve water, and save you money! Learn what to look for and how to use your water meter to detect leaks with this [how to video](#).

Faucet leaks		Irrigation leaks	
Drops per minute	= Gallons per month wasted	Hole size in inches	= Gallons per month wasted
 60	= 192	1/32	• 6,300
 90	= 288	1/16	• 25,000
 120	= 384	1/8	• 100,000
		3/16	• 225,000
		1/4	• 400,000

FREE RESOURCES FOR OC WATER CUSTOMERS

Rebates

Oregon City offers a variety of water conservation rebates through our partner Clackamas River Water Providers. Currently there are eight different water conservation rebates available. These rebates are available each fiscal year (July 1st – June 30th) on a first-come, first-served basis until annual funds are depleted. Current rebate opportunities include washing machines, toilets, leak detectors, hose bib timers, weather-based irrigation controllers, and more. For a list of rebate eligible items please visit: <https://www.clackamasproviders.org/conservation-rebates/>.

Free Water Audit Kit

Performing an audit on your water use will help you understand where you can save the most water. This process is simple and will help you locate leaks, prioritize fixing them, and help you start saving money. Request a free water audit kit [HERE](#) or by calling 503-723-3511.

Schedule a Free Landscape Audit

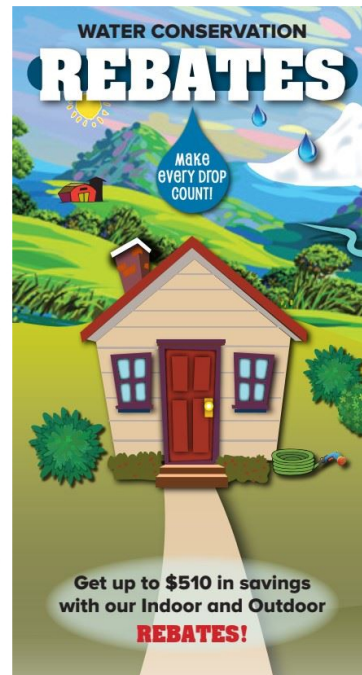
Between May-September, Clackamas River Water Providers offers free residential landscape audits to Oregon City water customers. Upon completion of the audit, you will be provided written recommendations to help you manage your outdoor water use for a more water efficient landscape and irrigation system. Click [HERE](#) for more information or to sign up for a free water audit.

Weekly Watering Number

Sign up and we'll tell you when to start watering and how much to water each week through mid-October. We will also send you a weekly tip throughout the watering season to help you use water efficiently outdoors. Sign up for free [HERE](#).

Water Efficient Plant Guide

Looking to add or replace outdoor plants, trees, or shrubs? Before you do, check out the [Water Efficient Plant Guide](#). This guide can help you pick out the perfect water efficient plants for your landscape project.





CONTACT US

Oregon City City Hall
625 Center Street
Oregon City, OR 97045

Phone: 503-657-0891

Hours:
Monday to Friday
8:00am to 5:00pm

QUICK LINKS

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[Facilities & Services](#)
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2024 OREGON CITY Water QUALITY REPORT



welcome...

We are pleased to provide you with Oregon City's 2024 Water Quality Report. Our drinking water continues to meet or surpass all state and federal standards and regulations.

Committed to:

- **Protecting public health –**
Providing clean, safe drinking water that complies with all state and federal regulations.
- **Protecting public safety –**
Ensuring reliable, plentiful water for fire suppression.
- **Protecting the environment –**
Providing a safe and reliable stormwater system and implementing watershed protection and restoration actions that consistently promote surface water quality and stream health.

www.orcity.org/1514/Water-Quality-Report

For questions about this report or if you have a water quality concern please contact Mallory Ott:
971-204-4674 or mott@orcity.org

Oregon City provides high-quality drinking water to approximately 35,000 people. Our distribution system consists of 5 water storage reservoirs, 5 pumping stations, and 167 miles of water pipes ranging from 2 inches to 24 inches in diameter. Our staff are responsible for maintaining over 1,500 fire hydrants and over 5,000 water valves. In addition to maintaining the current distribution system, water department staff assist with capital improvement projects to improve water quality and service, as well as adding system capacity to accommodate our growing population.

JOIN US!

You are encouraged to participate in City decisions that may affect water quality. City Commission meetings are held at Libke Public Safety Facility, 1234 Linn Ave, the first and third Wednesday of each month, starting at 7:00 pm. Find meeting agenda information or watch archived videos of public meetings at <https://www.orcity.org/1709/Agendas-Videos-and-Minutes>

**Household water leaks
waste more than one
trillion gallons of water
nationwide each year**



Promptly finding and fixing leaks helps prevent water damage, conserve water, and save you money! Learn what to look for and how to use your water meter to detect leaks with this how-to video (video at bottom of webpage):

<https://bit.ly/h2o-leaks>

Our Water Treatment Process

Oregon City's drinking water comes from the Clackamas River. Water from the Clackamas River is made safe to drink by conventional treatment at the South Fork Water Board (SFWB) Treatment Plant, located in the Park Place area of Oregon City. Oregon City purchases treated drinking water from SFWB and distributes it to Oregon City Water customers. The basic steps to the treatment process are:

- **Coagulation** – adding chemicals (alumn & polymers) to help very small suspended particles attract one another and form larger particles.
- **Flocculation** – gently stirring the water to bring the suspended particles together so they will form larger clumps called floc.
- **Sedimentation** – the velocity of the water is reduced allowing gravity to settle out the floc.



- **Filtration** – any remaining particles not settled out earlier are removed as water flows through filters made up of sand and anthracite coal.
- **Corrosion Control** – adding soda ash in order to increase the pH of the water, making it less likely to deteriorate piping material and plumbing fixtures.

- **Disinfection** – adding sodium hypochlorite (a liquid form of chlorine that is similar to household bleach) to kill any disease-causing organisms in the water. It is important to have a small amount of chlorine remain in the water as it travels throughout the distribution system.



SFWB, and by extension, Oregon City, is a member of the Regional Water Providers Consortium. The Consortium provides leadership in the planning, management, stewardship, and resiliency of drinking water in the greater Portland, OR metropolitan region. Learn more at: [regionalH2O.org](https://www.regionalh2o.org).

Check out our how-to videos and other resources that show how to store, access, and treat drinking water in an emergency at [regionalH2O.org/emergency-preparedness](https://www.regionalh2o.org/emergency-preparedness).

To learn more about SFWB visit their website at: www.sfwb.org.



Protecting Our Drinking Water Source

The Clackamas River supplies high-quality drinking water to over 300,000 people, including those in Oregon City.

The Clackamas River watershed begins on the slopes of Olallie Butte near Mount Hood and flows nearly 83 miles from its headwaters (elevation 6,000 feet) to its confluence with the Willamette River near Clackamette Park (elevation 12 feet); it encompasses 940 square miles.



Unlike the City of Portland's Bull Run watershed, the Clackamas River watershed is completely unprotected.

The watershed crosses two counties and is occupied by a wide range of land uses. It is 72% publicly owned, 25% privately owned, and 3% tribally owned.

In 2019, an updated Source Water Assessment was completed, which identified over 3,000 potential sources of pollution for the lower Clackamas River intakes. Many of these potential sources of pollution pose a moderate to high risk to the drinking water. To learn about contamination risks to our drinking water source go to the updated Source Water Assessment Report (May 2019) at:

<https://www.orcity.org/DocumentCenter/View/5823/Updated-Source-Water-Assessment---2019-PDF>

In 2021, the Clackamas River Water Providers (CRWP) updated their Drinking Water Protection Plan for the Clackamas River. The purpose of this plan is to provide a road map of potential strategies and programs to implement over the next decade, and beyond, to preserve the Clackamas River as a high-quality drinking water source. You can read the plan and learn more about the CRWP by going to:

<https://www.clackamasproviders.org/drinking-water-protection-plan/>.

Cross Connection/ Backflow Prevention Program

Oregon City water customers play a big role in helping to keep our drinking water safe by complying with the Cross Connection/Backflow Prevention Program. Most modern water-using fixtures and appliances such as sinks, toilets, and clothes washers have built-in backflow prevention features. However,

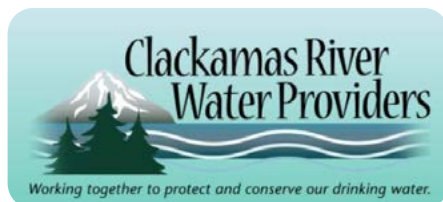


sometimes installation of a separate backflow prevention assembly is required to comply with plumbing code and to protect against a potential backflow incident. If your home has a landscape irrigation system, fire sprinkler system, or boiler you will most likely have a backflow assembly. Backflow assemblies must be tested annually to ensure they are working properly and providing adequate protection for your drinking water. Over time, the internal parts can wear out or get clogged with dirt and debris causing the assembly to fail. A failing backflow assembly will not protect your drinking

water properly and could put you and your family at risk. Find a list of state-certified backflow assembly testers, and much more information at:

<https://www.orcity.org/1494/Cross-Connection-Control>

Water Conservation Rebates



Here in the rainy Pacific Northwest, it is sometimes difficult to understand why we need to conserve water. As our community has grown, our water needs have also grown. Did you know Oregon City's water use nearly triples in the summer months! Oregon City's drinking water comes from the Clackamas River and the increased demand for water along with lower river levels in summer means finding ways to conserve water is crucial. By using less water, we can leave more water in the river for aquatic life and recreation.

Oregon City offers a variety of water conservation rebates through our partner Clackamas River Water Providers. Currently there are eight different water conservation rebates available. These rebates are available each fiscal year (July 1st – June 30th) on a first-come, first-served basis until annual funds are depleted. Current rebate opportunities include washing machines, toilets, leak detectors, hose bib timers, weather-based irrigation controllers, and more. For a list of rebate eligible items please visit: <https://www.clackamasproviders.org/conservation-rebates/>



Definitions

AL: *Action Level.* The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCL: *Maximum Contaminant Level.* The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG: *Maximum Contaminant Level Goal.* The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL: *Maximum Residual Disinfectant Level.* The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG: *Maximum Residual Disinfectant Level Goal.* The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

N/A: *Not Applicable.*

N/D: *Not Detected.* The results were below the laboratory reporting limit.

NTU: *Nephelometric Turbidity Unit.* A measurement of the water turbidity. Turbidity greater than 5 NTU is noticeable to the average person.

ppb: *Parts per billion.* A measure of the concentration of a substance in a given volume of water. One part per billion corresponds to one penny in \$10,000,000.

ppm: *Parts per million.* A measure of the concentration of a substance in a given volume of water. One part per million corresponds to one penny in \$10,000.

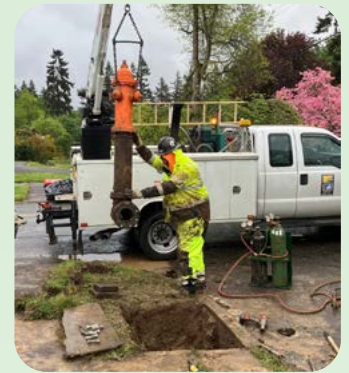
TT: *Treatment Technique.* A required process intended to reduce the level of a contaminant in drinking water.

90th Percentile: The highest result found in 90% of the samples when listed in order from the lowest to the highest results.

2023 System Improvement Projects

Like most cities across the nation, Oregon City has aging infrastructure. In order to continue providing reliable, high quality water to our customers, a percentage of water system revenue is used to fund capital improvement projects. These investments allow us to:

- **Replace old cast iron pipe** with ductile iron pipe. Cast iron pipe tends to corrode over time. This corrosion builds up on the inside of the pipe, reducing the effective diameter and capacity of the pipe. The corrosion also contributes to discolored water that, while being safe to drink, is aesthetically unpleasing.
- **Ensure reliability** by replacing older, smaller diameter piping with larger diameter piping to improve fire flow and help meet the increasing demand of our growing population.
- **Loop sections of pipeline whenever possible.** Eliminating dead-end lines improves water circulation so water quality and fire flow are enhanced.



Replacement of aging components in the drinking water distribution system is necessary to maintain good water quality and system reliability.

New Water Lines Installed In 2023

Project Name	Pipe Diameter	Ductile Iron Pipe (Length in Feet)				
		4"	8"	12"	18"	24"
Clackamas County Courthouse			258	1180		
Randall St			650			
Henrici Reservoir Project				150	22	10
Holmes Ln Condos			670			
Maplelane North Apartments			28	1240		
Maplelane South Apartments			867	573		
Latourette St		275	517			
Main St			495	1320		
Totals		275	3485	4463	22	10

Amount of New Pipe (in Feet) = 8,255

Frequently Asked Questions About Drinking Water

I can taste and smell chlorine in the water. Why?

Oregon City is required to keep a small amount of chlorine in the water to provide proper disinfection of the drinking water supply. We try to keep the chlorine level as low as possible to prevent unpleasant taste & odor issues; however, some people are more sensitive to the taste and smell of this chlorine than others. The chlorine residual varies throughout the distribution system, but is generally around 1 part per million (ppm). This is well below the maximum level of 4 ppm set by EPA.

Does Oregon City add fluoride to the drinking water?

No, Oregon City does not add fluoride to the drinking water. You may want to check with your dentist to see if supplemental fluoride is recommended for your family.

Sometimes the water coming out of the faucet looks dirty. Why?

These events are typically caused by the buildings internal plumbing. If your home or business has galvanized pipes, they can give water a reddish-brown or yellow appearance. It is most noticeable if the water has been sitting in the pipes for an extended period of time, such as overnight or when returning home in the evening. Iron is the cause of this discoloration. Discolored water rarely causes health problems. Turning on all your cold water faucets and letting them run for a few minutes usually clears the discoloration. Occasionally water system maintenance or firefighting activities can result in customers receiving discolored water. Again, flushing the plumbing in your home is the best way to get the water to clear up.



Public Works

Bids & RFPs

Projects +

Engineering +

Environmental Services +

Streets +

Water -

[Fire Flow Testing Request Form](#)[Water Leaks](#)[Water Main Breaks +](#)[Pay your Utility Bill or Moving?](#)[Cross Connection Control/Backflow](#)[Drinking Water Quality Reports](#)[Emergency Water Intertie Information](#)[Rule Revisions - Lead and Copper](#)[Water Master Plan](#)[Water Provider](#)[Winter Weather Water Conservation Tips](#)[Water Boil Warning Information](#)[Bolton Reservoir background +](#)[Clackamas River Water Providers](#)[Fire Hydrant Flushing](#)[Water Pipe Insurance Policies not Affiliated with the City of West Linn](#)

Fees & Charges +

Maps/GIS +

Traffic Safety Committee - Traffic Control Requests +

Emergency Contacts

Contact Information

Hours: M-Th 7:30-5:30, F 7:30-4:30.
Alternating Fridays closed. See City calendar.

Address: 22500 Salamo Rd., West Linn,
OR 97068

Contact:

[View Full Contact Details](#)

Upcoming Events

City Hall, Public Works, & Police Business
Office Closed
04/03/2026 (All day)

City Hall, Public Works, & Police Business
Office Closed
04/17/2026 (All day)

City Hall, Public Works, & Police Business
Office Closed
05/01/2026 (All day)

City Hall, Public Works, & Police Business
Office Closed
05/15/2026 (All day)

Memorial Day Holiday Closure

Winter Water Conservation Tips From Clackamas River Water Providers



The Clackamas River Water Providers shares the below helpful tips on how to prepare for colder weather:

Don't Let Cold Weather Catch You Unprepared!

Every winter, many homeowners face the expense and inconvenience of frozen water pipes. But you can cross that off your list of winter worries by taking a few simple precautions:

- Disconnect and drain outdoor hoses. Detaching a hose allows water to drain from the faucet. Otherwise, a single, hard overnight freeze can burst either the faucet or the pipe it's connected to.
- Insulate pipes or faucets in unheated areas. If you have pipes in the attic, an unheated garage or cold crawl space under the house, wrap the water pipes before temperatures plummet. Hardware or building supply stores will have good pipe wrapping materials available.
- Seal off access doors, air vents and cracks. Winter winds whistling through overlooked openings can quickly freeze exposed water pipes.
- Find the master shutoff valve. If a pipe bursts anywhere in the house - kitchen, bath, basement or crawl space - this valve turns the water off to the house. So find it now. Be sure everyone in the family knows where it is and what it does.
- In severe cold weather, you may want to allow a faucet to drip a small continuous stream

What if it's too late?

What if you wake up one day to find the pipes are frozen anyway? During an extended cold spell, it can happen despite precautions. Do you have the plumber's telephone number handy? Write it down now before you need it in an emergency.

If you think you know where the freeze-up occurred and want to try thawing it yourself, do not under any circumstances use a torch with an open flame. The whole house could catch fire. Also, overheating a single spot can burst the pipe. Heating a soldered joint could allow it to leak or come completely apart.

The easiest tool is probably a hair dryer with a high heat setting. Wave the warm air back and forth along the pipe, not on one spot. If you don't have a hair dryer, you can wrap the frozen section with rags or towels and pour hot water over them. It's messy, but it works. Be careful because the pipe may already be broken. It's not leaking because the water is frozen. But when you thaw it out, water could come gushing out. Be ready to run for the master shutoff valve if necessary. Better yet, turn the valve off while undertaking your thaw-out effort.

The main thing is to take precautions before cold weather arrives.

Source: American Water Works Association

For more Water Conservation Tips and information visit the Clackamas River Water Providers website www.clackamasproviders.org or call Christine @ 503 723 3511.





Public Works

Bids & RFPs

Projects



Engineering



Environmental Services



Streets



Water

[Fire Flow Testing Request Form](#)

Water Leaks

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Fees & Charges



Maps/GIS

[Traffic Safety Committee - Traffic Control Requests](#)

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Address: 22500 Salamo Rd., West Linn, OR 97068

Contact:

[View Full Contact Details](#)

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04/03/2026 (All day)

City Hall, Public Works, & Police Business Office Closed
04/17/2026 (All day)

City Hall, Public Works, & Police Business Office Closed
05/01/2026 (All day)

City Hall, Public Works, & Police Business Office Closed
05/15/2026 (All day)

Memorial Day Holiday Closure

Water Leaks



It is possible to detect leaks in your home on your own. Most water leaks can be seen or heard, but there are times when the leak can be hard to detect.

Check your water bill each month. Your water bill will compare water usage from the current month to the corresponding month of the previous year. For example, on your May utility bill you would see water usage from the current year and water usage from the previous May. Check your bill to see if your usage is in a similar range. If you see a significant difference and haven't changed your water use habits you may want to check for a leak.

Locating your meter

If you have sidewalks and curbs in front of your home your meter will most likely be located within the sidewalk. Please note, the meter lids do vary and your lid may look different than your neighbor's.



However, in older neighborhoods or neighborhoods without sidewalks and curbs the meter may be located within the front yard. In yards that have landscaping up to the street it may be more of a challenge to locate your meter as it may be hidden by shrubs or plants. It is important to know the location of your meter and keep landscaping around the meter maintained to ensure easy access.

Checking for a leak and isolating the location

Pinpointing where a leak might be located can help save money and time with regards to plumber fees. Fixing the problem helps conserve water and save money on your bill.

Steps to determine if you have a leak

1. Turn off all water sources being used in the house or any water features in your yard. Locate the water meter on your property.
2. Remove the meter box lid (small metal door on most meters). Locate the red triangle on the face of the water meter. If your meter does not have a red triangle, make note of the location of the needle on the meter.
3. Check to see if the red triangle has moved after one minute, or the needle has moved after five minutes.

If you have all the water off in the house/yard and the red triangle is spinning or after five minutes the needle has moved, a leak is present somewhere on the property side of the meter. Also, if you still feel that you might have a leak, you can look at the meter when you go to bed and then look first thing in the morning (making sure no one uses water in that time). If you have a bad leak it can be seen pretty fast. If it is a smaller leak, like a small leak in the toilet, it may take more time to see it on the meter.

Isolating the location of the leak

1. Turn off the water valve at the house and at the backflow device for irrigation/sprinkler system (if present).
2. If the red triangle/needle is turning there is a leak in the service line (line from the meter to the house valve).
3. If the red triangle/needle is not moving turn the backflow device back on and check the meter again. If the red triangle/needle is turning there is a leak in the irrigation/sprinkler system.
4. If the triangle/needle is not spinning at this point, turn the backflow device off and turn the water valve at the house back on. If the triangle/needle is spinning there is a leak in the house.

When your investigation is complete, turn on the water valve at the house and at the backflow device to restore water to your home.

For additional information on how to check for a leak please click the link below for a video provided by our water supplier South Fork Water Board.

VIDEO: [How to use your meter to check for a leak](#)



Looking and listening for leaks in and around your home

Check your house for leaking toilets (e.g. a toilet flapper not tightly fitted), faucets dripping, look under sinks/fixtures and in crawl spaces. You may also want to check your outdoor faucets and hose connections for leaks and examine any outdoor water features for drips. Inspect pipes for pinhole leaks, leaking joints, etc. Check around your house for puddles of water or investigate your property for soft spots. Listen for the leak. In pipes with 30 PSI or higher water pressure, there may be a "Hiss" or "Whoosh" sound indicating a leak may be present.

If you determine there is a leak in your plumbing

If you have followed the procedures above and you determined you have a leak in your plumbing, you can make the repairs yourself or contact a plumber to make the repairs for you. If you have determined you have a leak and are having difficulty locating the leak within your property, you can contact a private leak detection company to assist you in locating the leak. Both plumbers and leak detection companies can be found in

your local phone or web directory.

Getting your water turned off

If you have a scheduled plumbing repair and need your water shut off or have an emergency water leak during normal business hours (7:00am-3:30pm) please call 503-722-5500. Please note that we do not have the capacity to provide immediate shut-off services for non-emergencies. Please inform us ahead of time if you have a scheduled plumbing repair and want your water shut off. If you have an **emergency water leak after normal business hours** and you need assistance please call Locom non-emergency dispatch at 503-635-0238.



Memorandum Friday, October 1, 2021

05/25/2026 (All day)

City Hall, Public Works, & Police Business
Office Closed

05/29/2026 (All day)

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