Ochoco West Water and Sanitary Authority

Water Management and Conservation Plan Progress Report

Prepared for
Ochoco West Water and Sanitary Authority
Date
November 2024

Executive Summary

The Ochoco West Water and Sanitary Authority (OWWSA) serves a rural residential community northwest of Prineville, Oregon. OWWSA's water supply comes primarily from a series of springs located north of the service area and one well. This Progress Report fulfills the five-year reporting requirement by the Oregon Water Resources Department (OWRD), aligning with OAR Chapter 690, Division 86.

This reporting period has seen significant operational challenges due to staffing turnover. OWWSA's utility manager left in early 2024, and their water and wastewater operator retired during the 2024 summer, leading to disruptions in meeting conservation and management benchmarks. This report reflects both the efforts made and the areas for improvement as OWWSA continues working toward sustainable water management. Divergent Engineering Services has been managing the water utility since October 2024.

Section 1: Progress Report Elements

1.1 Introduction

This report covers the progress on conservation and management benchmarks outlined in OWWSA's 2019 Water Management and Conservation Plan (WMCP). Despite staffing changes, OWWSA remains committed to improving water conservation efforts, addressing system needs, and meeting regulatory requirements.

1.2 Report Organization

The report is organized as follows:

- Section 1: Introduction
- Section 2: Water Conservation Benchmarks
- Section 3: Water Right Diversions

- Section 4: Water Consumption
- Section 5: Annual Water Audit

Section 2: Water Conservation Benchmarks

This section addresses OAR 690-086-0120(4)(a), with a focus on conservation benchmarks and progress made by OWWSA since the 2019 WMCP.

2.1 Annual Water Audit

Benchmark: Conduct annual audits to monitor system efficiency, identify non-revenue water, and enhance data quality.

Status: Due to limited historic documentation, no record of a completed annual water audit was found. As of November 2024, OWWSA will prioritize initiating regular annual water audits to track system losses and improve conservation measures.

2.2 Water Meters

Benchmark: Ensure all service connections are metered and replace or repair inaccurate meters.

Status: All OWWSA customer connections are metered. However, due to intermittent meter reading and billing over the past few years, water usage data may lack continuity. Steps are being taken to ensure consistent meter reading and billing moving forward.

2.3 Rate Structure and Billing

Benchmark: Implement rate structures that encourage conservation.

Status: OWWSA utilizes a tiered rate structure designed to promote conservation by charging higher rates for higher consumption. Despite inconsistent billing, this rate structure aligns with conservation goals and provides financial incentives for customers to limit usage. Efforts to ensure regular billing cycles are underway to reinforce conservation through more frequent customer feedback on usage.

2.4 Leak Detection and Repair

Benchmark: Maintain a proactive leak detection program.

Status: OWWSA has two utility personnel who inspect water lines and repair leaks as they are identified, ensuring prompt response to minimize water loss. The utility's leak detection approach relies on visual inspections and quick repairs, which has helped maintain system integrity despite the absence of formalized leak detection protocols.

2.5 Public Education

Benchmark: Provide customers with conservation information and implement drought response stages.

Status: OWWSA provides customers with conservation guidelines, especially during drought conditions, with a three-stage water use restriction system. This approach helps raise awareness during critical periods. However, additional public education efforts could further support year-round conservation goals.

2.6 Technical and Financial Assistance

Benchmark: Offer support for customers to implement conservation measures.

Status: No technical or financial assistance programs are currently in place for conservation improvements. Developing such programs in the future could encourage broader participation in conservation efforts among customers.

2.7 Reuse and Recycling Opportunities

Benchmark: Explore opportunities for recycling and non-potable water use.

Status: OWWSA has not yet explored recycling or non-potable water use options. While infrastructure and financial limitations currently restrict these opportunities, OWWSA will consider feasible options as part of future conservation strategies.

Section 3: Water Right Diversions

This section meets the requirements of OAR 690-086-0120(4)(b), reporting average monthly diversions for OWWSA's water rights over the past five years.

3.1 Water Rights Summary

OWWSA's primary sources of water include five springs and a newly developed well, with a combined maximum instantaneous rate of 120-145 GPM. These sources provide sufficient water for the residential needs of the community.

3.2 Monthly and Daily Diversions (Calendar Year Data with Permit Allocations)

OWWSA has recorded water diversions by calendar year (January through December) over the past five years. The following tables summarize the monthly diversions from both the springs and the newly introduced well, along with the total production for each year. The diversions are distributed across the following permits:

- **S-42778**: 0.5 cfs
- **S-42779**: 0.3 cfs
- **S-42780**: 0.2 cfs
- **G-12648**: 0.579 cfs (associated with well production)

OWWSA Water Production 2019

Month	Springs Production (Gallons)	Well Production (Gallons)	S-42778 (0.5 cfs)	S-42779 (0.3 cfs)	S-42780 (0.2 cfs)	Total Production (Gallons)
January	740,260	0	370,130	222,078	148,052	740,260
February	731,010	0	365,505	219,303	146,202	731,010
March	844,730	0	422,365	253,419	168,946	844,730
April	881,580	0	440,790	264,474	176,316	881,580
May	1,354,650	0	677,325	406,395	270,930	1,354,650
June	1,561,720	0	780,860	468,516	312,344	1,561,720
July	1,629,390	0	814,695	488,817	325,878	1,629,390
August	1,646,910	0	823,455	494,073	329,382	1,646,910
September	1,128,820	0	564,410	338,646	225,764	1,128,820
October	820,900	0	410,450	246,270	164,180	820,900
November	793,480	0	396,740	238,044	158,696	793,480
December	838,460	0	419,230	251,538	167,692	838,460
Total	**12,971,910**	**0**	**6,485,955**	**3,891,573**	**2,594,382**	**12,971,910**

OWWSA Water Production 2020

Month	Springs Production (Gallons)	Well Production (Gallons)	S-42778 (0.5 cfs)	S-42779 (0.3 cfs)	S-42780 (0.2 cfs)	Total Production (Gallons)
January	843,580	0	421,790	253,074	168,716	843,580
February	816,750	0	408,375	245,025	163,350	816,750
March	954,260	0	477,130	286,278	190,852	954,260
April	1,191,440	0	595,720	357,432	238,288	1,191,440
May	1,331,120	0	665,560	399,336	266,224	1,331,120
June	1,465,810	0	732,905	439,743	293,162	1,465,810
July	1,804,890	0	902,445	541,467	360,978	1,804,890
August	1,789,570	0	894,785	536,871	357,914	1,789,570
September	1,407,900	0	703,950	422,370	281,580	1,407,900
October	1,181,210	0	590,605	354,363	236,242	1,181,210
November	843,550	0	421,775	253,065	168,710	843,550
December	883,040	0	441,520	264,912	176,608	883,040
Total	**14,513,120**	**0**	**7,256,560**	**4,353,936**	**2,902,624**	**14,513,120**

OWWSA Water Production 2021

Month	Springs Production (Gallons)	Well Production (Gallons)	S-42778 (0.5 cfs)	S-42779 (0.3 cfs)	S-42780 (0.2 cfs)	Total Production (Gallons)
January	780,630	0	390,315	234,189	156,126	780,630
February	807,480	0	403,740	242,244	161,496	807,480
March	793,510	0	396,755	238,053	158,702	793,510
April	1,008,950	0	504,475	302,685	201,790	1,008,950
May	1,373,900	0	686,950	412,170	274,780	1,373,900
June	1,233,520	0	616,760	370,056	246,704	1,233,520
July	1,166,490	0	583,245	349,947	233,298	1,166,490
August	1,083,330	0	541,665	324,999	216,666	1,083,330
September	1,103,350	0	551,675	331,005	220,670	1,103,350
October	911,540	0	455,770	273,462	182,308	911,540
November	878,340	0	439,170	263,502	175,668	878,340
December	815,650	0	407,825	244,695	163,130	815,650
Total	**11,956,690**	**0**	**5,978,345**	**3,587,007**	**2,391,338**	**11,956,690**

OWWSA Water Production 2022

Month	Springs Production (Gallons)	Well Production (Gallons)	S-42778 (0.5 cfs)	S-42779 (0.3 cfs)	S-42780 (0.2 cfs)	G-12648 (0.579 cfs)	Total Production (Gallons)
January	854,280	**0**	427,140	256,284	170,856	0	854,280
February	780,760	0	390,380	234,228	156,152	0	780,760
March	881,920	0	440,960	264,576	176,384	0	881,920
April	906,130	0	453,065	271,839	181,226	0	906,130
May	1,186,580	0	593,290	355,974	237,316	0	1,186,580
June	1,195,160	0	597,580	358,548	239,032	0	1,195,160
July	984,330	718,740	492,165	295,299	196,866	718,740	1,703,070
August	982,300	676,620	491,150	294,690	196,460	676,620	1,658,920
September	900,060	359,640	450,030	270,018	180,012	359,640	1,259,700
October	1,156,670	0	578,335	347,001	231,334	0	1,156,670
November	1,723,410	0	861,705	517,023	344,682	0	1,723,410
December	886,900	0	443,450	266,070	177,380	0	886,900
Total	**12,438,500**	**1,755,000**	**6,219,250**	**3,731,550**	**2,487,700**	**1,755,000**	**14,193,500**

OWWSA Water Production 2023

Month	Springs Production (Gallons)	Well Production (Gallons)	S-42778 (0.5 cfs)	S-42779 (0.3 cfs)	S-42780 (0.2 cfs)	G-12648 (0.579 cfs)	Total Production (Gallons)
January	993,460	0	496,730	298,038	198,692	0	993,460
February	725,910	0	362,955	217,773	145,182	0	725,910
March	818,440	0	409,220	245,532	163,688	0	818,440
April	860,290	0	430,145	258,087	172,058	0	860,290
May	1,153,510	0	576,755	346,053	230,702	0	1,153,510
June	1,572,630	491,400	786,315	471,789	314,526	491,400	2,064,030
July	1,876,540	642,600	938,270	562,962	375,308	642,600	2,519,140
August	1,658,920	448,200	829,460	497,676	331,784	448,200	2,107,120
September	1,259,700	126,900	629,850	377,910	251,940	126,900	1,386,600
October	964,080	0	482,040	289,224	192,816	0	964,080
November	842,340	0	421,170	252,702	168,468	0	842,340
December	888,170	0	444,085	266,451	177,634	0	888,170
Total	**13,613,990**	**1,709,100**	**6,806,995**	**4,084,197**	**2,722,798**	**1,709,100**	**15,323,090**

Section 4: Water Consumption

This section satisfies OAR 690-086-0120(4)(d), presenting an overview of water usage trends based on available data.

4.1 Residential and Seasonal Demand Trends

OWWSA's demand peaks during summer months, particularly for irrigation. Due to intermittent meter readings, detailed consumption patterns are not fully documented for prior years. Future efforts will focus on consistent meter readings to establish reliable usage patterns and support more accurate conservation planning.

4.2 Comparison with Historical Usage

Limited data on historical usage prevents a comprehensive analysis of trends. Consistent meter reading will become a priority for OWWSA staff moving forward.

Section 5: Annual Water Audit

This section addresses OAR 690-086-0120(4)(c), outlining water audit practices and findings.

5.1 Audit Methodology and Findings

No formal water audits were conducted in prior years. Establishing an annual audit process will be prioritized moving forward to identify potential sources of system loss and refine non-revenue water management.

5.2 System Leakage and Non-Revenue Water

In the absence of historical audit data, exact system leakage rates are unknown. However, the utility's response to leaks through visual inspections and prompt repairs has likely helped limit water losses. OWWSA will implement a structured audit process to quantify system leakage accurately and develop targeted leak reduction strategies.

5.3 Non-Revenue Water Management

Without recent audit data, non-revenue water remains unquantified. With consistent meter readings and annual audits moving forward, OWWSA aims to identify and reduce non-revenue water, aligning with OWRD's optimal management practices.

Section 6: Public Notice and Consultation

To ensure compliance with all requirements of OAR 690-086-0120:

1. **Public Notice and Comment Period**: OWWSA will work with OWRD to provide public notice and allow a 30-day comment period upon submission of this progress report. This step ensures transparency and community input on the conservation efforts and progress reported.
2. **Consultation with Local Governments**: While consultation with affected local governments is not explicitly required for progress reports, OWWSA will proactively engage with relevant local governments to ensure consistency with comprehensive land use plans and to address any regional considerations or concerns regarding water management and conservation efforts.

Conclusion

OWWSA has faced significant challenges in recent years due to staff turnover and the absence of documented operational data. However, recent management changes have brought renewed focus on meeting conservation and management benchmarks. Future efforts will prioritize establishing regular audits, consistent meter reading and billing, enhanced public education, and meeting all procedural requirements, including public notice and local government consultation, to strengthen OWWSA’s conservation practices and ensure compliance with regulatory standards.