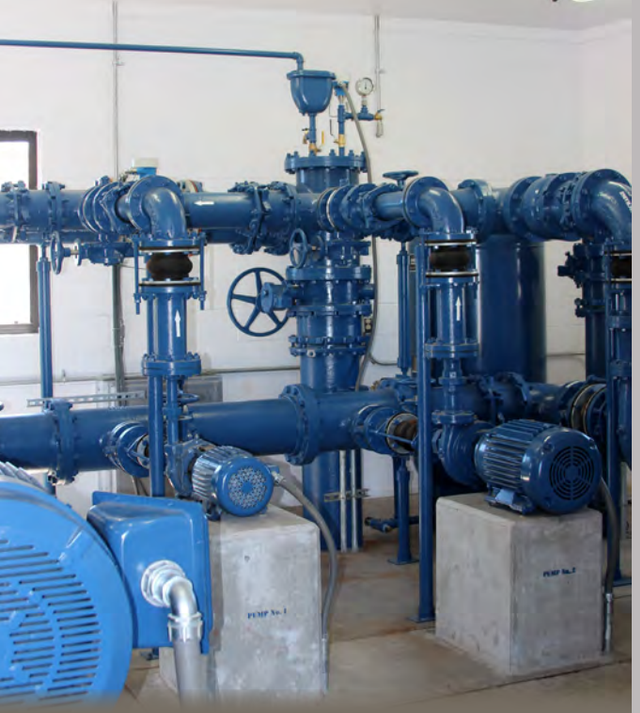
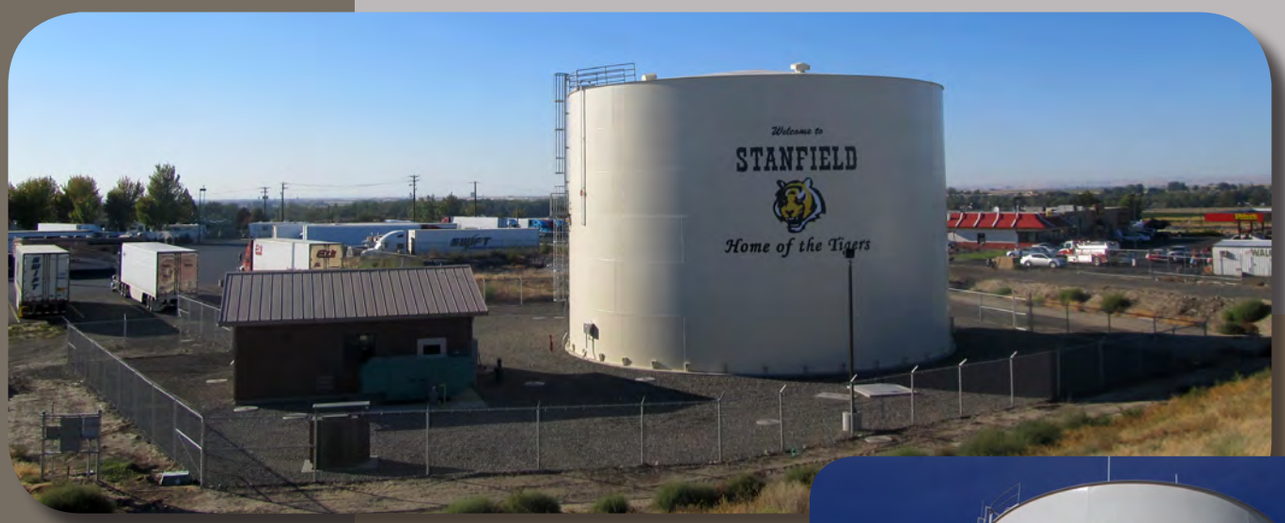


City of
Stanfield, Oregon
WATER SYSTEM MASTER PLAN



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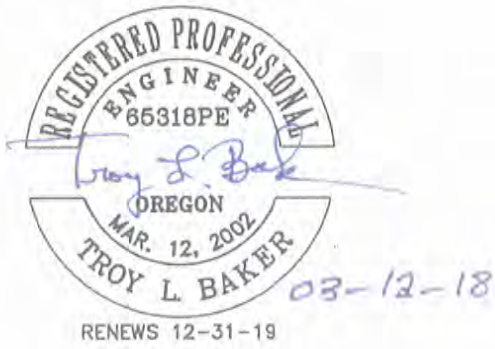
2018

WATER SYSTEM MASTER PLAN

FOR

CITY OF STANFIELD, OREGON

2018



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

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Executive Summary

Introduction

This Executive Summary briefly summarizes the results of the Water System Master Plan (WSMP) prepared by Anderson Perry & Associates, Inc., for the City of Stanfield, Oregon. The recommendations outlined hereafter have been developed in cooperation with the Stanfield City Council and City staff. The focus of this WSMP has been on the overall water system, including the water supply, storage, and distribution systems. This WSMP includes an analysis of the existing system and its performance, evaluation of system needs, evaluation of improvement alternatives, and development of a financial plan and project implementation plan. Included in this Executive Summary is a brief discussion of the existing water system, the water system improvements selected by the City Council, the current financial status of the Water Department, and a preliminary project implementation schedule. During the development of this WSMP, the City elected to take a Capital Improvements Plan (CIP) approach for completing water system improvements projects. For a more detailed discussion of the information presented in this Executive Summary, please refer to the individual chapters of this WSMP.

Service Population and Planning Period

For the purpose of this WSMP, the current population of 2,130, as estimated by the Portland State University Population Research Center, will be utilized. The population forecast estimated an average annual increase in the City of 0.3 percent per year between 2017 and 2035 and 0.1 percent between 2035 and 2066. This population forecast will result in an increase from the certified 2016 population of 2,130 to a population of 2,252 in 2037.

Summary of Supply, Storage, and Distribution System Evaluation and Needs

Supply

At this time, the City has enough source capacity to meet current and future demands. As discussed earlier, it is desirable to design a system with enough source capacity to provide for PDDs without requiring the well pumps to operate for 24 hours per day. The 2037 peak daily flow requirement is estimated to be 1,030 gpm. The current capacity from the City's primary well (Well No.5), as well as the two supplemental wells (Wells No. 3 and 4), is approximately 2,150 gpm. It is not recommended the City increase its supply capacity at this time.

Storage

The City currently has two operating storage reservoirs, the 625,000-gallon ground-level reservoir (Reservoir No. 2) and a 1,000,000-gallon ground-level reservoir (Reservoir No. 3). The needed storage for the 2037 design population is approximately 1,150,800 gallons. The current storage volume is adequate to meet these projected requirements. The conditions of both reservoirs are also adequate for the 20-year planning period. Currently, there are no recommendations to increase or make changes to the current storage available to the City's water system. To maintain Reservoir No. 1 as a landmark, it is recommended the City retain the services of a licensed structural engineer to address structural improvements needed, as well as coat and maintain the current structure.

Distribution

In general, the City's distribution piping system is in relatively good condition, although several areas cannot currently provide adequate fire flow. Undersized, dead-end, and supply distribution within the City lead to low fire flow capacity and issues with water circulation in these areas; therefore, some areas need improvement, namely areas with undersized main lines and dead-end lines. Improvements outlined in this chapter include installing water main lines to replace undersized lines and improving system looping, circulation, and fire flow capacities. These improvements were selected to address key areas of concern to improve fire flow capacity in the system.

Further discussion related to the City's existing water supply, storage, and distribution systems can be found in Chapters 3, 4, and 5 of this WSMP.

Selected Water System Improvements

The selected water system improvements discussed in this WSMP are briefly summarized hereafter. Work sessions were held with the City Council and City staff to discuss priority of improvements, potential impacts to future user rates, and possible funding opportunities. The proposed project improvements summarized below address the City's needs for improved distribution system reliability and increased fire flows. Recommended and selected water distribution system improvements are identified on Figure 5-3 in Chapter 5. Undersized main lines and dead-end lines are recommended to be replaced and new main lines and fire hydrants installed as part of an improvements project. This WSMP and the selected improvements described herein were officially adopted by the City Council and City staff on February 20, 2018. The meeting notes for the City Council session are attached as Appendix A.

Summary of Estimated Costs for Selected Improvements

The year 2017 estimated costs for the selected water system improvements are outlined on Figure 6-3 in Chapter 6. Each improvement has been categorized by priority and includes construction, administrative, legal, engineering, and contingencies together with other project costs. In total there are seven selected improvements ranging in cost from approximately $80,000 to $425,000.

Current Financial Status

The annual cost of operating and maintaining the City's water system is summarized on Figure 7-1 in Chapter 7. A graphical plot of the City of Stanfield's water system budget for Water Department funds, showing total revenue and total expenditures, is provided on Chart 7-1. The total expenditures from fiscal year 2016 were inflated at 5 percent per year as shown on Chart 7-1. The chart indicates expenditures will likely increase to $450,000 by the budget year 2019-20. This trend in expenditure increases will likely continue and will need to be reflected in future budgeting. It is recommended the City continue to allocate funds to the Water Reserve Fund to cover future maintenance and replacement costs of equipment and facilities. Pump replacement, water meter repairs, reservoir repairs, etc., are all items that require funds from time to time to maintain a healthy water system.

A major financial commitment will be required by the City to implement part or all of the selected water system improvements outlined in this WSMP. An increase in water rates will also be required to fund part or all of the selected system improvements.

Capital Improvements Plan and Implementation Schedule

During development of this WSMP, the City elected to take a CIP approach for completing water system improvements projects, meaning a portion of City funds is allocated each year to the Water System Improvement Fund to complete needed upgrades to the water system. For this reason, the water system improvements outlined in Chapter 6 have been prioritized systematically so the most critical projects, related to the quality and reliability of the water system, are recommended to be completed first. To move forward with completing the water system improvements summarized in this WSMP, the following action items and implementation steps need to occur.

Action Items

- The City Council has formally adopted this WSMP and the associated priority improvements outlined in Chapter 6. Therefore, the City should implement priority improvements as sufficient funds are generated in the Water Department Fund and Water System Improvement Fund. An example of implementing priorities without obtaining outside funding is presented in Chapter 7. This schedule is an estimate and can be used by the City as a tool for planning future improvements.
- The City Council and staff should monitor the progress of water system improvements over the next five years. If sufficient revenue is not obtained, the City should consider pursuing outside funding assistance.