



PUBLIC HEALTH DIVISION
Center for Health Protection, Drinking Water Services
Kate Brown, Governor

Oregon
Health
Authority

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March 7th, 2016

Frederick Schatz, Superintendent
Crystal Springs Water District
P.O. Box 186
Odell, OR 97041

**Re: Master Plan, Plan Review # 25-2016
Crystal Springs Water District, PWS ID # 41 00386
Final Approval**

Dear Mr. Schatz:

The Oregon Health Authority's Drinking Water Services (DWS) has received a copy of the November 2015 final water system master plan for the Crystal Springs Water District, and has determined that the document contains the required elements outlined in Oregon Administrative Rules (OAR) 333-061-0060(5) and concurs with the report's findings. The Master Plan serves as an update to the 2006 Master Plan, and represents a 20-year planning horizon for the City from 2015 through 2035. The document includes a summary, a description of the existing water system, an outline of water quality and service goals, an assessment of the water system's ability to meet these goals through the planning period, an alternatives analysis of projects to meet these goals, a list of Capital Improvement Projects (CIPs) recommended for the 20-year planning period, and an exploration of alternatives to finance the recommended projects. **The document is approved.**

The City's water system consists of a single source, Crystal Spring, on-site sodium hypochlorite generation for the purposes of maintaining a free chlorine residual in the distribution system, two reservoirs with a combined storage capacity of 1.1 million gallons, and approximately 715,000 feet of water distribution pipeline serving 10 pressure zones. As the entire water system flows via gravity, there are no pumping facilities.

The report recommends the following improvements through the 20-year planning period totaling approximately \$9.1 million in 2015 dollars.

- Two additional reservoirs with a combined storage capacity of 1.3 million gallons to provide for areas of the system currently with no storage and for industrial fire supply needs.

- Approximately 190,000 feet of distribution pipeline aimed at increasing pressure and flow as well as improving looping within the distribution system.
- Conducting a water rate study, system development charge study, and a master plan update.

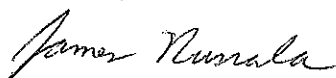
I do have the following comments on the document:

1. DWS recommends that the District address the documented high unaccounted water through a leak detection and repair program to bring the unaccounted water to below the acceptable standard of 10%.
2. Currently the District does not have a plan review exemption for water main extensions with DWS. This is an alternative to submitting plans and fees for each watermain extension project for DWS review. See attached and at www.healthoregon.org/pwsplanreview information on the requirements to apply for and maintain the exemption.
3. Section 3.11.2, Lead and Copper Water Quality, should reference **Action Levels** for lead and copper rather than Maximum Contaminant Levels.
4. Section 3.11.3, Regulatory Status of Water Quality, should reference that ‘OHA classified the spring as groundwater so only disinfection **is practiced.**’ Only groundwater sources that have confirmed fecal contamination require corrective action. Continuous disinfection with contact time to achieve a 4-log or 99.99 % inactivation of viruses is one of the corrective action alternatives for these sources. Currently, the District’s source has tested absent for *E. coli* (a fecal indicator) and consequently corrective action consisting of any disinfection with contact time is not required. The District practices chlorination for the purposes of maintaining a chlorine residual in the distribution system.

Please note that OAR 333-061-0060 contains plan submission and review requirements for all major water system additions or modifications. Construction plans and specifications should be submitted to and approved by DWS before construction begins.

If you have any questions, or would like this letter in an alternate format, please contact me at (971) 673-0459 or james.b.nusrala@state.or.us.

Sincerely,



James Nusrala, P.E., Regional Engineer

Enclosure: DWS Watermain Plan Review Exemption Information

cc: Ian Stromquist, REHS, Hood River County Environmental Health