

EXECUTIVE SUMMARY

The City of Kelso's (City) 2020 *Water System Plan* (WSP) provides a long-term planning document for the City's water system. It evaluates the City's water system over a 20-year planning horizon to address water supply, storage, transmission, and treatment needs. This WSP has been prepared in accordance with Washington State Department of Health (DOH) requirements as outlined in Washington Administrative Code (WAC) Chapter 246-290.

The City is the sole owner and operator for the distribution system and owns and operates the Kelso Water Treatment Plant. The City's water system is currently served by the Kelso Ranney Collector Well, located along the eastern bank of the Cowlitz River. Water from the Kelso Ranney Collector Well is pumped to the Kelso Water Treatment Plant and then the treated water is pumped into the City's distribution system. An additional source of water for the City is a wholesale intertie with the City of Longview.

The City has 10 reservoirs that serve the City's water service area (WSA). The City's distribution system currently operates with 12 pressure zones: the highest-pressure zone has a hydraulic grade line of approximately 544 feet, and the lowest pressure zone has a hydraulic grade line of approximately 188 feet. The transmission and distribution system for the City consists of approximately 411,000 linear feet (78 miles) of pipe ranging from less than 2 inches to 18 inches in diameter. The City currently serves approximately 4,688 connections; approximately 77 percent of which are single-family residences.

A complete hydraulic analysis of the system has been conducted, and numerous projects are recommended to improve the system. The various types of projects selected for the WSP based on the hydraulic analysis include:

1. Growth-related projects associated with extensions to the existing system to serve population growth;
2. System improvements to address existing system deficiencies, such as inability to meet minimum fire flow requirements;
3. Projects to replace small waterlines with diameters of 4 inches and smaller; and
4. Projects to replace waterlines constructed of asbestos cement (AC) or other substandard materials.

The City is committed to providing its customers with a safe and reliable source of drinking water. The City is anticipating a modest level of population growth over the 20-year planning period, and this WSP provides a means for ensuring that the City water system can accommodate current and future customers.