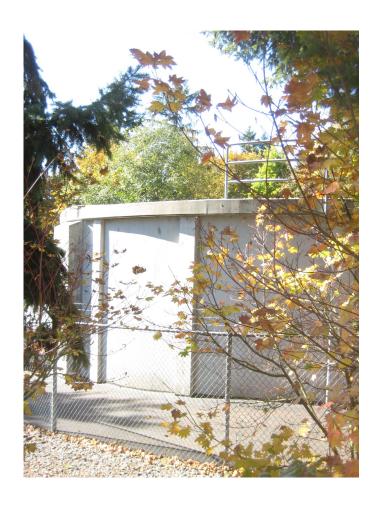


# **WATER SYSTEM PLAN**

## FEBRUARY 2019





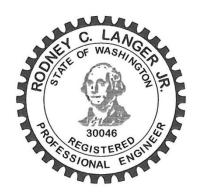


## **WATER SYSTEM PLAN**

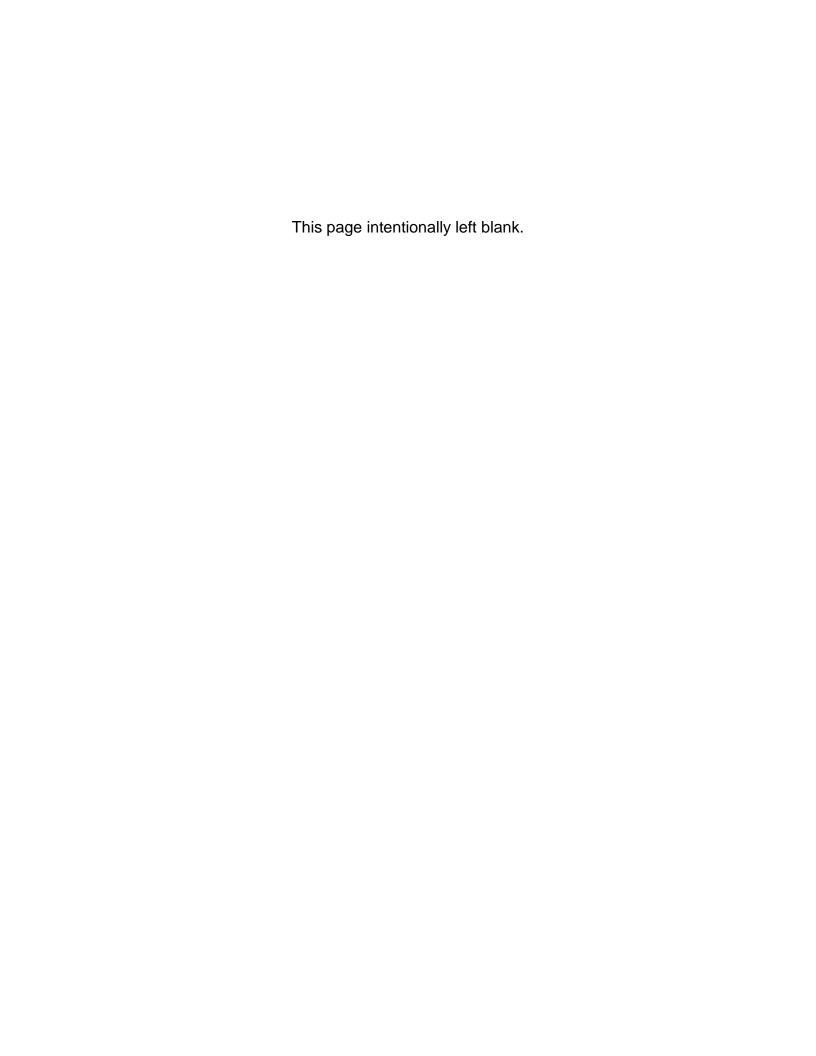
#### **FEBRUARY 2019**

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This plan was prepared under the direction of a Registered Professional Engineer.



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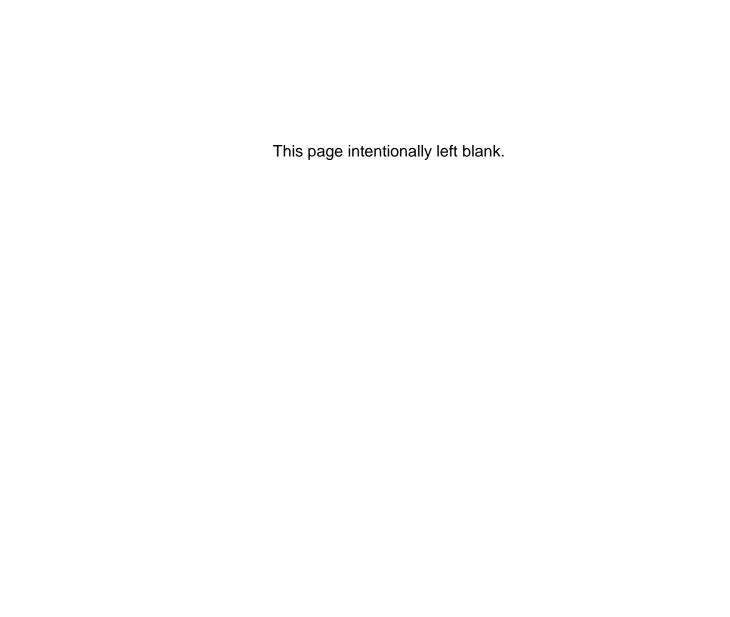
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#### INTRODUCTION

This report presents the results of studies that have been used to develop the 2019 Water System Plan (WSP) for King County Water District No. 49. This plan updates the 2017 WSP in response to comments provided by the State Department of Health, Seattle Public Utilities and King County. The update also extends the 20-year planning period by two years and updates the analysis and plan for a new water storage facility. The plan outlines the projected needs for the District and recommends capital improvement and financial programs to adequately provide for all aspects of supply, storage, treatment and distribution of water to the District's customers.

The plan has been prepared for compliance with applicable requirements of the State of Washington Department of Health and King County. The plan was prepared in accordance with WAC 246-290-100, WAC 246-293-230 and RCW 43.20 and 57. This plan supersedes all previous Water System Plans adopted by the Board of Commissioners of King County Water District No. 49.

The purpose of this study is to create a Water System Plan which will identify facilities and improvements necessary to serve the District for the present and reasonably foreseeable future. Some of the principal objectives of this plan are as listed below.

- Provide a comprehensive evaluation of existing and future system needs.
- Provide details of the District's policies to customers.
- Provide information to help educate customers on District needs.
- Minimize public health risks for customers.
- Maintain reliable delivery of high quality water.
- Make efficient use of available resources.
- Help assure orderly growth of the system.
- Provide documentation for water rates, plus grant and loan requests.
- Develop strategies for complying with the Safe Drinking Water Act and other requirements.
- Develop consistency between the District's planning efforts and local land use plans.

The plan addresses the following elements:

- Basic water system planning data;
- Existing system analysis;
- Planned improvements;
- Conservation program;
- Financial program;
- Relationship and compatibility with other plans, including local growth management plans and development policies;
- Operation and maintenance program;
- Ownership and management;
- State Environmental Policy Act;

The District purchases all of its water supply from Seattle Public Utilities. Therefore, a watershed control program is not required for this system.

The following abbreviations are used in this Water System Plan:

ADD Average Daily Demand

CIP Capital Improvement Program

CWA Cascade Water Alliance

CCCP Cross Connection Control Plan

cfs Cubic feet per second

DEM Developer Extension Manual ERU Equivalent Residential Unit FAZ Forecast Analysis Zone

gal Gallon(s)

gpd Gallons per day

g/d/conn Gallons per day per connection

gpm Gallons per Minute
HWD Highline Water District
ccf Hundred Cubic Feet

WD 49 King County Water District No. 49
WD 20 King County Water District No. 20
WD 45 King County Water District No. 45
WD 85 King County Water District No. 85
WD 125 King County Water District No. 125

LID Local Improvement District MDD Maximum Daily Demand

MSL Mean Sea Level

mgd Million Gallons per Day

ppm Parts per million
PHD Peak Hourly Demand

PSRC Puget Sound Regional Council
RCW Revised Code of Washington
SDWA Safe Drinking Water Act

SPU Seattle Public Utilities

SEPA State Environmental Policy Act
ULID Utility Local Improvement District
WAC Washington Administrative Code

DOH Washington State Department of Health

OFM Washington State Office of Financial Management

WFI Water Facilities Inventory

WSCP Water Shortage Contingency Plan WSDM Water System Design Manual

WSP Water System Plan