

CHAPTER 9

IMPLEMENTATION PLAN

9.1 INTRODUCTION

This Wastewater Comprehensive Plan (Plan) has been developed as a road map to guide the District into the future, and ensure that it can continue to provide reliable sewer service to its existing customers and plan for provision of sewer service to the District's urban area. The preceding chapters have documented in detail the facilities and operation of the sewer system, identified system deficiencies, described improvements necessary to maintain and expand the sewer system in a manner that is compliant with regulatory requirements and industry standards, and confirmed the District can operate under a framework that maintains affordable costs to customers.

Environmental review is required for comprehensive plans by the State Environmental Policy Act (SEPA). A programmatic SEPA checklist was completed for this Plan, addressed as a non-project action, and a Determination of Non-Significance was issued by the District. Copies of these documents can be found in Appendix A. SEPA compliance for each project in the CIP will be addressed when each project is being actively pursued.

Throughout the Plan, objectives, policies and program approaches relating to various elements of sewer system management are discussed. A summary list of such items that contain key implementation considerations regarding the future direction of the District is provided below, organized by Plan chapter.

9.2 CHAPTER 1: DESCRIPTION OF SEWER SYSTEM

The District sewer system description describes the existing physical sewer system, the extent of the existing and future service area, the District's history, organizational structure, prior planning initiatives, and regulations.

9.2.1 IMPLEMENTATION CONSIDERATIONS (CHAPTER 1)

9.2.1.1 Regulations and Related Plans

- Comply with regulations from local, state and federal agencies.

9.3 CHAPTER 2: PLANNING DATA AND SEWER DEMANDS

District sewer demands reflect the number and type of customers currently connected to the sewer system, and the forecasts add those projected to connect to the system, including septic system conversions in the urban areas. Near term forecasts rely on current development proposals, whereas the longer term forecasts reflect projected growth rates from jurisdictions. Tracking sewer customers, their water demands and monitoring flows within the sewer system can provide insights on the health of the sewer system.

9.3.1 IMPLEMENTATION CONSIDERATIONS (CHAPTER 2)

9.3.1.1 Track District Sewer Demographics

- Annually track new sewer connections and septic conversions by customer type and by Sewer Basin
- Annually track average sewer use rate by customer type.

9.3.1.2 Keep District Demand Forecasts Up-to-Date

- Annually update near-term ERU forecast based on current development proposed within the District.
- Annually update estimated growth by Sewer Basin.

9.3.1.3 Flow Monitoring

- Improve District flow monitoring capabilities to better track dry weather and Infiltration/Inflow flow components.

9.4 CHAPTER 3: SYSTEM ANALYSIS

9.4.1 IMPLEMENTATION CONSIDERATIONS (CHAPTER 3)

A hydraulic model was used to evaluate the existing sewer system and to identify areas for improvements. Recommendations to alleviate suspected deficiencies were provided. The model was based on system as-built information, billing data on water use, and flow measurement data.

9.4.1.1 Hydraulic Model Results

- Track facilities identified by the model as deficient for field verification of problems or emerging operational issues.

9.4.1.2 Wastewater Quality

- Continue development and enforcement of District FOG Program.

9.4.1.3 Odor Control

- Continue to address odor problems through operation of existing odor control facilities and addition of new facilities identified through the Capital Improvement Program.

9.5 CHAPTER 4: SERVICE STRATEGY

Service strategies are further evaluated for local and regional issues. Locally, the District must consider how to provide sewer service to the significant urban service areas that currently utilize septic systems and the reliability of the sewer system during power disruptions. Regionally, long-term options for delivery of District sewage to the King County system may have a significant impact on the District's ability to provide sewer service in rapidly developing areas.

9.5.1 IMPLEMENTATION CONSIDERATIONS (CHAPTER 4)

9.5.1.1 Septic Conversions

- Develop policies and funding mechanisms to support extension of sewer service to areas currently using septic systems.
- Enforce conversion of septic to sewer systems when required by land use jurisdiction or specific property agreement.

9.5.1.2 System Reliability

- Continue to provide back-up power sources for all lift stations.
- Develop strategies to operate lift stations sequentially and with lock-outs as appropriate to minimize potential for sewage overflows during power disruptions.

9.5.1.3 Regional Capital Improvements

- Provide King County with District operational information to support the North Diversion project as a high priority project in the King County Conveyance System Improvement Program.
- Monitor growth and flow rates in the North Lake Sammamish, Inglewood East and Northeast Plateau sewer facilities for levels that would trigger the need for either the North Diversion improvements or interim improvements to increase capacity to the existing South Diversion.

9.6 CHAPTER 5: OPERATIONS & MAINTENANCE

The Operations and Maintenance Chapter includes organizational elements for staffing and certification requirements. Operational activities include day to day maintenance, operation of a computerized SCADA system, use and improvement of GIS data, and a computerized maintenance management system. All of these maintenance activities provide input to the evaluation of facility performance.

9.6.1 IMPLEMENTATION CONSIDERATIONS (CHAPTER 5)

9.6.1.1 Staff Training and Management

- Provide training to all operations staff so they can obtain and maintain the knowledge and experience to be a fully effective member of the sewer operations team.
- Manage the sewer system in a safe and professional manner, implementing the routine operation tasks and preventative maintenance activities.

9.6.1.2 System Operations

- Provide response within one hour to complaints that indicate a potential public health issue, and respond with follow-up to all customer complaints received.
- Gather operational data to develop a District Asset Management Plan.
- Periodically evaluate sewer facility parameters to determine system operational efficiency.
- Continue implementation of preventative maintenance measures.

- Develop a program to ensure continued access and operational efficiency within easements.

9.6.1.3 Emergency Response Plan

- Regularly update the Emergency Plan to incorporate changes to the District system and operations.

9.7 CHAPTER 6: POLICIES

The District's policies associated with the sewer system cover considerations from where and how the wastewater is treated and disposed to provision of service to individual parcels. While these policies are comprehensive, additional policies may be found in other District resolutions, agreements and specification documents.

9.7.1 IMPLEMENTATION CONSIDERATIONS (CHAPTER 6)

9.7.1.1 Wastewater Disposal and Treatment

- Work with King County to implement construction of the North Diversion project on a schedule that will minimize unnecessary expense for interim facility construction.
- Continue to offer Community Drainfield operation services for appropriate situations where sewer service is not available or allowed.

9.7.1.2 Service Area Boundary and Adjustments with Adjacent Purveyors

- Require specific agreements to clarify temporal extent and conditions for service provided to properties outside of the District's sewer service area.
- Follow through with formal sewer service boundary modification actions for permanent boundary adjustments between the District and adjacent purveyors.

9.7.1.3 Sewer System Design Standards and Criteria

- Regularly review and update District design and construction standards to incorporate new technology and products to ensure the installation of high-quality, resilient facilities.

- Provide inspection of new facility construction to ensure adherence to the District’s standards and specifications.
- Use the Conceptual Sewer Plan (see Volume 3) to form the basis for design decisions, and update the Conceptual Sewer Plan periodically to reflect new sewer construction.

9.7.1.4 Mainline Extensions and District Support

- Facilitate the extension of the sewer systems by providing information on the methods for sewer extension including Developer Extension Agreements, Utility Local Improvement Districts, and the Neighborhood Sewer Program, and direction and support to implement new sewer projects.

9.7.1.5 Property Acquisition

- Identify critical property locations for future sewer facilities based on the Conceptual Sewer Plan, and maintain awareness of property availability for acquisition of these sites.

9.7.1.6 Sewer Connection Requirements

- Follow the land use jurisdictions regulations for requiring new sewer connections.
- Ensure future sewer connection agreements are obtained for properties in the urban area developing with septic systems.

9.7.1.7 Financial Philosophy

- Support infill sewer projects that are financially self-supporting (Growth pays for Growth).
- Facilitate infrastructure extensions that allow for backfill growth to the sewer system, the transition from septic systems to sewer system.

9.7.1.8 Connection Charges and Cost Recovery

- Collect appropriate connection charges from all new development and existing properties connecting to the sewer system.
- Re-evaluate the collection of Local Facility Charges and basin charges for lift stations and other basin facilities to strive for equity

and consistency throughout the District that will provide necessary funding for both existing and future facilities.

9.7.1.9 Service Billing and Charges

- Initiate sewer service charges in a manner that ensures that all sewer customers are billed for services provided.
- Periodically undertake rate studies to determine equitable distribution of costs among customer classes.
- Periodically re-evaluate the grinder pump program to ensure it is self-funding.
- Work with land use jurisdictions to develop programs to meter any auxiliary water supplies that will be discharged through the sewer system for non-single-family customers.

9.7.1.10 Individual Septic System Support

- Provide customer information links to King County Health Department and other resources that support long term health of septic systems.

9.8 CHAPTER 7: CAPITAL IMPROVEMENT PROGRAM

The Capital Improvement Program (CIP) is developed to address deficiencies identified through system analysis, to improve operational and maintenance efficiency, meet regulatory requirements and to provide for growth related requirements. The CIP's primary focus is on the 6-year CIP, but projects to the 20-year implementation schedule. Each project is identified with an estimated implementation schedule and funding source.

9.8.1 IMPLEMENTATION CONSIDERATIONS (CHAPTER 7)

9.8.1.1 Capital Improvements

- Focus regional project work on implementation of permanent facilities and limit efforts that will only provide interim use benefits.
- Implement projects that will allow consistent measurement of wastewater flows through the District's system.
- Implement interceptor projects to increase the District's system capacity in coordination with expected system growth.

- Pursue projects that will allow sewer extensions to currently unsewered areas, where connection of those areas will support funding for the project.
- Continue to work with the City of Sammamish on funding methods to support initiation of sewer extensions into the Town Center area.
- Upgrade lift stations as necessary for refurbishment and expanding capacity to accommodate system growth.
- Evaluate odor control techniques and implement in areas where odor complaints persist.
- Continue to identify and respond to system repair and replacement requirements.
- Continue implementation of the grinder pump maintenance and replacement program.

9.9 CHAPTER 8: FINANCIAL SUMMARY

The financial summary reviews the revenues and expenses for the District’s sewer system to verify that the operating and capital needs identified within this Plan and the District’s budget are attainable and affordable. The financial summary has been fully aligned with the Capital Improvement Program and the District’s 2014 Budget.

9.9.1 IMPLEMENTATION CONSIDERATIONS (CHAPTER 8)

9.9.1.1 Budget

- Continue to proactively manage the sewer utility finances, with periodic financial status reviews and rate adjustments.
- Update the 6-year CIP annually and continue alignment with the current year’s budget.
- Review and update the Long-Term Capital Reinvestment Study and reserve funding levels.
- Update General Facility Charges to reflect the current CIP.