CHAPTER 7
CAPITAL IMPROVEMENT PLAN

7.1 INTRODUCTION

This Chapter presents the District’s Capital Improvement Plan (CIP) in accordance with the requirements of WAC 173-240. Wastewater capital improvements have been scheduled and prioritized on the basis of growth, regulatory requirements, component reliability, system benefit, and cost. For the proposed projects identified in this Chapter, more detailed project descriptions and preliminary project cost estimates are presented in Appendix K. A wastewater base map illustrating the conceptual locations of the proposed improvement projects is included in the jacket of the Plan.

Other capital improvement projects may arise in the future that are not identified as part of the District’s CIP presented in this Chapter. Such projects may be deemed necessary for remedying an emergency situation, accommodating improvements proposed by other agencies or land development, or addressing unforeseen problems with the District’s wastewater system. Due to budgetary constraints, the construction of these projects may require that the proposed completion date for projects in the CIP be rescheduled. When new information becomes available, the District retains the flexibility to reschedule, add to, or delete proposed projects and to expand or reduce the scope of the projects, as best determined by the District. Additionally, future planning efforts by the Cities of Issaquah and Sammamish, or King County may affect land use zoning and service requirements within the District. Developments may create streets or provide alignments and locations of facilities that are different than shown on the Plan. Each capital improvement project will be reevaluated to consider the most recent planning efforts as the proposed completion date for the project approaches. Funding for CIPs will be assigned on the basis of each project’s purpose and benefit, and project funding may come from various sources, such as general facility charges, local facility charges and capital replacement reserves.

7.2 PROPOSED SYSTEM IMPROVEMENTS

The proposed system improvements in the CIP are based on projects identified in the collection system hydraulic model, problematic gravity mains and lift station issues identified by the District operational staff, on-going programs intended to reduce infiltration and inflow, and projects previously scheduled by the District.
Each project cost estimate includes design and engineering, construction with a 20 percent contingency, 9.5 percent sales tax, and construction management. All project costs are based on 2013 dollars (ENR CCI = 9552) with future projects adjusted for inflation using a 3 percent annual interest rate. Projects that span multiple years or have annual recurring costs include escalated costs to adjust for inflation for each year beyond 2013.

The recommended CIP projects are summarized below using the following abbreviations:

- **R** – Regional projects
- **INT** – Interceptor (>8-inch diameter) projects
- **CS** – Collection system (<8-inch diameter) projects
- **CL** – Critical link projects
- **LS** – Lift station and force main projects
- **M** – Miscellaneous system and planning projects
- **OM** – Operation and maintenance projects

All projects from 2013 through 2018 are listed and described herein. Non-lift station projects included in the 10-year and 20-year CIP are also briefly discussed. The year shown for each project is the anticipated year of construction. New Lift Station projects anticipated for construction in the 10-year and 20-year CIP capital improvement projects, (i.e., after 2018), are listed together, and included in Table 7-1.

### 7.2.1 REGIONAL CAPITAL IMPROVEMENTS

Currently, the District’s entire sanitary sewer enters the KCDNR collection system on the south side of Lake Sammamish, near the entrance to Lake Sammamish State Park. When the District and KCDNR designed and constructed the project to increase the capacity of the sanitary sewer system to the KCDNR system at the Lake Sammamish State Park location, it was decided that ultimately the District flows would be split to south and north connections to the KCDNR system. The District is evaluating system and operational changes to accommodate future growth and increase efficiency that would augment the sanitary sewer volume and add the planned northern location for the District connection to the KCDNR collection system.

#### 7.2.1.1 R-1A – North Diversion Project

The District is anticipating significant growth and increased sanitary sewer flows in the North Lake Sammamish, Tiburon, Inglewood East, and Northeast Plateau
sewer basins. The District plans to divert flows from these District sewer basins to the KCDNR collection system in Redmond. King County has the flexibility to send this flow to be treated at Brightwater, the new regional wastewater treatment facility north of Woodinville. The North Diversion would provide relief to facilities downstream of the Inglewood and North Lake Sammamish lift stations in the future that would otherwise require costly upgrades.

Seven scenarios for the North Diversion Project were evaluated in Chapter 4 comprised of three primary alignments. These alignments included the Hill Top, East Lake Sammamish Parkway, and the East Lake Sammamish Trail alignments. For scenarios 1, 2 and 3 the North Lake Sammamish Lift Station would pump south. In scenarios 4, 5 and 6 the North Lake Sammamish Lift Station would pump north as part of the North Diversion. Scenario 7 posited no foreseeable change of the collection system with all sanitary sewers flowing south to the KCDNR connection point.

From the analysis in Chapter 4, the preferred alignment for the North Diversion is Scenario 6: the East Lake Sammamish Trail with the North Lake Sammamish Lift Station pumping to the north. This alternative includes the installation of approximately 3,700 linear feet of 18-inch HDPE pipe in the Inglewood area and approximately 18,000 linear feet of 24-inch HDPE pipe along the East Lake Sammamish Trail to the connection point in Redmond. This portion of the Project would be funded by King County.

The cost to the District would include upgrades to the North Lake Sammamish Lift Station and approximately 4,800 linear feet of 16-inch force main to the connection point with the North Diversion. However, once the flows from the Inglewood Lift Station and the Tiburon Sewer Basin are diverted north, the North Lake Sammamish Lift Station will have additional capacity and would not require immediate upgrades. Therefore, the timing of the North Lake Sammamish Lift Station upgrades would depend on the growth rates in the North Lake Sammamish sewer basin and the capacity of the downstream infrastructure, specifically the Central Lake Sammamish Lift Station. From growth projections forecasted in Chapter 2 and the North Diversion Project evaluation in Chapter 4, the District is planning for construction of Scenario 6 to begin in 2019.

The North Diversion Project, including project alternatives and cost estimates, is discussed in Chapter 4. North Lake Sammamish Lift Station and force main upgrades are discussed in LS-2B.

Estimated Project Cost: $14,330,000
7.2.1.2  R-1B – North Diversion Delay Project

The North Diversion Project, as defined in project R-1A, assumes King County will begin design and construction of the North Diversion in 2019. If, however, the North Diversion is delayed or does not meet King County’s prioritization of imminent conveyance system improvement projects, the District anticipates other downstream facilities and infrastructure will require intermediate upgrades due to the expected population growth within the District’s sewer service area.

These upgrades include:

<table>
<thead>
<tr>
<th>Interim Facility Project</th>
<th>Cost</th>
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<tr>
<td>North Lake Lift Station and force main improvements</td>
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<tr>
<td>North Lake gravity sewer main improvements</td>
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<tr>
<td>Central Lake Lift Station and force main improvements</td>
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<tr>
<td>Central Lake gravity sewer main improvements</td>
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<tr>
<td><strong>Total Interim Facility Project Cost</strong></td>
<td><strong>$11,690,000</strong></td>
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Estimated Project Cost: $11,690,000

7.2.1.3  R-2 – Control Structure Modifications

Modify current operations at the Control Structure site. Modifications include:

- Replace the east sewer bay with bypass sewer main and backfill to the existing surface elevation.
- Replace existing bar rack with in-channel grinder, or mechanical screen.
- Install a metering method, such as a Parshall Flume flow monitor, with telemetry to connect to the District’s SCADA system.
- Remove existing structure above sewer bays and cover with concrete slabs and access hatches.
- Install ventilation and odor control.
- Replace roof on remaining structure.

Estimated Project Cost: $750,000

7.2.2  INTERCEPTOR CAPITAL IMPROVEMENTS

The interceptor and transmission main improvements identified are designed to increase capacity, repair or replace failing and problematic mains, and to improve
access to the mains for operational staff. For this plan, interceptors and transmission mains are defined as gravity and low-pressure sewer pipes larger than eight inches in diameter. For budgeting purposes, the cost estimates shown here assume open trench construction in existing right-of-way. The District may be able to realize cost savings by using trenchless technologies. The District should investigate these alternative construction methods during the design phase of these projects.

7.2.2.1 INT-1 – East Lake Sammamish Parkway SE Gravity Sewer Replacement at Montage (SE 4th Street), 12 Inch to 15 Inch

Increase the capacity of the existing gravity sewer main along East Lake Sammamish Parkway SE, at approximately SE 4th Street (if extended), by replacing approximately 310 LF of existing 12-inch-diameter sewer pipe with 15-inch-diameter sewer pipe. This project will correct an existing deficiency.

Estimated Project Cost: $352,163

7.2.2.2 INT-2 – Issaquah-Pine Lake Road and 234th Avenue SE Gravity Sewer Main Replacement, 8 Inch to 12 Inch

Replace approximately 310 LF of 8-inch gravity sewer main along Issaquah-Pine Lake Road, near the intersection of 234th Avenue SE with 12-inch-diameter main. This project will correct an existing deficiency.

Estimated Project Cost: $231,658

7.2.2.3 INT-3 – 221st Place SE and SE 56th Street Gravity Sewer Main Replacement, 12 Inch to 18 Inch

Replace approximately 650 LF of 12-inch gravity sewer main along 221st Place SE, just south of SE 56th Street, with 18-inch-diameter sewer pipe. This project will increase the capacity of the existing gravity sewer main for anticipated development and population growth in the future.

Estimated Project Cost: $442,489

7.2.2.4 INT-4 – SE 62nd Street and East Lake Sammamish Parkway SE Gravity Sewer Main Replacement, 8 Inch to 12 Inch

Replace approximately 1,250 LF of 8-inch gravity sewer main along SE 62nd Street, east and west of East Lake Sammamish Parkway SE, with 12-inch-diameter sewer
pipe. This project is identified to increase the capacity of the existing gravity sewer main for anticipated development and population growth in the future.

Estimated Project Cost: $494,098

7.2.2.5 INT-5 – South Plateau Parallel Conveyance Interceptor, 20 Inch and 36 Inch

Install approximately 4,500 linear feet of new 20-inch low pressure sewer main along SE 43rd Way extending from the Highland Creek Parallel sewer to the Control Structure. The extension will be used for redundancy and to potentially reduce high velocities by splitting the flows as the District’s sanitary sewer increases in the future. Project also includes approximately 750 linear feet of 36-inch sewer pipe along SE 42ND Street to parallel the existing 24-inch sewer main from Klahanie.

Estimated Project Cost: $6,300,000

7.2.2.6 INT-6 – South Pine Lake Interceptor Replacement – 228th Avenue SE to 219th Avenue SE, 10 Inch and 12 Inch

The existing condition of the South Pine Lake gravity interceptor is poor. The interceptor is comprised of 10-inch-diameter AC pipe and contains several sags through a generally flat slope. The District plans to replace it with approximately 4,000 linear feet of 12-inch-diameter sewer pipe. For budget planning purposes, the cost estimate assumed replacement of the existing interceptor by open trench. The method for replacement of the existing interceptor will be selected during design.

Estimated Project Cost: $1,182,547

7.2.3 COLLECTION SYSTEM CAPITAL IMPROVEMENTS

Collection system improvement projects include gravity or low pressure sewer mains with diameters equal to, or less than 8 inches. These projects may either improve existing facilities or extend new collection systems to currently unsewered areas. For this reason, collection system improvement may have a variety of funding sources and the identified projects could potentially be installed by DEA, ULID, or CIP for the District.
7.2.3.1 CS-1 – Water’s Edge Lift Station Collection Sewer System

Install approximately 1,450 linear feet of 8-inch sewer pipe for the gravity collection sewer to connect Pine Lake Heights Lift Station and First Branch Lift Station to the Water’s Edge Lift Station (See LS-3).

Estimated Project Cost: $1,600,000

7.2.3.2 CS-2A – Camden Park Shallow Sewer Replacement

Install approximately 300 linear feet of replacement deep sewer main in Camden Park to connect to the Camden Park Lift Station.

Estimated Project Cost: $450,000

7.2.3.3 CS-2B – Camden Park Gravity Connection

Install approximately 2,000 linear feet of new sewer main to connect the gravity collection system from 244th Avenue NE (at the Good Samaritan Lift Station) to the Camden Park Lift Station.

Estimated Project Cost: $1,319,097

7.2.4 CRITICAL LINK PROJECTS

Critical link projects provide access to sewer service for large unsewered areas or to areas where customers have expressed interest in obtaining sewer service, but have not been successful in extending the service.

7.2.4.1 CL-1 – South End East Lake Sammamish Parkway/Place Crossing, Gravity Sewer, 8 Inch

Install approximately 200 lineal feet of 8-inch gravity sewer main across East Lake Sammamish Parkway to connect Sammamish Woods Highlands area.

Estimated Project Cost: $184,481
7.2.4.2  **CL-2 – Upper Waverly Connecting Sewer, Gravity Sewer, 8 Inch**

Install approximately 950 lineal feet of 8-inch gravity sewer main to provide sanitary sewer service to Upper Waverly.

Estimated Project Cost: $434,728

7.2.4.3  **CL-3 – Louis Thompson Sewer Main, Gravity Sewer, 8 Inch**

Install approximately 1600 lineal feet of 8-inch gravity sewer main along Louis Thompson Road NE to provide sewer service to the District’s North Lake Sammamish sewer basin.

Estimated Project Cost: $1,194,052

7.2.4.4  **CL-4A – Sammamish Town Center Initiation Support (SE 4th and Other Gravity)**

This project is in support of providing service to the Sammamish Town Center. Funding for this project will likely be provided by the developer or as part of a ULID.

Estimated Project Cost: $861,014

7.2.4.5  **CL-4B – Sammamish Town Center Collection System**

This project consists of new sewer piping installed as part of the Sammamish Town Center project. Funding for this project will likely be provided by the developer.

Estimated Project Cost: $18,357,300

7.2.5  **LIFT STATION AND FORCE MAIN CAPITAL IMPROVEMENTS**

The following lift station and force main projects are designed to improve operation of the existing lift station and construct new lift stations.

7.2.5.1  **LS-1 – Central Lake Sammamish Lift Station Improvements**

Improvements include installing a third pump at the Central Lake Sammamish Lift Station. The additional pump will be used to improve reliability, and to supplement the existing pumping capacity to sustain current peak wastewater flows from the Inglewood and North Lake Lift Stations. The additional capacity
from the third pump is anticipated to be sufficient for buildout according to the model and the preceding analysis in Chapter 2.

Estimated Project Cost: $195,594

7.2.5.2  LS-2A – North Lake Sammamish Lift Station Improvement, Phase I – 3rd Pump Installation

Phase I improvements include installing a third pump at the North Lake Sammamish Lift Station. The additional pump will be used to improve reliability, and to supplement the existing pumping capacity to sustain current peak wastewater flows and increased future flows.

Estimated Project Cost: $195,594

7.2.5.3  LS-2B – North Lake Sammamish Lift Station Improvement, Phase II – Capacity and Force Main Upgrade

Phase II improvements include increasing the capacity at the lift station for anticipated growth within the sewer basin, and installation of a new force main that would connect to the North Diversion Project (see R-1A). Phase II improvements are contingent on the expediency of the North Diversion Project and likely to be implemented beyond the District’s 6-year planning period. These improvements are discussed in Chapter 4.

Estimated Project Cost: $4,300,869

7.2.5.4  LS-4A – Flow Meter Installation Program (Todd’s Landing, Pine Lake Glen, Beaver Lake Estates, Freegard)

Install magnetic flow meters at multiple sewer lift stations. The flow meter will include telemetry with continuous monitoring capabilities via the District’s SCADA system. The District plans to install flow meters at the following lift stations:

- Beaver Lake Estates
- Pine Lake Glen
- Todd’s Landing
- Freegard
The project cost for installation of a flow meter varies for each lift station identified.

Estimated Project Cost: $25,000-$30,000/each ($110,000 total)

7.2.5.5 LS-4B – Flow Meter Replacement Program (Beaver Dam, Aldarra, Central Lake Sammamish)

Replace existing flow meters at the following sewer lift stations. The project cost for installation of a flow meter varies for each lift station identified. However, for budgeting purposes, the estimated project cost will be based on the most expensive application anticipated.

- Beaver Dam
- Aldarra
- Central Lake Sammamish

Estimated Project Cost: $10,000/each ($30,000 total)

7.2.5.6 LS-5A – Freegard Lift Station Replacement, Phase I – Wet Well

Replace the Freegard lift station wet well and related improvements. Improvements would include:

- Increase storage in the wet well.
- Replace existing isolation valves.

Estimated Project Cost: $1,113,832

7.2.5.7 LS-5B – Freegard Lift Station Replacement, Phase II – Mechanical, Electrical and Flow Meter

Replace the Freegard lift station mechanical and electrical equipment and install a magnetic flow meter with telemetry.

Estimated Project Cost: $617,748

7.2.5.8 LS-6 – Inglewood Odor Evaluation

Evaluate the use of calcium nitrate injection into the force main to address odors at various locations including air vacuum valves and the manhole at which the force main transitions to open-channel flow. Alternatives to address these odors will be evaluated and include point-source carbon canisters at air vacuum valves.
and manhole lids, oxygen injection, and increasing the dosing rate/volume of calcium nitrate into the force main.

The estimated project cost will be adjusted depending on the alternative selected during design.

Estimated Project Cost: $297,560

7.2.5.9  LS-24 – Trossachs Lift Station Pump Replacement

Improvements will include replacement of the two 75-hp pumps at the Trossachs Lift Station, and an evaluation of incoming flow conditions that may be causing cavitation of the impellers.

Estimated Project Cost: $55,000

7.2.6  FUTURE LIFT STATION PROJECTS

Future lift station projects include those projects that are unlikely to be implemented in the District’s 6-year planning period or are likely to be funded by DEA or ULID. Costs for future lift stations are based on costs developed initially for the District’s 2003 Wastewater Comprehensive Plan.

The list of future lift station projects is provided in Table 7-1.

New Lift Stations in the 10-year CIP

- **LS-3 – Water’s Edge Lift Station:** Estimated Project Cost: $1,551,940  
  Located along 222nd Place SE on the south side of Pine Lake.  
  Note: This will replace Pine Lake Heights and First Branch Lift Stations upon completion of connecting collection sewers.

- **LS-7 – Tiburon Lift Station:** Estimated Project Cost: $1,886,627  
  Located near the intersection of 216th Avenue NE and NE 4th Street.

- **LS-10 – Broadmoore Estates Lift Station:** Estimated Project Cost: $2,644,229  
  Located along NE 31st Way near 240th Avenue NE.

- **LS-13 – 223rd Lift Station:** Estimated Project Cost: $662,902  
  Located on 223rd Avenue SE, near SE 12th.
LS-15 – Inglewood Lift Station Capacity Evaluation and Pump Upgrade:
The evaluation will consider the North Diversion Project status,
hydraulics associated with the chosen alternative, as well as
revised growth projections. Estimated Project Cost: $323,790
Located at 22405 NE Inglewood Hill Rd.

LS-16 – Wesley Cove Lift Station: Estimated Project Cost: $581,730
Located west of 244th Avenue NE, between NE 22nd and NE 24th.

LS-17 – Swan Ridge Interim Lift Station: Estimated Project Cost: $614,937
Located in the Swan Ridge development area, east of 244th Avenue
NE and north of NE 8th Street.

LS-18 – High Country 3 Lift Station: Estimated Project Cost: $843,693
Located in High Country Division 3, along SE 25th, at
approximately 265th SE, if extended.

LS-20 – Providence Ridge Lift Station: Estimated Project Cost: $614,937
Located south of SE 43rd Way at approximately 220th SE if
extended.

LS-21 – Tibbetts Station Lift Station: Estimated Project Cost: $712,097
Located SE 33rd Place and 264th Avenue SE.

LS-22 – Sunnyhills Estates 2 Lift Station: Estimated Project Cost: $696,109
Located SE 31st Place and 254th Avenue SE.

LS-23 – French SE 8th Lift Station: Estimated Project Cost: $1,543,492
Located near the intersection of SE 8th Street and 214th Avenue SE

New Lift Stations in the 20-year CIP

LS-9 – North Fork Lift Station: Estimated Project Cost: $735,693
Located at approximately 220th Avenue SE and SE 60th, west of the
North Fork of Issaquah Creek.

LS-11 – Treefarm East Lift Station: Estimated Project Cost: $795,575
Located on the south end of 242nd Avenue NE in or adjacent to the
Treefarm development at approximately the alignment of NE 4th.
LS-12 – Aldarra Golf South Lift Station: Estimated Project Cost: $1,140,609
Located north of Old Issaquah-Fall City Road, south of The Members Club at Aldarra golf course, between 287th Avenue SE and 292nd Avenue SE (if both extended).

LS-14 – Loree Estates Lift Station: Estimated Project Cost: $2,352,505
Located near the west end of SE 19th Street, at approximately 204th Avenue NE (if extended).

LS-19 – High Country Entrance Lift Station: Estimated Project Cost: $950,983
Located near the Duthie Hill entrance to High Country, at SE 31st Street and 266th Avenue SE.

7.2.7 MISCELLANEOUS SYSTEM CAPITAL IMPROVEMENTS

The District has identified miscellaneous or general projects that will be fully or partially funded by the wastewater utility. Estimated project costs represent only the cost for sewer for those projects shared by both the water and sewer utility.

7.2.7.1 M-2 – District Headquarters Site Expansion – 60 Percent Water/40 Percent Sewer

Improvements include:

- New fuel facility
- Decant facility
- Vehicle washing station
- Material Storage
- Site fencing

Estimated Sewer Portion of Project Cost: $1,650,000

7.2.7.2 M-3A – New Vehicles – 60 Percent Water/40 Percent Sewer

The District budgets an amount annually to cover periodic purchases of vehicles.

Estimated Sewer Portion of Project Cost through 2018: $580,660 (6-year CIP)
10-year CIP: $689,169 additional
20-year CIP: $2,265,227 additional
7.2.7.3  M-3B – New Equipment – 60 Percent Water/40 Percent Sewer

The District budgets an amount annually to cover periodic purchases of large equipment.

Estimated Sewer Portion of Project Cost: $49,330 for 2013 & $42,228 for 2014
$56,000/year after 2014

7.2.7.4  M-4 – 2013 Seismic VA – 60 Percent Water/40 Percent Sewer

Conduct a seismic vulnerability assessment at the District’s water and sewer facilities (i.e., wells, storage tanks, lift stations, pump stations) to evaluate and determine facilities at risk of damage or failure. The study will also identify retrofits that may improve reliability and continued operation during and following an earthquake.

Estimated Sewer Portion of Project Cost: $42,000

7.2.7.5  M-5 – Environmental Protection Program – 60 Percent Water/40 Percent Sewer

The District maintains an environmental protection plan to guide the development of District processes and methods that have less impact on the natural environment. The program will include operation and maintenance of water and sewer systems, construction activities, and District administrative operations.

Estimated Sewer Portion of Project Cost: $41,400

7.2.7.6  M-6 – Security Improvements – 60 Percent Water/40 Percent Sewer

The District maintains a security improvement plan that includes ongoing assessment of the District’s facilities and identifies areas where security could be improved. Current security improvements include perimeter fencing along the south boundary of the District Headquarters and motion detection for the District’s water and wastewater facilities.

Estimated Sewer Portion of Project Cost: $90,120 6-year CIP
$19,680 additional 10-year CIP
7.2.7.7 M-9 – Sewer Comprehensive Plan Update (Every 6 Years)

Every 6 years the District must update its wastewater comprehensive plan. Capital funds are allocated periodically to support these updates.

Estimated Project Cost: 569,188 in 6-year CIP

7.2.8 OPERATION AND MAINTENANCE PROJECTS

The District has identified operation and maintenance projects that will be fully or partially funded by the wastewater utility.

7.2.8.1 OM-1 – District Headquarter Maintenance Program – 60 Percent Water/40 Percent Sewer

The District maintains a program for larger repair and replacement and upgrade projects for the District headquarters facilities.

Estimated Project Cost: $113,105 in the 6-year CIP

7.2.8.2 OM-2 – Repair and Replacement Program

The District maintains a repair and replacement (R&R) program that identifies existing and potential future projects that need to be improved as part of the CIP. R&R projects that the District plans to implement within the 6-year planning period have been identified as individual projects within the CIP. However, future projects beyond the 6-year planning period but within the 20-year planning period must still be included in the District’s future budget planning.

Estimated Project Cost: $2,459,748 in the 10-year CIP
$6,415,924 additional in the 20-year CIP

7.2.8.3 OM-3 – Grinder Pump Replacement Program

The District maintains the residential grinder pump systems in their sewer service area. Each grinder pump is estimated to have a service life of 15 years. Therefore, the District maintains a program to replace aging grinder pump system every 15 years.

Estimated Project Cost: $950,000 in the 6-year CIP
$360,000 additional in the 10-year CIP
$1,320,000 additional in the 20-year CIP
7.2.8.4 OM-4 – Cities Overlay and Road Improvements

The District must respond to work to adjust the sewer system components when the land use jurisdiction has an overlay project.

Estimated Project Cost: $37,500/year in the 6-year CIP

7.3 CAPITAL IMPROVEMENTS PLAN SCHEDULE

Table 7-1 provides a summary of each capital improvement project and the proposed schedule for implementation. Several projects span multiple years. The District can reschedule its capital improvement projects as needed to accommodate unanticipated projects in the future.

Wastewater base maps illustrating the conceptual location of the proposed capital improvement projects identified for each of the District’s 13 sewer basins are presented in Figures 7-1 through 7-13. A listing of the Sewer Basins is provided here for reference. An overall map is also provided as a pull-out map.

Figure 7-1: Northeast Plateau  Figure 7-2: Beaver Dam  Figure 7-3: Inglewood East  Figure 7-4: Tiburon  Figure 7-5: North Lake Sammamish  Figure 7-6: Central Lake Sammamish  Figure 7-7: Mallard Bay  Figure 7-8: Trossachs  Figure 7-9: Yellow Lake  Figure 7-10: North Sunny Hills  Figure 7-11: Laughing Jacobs  Figure 7-12: South Pine Lake  Figure 7-13: Freegard
LEGEND:
- **EXISTING LIFT STATION**
- **FUTURE LIFT STATION**
- **LOW PRESSURE FORCE MAIN**
- **FORCEMAINS & TIGHTLINES**
- **GRAVITY**
- **FUTURE SEWER MAINS**
- **GRAVITY**
- **FORCE MAIN**
- **LOW PRESSURE FORCE MAIN**
- **FUTURE DISTRICT SEWER SERVICE BOUNDARY**
- **KING COUNTY PARCELS**
- **MALLARD BAY**

**CAPITAL IMPROVEMENT PROJECT LEGEND:**
- **R-X**
- **REGIONAL PROJECT**
- **INT**
- **INTERCEPTOR PROJECT**
- (+ 8" DIAMETER)

**SAMMAMISH PLATEAU WATER & SEWER DISTRICT**

**WASTEWATER COMPREHENSIVE PLAN**

**FIGURE 7-7**

**MALLARD BAY BASIN**
## TABLE 7-1
Capital Improvements Plan Schedule

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Description</th>
<th>Purpose of Project</th>
<th>Funding Information</th>
<th>Schedule and Cost of Improvements(1)</th>
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<td>R&amp;R</td>
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<td>Issaquah/Fall City Road and 238th Avenue SE Gravity Sewer Main Replacement, 8 Inch to 12 Inch</td>
<td>Deficiency</td>
<td>R&amp;R</td>
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<td>SE 62nd St and E Lake Sammamish Flows SE Gravity Sewer Main Replacement, 8 in to 12 in or Slope Adj.</td>
<td>Deficiency</td>
<td>50%/Rates, 50%/GFC</td>
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<td>INT-4</td>
<td>South Pine Lake Interceptor Replacement - 228th Avenue SE to 219th Avenue SE, 10 Inch and 12 Inch</td>
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<td>Umbrella Westerly Connecting Sewer, Gravity Sewer - 8 Inch</td>
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<td>Sammamish Town Center Initiative Support (SE 4th and Other Gravity)</td>
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<td>Flow Meter Installation Program (Todds Landing, Pine Lake Glen, Beaver Lake Estates, Freegard)</td>
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<td>Flow Meter Replacement Program (Beaverdam, Aldarra, Central Lake)</td>
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<td>Inglewood Odor Evaluation Study</td>
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### Notes
- **(1)** Includes Reserves and Contingency.
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<th>2016</th>
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<th>2018</th>
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<td>Sewer Comprehensive Plan Update (Every 6 Years) Study</td>
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### TABLE 7-1 – (continued)

#### Capital Improvements Plan Schedule

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<th>Schedule and Cost of Improvements(1)</th>
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<td>Purpose of Project</td>
<td>Project Funding Source</td>
</tr>
<tr>
<td></td>
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<td>Growth</td>
<td>GFC</td>
</tr>
<tr>
<td>Sub Total: Funded by District Sources = General Facility Improvements (GFCs)</td>
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<td>Sub Total: Funded by District Sources = Capital Replacement (R&amp;R)</td>
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<td>Sub Total: Funded by District Sources = Capital Operations (Rates)</td>
<td>O&amp;M, Imp, Study</td>
<td>Rates</td>
<td>CIP</td>
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<td>Sub Total: Funded by District Sources = Local Facility Improvements (LFCs)</td>
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<td>Sub Total: Funded by Other Sources - DEA or ULID = Local Facility Improvements (LFCs)</td>
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<td>TOTAL</td>
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(1) Project costs are escalated based on a 3 percent annual rate of interest inflation and applied to projects implemented after 2013. Project costs for 2013 are not escalated.