Executive Summary

Water Sources
Seattle Public Utilities supplied approximately 70% of our water from three metered locations; the remaining 30% was sourced from four District-owned groundwater wells with three treatment facilities.

System Inventory
Pump Stations .......................................................... 6
Water Storage Facilities (21.10 MG) ................................ 8
Pressure Zones ......................................................... 11
Pressure Reducing Stations ........................................... 29
Emergency Interties .................................................... 10
Miles of Water Main (from 2” to 36" diameter)............. > 304
Active Meters* .......................................................... 18,750

Miles of Water Main by Type
Ductile Iron .............................................................. 189
Asbestos Cement ....................................................... 67
Cast Iron ................................................................. 45
Other ........................................................................ 3

*Ranging in size from 5/8” to 8”, including one hundred and twelve 3” and larger meters.

Operations Overview
2018 was a year of change for District operations. The retirement of the Operations Supervisor opened up multiple opportunities for staff changes, including the promotion of a new Supervisor and Lead, several lateral transfers into different positions and the hiring and training of three new utility workers. In addition, there was no reduction in demand for services. Staff installed 98 new or deficient services and performed three main replacement projects all while accelerating the cross-training program. Several District’s preventative maintenance goals were not met due to the significant change facing the department. 2019 will be a year of continued evaluation of processes and tasking to improve efficiencies while we continue training.

Infrastructure Overview
In 2018, the District completed three AC water main replacement projects totaling 16,350 LF, or 3.1 miles of aging main (described in the Infrastructure section). The estimated Total Capital Additions for 2018, which includes CIP Expenditures, Small Works/Emergency Projects, Mitigation Improvements, Meters, Hydrants & Services, and Capital Asset Purchases, is $5.80 million. 2018 debt service is $1.01 million.

For 2019, the CIP includes nine projects in various phases of planning, design and construction (see 2019 CIP). The Total Capital Additions is estimated at $16.2 million ($10.2 funded by rates and reserves). The remaining funding is from developer reimbursements second reserve account. Debt service reduces to $713,060 in 2019, as the District continues to retire existing loans.
### Water Production

The annual goal for water production from the District’s four wells was 765,000 CCF. The actual production in 2018 was 639,260 CCF. McMicken Well was taken offline for repairs in the fall of 2017, resulting in the reduced production.

### Water Quality

Highline Water District continued to provide high quality water that meets applicable state and federal standards for safe drinking water in 2018. The 2017 CCR (Consumer Confidence Report) was offered to District consumers in three formats: 1) online on our District website (as a printable PDF); 2) by email; or 3) as a printed copy for customers who requested it. 12,751 postcards and 18,700 water bill messages outlining methods of obtaining the CCR were sent to District customers, businesses, and multi-family dwellings within the District’s service area. Sending postcards and billing messages in lieu of the actual CCR saved the District on both printing and postage costs. View the CCR at:

www.highlinewater.org/media/69805/2018_ccr.pdf

### Water Quality Goals

**Provide High Quality Water**
- Complied with DOH WAC 246-290 monitoring requirements.
- Maintained Cross-Connection Control Program per State and District Standards.

### Water Sales

<table>
<thead>
<tr>
<th>Year</th>
<th>Meters</th>
<th>Billed (CCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>18,336</td>
<td>2,779,089</td>
</tr>
<tr>
<td>2015</td>
<td>18,385</td>
<td>2,847,534</td>
</tr>
<tr>
<td>2016</td>
<td>18,498</td>
<td>2,850,950</td>
</tr>
<tr>
<td>2017</td>
<td>18,600</td>
<td>2,869,021</td>
</tr>
<tr>
<td>2018</td>
<td>18,750</td>
<td>3,182,752</td>
</tr>
</tbody>
</table>

### Be Responsive to Customer Needs

- Addressed water quality inquiries in a professional and thorough manner.
- Responded within one hour to water quality complaints.

Customer concerns regarding water quality remained a priority for our staff. During 2018, we responded to the following 32 water quality inquiries:

- 12 Miscellaneous
- 7 Odor
- 12 Color
- 1 Taste

Each of these inquiries prompted a site visit, evaluation by District staff, and follow-up communications to inform our customers of our findings and/or any remedial action taken.

### Perform Routine Tank Cleaning and Disinfection

- Cleaned/disinfected each of the District’s nine (9) tanks on a 5-year rotating schedule.

### Perform Routine Water Main Flushing

- Flushed 1.5 miles in 2018. The goal is to flush all small diameter distribution mains every five years (59 miles annually).*
- Flushed approximately 429 dead-end mains.
- Maintained chlorine residual in the distribution system between 0.3 mg/L and 1.8 mg/L.

*Personnel availability and other cross-training prohibited achieving our annual goal.

### Maintain Water Treatment

- Removed a minimum of 90% iron and manganese and manage tank water levels to maximize water turnover.
- Maintained proper PH, chlorine and fluoride levels.
- Maintained Wellhead Protection Plan.
Preventative Maintenance Goals

**Hydrants**
- Continued aggressive policy of policing or monitoring hydrant use by third parties.
- Clean and paint 600 hydrants each year: *completed 584 in 2018.*
- Fire hydrant maintenance: *Replaced 23, repaired 33, relocated 6, installed 1 new, and removed 2.*

**Valves**
- Operate/maintain approximately 1,200 smaller diameter valves each year (on a 5 year cycle): *completed 359 in 2018.*
- Operate/maintain approx. 190 larger diameter valves (>12”) each year: *completed 38 in 2018.*
- Annually operate/maintain approximately 316 “hard to find” valves: *completed 102 in 2018.*

**Meters**
- Replaced 6,400 meters as part of the Badger Meter replacement program.
- Inspect 6,000 meters annually: *completed 1,308 in 2018, in addition to the meters replaced.*

**Treatment and Pump Stations**
- Produced 639,260 ccf of water in 2018 from District sources (McMicken well offline).
- Checked for vandalism and operational problems.
- Continued development of proactive preventive maintenance schedule.

**Pressure Reducing Valves (PRV)**
- Checked PRV Stations monthly; cleaned annually.
- Installed Sump Pump at PRV Station 18 at 21600 43rd Avenue S.

*Valve goals not achieved due to cross-training and increases in new services and main installations.*

---

**Water Mains**

Completed the following small water main projects:

- **Main Replacement**
  Replace 572’ 4”AC with 8” DI
  Along along 48th Avenue S from S 160th Street to S 162nd Street, Tukwila

- **Main Cut and Cap**
  Abandoned 287’ 12” AC
  S 197th Street and 1st Avenue S, Normandy Park

- **Main Replacement**
  Replace 495’ 4” AC with 8” DI
  Along 3rd Avenue S, from S 213th Street to S 214th Street, Des Moines

- **Main Repair and Relocation**
  Perform emergency repair and relocate 185’ of 12” DI App 185 at SW 176th Street and 6th Avenue SW, Normandy Park

- **Main Install**
  Install 40’ 4” DI for South King Fire Station #51 at 27013 16th Avenue S, Des Moines

**Services**
- Installed / replaced 66 deficient services in 2018.

**Fire Hydrant Security**
- Continued to monitor hydrants to ensure they are being used properly and with District authorization.

**Easements**
- Continued to check 230 out of 1222 District easements for encroachments (on a 5-year cycle) in 2018.
Breaks, Leaks, Unexpected Shutdowns, and Water Loss

On average, the District experiences 10 water main breaks per year. During 2018, there were a total of 13 breaks. Several of these breaks were caused by contractors working in the area; the others were from natural causes like ground settlement or tree roots, or unknown causes. When a water main break occurs, our goal is to have the water service restored within an average of eight hours or less.

Leak Detection and Water Loss

- Keep unaccounted water usage below 10% (as per WSDOH Water Use Efficiency Requirements): our unaccounted-for water was 5.6% this year.
- Continue monitoring for unmetered water connections / uses: we found 1 unmetered connection in 2018 (the Tukwila intertie with a failed meter).
- Perform annual leak detection on 98 miles of main line and services (except during summer months): we inspected 60 miles in 2018.
- District crews found and repaired leaks in various mains, services, and hydrants—preventing them from becoming bigger problems, and saving the District millions of gallons of water from being wasted over time.

One gallon per minute leak = 525,000 gallons per year

Parts Inventory

- After annual inventory completed there was a $7,014.36 gain in inventory value ($889,618.00).

Vehicles and Equipment

- Purchased a 2018 Toyota RAV4 (#88).
- Purchased a 2018 Ford F150 truck (#89).
- Surplused a 2004 Ford Explorer (#65).

Computer System

- Updated SCADA Remote Telemetry Units (RTU) devices at Pump Station 4, Bow Lake Tank, and Star Lake Tank.

Office

- Constructed new Supervisor’s office in crew room.

Emergency Management and Mitigation

- Updated monitors.
- New alarm for visual verification.
- Introduced Armed Intruder safety training
- Ordered walkie-talkies for emergency communications back-up
- Updated contact information in the Incident Action Plan (IAP) Books

Safety

Highline Water District ended the year with 186 days without an on the job injury. There was a total of 2 on the job injury resulting in 2 days of lost work. The L&I experience factor was 0.6539 for 2018.

Required Training

- Forklift Certification
- Confined Space Training
- Annual fit tests for Personal Protective Masks.
- Competent Person Training
- Safe Driver Training
- Flagger Certification
- Asbestos Pipe Handling
- Fire Extinguisher Training
- Heat Stress First Aid
- Annual Hearing Testing

Hazard/Safety Committee Goals

- Develop Tabletop Exercises for training purposes.
- Maintain current IAP contact information.
- Continue Hazard/Safety Committee meetings.
- Aim for minimal L&I incidents and no time loss due to on-the-job injuries.
The District received a total of 5,069 line location requests in 2018; 1,082 of those requests required a site visit.

State law requires a Location Request if the ground is going to be dug deeper than 12 inches. A new law in 2017 began requiring a Location Request for the placement of all real estate signs, which has caused a noticeable increase in Location Requests ever since.

**Location Requests by Year**

- 2013: 2,745
- 2014: 2,963
- 2015: 2,948
- 2016: 3,281
- 2017: 4,469
- 2018: 5,069

**Location Requests by Type**

- Mismarked: 1
- Emergency: 2
- Real Estate Signs: 908
- Out of District: 453
- No Highline Water: 474
- Other: 661
- Marked (field visits): 1,082
- Private Property: 1,489
**Administrative**

During 2018, the Administrative Department completed a District records assessment, and conducted a Request for Proposals (RFP) process to identify a consultant to help us with District-wide records management. The District selected LaserFiche and Cities Digital to provide software.

The Department continues to ensure compliance with the Governmental Accounting Standards Board (GASB) and the Washington State Auditor, including:

- Communicate the District’s Ethics policies to staff and Board annually.
- Continue to provide an ethical work environment.
- Provide accurate quarterly and year-end financial reports to the Board in a timely manner.
- The District received another clean Audit for 2017.
- Maintain GAAP procedures and proper internal controls.
- Economic Stability: maintain rates < 1% of median household income.

**Customer Service**

During 2018, Customer Service staff answered over 25,000 phone calls, and our Field Staff went out on approximately 2,000 field calls to assist customers with various questions.

Customers continue to take advantage of the District’s online account access. We currently have 7,695 activated bill payers: 3,380 have chosen paperless billing, and 3,700 are using the autopay feature.

<table>
<thead>
<tr>
<th>Billings</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Bills</td>
<td>112,400</td>
<td>113,450</td>
<td>114,000</td>
</tr>
<tr>
<td>Electronic</td>
<td>9%</td>
<td>15%</td>
<td>18%</td>
</tr>
<tr>
<td>Final Bills</td>
<td>1,535</td>
<td>1,767</td>
<td>1,760</td>
</tr>
<tr>
<td>Tenant Accounts</td>
<td>1,580</td>
<td>1,566</td>
<td>1,515</td>
</tr>
</tbody>
</table>

**Public Outreach**

The District hosted a poster contest for local 4th, 5th and 6th graders, and made a calendar showcasing the top 12 posters.

The District received 273 entries from five schools within the Highline Water District service area. Each student that had a poster chosen for the calendar received a gift card to Barnes & Noble Books and four copies of the calendar for their family members. Two examples of the winning entries are shown below.

Helen Le, North Hill Elementary

Dania Carrillo, North Hill Elementary
## Operations: Financials

### 2018 Sources of Funds

- **Rates (87%)**
- **Other Revenues (10%)**
- **General Facility Charges (2%)**
- **Other Funding Sources (2%)**
- **Reserve Accounts (-1%)**

### 2018 Uses of Funds

- **Operation & Maintenance (32%)**
- **Water Supply (29%)**
- **Capital Projects (21%)**
- **Meters / Hydrants / Services (7%)**
- **Debt Service (5%)**
- **B&O Tax (5%)**
- **Capital Asset Purchases (1%)**

### 2018 Budget Recap

<table>
<thead>
<tr>
<th>Sources of Funds</th>
<th>Budget</th>
<th>Actual</th>
<th>% of Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rates</td>
<td>$ 16,323,375</td>
<td>$ 17,122,585</td>
<td>104.9%</td>
</tr>
<tr>
<td>Other Revenues</td>
<td>1,384,423</td>
<td>2,069,209</td>
<td>149.5%</td>
</tr>
<tr>
<td>General Facility Charges</td>
<td>700,000</td>
<td>459,832</td>
<td>65.7%</td>
</tr>
<tr>
<td>Other Funding Sources</td>
<td>5,554,134</td>
<td>375,663</td>
<td>6.8%</td>
</tr>
<tr>
<td>Reserve Accounts</td>
<td>4,450,381</td>
<td>(272,472)</td>
<td>-6.1%</td>
</tr>
<tr>
<td><strong>TOTAL SOURCES OF FUNDS</strong></td>
<td>$ 28,412,313</td>
<td>19,754,817</td>
<td>69.5%</td>
</tr>
</tbody>
</table>

### 2019 Board-Approved Budget

<table>
<thead>
<tr>
<th>Sources of Funds</th>
<th>Budget</th>
<th>% of Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rates</td>
<td>$ 16,980,864</td>
<td>55%</td>
</tr>
<tr>
<td>Other Revenues</td>
<td>1,506,315</td>
<td>5%</td>
</tr>
<tr>
<td>General Facility Charges</td>
<td>700,000</td>
<td>2%</td>
</tr>
<tr>
<td>Other Funding Sources</td>
<td>6,066,525</td>
<td>20%</td>
</tr>
<tr>
<td>Reserve Accounts</td>
<td>5,346,375</td>
<td>17%</td>
</tr>
<tr>
<td><strong>TOTAL SOURCES OF FUNDS</strong></td>
<td>$ 30,600,079</td>
<td>100%</td>
</tr>
</tbody>
</table>

### 2018 Uses of Funds

<table>
<thead>
<tr>
<th>Uses of Funds</th>
<th>Budget</th>
<th>% of Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations &amp; Maintenance</td>
<td>$ 7,086,032</td>
<td>25%</td>
</tr>
<tr>
<td>Water Supply</td>
<td>4,704,142</td>
<td>16%</td>
</tr>
<tr>
<td>Debt Service</td>
<td>1,013,370</td>
<td>3%</td>
</tr>
<tr>
<td>Capital Projects</td>
<td>13,161,247</td>
<td>47%</td>
</tr>
<tr>
<td>Meters/Hydrants/Services</td>
<td>1,245,000</td>
<td>5%</td>
</tr>
<tr>
<td>Capital Asset Purchases</td>
<td>251,545</td>
<td>1%</td>
</tr>
<tr>
<td>B&amp;O Tax</td>
<td>950,977</td>
<td>3%</td>
</tr>
<tr>
<td><strong>TOTAL USES OF FUNDS</strong></td>
<td>$ 28,412,313</td>
<td>100%</td>
</tr>
</tbody>
</table>
New Pump Station No 8 (PS8) 
Serving Crestview

The 7.6 MG Crestview Reservoir is Highline Water District’s primary storage component serving the 560 Pressure Zone. In order for water to enter this zone, it must pump through Pump Station 6 (PS6). During our 2016 Comprehensive Water System Plan, we identified the need for a second pump station to improve redundancy and resiliency, which we have designated PS8.

RH2 Engineering’s preliminary study evaluated ten properties in the general area of South 160th Street and 42nd Avenue South, based on elevation, cost, proximity to Crestview Reservoir and PS6, and neighborhood impact. In November 2016, we purchased the property at 16032 42nd Avenue South, and in early 2017 we demolished its derelict, foreclosed structure (pictured at left), thus eliminating a source of criminal activity and nuisance to surrounding properties.

RH2 also provided several concept designs, resulting in a preliminary design for a 5,000 GPM split-level pump station with below-ground pumps and piping, and an above-ground electrical and equipment storage building designed by Beard Architects to blend in with the surrounding properties.

As of 2018, the District has obtained an Unspecified Use Permit (UUP). We have allocated $1.4M in 2019 and $2.1M in 2020, and look forward to the start of construction of our new Pump Station in 2019.

| Project# | 16-2 |
| Start Date: | Q4 2017 study; Q3 2018 design; Q2 2019 construction |
| Complete: | Q1 2020 |
| Cost: | $4.1M total construction |
| Funding: | Rates / capital reserves |
| Engineer: | RH2 Engineering |
| Contractor: | TBD |
Mansion Hill Reservoir Relocation

When Sound Transit (ST) selected the SR509/I-5 route for the Federal Way Link Light Rail Project in late 2015, its proximity to our 5.0 MG 490 Zone reservoir and 30-inch Transmission Main at the Mansion Hill Tank site required we relocate both the tank and transmission main.

Preliminary engineering included survey, geotechnical investigation, planning, permitting, and project scoping, as well as reimbursement negotiations with ST. In 2016, the District executed an Interlocal Agreement for preliminary engineering with ST, and a separate consultant contract with Stantec to determine the impacts to the water system, preferred mitigation options, and subsequent design.

In addition to offsite improvements through a developer extension, Stantec identified two significant impacts to the water system at Mansion Hill, each of which became a separate project:

- Project 16-3 Mansion Hill Reservoir Relocation: construct a new, 4.5 MG 490 Zone reservoir to replace the existing 5.0 MG reservoir, which will conflict with the existing 0.25 MG elevated tank, and thus requires demolition of both tanks.

- Project 16-6 Mansion Hill Pump Station Project (PS5): replace the elevated tank with a new pump station (PS5) to serve a future 600 Mansion Hill Pressure Zone [slated for preliminary design in 2019 and construction in 2020].

In Fall 2018, the District advertised and awarded Project 16-3 to T. Bailey Construction for $7.4M. The budget and off-site pipe work includes $1.6M for security, lighting, and other on-site betterments funded by the District; ST will reimburse the remaining expenses through their Property Acquisition Group (ST must purchase District property for the alignment through separate negotiations).

All reservoir work must be completed by the end of 2019 to avoid conflicts with ST light rail construction.

<table>
<thead>
<tr>
<th>Project#</th>
<th>16-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Date:</td>
<td>Q1 2016 engineering; Q4 2018 construction</td>
</tr>
<tr>
<td>Complete:</td>
<td>Q1 2020</td>
</tr>
<tr>
<td>Cost:</td>
<td>$9.4M</td>
</tr>
<tr>
<td>Funding:</td>
<td>Sound Transit / Rates</td>
</tr>
<tr>
<td>Engineer:</td>
<td>Stantec</td>
</tr>
<tr>
<td>Engineer:</td>
<td>Gray and Osborne</td>
</tr>
<tr>
<td>Contractor:</td>
<td>T. Bailey Construction</td>
</tr>
</tbody>
</table>
### 2017 AC Water Main Replacement in Multiple Locations

The Board of Commissioners authorized Project 17-1 in October 2016 for the 2017 construction season. The District selected Gray and Osborne for design and construction administration services. The four project locations include:

- 3rd Avenue SW/3rd Place SW at SW 200th Street in Normandy Park
- S 232nd Street & 14th Avenue S in Des Moines
- 16th Avenue S from S 240th Street To KDM in Des Moines
- S 268th Street from Military Rd S to 40th Avenue S in Kent

This project replaced approximately 7,700 LF of existing AC water mains with new, ductile iron pipe, in addition to new services, hydrants, services and appurtenances. Staff selected the project locations due to recent water main breaks, proximity to sensitive environmental areas, and in anticipation of future city overlay projects.

The District advertised and awarded the project to Kar-Vel Construction on June 7, 2017. The bid price was $1.87 million. Work commenced in August 2017, and was complete in Spring 2018.

On September 3, 2017, an existing 6” AC water main failed on S 176th Street in the City of SeaTac, causing significant damage to the road and adjacent properties. Because the condition, size, and material type of this water main indicated a high likelihood of repeated failures in the near future, the Board of Commissioners declared an emergency, pursuant to RCW 39.04.280(1)(e) and authorized staff to retain Kar-Vel through a change order to replace the failing main. This additional work included approximately 1,100 LF of 12” DI water main.

The final project cost was $2.88M, including design, construction, and the emergency work. The project was funded by existing rates and capital reserves.

<table>
<thead>
<tr>
<th>Project#</th>
<th>17-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Date:</td>
<td>August 2017</td>
</tr>
<tr>
<td>Complete:</td>
<td>Spring 2018</td>
</tr>
</tbody>
</table>
| Cost: | $256k design and CA services
$2.88M construction incl. emergency repair |
| Funding: | Rates / capital reserves |
| Engineer: | Gray and Osborne |
| Contractor: | Kar-Vel Construction |
Infrastructure: 2018 Capital Improvement Projects, continued

**AC Water Main Replacement in SeaTac at 12th Place S and 13th Avenue S**

In February 2017, the City of SeaTac identified the neighborhood bounded by S 200th Street - S 207th Street, and 12th Place S - 13th Avenue S for their 2017 Asphalt Overlay Replacement Program. The District’s infrastructure in this area is primarily small diameter AC water mains.

Upon discovery of the project, the District discussed a partnership with the City to replace the existing water mains prior to the overlay. Understanding the District would perform excavation work, the City elected to increase their project scope to replace aging storm pipes throughout the neighborhood, and shifted construction to Spring 2018.

The project is a model of two governmental agencies working together on a construction project to provide public value to the neighborhood and community. The District selected Murray Smith, Inc. to perform design services. Work included the replacement of 4,500 LF of small diameter AC water main with new, 8-inch DI pipe—upsized to improve fire flow within the neighborhood. Murray Smith completed the design in late 2017 and the City began construction in early 2018; work was complete in September 2018.

**Project#** 17-3  
**Start Date:** Q2 2017  
**Complete:** Q3 2018  
**Cost:** $1.5M design and construction  
**Funding:** Rates / capital reserves  
**Engineer:** Murray Smith, Inc.  
**Contractor:** Karvel Construction

**AC Water Main Replacement in Des Moines at S 223rd Street from 16th Avenue S to 24th Avenue S**

The City of Des Moines identified the need to improve the road surface along S 223rd St from Marine View Drive to 24th Ave S. This road is a major east-west route to downtown with heavy use by transit busses, fire vehicles, City Public Works and Highline School District. Because the road was severely damaged by alligator cracking and spalling of asphalt, immediate repair was required.

The District identified the need to replace a small diameter AC water main between 16th and 24th Ave S. The project included the installation of approximately 2,850 LF of 8-inch diameter DI main and other appurtenances.

The District was the lead agency and Highline entered into an Interlocal Agreement (ILA) to construct the water main. Des Moines requested the District fund the cost of the overlay and trench patching in a lump sum payment through the ILA and in exchange, the City would take responsibility for the surface restoration.

Pace Engineers designed the water portion of the project. Construction began summer 2018 and was completed in late fall. The City was the lead agency and Des Moines Construction began construction in Summer 2018; work was completed by November 2018.

**Project#** 18-1  
**Start Date:** Q2 2018  
**Complete:** Q3 2018  
**Cost:** $830,000 design and construction  
**Funding:** Existing water rates and capital reserves  
**Engineer:** Pace Engineers  
**Contractor:** Scarsella Construction
Water Main Infrastructure Relocation for Road Improvements on International Blvd. at SR 509

The Washington State Department of Transportation (WSDOT) proposes to extend the SR509 freeway from S 188th Street to Interstate 5, as part of the Puget Sound Gateway project. The project will be completed in two phases: Phase 1 is from Kent-Des Moines Rd to 24th Ave S in SeaTac; Phase 2 is from 24th Ave S to S 188th St. WSDOT anticipates construction to begin as early as 2020 and completed by 2028; however the final project schedule is not fully defined.

WSDOT’s design requires a freeway overpass for International Blvd S (ILB) at SR509 near S 206th St. Sound Transit (ST) simultaneously plans for the Federal Way Link Light Rail to cross ILB in the same vicinity. Because ST will construct their infrastructure first, WSDOT desires ST to construct the overpass on their behalf during the light rail construction, in order to avoid multiple contractors working in the same area on separate Public Works contracts.

Highline Water District has three water mains in the vicinity of the bridge, which must be designed and relocated in advance of the bridge work, and then affixed to the bridge after construction. The District retained Pace Engineers for preliminary planning work to identify all potential impacts of the project.

Project 18-2 will include design and construction of the necessary improvements for the bridge work and crossing at International Blvd only. The other impacts caused by SR509 will be a separate project to be defined in the future.

The District allocated $35,000 for the project in 2019 for evaluation and design alternatives. The budget includes $1.0 million for design and construction distributed in the two subsequent years (2020/2021). The final piping configuration and other conflicts along the length of the SR509 Project are not yet defined.

Staff will amend the schedule and budget upon completion of the preliminary planning work, scope of water project, and confirmation with WSDOT on the project schedule. Construction is tentatively scheduled to begin in 2020.
Project 18-4 McMicken Well Repair

In 2012, the District completed construction of the McMicken Well and Treatment Plant project. The initial well production was 500 gpm on a continuous basis; however, over time, production began to decline: in September 2017, production was down to 375 gpm.

The District elected to have PumpTech, Inc., the pump supplier, remove and diagnose potential problems with the well pump and motor.

During the removal process by PumpTech, the piping separated at a joint coupling, causing the pump and motor to drop into the bottom of the well. The piping exhibited extensive corrosion on the pipe and threads, along with the presence of iron-oxidizing bacteria.

PumpTech retrieved the pump and the District retained RH2 Engineering to evaluate causes and solutions for the failure. Their findings indicated the bacteria corroded the threads, causing the pipe to detach from the coupler. The pump was likewise damaged from the corrosion, and the motor was damaged from the fall—both beyond repair. The District filed an insurance claim for the damaged components caused by the equipment falling in the well.

The District contracted Hokkaido Drilling to remove debris, clean, inspect and repair the damaged well casing from the fall. Their work was complete in early 2018. The 2019 budget includes $275,000 for replacement of the pump, motor and piping. The pump is ordered and the manufacturer anticipates delivering the pump in late spring 2019.

---

<table>
<thead>
<tr>
<th>Project#</th>
<th>18-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Date</td>
<td>Q3 2017</td>
</tr>
<tr>
<td>Complete</td>
<td>Q2 2019</td>
</tr>
<tr>
<td>Cost</td>
<td>$27k engineering assessment $30k well cleaning and repair $255k pump, motor, and piping</td>
</tr>
<tr>
<td>Funding</td>
<td>District rates and reserves</td>
</tr>
<tr>
<td>Engineer</td>
<td>RH2 Engineering</td>
</tr>
<tr>
<td>Supplier</td>
<td>PumpTech</td>
</tr>
<tr>
<td>Contractor</td>
<td>Hokkaido Drilling</td>
</tr>
</tbody>
</table>
Infrastructure: 2018 Capital Improvement Projects, continued

Water Main Replacements:
– Kent/Des Moines Road and Pacific Highway South
– South 240th Street and 9th Place South

In 2018, the District experienced several main ruptures attributed to a variety of causes. Two specific breaks exceeded the capability of District personnel to repair and required outside consulting and contracting.

The first break occurred on September 7, 2018 at Kent-Des Moines Road (KDM) and Pacific Highway South (PHS), when a third party working in the area ruptured the 12” cast iron water main. Given the main’s ten foot depth, its proximity to the foundation of the traffic light, and the complexity of multiple utilities in the area, District crews were not able to make this repair.

The permanent solution will require the installation of a new main parallel to the old main, within the right-turn and HOV lanes, in order to avoid existing utility conflicts. The scope of work includes approximately 300 LF of 12 DI pipe, with associated connections and fittings.

The second break occurred on August 13, 2018 at S 240th Street and 9th Place S, when an existing service line broke at the water main, causing the pipe to rupture. This break caused significant damage to an existing home. During the repair, the existing 350 LF, 4-inch AC water main was observed to be in poor condition, causing the District concern over potential future ruptures.

Pace Engineers will complete the contract documents, and package both repair locations in one project. The District will advertise the construction contract in Spring 2019. The 2019 budget includes $470,000 for construction and other costs. Work should be complete by early Summer.

Project# 19-3
Start Date: Q3 2018
Complete: Q2 2019
Cost: $27k engineering
$470k construction
and related costs
Funding: District rates and reserves
Engineer: Pace Engineers
Contractor: TBD
## Ongoing Projects
- **Breckenridge Short Plat**
  - 6 single family residences at 2200 S 253rd Place, Des Moines
- **CPSG Self Storage**
  - 3 buildings at 25300 Pacific Highway S, Des Moines
- **Copper River**
  - Office complex at S 192nd and 28th, SeaTac
- **Des Moines Elementary**
  - 1500 S 240th Street, Des Moines
- **Des Moines Creek North**
  - 455,000 SF warehouse facilities at 2200 S 208th, Des Moines
- **Hyatt Place - 156 Unit Hotel**
  - 19518 International Blvd., SeaTac
- **SeaTac Hilton Garden Inn Hotel**
  - 3056 S 188th Street, SeaTac
- **SeaTac Hyatt Hotel and Apartment Complex**
  - 17300 International Blvd., SeaTac
- **Vintage Senior Housing - 170 Units**
  - 21212 Pacific Highway S, SeaTac
- **Waterview Crossing - 372 Units + Commercial Space**
  - 22000 International Blvd., Des Moines

## Accepted as Complete Projects
- **Belleme at Normandy Park - 25 Units + Mixed Use Space**
  - 18459 1st Avenue S, Normandy Park
- **Des Moines Creek Business Park Warehouse/Offices**
  - S 211th and 24th Avenue S, Des Moines
- **DMCBP II - FAA Facility**
  - 2200 S 216th Street, Des Moines
- **DMCBP IV - Two Warehouse Facilities**
  - 21200 Pacific Highway S, Des Moines
- **Highline Place - 44 Units + Mixed Use Facility**
  - 23609 Pacific Hwy S, Des Moines
- **Residence Inn at SeaTac - 183 Unit Hotel**
  - 19608 International Blvd., SeaTac
- **SW Suburban Sewer - Utility Offices + Operations Center**
  - 17874 Des Moines Memorial Drive, Burien
- **The Pinnacles - 22 Single Family Residences**
  - 12xx S 232nd Street, Des Moines

## New / In Design Projects
- **Country Inn Hotel Remodel**
  - S 192nd and Pacific Highway S, SeaTac
Staff Awards and Recognitions in 2017

Al Metz
25 Year Service Award

Al started with our District as a meter reader in March of 1993. During his career, he spent several years at the front desk on the customer service team, where he was a customer favorite, then moved into the warehouse inventory, purchasing, and security duties that he currently holds.

Jerry Cella
25 Year Service Award

Jerry started in March 1993 as a meter reader, and later moved into a field position where he served as the lead. After 20 years in the field, Jerry returned to the meter department as part of a team upgrading the meters to newer technology. He will be cross training in the construction department during 2019. Jerry is one of our most multi-talented employees.

Matt Everett
15 Year Service Award

Matt started at Highline in 2003, and became General Manager on January 1, 2004. His primary goal is to provide our customers with the best possible service at the lowest possible rates. He believes in using a team-based approach with District staff to explore the most safe and efficient ways to complete tasks and serve customers’ needs.

Keith Colburn
10 Year Service Award

Keith’s ten year career began with working with crews in preventive maintenance; he’s now doing an excellent job as water treatment plant operator—where he troubleshoots issues on the fly with professionalism and accurate recordskeeping.

Shane Heflen - 2018 Employee of the Year

Shane started his career with Highline Water District in February 1993. During his long career (with an exceptional attendance record), he has changed positions several times, and was recently promoted to SCADA/Treatment Lead.

Shane is well respected by his coworkers and management—he has a positive, can-do attitude and is willing to help out in any situation. He is likewise praised by our customers for his knowledge, courtesy, and professionalism. Yet Shane is a humble individual who prefers to focus on the accomplishments of his team, rather than receive personal recognition.

Shane is currently working towards becoming a Cross Connection Specialist and a certified Backflow Assembly Tester.
This Annual Report is proudly provided by Highline Water District

Visit us:
23828 30th Avenue South
Kent, Washington 98032
www.highlinewater.org

2018 Board of Commissioners:
   Todd Fultz
   Daniel Johnson (President)
   Vince Koester
   George Landon
   Kathleen Quong-Vermeire (Secretary)

Contact us:
Monday through Friday
7:00 am – 4:00 pm
(206) 824-0375
customerservice@
highlinewater.org

Office Mascot
“Winston” hired January 1, 2019

Our mission is to provide high quality water and excellent customer service while effectively managing
District infrastructure for a reliable water system today, and for future generations.