AGENDA ITEM 5F

OVERVIEW

The RESCU Program describes eleven projects which constitute full replacement and rehabilitation of SVCW’s conveyance system. RESCU includes the Gravity Pipeline, Front of Plant, Pump Stations, and Belmont Force Main projects. The Front of Plant includes six and Pump Stations includes four of the eleven projects. The Conveyance System Improvements Environmental Impact Report completed and adopted by the SVCW Commission in April 2017 covers work to be done under all the RESCU Program projects.

<table>
<thead>
<tr>
<th>Source of Funds (per LRFP 2018)</th>
<th>Budget vs Expenditures</th>
<th>Expenditures by Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>BONDS $81.52M</td>
<td>Expenditures $85.33M</td>
<td>CIP Admin &amp; Legal ($18.25M)</td>
</tr>
<tr>
<td>CASH $14.39M</td>
<td>Budget $494.99M</td>
<td>CIP Construction ($58.43M)</td>
</tr>
<tr>
<td>WIPF $239.77M</td>
<td></td>
<td>CIP Construction Mgmt ($1.95M)</td>
</tr>
<tr>
<td>SRF $143.86M</td>
<td></td>
<td>CIP Planning &amp; Design ($5.77M)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CIP Staff ($1.75M)</td>
</tr>
</tbody>
</table>

**Project Schedule**

- R01 - Influent Connection - connected to plant
- R02 - Headworks - connected to plant
- R03 - Gravity Pipeline - in service
- R04 - RLS - in service
- R05 - FOP Site Work Finished
- R06 - RCP5 Replacement Complete
- R07 - Belmont Force Main
- R08 - MPSS Replacement Complete
- R09 - Belmont Pump Station

**3 Month Cash-Flow**

<table>
<thead>
<tr>
<th>Capital Program</th>
<th>Front-of-Plant</th>
<th>Gravity Pipeline</th>
<th>OCIP</th>
<th>Pump Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2019</td>
<td>2.6M</td>
<td>0.1M</td>
<td>3.07M</td>
<td>4.4M</td>
</tr>
<tr>
<td>May 2019</td>
<td>4.6M</td>
<td>0.1M</td>
<td>3.07M</td>
<td>5.6M</td>
</tr>
<tr>
<td>June 2019</td>
<td>8.6M</td>
<td>0.1M</td>
<td>3.07M</td>
<td>6.6M</td>
</tr>
<tr>
<td>July 2019</td>
<td>13.4M</td>
<td>0.1M</td>
<td>3.07M</td>
<td>7.6M</td>
</tr>
</tbody>
</table>

As of: 2019-04
The Front of Plant (FoP) Project consists of the design, construction, permitting, start-up, commissioning, and final acceptance for the Receiving Lift Station (RLS), Surge and Flow Splitter (SFS), Headworks Facility, Odor Control Facilities, Influent Connector Pipe, Storage and Chemical Offload Facilities, Civil site work, Emergency Overflow pipe to storage basin and related process support systems. Work is being implemented under a Progressive Design-Build procurement process in stages.

### Milestone Schedule

<table>
<thead>
<tr>
<th>Milestone Description</th>
<th>Start</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 Percent (%) Design Documents</td>
<td>12/6/2018</td>
<td>7/31/2019</td>
</tr>
<tr>
<td>Stage 2C - RLS Shaft Construction</td>
<td>10/11/2018</td>
<td>2/25/2020</td>
</tr>
<tr>
<td>Headworks Completed/Early Start-Up</td>
<td>12/6/2018</td>
<td>10/24/2021</td>
</tr>
<tr>
<td>SFS/RLS Operational</td>
<td>12/6/2018</td>
<td>8/28/2022</td>
</tr>
<tr>
<td>Stage 2D - Balance of Stage 2 Work Final Completion</td>
<td>12/6/2018</td>
<td>10/20/2022</td>
</tr>
</tbody>
</table>

### Budget vs Expenditures

- Expenditures: 22.8%
- Remaining B: 77.2%

### Expenditures by Object

- CIP Admin & Legal ($8.08M)
- CIP Construction ($28.49M)
- CIP Construction Mgmt ($2.1M)
- CIP Planning & Design ($3.35M)
- CIP Staff ($7.99M)

---

**Schedule**

- FoPS2.R1030 - Stage2C - Concrete Base Slabs
- FoPS2.R1040 - Stage2C - Shaft Excavation Work
- FoPS2.R1050 - Stage2C - Pre-Excavation Work
- FoPS2.R1080 - Stage2C - Procurement
- FoPS2.R1090 - Stage2C - Review & Approve
- FoPS2.R1100 - Stage2C - Prepare and Submit
- FoPS2.R1120 - Stage2D - Project Closeout
- FoPS2.R1130 - Stage2D - Final Site Improvements
- FoPS2.R1140 - Stage2D - Start-Up & Commissioning
- FoPS2.R1150 - Stage2D - Electrical/Instrumentation
- FoPS2.R1160 - Stage2D - Surge & Flow Splitter (SFS) / Receiving Lift ...
- FoPS2.R1170 - Stage2D - Headworks Facility - Screening / Grit / Odo ...
- FoPS2.R1180 - Stage2D - Civil/Site work

---

As of: 2019 - 04
Front of Plant Progressive DB Project

Major Accomplishments this Period

Design
- SPJV continues reviewing and implementing SVCW’s follow-up responses to the 60% design package resubmittal and developing the 100% design package
- Continued detailing the instrumentation and controls for RLS control strategies
- Continued development of all FeP control narratives
- Revised the Master Equipment List
- Came to decision on the odor control system

Procurement of Trade Packages
- Completed review of the major equipment list with preferred manufacturers
- WIFIA and SRF requirements for trade packages are in progress
- SPJV executed contracts with multiple subcontractors for upcoming work

Construction
- Completed the installation of twelve of the sixteen support of excavation panels for the SFS/RLS shafts
- Placed concrete slab and walls for the headcell area in the Headworks Facility

Upcoming Key Activities

- Continue detailing RLS and Headworks facilities
- Complete the installation of the RLS and SFS Support of Excavation Walls
- Procurement of major equipment

3 - Month Look Ahead

<table>
<thead>
<tr>
<th></th>
<th>Start</th>
<th>End</th>
<th>May</th>
<th>June</th>
<th>July</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation of RLS and SFS Support</td>
<td>November 12, 2018</td>
<td>June 17, 2019</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>of Excavation Walls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop 100% Design Package</td>
<td>December 6, 2018</td>
<td>July 31, 2019</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Headworks Facility Civil Work</td>
<td>March 7, 2019</td>
<td>August 1, 2019</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
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</table>

Safety Spot Light

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lost Time</td>
<td>0</td>
</tr>
<tr>
<td>Near Misses</td>
<td>0</td>
</tr>
<tr>
<td>Recorded Losses</td>
<td>0</td>
</tr>
</tbody>
</table>

As of: 2019 - 04
Gravity Pipeline Progressive DB Project

The Gravity Pipeline (GP) Project consists of the design, construction, permitting, start-up, commissioning, and closeout of approximately 17,600 feet of wastewater gravity FRP pipe inside a concrete-segment tunnel. The work includes three shafts and will interface directly with the Front of Plant (FoP) Project at the Surge & Flow Shaft (SFS). Work is being implemented under a Progressive Design-Build procurement process.

Milestone Schedule

- **Notice to Proceed - Stage 1 Services**
  - Start: 10/13/2017
  - Finish: 10/13/2017
- **Stage 1 Services Complete**
  - Start: 10/13/2017
  - Finish: 1/21/2019
- **100% Design Documents**
  - Start: 5/31/2019
  - Finish: 7/5/2019
- **TBM Procurement and Delivery**
  - Start: 7/5/2019
  - Finish: 7/5/2019
- **Airport Access Shaft Construction**
  - Start: 12/14/2018
  - Finish: 8/9/2019
- **Procurement of BCDC permit**
  - Start: 5/31/2019
  - Finish: 5/31/2019
- **Bair Island Shaft Construction**
  - Start: 7/22/2019
  - Finish: 4/28/2020
- **TBM Drive (AAS to Bair Island)**
  - Start: 10/4/2019
  - Finish: 5/1/2020
- **San Carlos Shaft Construction**
  - Start: 9/21/2020
  - Finish: 1/27/2022
- **TBM Drive (AAS to SFS)**
  - Start: 9/10/2020
  - Finish: 8/12/2021
- **FRP Pipe Installation**
  - Start: 7/27/2021
  - Finish: 5/9/2022
- **Final Commissioning**
  - Start: 7/1/2022
  - Finish: 7/1/2022

Budget vs Expenditures

Expenditures by Object

Remaining 85.7%

Expenditures 14.3%

1.60M (3.76%)

29.89M (70.08%)

9.67M (22.68%)

Available Budget

$253.25M

Total Expenditure

$42.27M

Remaining Budget

$210.98M

Schedule

- **GPS2.A2490 - Finish TBM Drive #1**
- **GPS2.A5180 - FINAL COMPLETION (182.5 days)**
- **GPS2.A5570 - Finish TBM Drive #2**
- **GPS2.A5580 - FINAL SFS MILESTONE (GP turnover to FoP)**
- **GPS2.R5615 - 100% Design Complete**
- **GPS2.R5645 - TBM ON SITE**
- **GPS2.R5650 - Manufacture & Deliver TBM (11.5 months)**
- **GPS2.R5660 - Manufacture Segment Moulds (6 months)**
- **GPS2.R5670 - AAA Site Prep**
- **GPS2.R5680 - AAA Shaft Construction**
- **GPS2.R5690 - AAS Inclined Conveyor Tunnel**
- **GPS2.R5700 - Lower-In/ Assembly/Prep for Launch**
- **GPS2.R5710 - Bair Island Shaft**
- **GPS2.R5720 - San Carlos Shaft**

As of: 2019 - 04
Gravity Pipeline Progressive DB Project

Major Accomplishments this Period

Design
- Finalized Construction Phase Instrumentation & Monitoring design
- Continued Specification development
- Continued coordination with Pump Stations Improvement project for San Carlos inlet connection
- Continued FRP Pipe Specification and Durability Report development

Procurement of Trade Packages
- Continued discussions with FRP pipe manufacturers. SVCW reviewing durability report in parallel.
- Outreach in conformance with SRF and WIPFA funding requirements
- SVCW and BBJV witnessed the factory acceptance test for the TBM

Construction
- Instrumentation & Monitoring subcontractor continues installation of ground monitoring at Airport Access Shaft site
- BBJV completed excavation of Airport Access Shaft
- DrillTech began pipe ramming activity for the tunnel muck conveyor

Upcoming Key Activities
- San Carlos/Bair Island Piping Design
- Inclined Conveyor Tunnel Installation
- Pipe Supplier Contract Execution
- TBM Delivery
- BCDC Permit in Progress
- Installation of Ground Settlement Extensometers

3 - Month Look Ahead

<table>
<thead>
<tr>
<th>Event</th>
<th>Start</th>
<th>End</th>
<th>May</th>
<th>June</th>
<th>July</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% Design Completion</td>
<td>August 10, 2018</td>
<td>May 31, 2019</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inclined Tunnel Muck Conveyor Installation</td>
<td>March 11, 2019</td>
<td>July 26, 2019</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Airport Access Shaft Excavitation</td>
<td>March 29, 2019</td>
<td>May 7, 2019</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assemble TBM</td>
<td>July 8, 2019</td>
<td>September 13, 2019</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Safety Spotlight

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Near Misses</td>
<td>0</td>
</tr>
<tr>
<td>Recorded Losses</td>
<td>0</td>
</tr>
</tbody>
</table>

As of: 2019 - 04
Pump Stations

All SVCW pump stations require replacement or rehabilitation. Menlo Park PS will be rehabilitated. Redwood City PS will be replaced. Belmont PS will be rehabilitated. San Carlos PS is no longer needed due to the new gravity pipeline; flows from San Carlos and Belmont will enter into the gravity pipeline via a drop structure at the current San Carlos pump station site. Flows from the MPSS and RCPS will flow through the new 48-inch force main to a drop structure at Inner Bair Island. This project also includes replacement of the Belmont Force Main and will be implemented via a Progressive Design-Build Process.

### Milestone Schedule

<table>
<thead>
<tr>
<th>Event</th>
<th>Start</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSI Project Procurement process approved by Commission</td>
<td>7/13/2018</td>
<td>7/13/2018</td>
</tr>
<tr>
<td>Recommend Award of DB Agreement to Commission</td>
<td>2/25/2019</td>
<td>2/25/2019</td>
</tr>
<tr>
<td>Basis of Design Report (BODR)</td>
<td>2/26/2019</td>
<td>7/16/2019</td>
</tr>
<tr>
<td>30 Percent (%) Design Documents</td>
<td>7/17/2019</td>
<td>9/11/2019</td>
</tr>
<tr>
<td>60 Percent (%) Design Documents</td>
<td>9/12/2019</td>
<td>11/4/2019</td>
</tr>
<tr>
<td>Stage 1 Services Complete</td>
<td>1/9/2020</td>
<td>1/9/2020</td>
</tr>
</tbody>
</table>

### Budget vs Expenditures

- Expenditures: 2.02%
- Remaining Budget: 97.98%

### Expenditures by Object

- CIP Admin & Legal ($29.4M)
- CIP Construction ($0.05M)
- CIP Construction Mgmt ($1.14M)
- CIP Planning & Design ($1.64M)
- CIP Staff ($10M)

### Schedule

- PSS1.R1000 - Task 1: Background Document Review & Validation / Coordination with GP Project
- PSS1.R1030 - Task 4: Additional Surveying, Mapping and Utility Locates
- PSS1.R1040 - Task 5: Alternative Analysis
- PSS1.R1050 - Task 6: BIM Model Development, Analysis & Support
- PSS1.R1060 - Task 7: Cost Modeling Development & Estimates
- PSS1.R1070 - Task 8: Scheduling
- PSS1.R1090 - Task 10: Process & Instrumentation Diagram (P&ID), Master Equipment & I/O List Development
- PSS1.R1100 - Task 11: Control Strategy / Narratives Development
- PSS1.R1130 - Task 14: 60 Percent (%) Design Package
- PSS1.R1150 - Task 16: Preliminary Staffing & Staff Training Plan
- PSS1.R1160 - Task 17: Permitting & Public Outreach Support
- PSS1.R1170 - Task 18: Proposed Stage 1 Implementation

As of: 2019 - 04
# Pump Stations

## Major Accomplishments this Period

**Design**
- Held RCPS Alternatives Analysis Workshop
- Fine tuning alternatives selected in MPPS and RCPS Workshops
- Ongoing coordination with GP project
- Began planning for MPPS condition assessments

## 3 - Month Look Ahead

<table>
<thead>
<tr>
<th>Activity</th>
<th>Start</th>
<th>End</th>
<th>May</th>
<th>June</th>
<th>July</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative Analysis</td>
<td>February 28, 2019</td>
<td>June 3, 2019</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Control Strategy / Narratives Development</td>
<td>April 16, 2019</td>
<td>September 23, 2019</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Geotechnical Investigation Plan</td>
<td>April 23, 2019</td>
<td>May 24, 2019</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BODR &amp; 30% Design Documents</td>
<td>May 14, 2019</td>
<td>October 31, 2019</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Modeling</td>
<td>May 14, 2019</td>
<td>August 8, 2019</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Surveying, Mapping, and Utility Locates</td>
<td>May 14, 2019</td>
<td>June 21, 2019</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design and Construction Phasing Plan</td>
<td>May 17, 2019</td>
<td>June 14, 2019</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Cost Modeling Development and Estimates</td>
<td>July 12, 2019</td>
<td>November 22, 2019</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P&amp;ID, Master Equipment &amp; I/O List Development</td>
<td>July 22, 2019</td>
<td>September 23, 2019</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Upcoming Key Activities

- Belmont Alternatives Analysis Workshop
- MPPS System Outages for Condition Assessments
- Develop selected alternatives for MPPS and RCPS in further detail, including major equipment/decision cost estimates.

## Safety Spotlight

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lost Time</td>
<td>0</td>
</tr>
<tr>
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<td>0</td>
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<tr>
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<td>0</td>
</tr>
</tbody>
</table>

As of: 2019 - 04