Presentation to Seattle Design Commission

October 15, 2009

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Seattle Public Utilities

Overview

• Seattle Public Utilities (SPU) is owned directly by the City of Seattle and funded primarily by the rates paid for services

• SPU provides retail water service in Seattle and wholesale water service to 21 water purveyors in the Seattle Metropolitan Area

• Wastewater within City of Seattle is collected by SPU and treated by King County
SPU Overview

• **Four Utilities (Lines of Business)**
  • Water - established in 1889
  • Wastewater – established in 1955
  • Drainage – created in 1987
  • Solid Waste – established in 1961

• **More than $4.5 Billion in Assets**
  • 1,830 mile water system serving approximately 1.3 million retail and wholesale customers
  • 2020 mile drainage and wastewater system serving approximately 700,000 retail customers
CIP Portfolio Value
$725 Million

35 Small Projects
Less than $1m = 1% of CIP

35 Mid-Sized Projects
$1m to $4m = 9% of CIP

35 Major Projects
Greater than $4m = 90% of CIP
Madison Valley Stormwater Project
Phase 1 - Proposed Art
split stone

bowl

weaving stones
Madison Valley Stormwater Project
Phase 2 – Proposed Art

Project Area Close-Up
Madison Valley – Phase 2

Washington Park Orientation Map
Madison Valley – Phase 2

Landscape Plan
Madison Valley – Phase 2

Art Wall

cavity-nest bird sites integrated into wall
weep holes drain upper lawn
rectangular stone work
gutter collects water from top of tank and directs it to moss chevrons
rough cut angled stone work under gutter spouts
rain garden below moss
Madison Valley – Phase 2

Landscape Details

Metal Guardrail
Concrete Pavers

Upper Lawn  Overlook with Ornamental Railing  Stone Façade on Tank  Rain Garden & Drainage Grate  Sunken Lawn with Wooded Hillside
Madison Valley – Phase 2

Art Wall

Bird Nest

- facing stone
- stainless steel hinge
- pvc or hpde conduit box set into facade
- removable cast stone tree bark facade
- 1" opening to favor wrens and chickadees
- all nests 4" deep but ht. & width vary
Madison Valley – Phase 2

Art Wall

**Hydrology:** Storm runoff from the top of the tank, the upper lawn and possibly the access road is captured and directed to a gutter at the top of the wall. Captured runoff flows down the wall creating 3 moss zones of the tank into the rain garden below.

**Moss Wall Zones:** The mossy wall zones located on the northeast side of the tank, an easy place for moss to grow. In addition to moss, ferns can also grow on the wall.
Ballard Green Streets

Ballard Roadside Raingardens
Phase 1

The Ballard Roadside Raingardens Phase 1 Project is a smaller scale version of the Natural Drainage Systems project that SPU has completed in the past.
Map of North Ballard with the Roadside Raingardens Streets
Ballard Roadside Raingardens

Change this...

... to this
Ballard Roadside Raingardens

Initiating Roadside Raingarden Program

Curb bulb design

Planting strip design
Ballard Roadside Raingardens

We will only use the existing parking strip on some streets. Roadside Raingardens within the planting strip are:

Shallow depressions filled with a designed soil mix and plants that capture and infiltrate street runoff.
Ballard Roadside Raingardens

And on other streets SPU will install curb bulbs.

Roadside Raingardens that bump out into the street
Ballard Roadside Raingardens

Multiple benefits:

Remove stormwater from combined system and reduce overflows

Provide water quality treatment

Traffic calming

Aesthetics
Proposed South Park Water Quality
South Park Pump Station
Duwamish River
South Park Pump Station Work
Duwamish River (street view)
South Park Pump Station Work
Combined Sewer Overflow (CSO) Improvement Sites
Genesse/Henderson CSO Site
Windermere CSO Site
Transfer Station Improvements
North Transfer Station
South Transfer Station
South Transfer Station
Reservoir Burying Program

Seattle Reservoir Burying Program replaces the existing open basins at Beacon, Myrtle, West Seattle, and Maple Leaf Reservoir sites with new reinforced concrete buried structures to protect the drinking water and provide open space.
SPU Drinking Water Reservoirs

<table>
<thead>
<tr>
<th>Reservoir</th>
<th>Status</th>
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<tbody>
<tr>
<td>Riverton</td>
<td>Covered (from start)</td>
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<tr>
<td>Eastside</td>
<td>Covered (from start)</td>
</tr>
<tr>
<td>View Ridge</td>
<td>Covered (from start)</td>
</tr>
<tr>
<td>Magnolia</td>
<td>Covered (1994)</td>
</tr>
<tr>
<td>Bitter Lake</td>
<td>Covered (floating / 2003)</td>
</tr>
<tr>
<td>Lake Forest Park</td>
<td>Covered (floating/ 2003)</td>
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<tr>
<td>Lincoln</td>
<td>Covered (2005)</td>
</tr>
<tr>
<td>Myrtle</td>
<td>Covered (2008)</td>
</tr>
<tr>
<td>Beacon</td>
<td>Covered (2009)</td>
</tr>
<tr>
<td>West Seattle</td>
<td>In Construction</td>
</tr>
<tr>
<td>Maple Leaf</td>
<td>In Construction</td>
</tr>
<tr>
<td>Roosevelt</td>
<td>Decommission</td>
</tr>
<tr>
<td>Volunteer</td>
<td>TBD (likely decom)</td>
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Original Beacon Reservoirs
Beacon Reservoir Construction

Reservoir Placed into service in February 2009
West Seattle Reservoir
West Seattle Reservoir

Project on schedule to complete construction in summer 2010
Interior of Buried Reservoir
Myrtle Reservoir Construction

- Reservoir Placed into service in July 2008
Myrtle Reservoir
Maple Leaf Reservoir
The original 1910 60 MG open reservoir before reconstruction begins in 2009
Lincoln Reservoir under Cal Anderson Park
Volunteer Reservoir
Thank You!