

Recommended Alternative for the Plan to Protect Seattle's Waterways





CDWAC and SWAC Update
April 15, 2015

Agenda

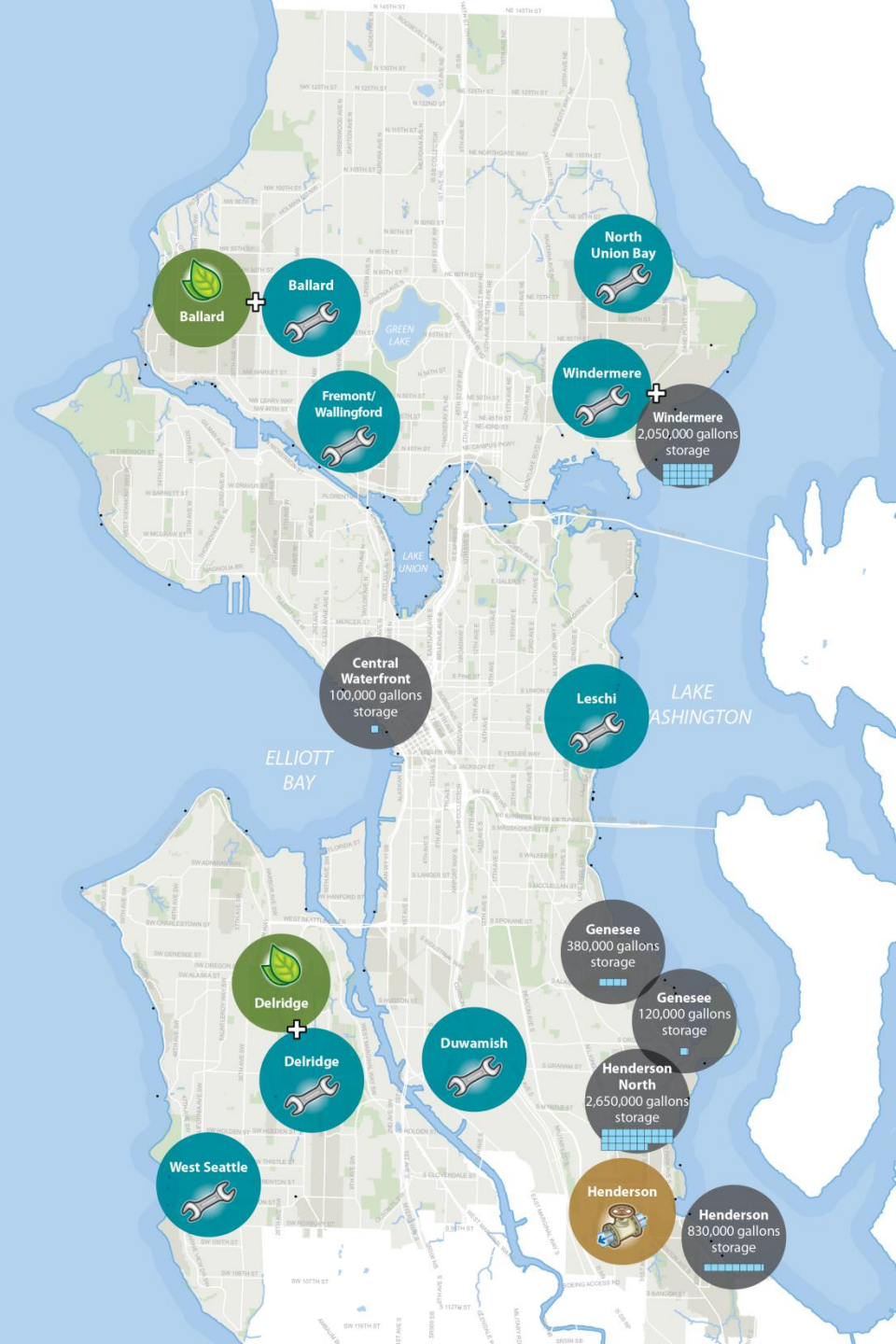
- Welcome and confirm meeting agenda
- Recommended alternative for addressing sewage overflows
- Public engagement approach for implementation

Recommended alternative for addressing sewage overflows

SPU has invested \$130M in Combined Sewer Overflow (CSO) reduction since 2010

-  Sewer system improvement
-  Sewer storage project
-  Conveyance / flow transfer
-  Green Infrastructure project

PUGET
SOUND



CSO Projects Only

OR

Recommended Alternative

**CSO
Projects**

Manage 50 million
gallons of sewage
and polluted runoff
per year by 2025

Cost:
\$500
Million

**CSO
Projects**

+

**Stormwater
Projects**

Manage 50
million gallons of
sewage and
polluted runoff
per year by 2030

Manage 100
million gallons
of polluted
runoff per year
by 2025

Cost:
\$600
Million

What is in the Recommended Alternative?

Sewer system improvements by 2020

Shared West Ship Canal Tunnel project with King County by 2025

5 storage projects by 2025

5 storage projects by 2030

3 Stormwater Projects



Integrated Plan Stormwater Projects



- Street Sweeping Arterials
- South Park Water Quality Facility
- Natural Drainage Systems Partnering



Why do an Integrated Plan?

- Cleaner water, faster
 - Treats an additional 100 million gallons of polluted runoff each year
- More “bang for the buck”
 - Stormwater projects are more cost effective than the deferred CSO projects
- Get a head start on potential stormwater treatment requirements
- Sewer system improvements could eliminate need for deferred CSO projects

Integrated Plan water quality benefits

| | Three Integrated Plan Projects | Six Deferred CSO Projects |
|---|--|---|
| Annually, the projects would treat: | | |
| | 108 Million Gallons of Stormwater | 2.4 Million Gallons of sewage and stormwater |
| Annually, the projects would remove: | | |
| Fecal Coliform Bacteria | 71 billion fecal coliform | 5.6 billion fecal coliform |
| Zinc | 100 pounds | 1 pound |
| PCBs | 0.2 pounds | 0.001 pounds |
| Phosphorus | 150 pounds | 15 pounds |
| Total Suspended Solids | 130,000 pounds | 1,100 pounds |

Shared West Ship Canal Tunnel is largest CSO project

- Combines four separate projects into one shared project with King County
- 2.7 mile underground tunnel between Ballard and Wallingford
- 15 million gallons of storage capacity
- Prevent 130 sewer overflows each year (about 50 million gallons)

Project planning underway with King County

- SPU and King County Consent Decrees encourage cooperation
- Constructed and operated by SPU under terms of a Joint Project Agreement
- Total Project cost about \$375 M



Benefits of Shared West Ship Canal Tunnel

- Fewer construction impacts than separate tank projects
 - Less open-trench construction
 - Less excavation and hauling
 - Fewer truck trips
- Reduces overflows from seven outfalls by about 95 percent
- Supported by our regulators and stakeholders
- Smaller footprint, leaving more land in the community

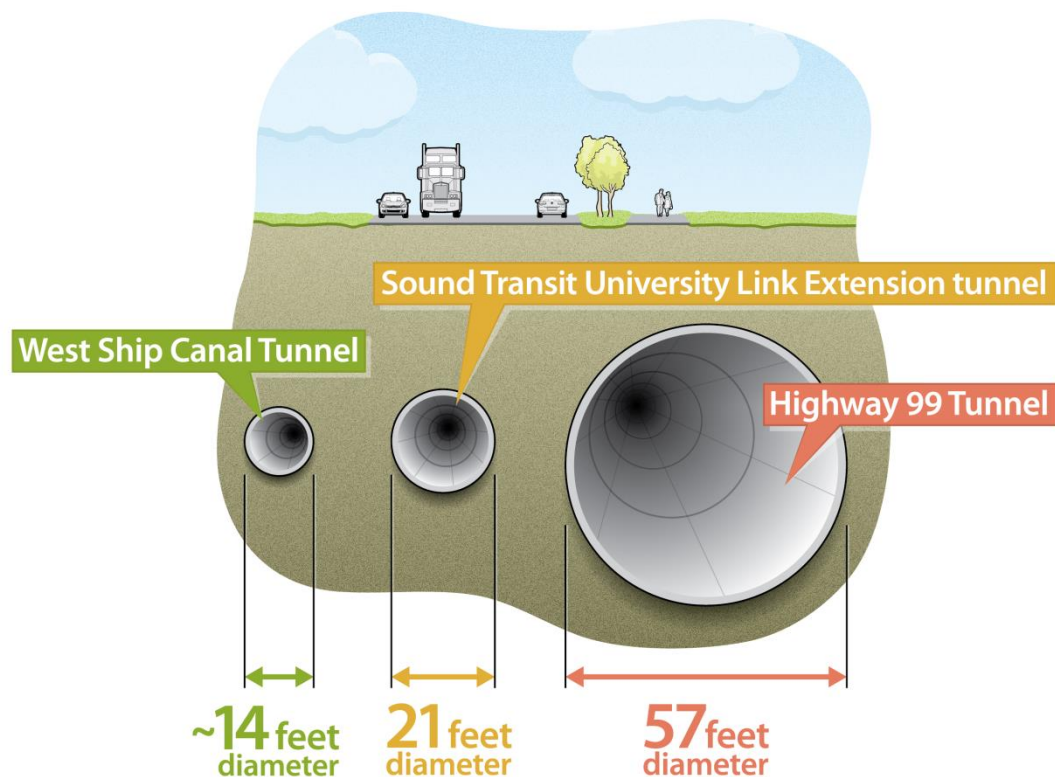
West Ship Canal requires more than 7 times the storage of Windermere CSO facility



| Project | Windermere CSO Storage Tank | West Ship Canal - 4 storage tanks | West Ship Canal Tunnel |
|-------------------------------------|-----------------------------------|---|---------------------------|
| Storage volume (million gallons) | 2 | 6/3/2/4 | 15.2 |
| Facility footprint (acres) | 0.7 | 4.3 | 1.3 |

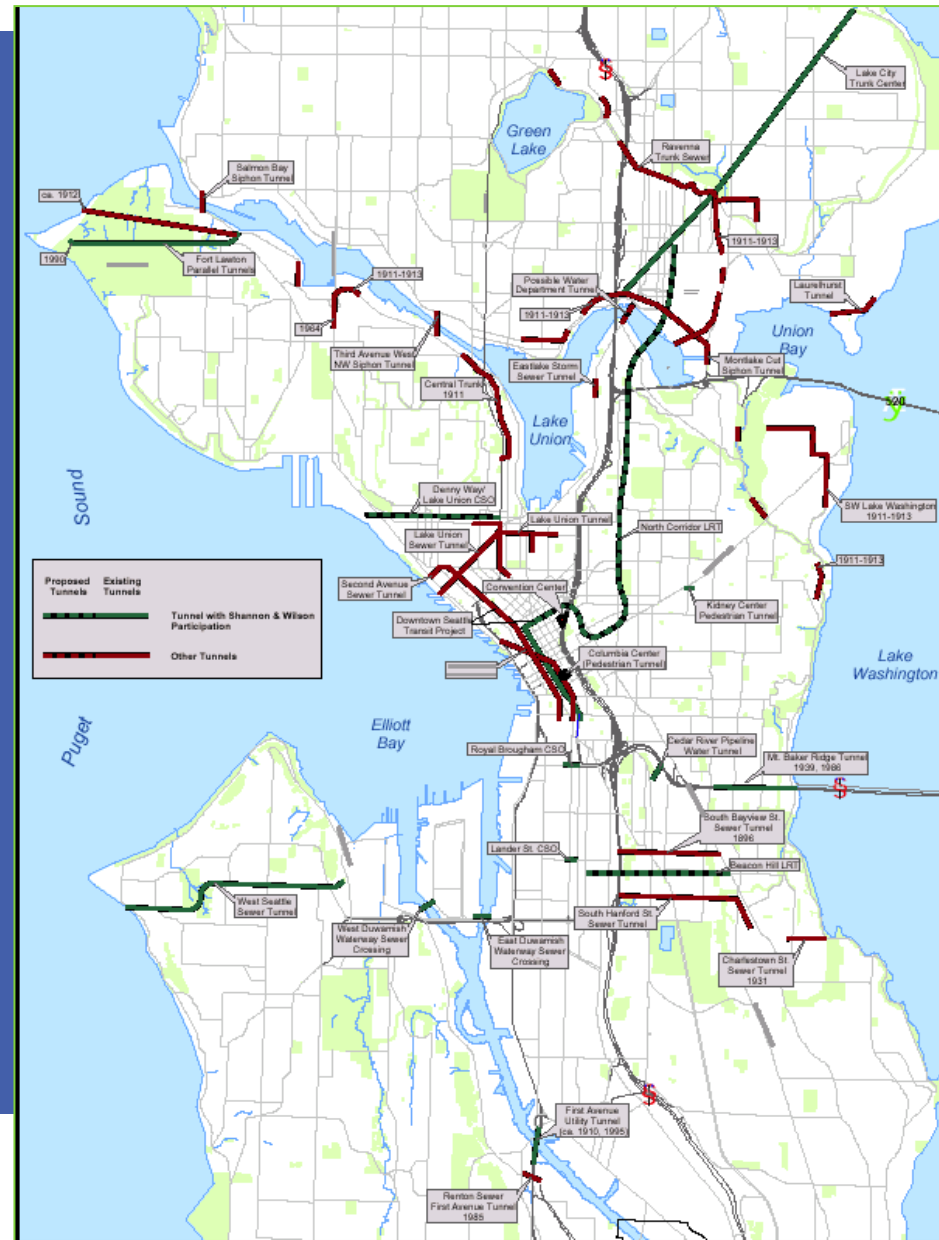
Comparison of relative tunnel sizes locally

- Size of Shared West Ship Canal Tunnel compared to other projects
 - 16 times smaller than the Highway 99 tunnel
 - 2.5 times smaller than the Sound Transit University Link Extension Tunnel



Local Seattle Tunnel Context

- Since 1880s, 150 tunnels (70+ miles) built for sewers, utilidors, transit
- Numerous successful projects
- Apply lessons learned from prior construction projects to mitigate risks



Public engagement approach

- Direct one-on-one outreach to stakeholders
- Initial Stakeholder Interviews through April, representing:
 - ✓ Ballard, Fremont, Wallingford, and Queen Anne
 - ✓ Range of sectors (Industrial, Retail, Neighborhoods, Bikes and Parks)
 - ✓ Key issues and organizations
- Stakeholder Public Involvement Plan in May
- Briefings and direct contact begin in June

Communications and Outreach *General* Questions

- Where do people get information about things that matter to your community?
- What is the best way to communicate with members of your community?
- What should we keep in mind when reaching out to this community?

Communications and Outreach *Project-Specific* Questions

- Key personal concerns?
- Larger community concerns?
- Potential risks?
- Who else should be involved?
- What do you want to know more about?
- Best ways to engage you going forward?
- Near term concerns?
- What haven't we asked?

Community Survey Input

Survey Background Information

- How compelling is this information?
- Anything unclear?
- Suggestions to improve flow?

Potential Design Features

- Preserve existing views or sightlines
- Site security
- Odor control
- Energy efficiency
- Environmentally responsible design
- Add trees or plants
- Reliable long-term sewer service
- Other

- Anything you would add to this list?
- Anything you would combine or remove?
- Which items are unclear?

Potential Construction Considerations

- Construction duration
- Safety
- Ground settlement
- Vibration
- Noise
- Traffic congestion
- Air quality
- Adequate parking
- Days and hours construction occurs
- Access to public transit
- Access to bike paths
- Access to home and/or business
- Other

- Anything you would add to this list?
- Anything you would combine or remove?
- Which items are unclear?