

Seattle City Council Transportation and Seattle Public Utilities Committee

SPU Winter Weather Response – Dec. 21/Jan. 22

February 1, 2022



Recent Winter Weather Challenges

Solid waste service interruption and Recovery

- City-wide
- Caused by snow and persistent ice
- December 26- January 15

Flooding and sewer backups

- South Park
- Caused by 10-year storm event plus King Tide
- January 7

Landslides

- City-wide
- Caused by precipitation placing Seattle over Landslide Threshold
- January 7 - 10

Solid Waste Service Interruption Summary

- Most waste pickups postponed during the week of Dec 27-Jan 1
- SPU & Contractors work to maximize services, but with a focus on safety to public, property, and staff
- SPU Stations stayed open – except for brief closure Sun Dec 26 and early am on Dec 27



Service Interruption Recovery

- Most scheduled services recovered during the week of Jan 3-8
- Overtime routes recovered some of 'off-week' postponed every other week recycling, but most (80%) were delayed to next scheduled pickup.
- All services were fully recovered by end of secondary recovery week Jan 10-15



SPU Activity Summary

- Coordinated recovery with vendors & departments, confirming priorities & aligning impacted facilities.
- Deployed steady and robust customer alerts and communication on service status and impacts.
- Provided free tips at SPU stations for customers missed twice.
- No charges for extra set-out during recovery weeks.
- Performance penalties for any delay in recovery during safe conditions. Minor payment adjustment for postponed services.

What to Do with Your Collection Carts in Case of Winter Weather

Set them out & leave them out the following day



If they haven't been collected by the end of the following day, bring them in & set them back out on the next collection day

*You can set out 2x as much for no extra charge



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Response Assessment

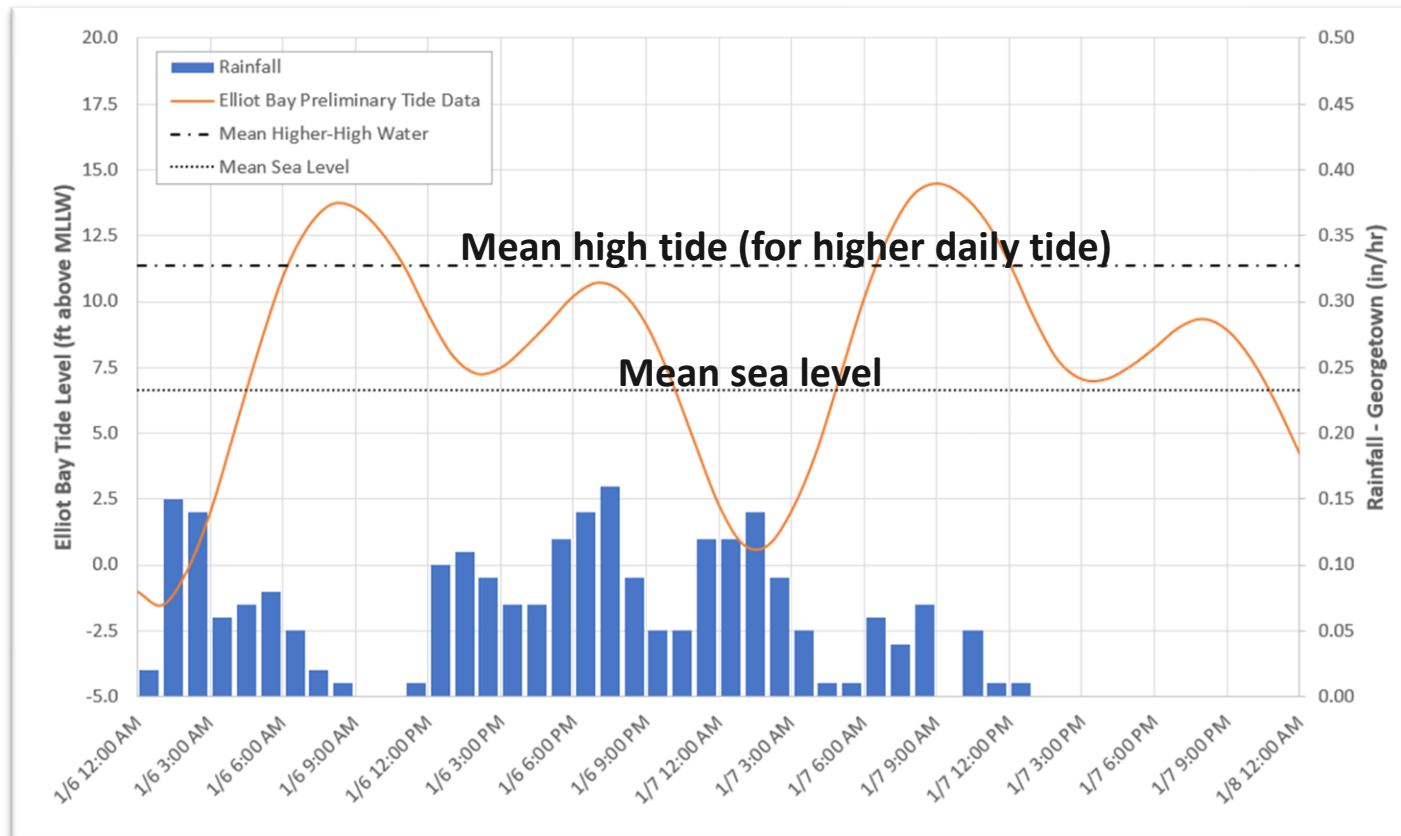
- No injuries to staff or public, with minor property incidents.
- Strong contractor staffing and overtime, to recover 2 weeks of waste in 1 week, despite covid quarantines and other January challenges.
- Major efforts by frontline staff collecting and transferring double volumes, peak holiday recycling and greens, and wet loads.
- Stations and processing facilities challenged too – including heavy volumes at recycling plants and disposal container delays from landslides.
- SPU successfully updated customers, through text and email alerts, social media and online postings and responses, local media, and other platforms.

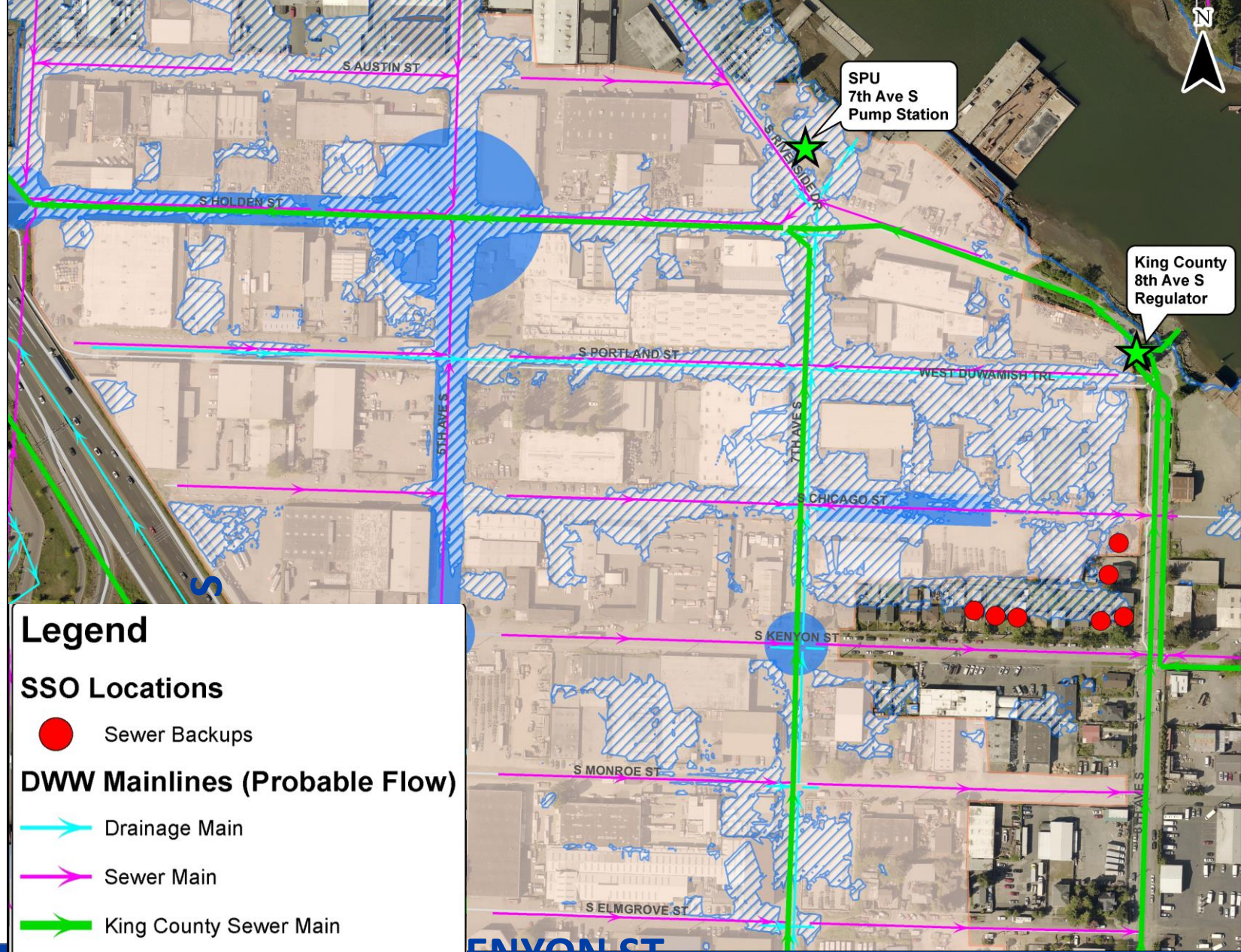
Next Steps

- Continue to **enhance customer communication** across multiple platforms including social media and the Recycle It App.
- Strengthen **customer support on delayed every other week recycle**. Some can be collected with overtime routes on the 'off-week', but with a full week interruption, many are serviced as double volumes, on next regular collection.
- Internal confirmation on **customer support policies**, including free station and drop-off options for overflow.

Snow melt + Storm + King Tide

January 1-7: Drainage and Wastewater impacts





Legend

SSO Locations

- Sewer Backups

DWW Mainlines (Probable Flow)

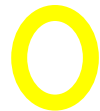


- ↗ Drainage Main
- ↗ Sewer Main
- ↗ King County Sewer Main

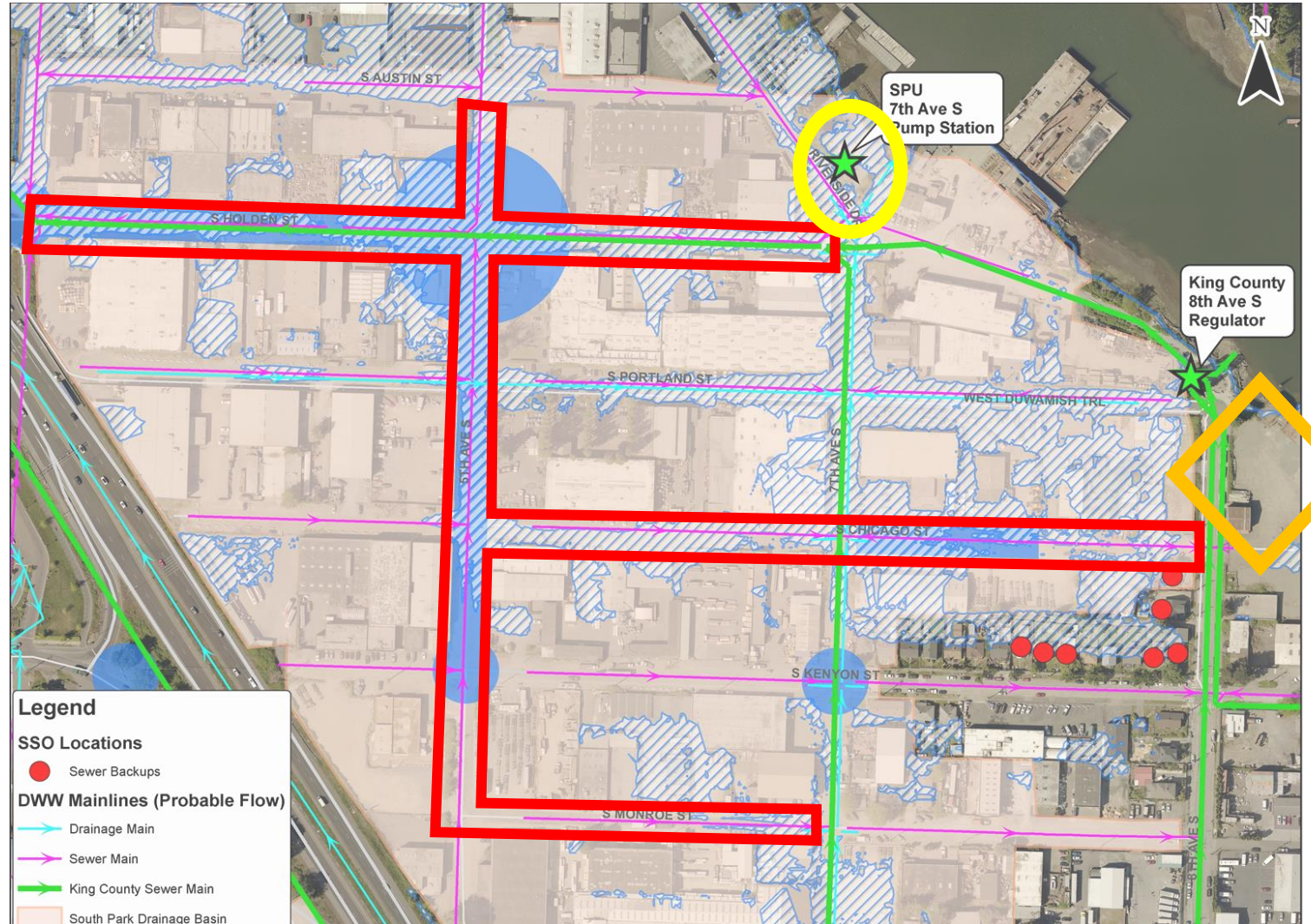
- South Park Drainage Basin
- ▨ High Tide Inundation Area
- SPU Crew Observed Flooding

8th AVE S

Capital Investments

Major South Park flooding reduction investments: \$100+M

-  Pump station (2022)
-  Drainage and roadway improvements w/SDOT (2023)
-  Water quality facility (options analysis, potential site)



Next Steps

- Improve preparedness and response in partnership with community
- Resilience District: Addressing infrastructure gaps and sea level rise
- King County partnership: Sewer capacity assessment and improvements
 - Wet weather preparedness plan for South Park
 - Operational and capital improvements

Landslide Coordination and Response

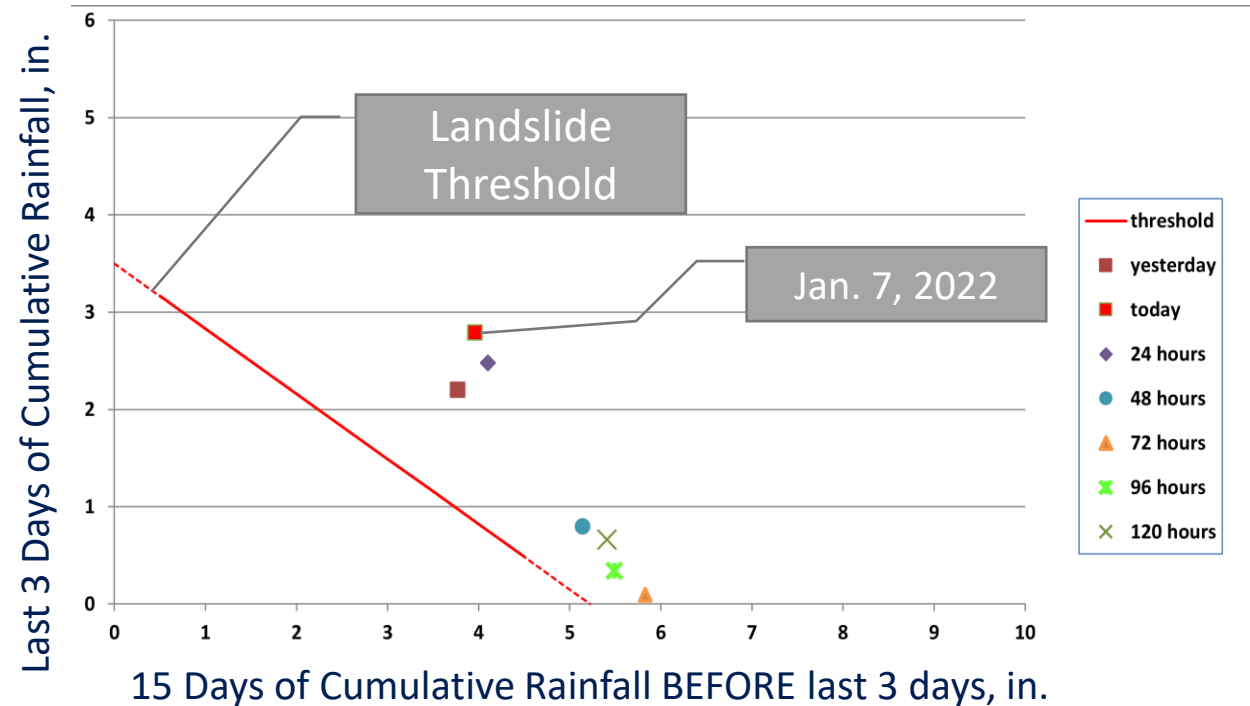
Multi-department activities:

- **Hold annual City-wide Landslide Preparedness Workshop**
 - SPU organizes; SDOT, SDCI, SCL, Parks, Office of Emergency Management (OEM), and Law attend.
- **Monitor “landslide threshold” to ensure on-call response personnel are available**
 - SPU sends weekly status e-mail during wet months
- **Respond to reported landslides**
 - Each department researches location to determine potential impacts, if a site visit is warranted, what coordination is needed, and what department will take lead
- **Log landslide in OEM’s web-based tool (WebEOC)**



2022 Landslide Prediction and Response

- **Friday, Jan. 7, 2022 (am):** SPU emails landslide responders about high slide risk warning through the following week
- **Jan. 7 (pm) – Jan. 10, 2022:** Seven slides reported including 2400 Perkins Ln W.
 - None involved SPU assets or property; other depts. take lead
 - SDCI leads 2400 Perkins Ln W response; “red-tagged” house = unsafe for occupancy



SPU's Landslide Program

We mitigate and monitor Landslide-Prone Areas (LPAs) where SPU assets are at risk.

- Typical mitigation measures:
 - Improve stormwater conveyance
 - Strategically install subsurface horizontal drains
- Monitoring methods:
 - Regular site visits
 - Measure slope deformation over time
 - Groundwater observation wells; flow meters on drain pipes
 - Future: Ground deformation measurements via satellite (InSAR)

Questions?



