Joint Meeting of the Water System Advisory Committee (WSAC) and Creeks, Drainage & Wastewater Advisory Committee (CDWAC)
November 14, 2018 Meeting Notes
Seattle Municipal Tower, 700 Fifth Avenue
Room 4901
5:30 pm – 7:30 pm

WSAC Members	Present?	SPU Staff & Guests	Role
Joel Carsley	Y	Natasha Walker	CAC Program Coordinator
Steven Cole	Y	Kathy Curry	Water System Policy Liaison
Paul Reed	N	Sheryl Shapiro	CAC Program Manager
Rodney Schauf	Y	Alex Chen	Division Director, Water Planning and Program Management
Teresa Stern	N	Wylie Harper	SPU Drinking Water Quality Director
Michael Godfried	Y	Bill Heubach	SPU Water Planning & Program Management Division
Kat Dej-Panah	Y		
Wendy Walker	On leave	**Guests**	
Ky Lewis	Y	Nico Onoda-McGuire	Guest
Annie Saunders	N	Kelsie Blanthorn	Guest
		Angella Mickowski	Guest
CDWAC Members	**Present?**	Imani Martinez	Guest
Colum Lang	N	Robert Smith	Guest
Gary Olson	N	Nina Page	Guest
Mariela White	N	Isabel Carrera Zamanillo	Guest
Michael Williams	Y		
Maria McDaniel	Y		
Thy Pham	N		
Andrew Schiffer	N		
Lisa Mikesell	N		

1. **Regular Business**
   - WSAC Chair, Rodney Schauf, opened the meeting at 5:36 PM.
   - Meeting notes from September WSAC meeting were reviewed and approved.
   - Rodney indicated emergency exits and exit procedures.

2. **CAC Program Updates**
   - **Nomination Process for 2019 Co-Chairs:**

a. November 14 CDWAC/WSAC Meeting: Nominations for 2019 Officers open. Natasha will email members on November 15 about nomination process. Members may self-nominate.
b. November 19: Nominations due
c. November 20-27 Kathy and Sheryl will contact nominees to answer questions and confirm willingness to serve.
d. December 6 Nominee statements are due
e. December 12 CDWAC/WSAC Meeting: Elections will be held (private ballot) with absentee ballot provided in advance for those calling in or absent.

- **Upcoming December combined WSAC/CDWAC meeting** will involve time for 2018 reflections.

3. CRP Update from the Chair

WSAC Chair, Rodney Schauf, provided a brief update on the work of Seattle's Customer Review Panel (CRP). Schauf gave an overview of the SPU Strategic Business Plan process, and the CRP's role relative to that Plan. The CRP met for the first time in October. We expect quarterly updates going into the future as the CRP meets.

4. SPU Drinking Water Quality Update

Wylie Harper, SPU Drinking Water Quality Director, provided an update on SPU's water quality and recent sampling results. Harper began with an overview of PFAS and the complex history of national regulation and guidelines around health advisory levels. Per- and polyfluoroalkyl substances (PFAS), also known as perfluorinated chemicals (PFCs), are a large group of man-made fluorinated organic chemicals that have been used since the 1950s in firefighting foams, oil and water repellent products, and surfactants. PFAS can be released to the environment by manufacture and use of items that have PFAS in them. Harper reviewed the testing methodologies and results, as well as public notice requirements.

- **A CAC member** asked if PFAS could enter the water distribution pipes further downstream, given that SPU tests their water primarily at the source of the Tolt and Cedar Watershed. Harper explained that the water distribution system is pressurized, so it is highly unlikely.
- **A guest** asked what kind of contaminant removal technologies exist for PFAS. Staff responded that a variety of technologies exist, including reverse osmosis and Nano-filtration. They noted that some utilities in Washington state have been gearing up to provide that kind of filtration. CAC members discussed how cost-prohibitive these technologies might be for those relying on well systems. A CAC member inquired about at-home filters to remove these contaminants. Staff responded that sophisticated units may be able to remove PFAS.
- **A guest** asked what type of industries are closely correlated with these contaminants. Staff responded that there are many manufacturers who use PFAS-containing products, so it is hard to pinpoint a particular industry.

5. SPU Seismic Study

Bill Heubach from SPU's Water Planning & Program Management Division provided an overview of SPU's most recent Water System Seismic Study. Heubach began by reviewing the critical role that water systems play before and after seismic events and showing how water systems have performed in recent

catastrophic earthquakes. In recent catastrophic earthquakes, getting enough water to fight post-earthquake fires and restoring water service have been significant issues.

Heubach gave a history of SPU's seismic mitigation program, including the seismic upgrades that have been made. Since 1990 when SPU's first comprehensive seismic vulnerability assessment was completed, the shallow earthquake faults such as the Seattle Fault were determined to be much more active than previously thought so seismic design requirements have increased. Although water systems have continued to perform poorly in earthquakes, new types of earthquake-resistant pipe that will help lessen damage is now available in the United States.

Heubach outlined the project goals of the Seismic Vulnerability Assessment: assess the seismic vulnerability of water system facilities, use hydraulic modeling to assess overall system performance, develop system post-earthquake performance goals, develop mitigation recommendations and planning level cost estimates, and develop seismic design standards for new pipelines.

Heubach briefly discussed the scenarios used in the assessment, and reviewed the seismic hazard map, indicating liquefaction susceptibility zones and highlighting where SPU assets exist within those zones. He also gave an overview of the facility and system seismic vulnerability assessment findings. Lastly, he discussed the mitigation approaches developed as a result of the study findings.

- **A CAC Member** asked if there are any concerns over the new pipe material impacting water quality. Staff responded that the lining of the pipe is the same material as before, which is NSF approved.
- **A guest** asked if the previous/non-earthquake resistant pipes leaked in the tube of the pipe or at the connections. Staff responded that both could happen; that joints can pull apart, or if joints are constrained than the pipe itself could break.
- **A guest** asked if a Seattle Fault earthquake is more likely to cause severe shaking. Staff responded that yes, earthquakes caused by the Seattle Fault would result in the highest intensity shaking and could cause surface ruptures that could be 3 meters tall and more gradual uplift of over 6 meters high.
- **A guest** asked if structural seismic requirements / building codes are based on vertical or horizontal acceleration (they were referencing the Mexico earthquake example). Staff responded that building codes cover both horizontal and vertical acceleration.
- **A guest** asked if there are regulations in place to require reinforcement of older buildings. Specifically, they were interested in buildings in high risk areas in the Seattle Fault Zone. Staff responded that when substantial modifications are made, seismic upgrade may also be required. Otherwise seismic upgrade is currently not required. A CAC member added that it was a lot of older, masonry buildings that seemed to fail during the Nisqually earthquake, indicating seismic vulnerability.
- **A guest** asked about California's new earthquake alert system. Staff responded that an alert system is coming to Washington soon, with trial users already in place. For a Cascadia earthquake, there could be an alert that provides more than a minute of warning for Seattle. For

a Seattle Fault Zone earthquake, there may be essentially no warning since the fault rupture occurs in Seattle.

- **A CAC Member** asked about the impact to power for pumping drinking water, in the event of an earthquake. Staff responded that Seattle is fortunate that most areas do not rely on pumping but that the pumps we have would be impacted, and SPU will be looking at ensuring we have enough generators to supply power to those pumps that are critical.
- **A CAC Member** referenced the liquefaction demonstration video (https://www.youtube.com/watch?v=-eH5fh0YEuQ). They asked how the simulation may have differed with bedrock, instead of sand. Staff responded that a lot of the highest risk areas are where softer fill dirt has been placed on top of harder land. When they built the stadium, they drove piles deep into the stronger (harder) ground. He explained that you can build safe structures in those areas, but they must be supported by the harder ground. He added that water distribution pipelines are, on average, 4 feet deep, so they usually exist in the softer soils.
- **A CAC Member** asked other members to share where they keep emergency supplies. Members responded: various rooms in the house, closets, car trunk. They also noted having multiple fire extinguisher locations.

6. Debrief of 10/24/18 All-CAC Meeting

- **A CAC Member** shared that it was interesting to hear about resiliency from an SPU perspective. They were impressed by the breadth of the risks SPU is examining, from climate change to earthquakes to terrorism. They also felt that the presentation from CEO/General Manager, Mami Hara, was enlightening; specifically, how SPU is managing growth and City changes.
- **A CAC Member** shared that "as always, it was great to hear from Mami." They also appreciated having an interactive activity; they said it was good to walk around the room while thinking about what they would prioritize.
- **A CAC Member** shared that as a follow-up, they would be interested in exploring cyber threats to the Utility.
- **A guest** shared that as a follow-up, they would be interested in how we are spreading the information regarding community centers/hubs, so those impacted know where to go in an emergency.

7. Community Insights, Around the Table

- **A CAC Member** shared about Carkeek Park salmon spawning in the river Piper's Creek. They expected them to viewable the first two weeks of December. They also shared that they had heard Thornton Creek had Chinook spawning for the first time in 8 years.
- **A CAC Member** shared about a water-related charity event they were hosting on Saturday, December 8, at Paragon in Queen Ann. Information about the event will be emailed.

Adjourned 7:40 PM