

Environmental Surveillance for SARS-CoV-2

Sampling at King County Wastewater
Treatment Plants



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 **King County** | Resource Recovery

 **King County**
Department of Natural Resources and Parks
Wastewater Treatment Division

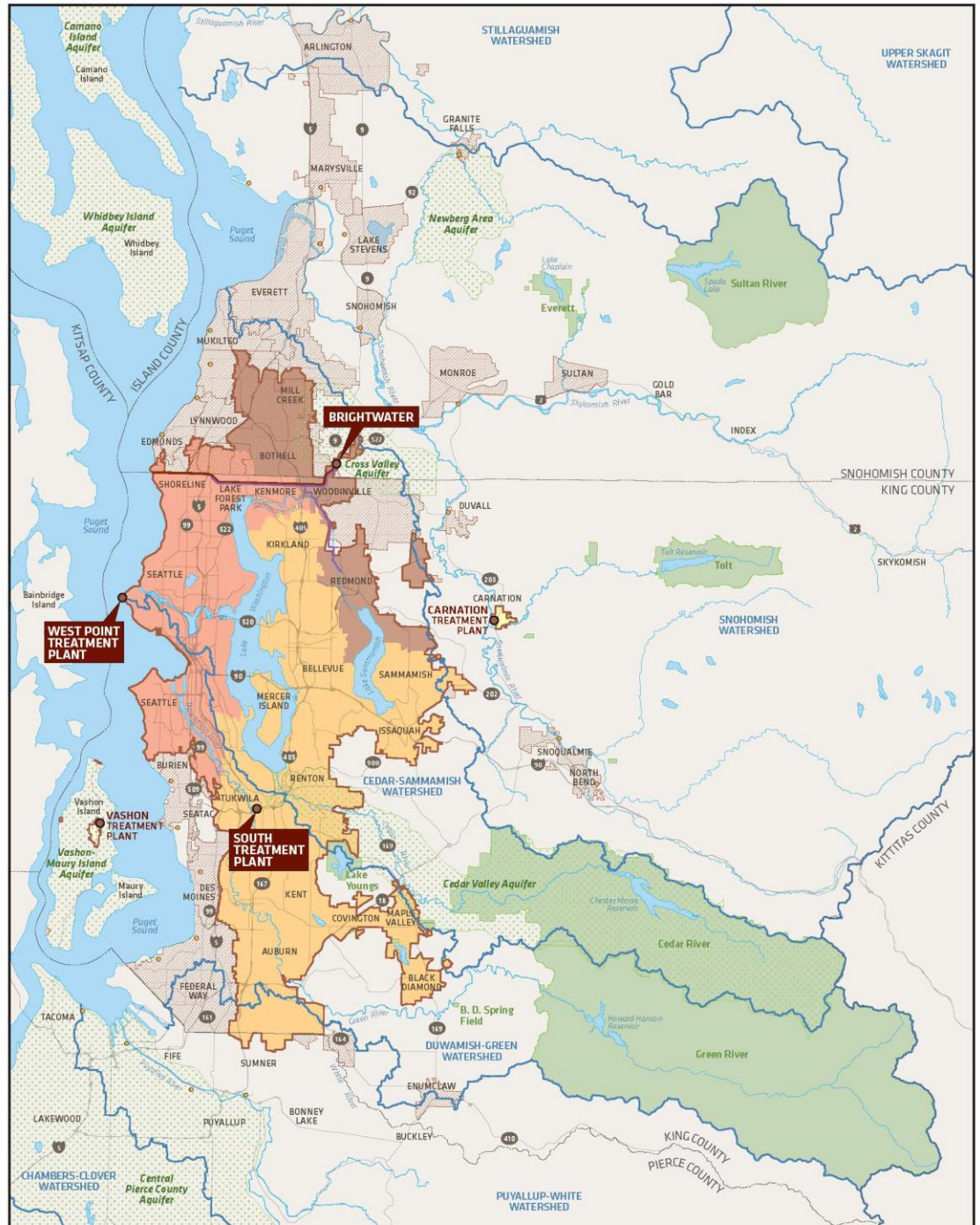
King County Wastewater Service Area

Metro Seattle

- 1.7 Million served
- 34 local cities / sewer districts

Treatment Plants

- West Point – 70 MGD
- South Plant – 65 MGD
- Brightwater – 18 MGD



- University of Washington DEOHS (Scott Meschke)
 - Raw Wastewater Sampling Weekly since March 2020
 - Ongoing method development
 - Qualitative results (presence/absence)

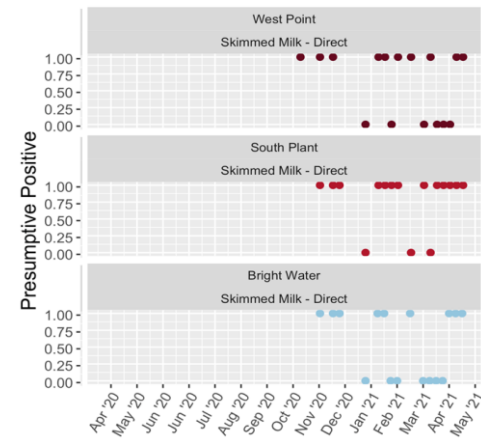
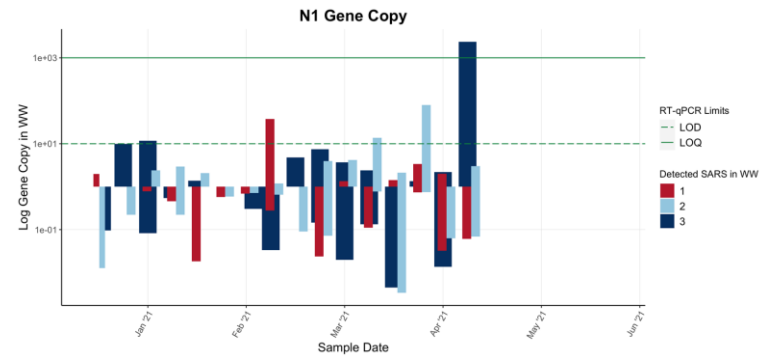
- Southern Nevada Water Authority (Dan Gerrity)
 - Primary Effluent Sample in March 2020
 - Qualitative result (presence/absence)

- University of Arizona WET Center (Walter Betancourt)
 - Raw Wastewater Sample in April 2020
 - Qualitative result (presence/absence)

Early Wastewater Sample Requests

SEWER SURVEILLANCE SUPPORT

- Informal Working Group
- Periodic Data Presentations
- Sampling Support
- Local Technical Resource



Graphic Source: Professor Scott Meschke

HHS COVID-19 Wastewater Monitoring Program

- Weekly sampling June – August
- Sampling at three regional treatment plants
- Sample analysis/reporting by Biobot Analytics

Brightwater Wastewater Treatment Plant

Sample collection date: August 2, 2021

SARS-CoV-2 virus in wastewater

DETECTED

Virus concentration
(copies per liter of sewage)
690,254

Normalized* virus concentration
(copies per liter of sewage)
264,434

**Normalized virus concentration value is derived by adjusting the raw virus concentration to the PMMoV fecal marker in order to account for dilution*

Normalized virus concentration over time



Overview of normalized virus concentration levels

State-level mean of samples
(collected in the past 6 weeks)

lower higher

Color indicates normalized virus concentration level

Your state outlined in red



Participation in Phase 2 of HHS/CDC Program

SEWER SURVEILLANCE SUPPORT

- Continued Sampling Support for UW DEOHS Work
- Participation in Wash State DOH Working Group
- Information Sharing with Public Health – Seattle & King County
- Serving as SME on Regional Conveyance System



Current Status

SEWER SURVEILLANCE SUPPORT

Questions?

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kingcounty.gov/Technology-Assessment

