Overflows at Pump Stations and Other Wastewater Facilities: Causes and Responses

Kamuron Gurol, Director

King County Wastewater Treatment Division

Regional Water Quality Committee

September 7, 2022

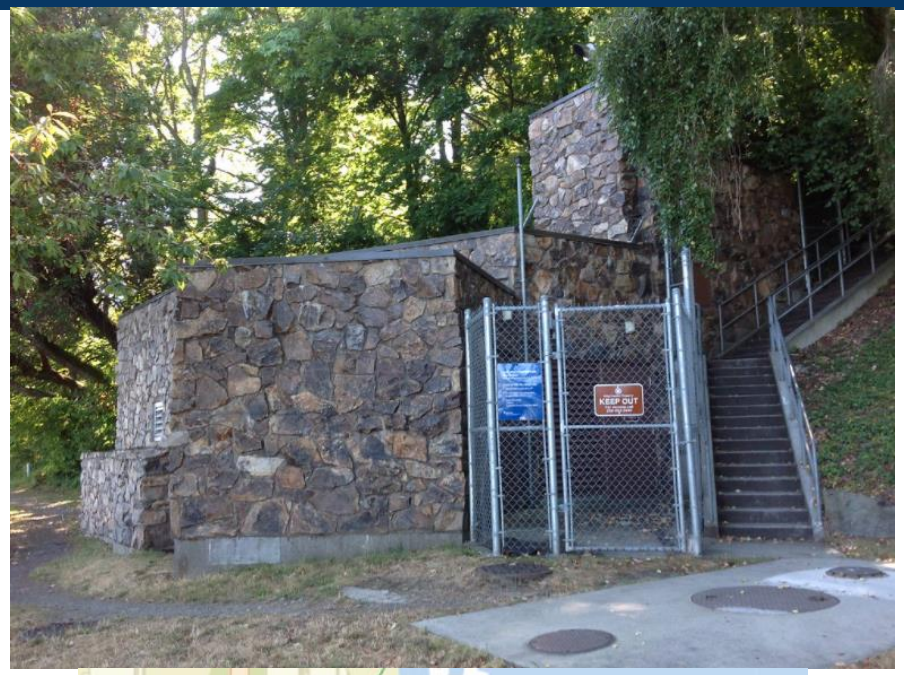
King County

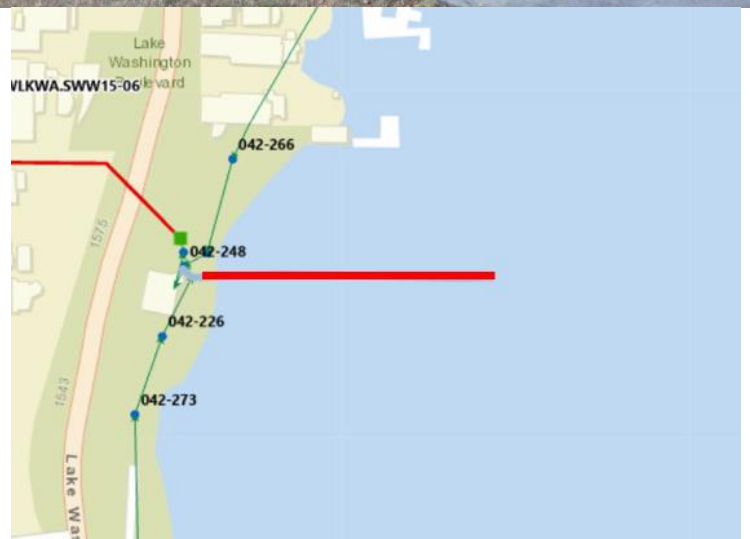
Department of Natural Resources and Parks
Wastewater Treatment Division

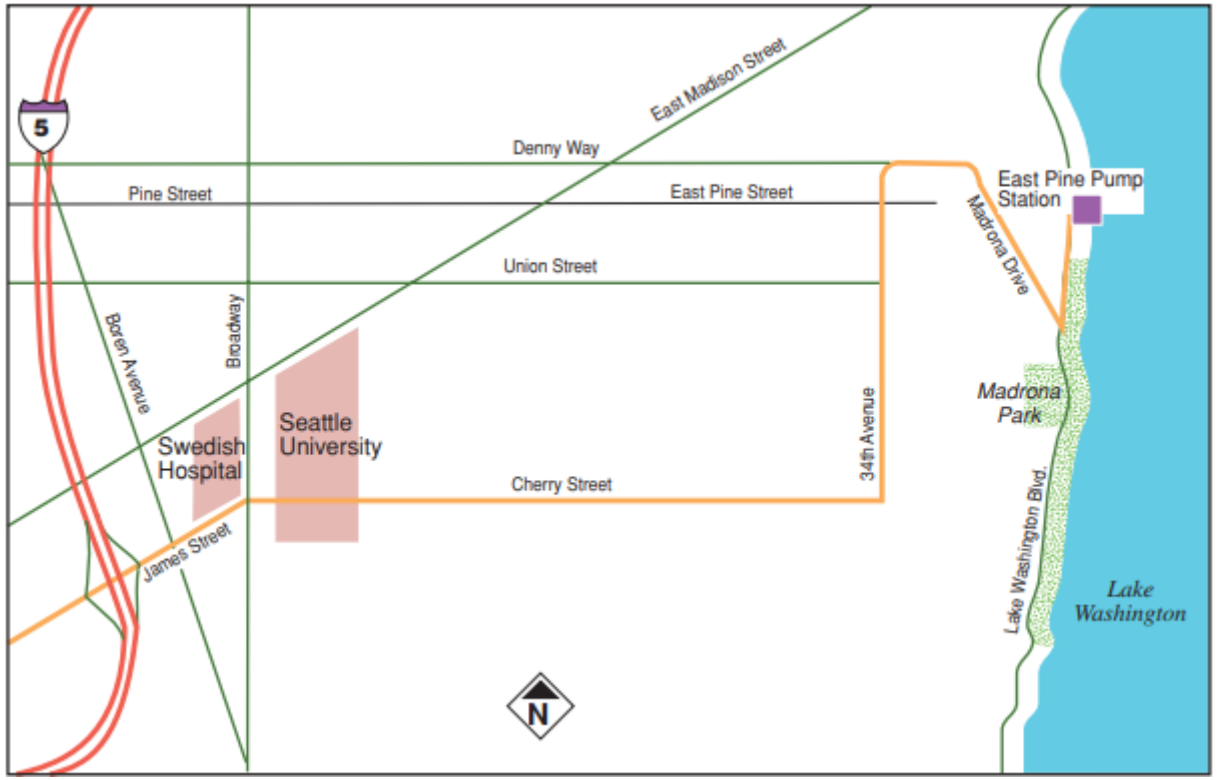
Overview for Today

- Recent example at East Pine Pump Station
- Actions to prevent recurrences

Background on East Pine Pump Station







King County
Department of Natural Resources and Parks
Wastewater Treatment Division

Cause of 8/22/22 East Pine Pump Station Overflow

- Seattle City Light power disruption shut off pumps
- Sensor signaled low coolant level for generator engine
- Low coolant alarm did not allow generator to start
- Operator arrived to start generator, restoring power to the pumps
- Total time of 44 minutes and estimated volume of 15-20k gallons

Steps following an overflow event

- Immediately notify regulatory agencies, begin coordination with Public Health
- Post closure signs at nearby beaches as a precaution
  - Locations coordinated with Public Health
  - Notify neighbors and those using the area
- Samples taken to ensure Water Quality standards are met before reopening the beaches

Preventing recurrences

- Perform root cause analysis and develop actions to prevent future recurrences
- Identify sensor that failed and address at all pump stations with this type of generator
- Implement high priority alarm for operator dispatch
- Enhance regular inspections for this issue

Actions to Prevent Overflow Incidents

- Applying lessons learned from previous events
- Testing of critical backup systems
- Continuing to improve preventative and preemptive maintenance
- Evaluating systems and equipment for potential component failures
- Improving agency coordination – system planning, capital work, maintenance and operations

Thank You

Kamuron Gurol

Director

King County Wastewater Treatment Division

kamuron.gurol@kingcounty.gov

King County

Department of Natural Resources and Parks
Wastewater Treatment Division