

Ballard NDS Phase 1 Winter/Spring Controlled Flow Testing

Dates : April 9-12, April 16&17

Postconstruction flow monitoring for the Ballard NDS Phase 1 project consists of 1) traditional continuous flow monitoring of the combined sewer system (CSS, piped system), and 2) controlled flow tests on one side of the roadside rain garden blocks located on 30th Avenue NW and 28th Avenue NW.

The controlled flow tests include simulating a large CSO causing storm by pumping water into the rain gardens using a flow meter, fire hose, and hydrant to measure how much water is absorbed.

The objectives of the post-construction flow monitoring controlled flow tests are as follows.

- Adequately and accurately characterize the hydrologic performance of the roadside raingardens for the CSO design storm event(s) specific to the Ballard basin by compressing and replicating the design storm flows (peak timing, volume and pattern) with applied inflow water from a hydrant and collecting continuous level and velocity data in the downstream CSS during the simulated events.
- Capture pre- and post-construction data for each of the simulated storm events.
 - The pre-construction data will be captured by running the simulated storm flows down the street and bypassing the rain gardens to simulate the runoff without the interception by the rain gardens.
 - The post-construction data would be captured by running the simulated storm down the street and allowing it to enter the rain gardens. These tests will be conducted on consecutive days to capture both dry (day one) and wet (following days) antecedent moisture conditions more typical of CSO events.
- Determine saturated and unsaturated infiltration rates for the rain gardens and other parameters necessary to calibrate modeling. This is done with a surface meter (miniTroll) to measure ponding depth.
- Gather information about groundwater levels to provide additional information to inform model calibration and better understand how these cells are working. This is accomplished through piezometers in the cell and on 28th Avenue NW, in the maintenance holes as well.