

72 - Stormwater Monitoring or Stormwater-Related Studies

In accordance with S8.A, this summary provides a brief description of the stormwater monitoring or related monitoring studies conducted during 2014 by or for the City outside of the permit required monitoring:

Water Quality

Pollutant Source Control Sampling - This monitoring was conducted by SPU in support of and associated with the Water Quality Hotline, IDDE, and business inspections for source control from existing development.

Lower Duwamish source sediment samples - In 2014, SPU continued to collect source sediment samples (i.e., catch basins, inline sediment traps, and inline grab samples) to support the source control program for the Lower Duwamish Waterway superfund site. In 2014, SPU took 102 samples, which were analyzed for the LDW contaminants of concern, including TOC, SVOC's, TPH-Dx, select Metals, PCB's, Grain Size and occasionally site specific parameters, such as pH, additional metals, VOC's.

Street Sweeping

The objective of the Street Sweeping for Water Quality Program (SS4WQP) is to cost-effectively reduce the pollutant load carried by stormwater runoff from Seattle's streets to receiving water bodies. The purpose of the monitoring program is to collect & evaluate performance metric data in order to (A) provide information for regulatory requirements for solids disposal, (B) to track program performance, and (C) for developing a baseline for future effectiveness studies. Performance metrics currently being collected include mileage swept (street curb miles within a combined [sanitary] basin, and miles within an MS4 basin), sweeping velocity, solids load removed, cost, and sweeping solids chemistry (metals, SVOCs, PCBs, BTEX, grain size, total solids, Nutrients (Tot Phosphorous, TKN), total organic carbon, pH, NWTPH-Dx/Gx, BOD/COD, Fecal coliform).

Thornton Creek

Several concurrent efforts were conducted as part of the on-going SPU Thornton Creek Bacteria Investigation (TCBI) to locate and address sources of bacteria in Thornton Creek. Continuation of focused in-stream E.coli sampling has identified the South Fork of Thornton Creek as the section of stream where most of the bacteria load originates and is, therefore, the section of stream where most of the source identification efforts are focused.

Seattle City Light inspections

Washington Department of Ecology (Ecology) conducted stormwater inspections with sampling at City Light's South Service Center and Duwamish Substation on December, 11 and December, 16 2014, respectively. The inspections were conducted by Rachel McCrea, Ecology's Municipal Stormwater Specialist and Lead Water Quality Planner for the Lower Duwamish, as part of Ecology's efforts to control sources of pollutants to the Lower Duwamish Waterway Superfund cleanup site. Sediment and water samples were collected by Ecology's consultant Leidos. Sediment samples were collected from selected catch basins at SSC and trench drains at the Duwamish Substation as there was insufficient sediment in the Substation catch basins to collect samples. Water samples were collected from catch basins and/or oil water separators. Split samples were provided to City Light. These samples were submitted to Onsite Environmental Inc., an Ecology accredited laboratory, located in Redmond, WA.

Sediment samples provided to City Light were analyzed for PCB Aroclors, volatile organic compounds (VOCs), semi-volatile organics (SVOCs), diesel-range and gasoline-range total petroleum hydrocarbons (TPH), total metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc), total solids, and total organic carbon (TOC). Water samples provided to City Light were analyzed for SVOCs, total metals, alkalinity, anions, TOC, dissolved organic carbon (DOC), and total suspended solids (TSS). A summary of City Light's analytical results is available upon request.

In addition to the analytes above, based on the chain-of-custody prepared by Leidos and provided to City Light, Ecology's samples were also to be analyzed for PCB congeners and dioxins/furans. City Light understands that Ecology expects to receive a report from Leidos mid-year summarizing the analytical results and that a copy of the report will be provided to City Light. These results will be summarized in the 2015 Annual Report to ensure compliance with S8.A (i.e., if stormwater-related investigations, conducted by other entities were reported to the Permittee during the reporting period, a brief description of the type of information gathered shall be included in the annual report.)