

4.8 Stormwater/ Water Quality

Water resources consist of surface drainage, stormwater collection systems, and groundwater. This section discusses potential water quality impacts from the Center City Connector as a result of any changes in impervious surfaces and how the Center City Connector Project would meet the federal, state, and local regulations that address stormwater. Groundwater is addressed in Section 4.11, Geologic and Soil Resources.

The Center City Connector is located in downtown Seattle, where stormwater runoff generally flows in sheets off the roadway pavement to the roadside curb and gutter. The runoff is collected by inlets or catch basins and conveyed to sewer or storm drain systems. The project area consists of nearly 100 percent impervious surface. The study area is limited to the area that may be drained from the proposed project limits of the Center City Connector and associated project components, including the proposed OMF expansion sites.

There are no exposed surface waters along the alignment, and the project does not lie within any floodplains. The closest receiving waterbody for stormwater is Elliott Bay, which is part of Puget Sound and is located two to three blocks away from most of the proposed project alignment

Generally, stormwater runoff is collected by inlets and catch basins that enter the combined pipe sewer system. The runoff combines with sanitary sewer flows and is treated at the Westpoint Wastewater Treatment Plant, where it is discharged to Puget Sound. During occasional large storm events, the public sewer system may overflow into Puget Sound. This is categorized as combined sewer overflow (CSO). The storm drainage system for one small area, the block between University Street and Union Street, drains into the Denney Way CSO basin before discharging into Elliot Bay. Hydrogeologically, the groundwater in the study area around the South Lake Union OMF and access tracks drains to South Lake Union.

Applicable Regulations

Federal:

- Sections 401 and 402 of the Clean Water Act

State:

- Washington State Water Quality Standards
- Washington State Department of Ecology *Stormwater Management Manual for Western Washington*
- National Pollutant Discharge Elimination System Program's General Permit for Stormwater Discharges Associated with Construction Activities

Seattle:

- Seattle Municipal Code, Section 22.805

Pollutant-Generating Impervious Surface

Impervious surfaces that are considered a significant source of pollutants in stormwater runoff. Such surfaces include those that are subject to vehicular use; industrial activities (as defined in the Ecology Manual); and storage of erodible or leachable materials, wastes, or chemicals; and that receive direct rainfall.

4.8.1 Impacts

4.8.1.1 No Build Alternative

The No Build Alternative would not create additional stormwater flows or degrade water quality because the area consists substantially of impervious surface and stormwater would continue to flow into the CSO basins or equivalent storm drain basins. The No Build Alternative would not reduce vehicle miles traveled within the study area, which is projected to increase by 3.6 percent from 2014 through the 2035 planning horizon (PSRC, 2014). More traffic can increase the amount of pollutants, such as oils and heavy metals that degrade water quality. Roadway surfaces are referred to as pollutant-generating impervious surface (PGIS).

4.8.1.2 Locally Preferred Alternative

Operational Impacts

The LPA stations, trackway, and access/turnback track, as well as both OMF expansion sites, would be in roadway right-of-way or in areas of existing impervious surface. In general, the exclusive transit lanes and the stations would be non-pollutant-generating surfaces because the streetcars would be powered by electricity and their braking systems would be maintained routinely. However, because there would be no barrier between motor vehicles, the exclusive-transit lanes would be calculated with the rest of the roadway as PGIS. There would be approximately 3.2 acres of replaced PGIS within the two CSO basins that are treated at the West Point facility. The replaced PGIS in the area between University and Union would be less than 0.2 acre. Up to 0.5 acre of impervious surface would be replaced whether one or both OMFs were expanded.

According to the City of Seattle Stormwater Manual (City of Seattle, 2014), transportation projects with more than 10,000 square feet of replaced impervious surface area within a CSO basin shall provide flow control. Between 3,200 and 3,300 cubic feet of flow control would be required for the two CSO basins in downtown Seattle, but additional treatment would not be necessary because the flow would drain into the CSO basins. The portion of the LPA that would be separated from the CSO basins (the block between University Street and Union Street) would contain more than 5,000 square feet of new and replaced PGIS. Therefore, per the City of Seattle Stormwater Manual, water quality treatment would be required for the equivalent of approximately 8,400 square feet. Compact, proprietary water quality treatment BMPs, such as Filtterra (a self-contained stormwater treatment system) or filter cartridges in underground structures, could be implemented to meet the treatment requirements.

In addition to the requirements for flow control for the streetcar tracks and stations, the total OMF expansion area would require an additional 1,000 cubic feet of detention volume for the replacement PGIS. The project will adhere to the stormwater quality and flow control requirements contained in the Seattle Municipal Code, Section 22.805, and comply with other applicable federal, state, and local regulatory requirements.

Construction Impacts

During construction, sediment from removal of the roadway surface, relocation of utilities, and removal of impermeable surface at the OMFs may drain into the existing or proposed storm drain system during storm events.

4.8.2 Mitigation Measures

The project will adhere to the stormwater quality and flow control requirements contained in the Seattle Municipal Code, Section 22.805, and comply with other applicable federal, state, and local regulatory requirements; therefore, no mitigation is proposed.

Erosion control measures will be implemented during construction by the contractor. Prior to construction SDOT will obtain a National Pollutant Discharge Elimination System Program General Permit for Stormwater Discharges Associated with Construction Activities. One of the permit requirements is a project-specific Stormwater Pollution Prevention Plan and Sediment Control Plan, which would employ BMPs during construction to minimize the potential for soil erosion and sediment to enter the stormwater system.