

Stormwater

Stormwater management presents facility owners and municipalities with a range of compliance, monitoring, and source control challenges. Stormwater contaminants—which can originate from on-site sources (via industrial and municipal discharges), airborne deposition during storm events, and various upgradient sources (e.g., roads and parking lots)—often flow unchecked directly into rivers and streams. Regardless of the origin, contaminated stormwater has the potential to impact both human health and the environment.

Issues stemming from contaminated stormwater have gained prominence as property development has continued to reduce the natural filtering functions of our wetlands and watersheds. As a result, local, state, and federal governments are establishing more stringent stormwater management requirements. The management of stormwater-related issues will continue to be a focus for industry and municipalities, especially as discharge limits tighten, monitoring requirements increase, existing infrastructure ages, and urban development spreads. Thus, Windward offers clients a broad array of stormwater-related services, including:

- Surface water and stormwater planning
- Stormwater system assessment and management
- Stormwater and receiving water quality monitoring and characterization
- Source identification, characterization, and control
- Basin and comprehensive stormwater planning
- Stormwater compliance and regulatory support
- National Pollutant Discharge Elimination System (NPDES) permit support (e.g., planning, application, review, negotiation, source control, and treatment design)

Stormwater and Source Control Compliance Program

Windward was retained by a confidential client to assist with the implementation of a stormwater program for a facility in Tukwila, Washington. The property is adjacent to the Lower Duwamish Waterway, an industrialized waterway that has been listed as a Superfund site. The stormwater infrastructure at the facility needed to be assessed because of its complexity, age, and problems with groundwater infiltration into the stormwater system.

Windward oversaw cleanout of drainage lines and catch basins on the property, as well as video inspection of the drainage lines, and documented cleanout activities with detailed reports that were submitted to the Washington State Department of Ecology (Ecology). AutoCAD drawings were prepared using historical drainage system maps and information obtained during the storm drain system cleanout and video inspection activities to provide accurate maps of the facility's storm drainage system layout and to identify points in the system where groundwater was infiltrating the pipes.

Windward conducted a series of site inspections at the facility in order to identify additional best management practices (BMPs) that could be implemented to protect stormwater quality. Windward also provides stormwater monitoring services in support of the client's NPDES permit and prepares the discharge monitoring reports for submittal to Ecology.

DHL Express Industrial Stormwater General Permit Renewal

Windward assisted DHL Express with compliance activities for its NPDES Industrial Stormwater General Permit (ISGP) for the facility at the King County International Airport in Seattle, Washington. Windward prepared a notice of intent application for renewal of the ISGP and worked closely with Ecology during the issuance of the permit to ensure it was administratively complete and accurate. Windward provided a facility assessment and updated the facility's stormwater pollution prevention plan (SWPPP) to be in compliance with the 2015 ISGP. The necessary maintenance of the facility's stormwater treatment system was also overseen by Windward; this maintenance resulted in stormwater discharges at the facility that were consistently in compliance with the requirements of the ISGP. Ongoing support provided by Windward currently includes monthly stormwater inspections, quarterly stormwater sampling, and preparation of the facility's annual report.

Seattle-Tacoma International Airport Construction

Windward is providing ongoing support to the Port of Seattle (Port) to meet the construction stormwater discharge water quality requirements of its National Pollutant Discharge NPDES permit and Section 401 Water Quality Certification for construction activities at Seattle-Tacoma International Airport (STIA).

Windward performs all monitoring preparation and field sampling and provides related support in accordance with the Port's standard operating procedures for construction stormwater monitoring at STIA. Windward field crew leaders monitor local weather forecasts and real-time precipitation amounts on an ongoing basis to identify qualifying storm events for monitoring. After each monitoring event, Windward submits construction monitoring data reports to Port Aviation Division environmental staff for use in monthly discharge monitoring report submissions to Ecology.

Windward also provides other services in support of the Port's NPDES permit. These include the preparation of construction stormwater monitoring plans for submittal to Ecology for planned projects at the 90% design level, review of individual project or programmatic SWPPPs, on-site inspection of construction site best management practices and stormwater treatment facilities (including chitosan-enhanced sand filter units), monitoring of construction dewatering discharges and in-stream construction work, and permit renewal assistance.