

NPDES Permitting Support

Windward provides a wide variety of services to National Pollutant Discharge Elimination System (NPDES) stormwater and wastewater permittees. We serve industrial and municipal clients, working on both stormwater and wastewater issues. We understand state and federal water quality standards for aquatic life and human health, as well as NPDES stormwater regulations as implemented under individual and general sector-specific federal and state NPDES permits. We are intimately familiar with both typical and unique NPDES permitting approaches, and can assist attorneys in developing technical strategies to defend these approaches, as well as provide expert testimony during appeals or other legal challenges.

Windward's services include completing permit application documents and preparing effluent datasets; developing and reviewing fact sheets and draft permits; negotiating permit requirements with regulators; designing and implementing receiving water quality and stormwater monitoring programs; evaluating "reasonable potential" and water quality-based effluent limits (WQBELs); managing sample data and preparing discharge monitoring report; coordinating and evaluating whole effluent toxicity tests and toxicity identification evaluations; preparing stormwater pollution prevention plans (SWPPPs); identifying non-stormwater discharges and associated remedies; designing and conducting bench- and pilot-scale stormwater treatment evaluations; preparing engineering reports to monitor construction stormwater runoff; and providing technical support for waste management decisions. Windward designs and implements innovative best management practices (BMPs) for source control and treatment and optimizes existing BMPs, with particular expertise in BMPs for roofing materials and structures. We perform NPDES-required facility inspections to assess stormwater pollutant sources, develop drainage maps, evaluate BMP effectiveness, and confirm SWPPP compliance. We coordinate and conduct video camera assessments, drainage infrastructure cleanouts, and treatment system maintenance. We also design and implement receiving water studies to evaluate the need for WQBELs, or develop site-specific water quality criteria for ammonia, copper, and zinc.

Darigold NPDES Industrial Wastewater & Stormwater

Windward provided technical support to help the Darigold facility in Sunnyside, Washington, comply with its wastewater and industrial stormwater NPDES permits. This support included developing and implementing a 1-year receiving water study to collect ambient and effluent water samples and flow data to evaluate the reasonable potential to exceed water quality standards and to develop effluent limits for ammonia. Windward helped develop and implement a comprehensive facility assessment to evaluate stormwater drainage systems, existing BMPs, and pollutant sources for zinc, biochemical oxygen demand (BOD), and nutrients sources identified included roofing materials, air conditioning condensate, leakage from cooling towers, and air emissions. Windward also helped develop early actions and alternatives for long-term stormwater source control and treatment BMPs to meet permit compliance requirements. We reviewed engineering designs for a zero-discharge evaporation pond as the final alternative selected by the client. Other aspects of this work involved updating the SWPPP documents and related monitoring procedures, and communicating with state regulators.

NPDES Industrial Stormwater

Windward has been helping a large cement manufacturer with its individual NPDES permit. Support for this confidential client has included preparing permit renewal documentation; preparing fact sheets and reviewing draft permit documents; reviewing and updating SWPPPs and engineering reports; assessing process water management; preparing facility drainage maps; developing new BMPs; and evaluating treatment system and effluent data, including conducting reasonable potential evaluations for copper, nickel, zinc, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), phthalates, and organics.

Three Rivers Municipal Wastewater Treatment Plant Receiving Water Study

Windward designed and implemented a 1-year receiving water study to determine whether NPDES permit effluent limits for ammonia were needed at the Three Rivers Regional Wastewater Authority municipal wastewater treatment plant in Longview, Washington. The project involved developing a quality assurance project plan (QAPP) and monitoring design, both of which required Ecology approval. Monitoring included collecting water quality samples and continuous pH and temperature data in the Columbia River. Evaluations required a clear understanding of ammonia water quality criteria, as well as the influence of potential outliers and diurnal effects of temperature and pH, especially on chronic ammonia criteria. Windward evaluated the results, determined that the effluent presented no reasonable potential to cause or contribute to exceedances of water quality criteria, and recommended that the existing ammonia effluent limits be dropped. Ecology approved the study report with no comments and commended Windward for the project. Windward also provided support for an underwater inspection of the plant's outfall diffuser system in the river, using dye to aid the diver's inspection.