



February 3, 2012

Washington State Department of Ecology
Water Quality Program
PO Box 47696
Olympia, WA 98504-7696

RE: Stormwater Management Manual for Western Washington
November 2011 Draft

To Whom It May Concern;

Thank you for the opportunity to review and provide comment on the November 2011 Draft Stormwater Management Manual for Western Washington (Manual). We recognize the enormous effort Ecology has devoted to this update. Many of the revisions in the Draft Manual reflect Ecology's attempt to provide consistency with associated permits and to provide greater clarity to the guidance.

Other revisions in the Draft Manual pertain to Low Impact Development (LID) requirements. The Port of Seattle recognizes the benefits of LID to the water resources of the region. We believe that LID measures can be an effective method of stormwater management on sites where feasible and where there is a direct benefit to the receiving water. We realize, however, that LID is not practical or feasible at all sites and we are pleased to see Ecology's inclusion of conditions where and when LID may not be feasible.

The Port manages and operates a unique array of facilities which in many cases present significant barriers toward LID implementation. With respect to operations at the Seattle-Tacoma International Airport (STIA), the Port agrees with Ecology's recognition of the competing needs of Federal Aviation Administration (FAA) requirements, particularly those associated with hazards presented by wildlife attractants.

The comments below are offered to better ensure LID is implemented in a reasonable manner where it can provide an effective benefit to the receiving water.

Volume I

Section 2.2 Exemptions

Page 2-3. The Draft Manual requires that Minimum Requirement # 5 be applied to road maintenance where the paved surface is removed or replaced to the base course or lower even if the impervious surfaces are not expanded. We believe requiring application of LID for this type of activity is

unreasonable costly and will not yield effective benefits. Road maintenance of this nature is typically completed on portions of an existing surface and often in discontinuous segments. At STIA, isolated runway and taxiway panel surfaces are routinely replaced. Application of Minimum Requirement #5 to this maintenance activity would be disproportional to the cost of the project and result in numerous isolated BMPs. In addition to providing limited effectiveness, the cost to maintain these BMPs would be exceptionally high.

Section 2.5.5 Minimum Requirement #5: On-site Stormwater Management

Applicability (page 2-34)

The Manual should include a new subsection that defines the applicability of Minimum Requirement #5. In addition to guidance on applicability, we believe the recognized conflicts and competing needs identified in Appendix I-F, page F-4 would be more appropriately located up front in an Applicability section. This section should also include all major exemptions from the requirement as is done for Minimum Requirement #7.

Applicability to Projects that Drain to a Flow Control-Exempt Receiving Waters (page 2-34)

LID BMPs or the Performance Standard should not be mandatory for projects that drain to a Flow Control-Exempt Receiving Waters. Ecology has determined that controlling high flows (flow control) does not provide a reasonable benefit to the receiving water in these drainages. Therefore, controlling low flows through LID would also provide no hydraulic benefit and should not be required. Any treatment needs should be met through Minimum Requirement #6.

A significant number of Port properties are located along the waterfront and discharge to either the Duwamish River or Puget Sound. The only benefit of applying LID BMPs to these sites would be for potential runoff treatment. Dispersion and infiltration, the basis for most of the LID measures, would not be feasible due to contaminated soils and/or high ground water and tidal influences. Minimum Requirement #6 adequately addresses requirements for runoff treatment.

Ecology should define the Applicability of MR #5 and in doing so exempt projects that drain to a Flow Control-Exempt Receiving Waters.

Project Thresholds (page 2-34 and 2-35)

The Manual does not clearly indicate if an applicant would be required implement the Low Impact Development Performance Standard on sites where it is not feasible to implement LID BMPs. Projects where dispersion, infiltration and vegetative roofs are not feasible should not be held to the Performance Standard. The Project Thresholds should clearly indicate that the Performance Standard is not required in these cases.

Mandatory List #1 and #2 (pages 2-35 and 2-36)

Requirements to implement LID BMPs should not be mandatory until an appropriate analysis of All Known, Available, and Reasonable Methods of Prevention, Control and Treatment (AKART) is completed. Costs for the LID testing, engineering studies, construction, monitoring and maintenance as

prescribed in the Draft Manual are considerable and their benefits are not well defined for all land use types.

The benefits of the LID have been assessed in one study performed on Juanita Creek. However, the extent to which these benefits have been evaluated in conjunction with their associated costs to determine reasonableness is not clear. Ecology's AART determination for LID with an economic impact analysis should be completed and provided to the public for review before these requirements are applied.

Appendix I-F Feasibility Criteria for Selected Low Impact Development Best Management Practices

Competing Needs

In addition to those competing needs listed in Appendix I-F, the Manual should recognize the constraints of specialized industrial and transportation facilities. Stormwater management on many facilities is best served through a regional or basin/subbasin approach. At STIA, the Port has been able to consistently meet flow control and water quality standards in all airport subbasins through the use of centralized facilities which remain operational regardless of ongoing redevelopment. The Draft Manual should include provisions to allow for the application of LID on a planned basin/subbasin approach.

In addition, the manual should recognize that industrial areas have many competing land use needs and it may not always be possible to implement LID to the full extent required by the manual within the current or planned site layout. The manual needs to provide flexibility for sites and include incentives to implement LID to the extent feasible.

Volume III

Section 3.3.6 Design Saturated Hydraulic Conductivity – Guidelines and Criteria

Page 3-87 to 3-88. The Draft Manual stipulates the correction factors to be used with in-situ saturated hydraulic conductivity in order to estimate long-term hydraulic conductivity rates. The factors include a correction for site variability and number of locations tested. The Manual also recommends performing Pilot Infiltration Tests (PIT) every 2500 square feet. We feel this level of testing accurately characterizes the site with a high enough precision that no correction factor for variability should be required.

Thank you for considering these comments.

Sincerely;



Bob Duffner

Environmental Compliance Programs Manager, Aviation Division

