



June 17, 2011

Municipal Stormwater Permit Comments  
WA Department of Ecology  
Water Quality Program  
P.O. Box 47696  
Olympia, WA 98504-7696

Re: Comments on the Phase I Municipal Stormwater General Permit  
Preliminary Draft Language dated May 16, 2011

To whom it may concern,

The Port of Tacoma has reviewed the Washington Department of Ecology's (DOE) Phase I Municipal Stormwater General Permit "Preliminary Draft Language", the revised Appendix 1, and the Phase I "Preliminary Draft Language Explanatory Notes" documents dated May 16, 2011 and is providing comments herein. These documents are in support of DOE's Phase I Municipal Separate Storm Sewer Systems permit (MS4), with a current estimated issuance date of July 1, 2012. The Port of Tacoma appreciates the opportunity to review and comment on the preliminary draft language.

The comments follow the outline of the May 16, 2011 documents and are provided below with references to the section and page numbers of the document.

### **Low Impact Development Preliminary Draft Language**

#### **General Comments:**

- L-1. The Port of Tacoma is in favor of Low Impact Development techniques and is willing to apply them for development and redevelopment projects where feasible. Currently, the Port of Tacoma has a policy in place that requires that LID be considered first for stormwater management for all

new and redevelopment projects. This policy could be revised to include the list of mandatory LID BMP's and the feasibility criteria from Appendix 1, with the addition of loading and engineering criteria specific to Ports or other industrial areas.

**L-2. Feasibility:**

Many of our facilities are subject to other NPDES permits that require treatment to be in compliance. LID is untried for many of these industrial applications and Ports are concerned that use of the current available LID technologies does not ensure that benchmarks for those permits can be met. Ports do not have unlimited funds to install subsequent treatment devices when the LID BMPs fail to meet those limits.

Industrial facilities are often not conducive to putting water in the ground. This can create three kinds of problems. First, much of the land managed by Ports and other industrial areas typically have high concentrations of oil, and other pollutants, due to the kinds of activities that take place there or due to historical contamination. Current technology concentrates and manages those pollutants (e.g. oil water separators, stormwater treatment) while LID will disperse those pollutants in an uncontrolled way. DOE will become a potentially liable party (PLP) to future Cleanup and Superfund sites if DOE requires industrial areas to infiltrate and disperse potentially contaminated stormwater into the ground. Second, using lower strength pavement (and lower strength subgrade) or adding water under pavements that bear industrial loads is generally infeasible from an engineering standpoint. Industrial equipment common at Ports can have axle weights of 250,000 pounds. Comparatively, a semi-truck maximum axle weight is approximately 35,000 pounds. Thus, industrial sites must bear loads approximately seven times higher than those found in residential or commercial areas. Lastly, adding water under pavements landward of bulkheads is also generally unfeasible from an engineering standpoint as excessive water landward of bulkheads may cause bulkhead failures.

**L-3. Definition of LID:**

Treatment devices that we have used in our industrial areas, in particular Filterra Bioretention, have been deemed, "not LID" by Ecology in the past. The Port would like further clarification on the definition of LID and whether or not systems that are not on the mandatory list could be used to meet the requirement of LID BMPs and Principles.

**L-4. The Port recommends that for industrial applications subject to other NPDES permits, that LID not be required. The Port would like to continue to partner with UWT, WSU and the new Stormwater Technical Center to**

explore how to make LID more applicable and feasible for industrial areas.

- L-5. The preliminary draft language and supporting documents use permeable and pervious quite interchangeably and the terminology should be consistent, and/or the definitions should state that they are intended to mean the same and used interchangeably.

## **Appendix 1 - Minimum Technical Requirements for New Development and Redevelopment**

### **Section 2. Definitions Related to Minimum Requirements**

- L-6. (pg.2 and globally)  
The Port of Tacoma is concerned that DOE references the 2012 *Stormwater Management Manual for Western Washington (SWMM)*, a document that has not been published, either draft or final, and has not been made available for public review and comment. If the SWMM is not finalized prior to the draft permit language being released, then the 2005 version of the SWMM must be referenced in the draft and final permit. Permittees cannot review the draft permit and therein referenced documents for technical, administrative, or cost implications, requirements, or feasibility if the documents (i.e., the SWMM) referenced in the draft permit are not final when the draft permit is released for public review.
- L-7. (pg. 4.)  
LID principles are not applicable for industrial land use. In most cases, industrial land that is being redeveloped has few, if any, natural features or native vegetation. Infiltration is not appropriate in most industrial areas due to the potential for pollutants being present on the site from industrial activities or from historical contamination commonly found in heavily industrialized or Port areas.
- L-8. (pg. 5, Rain Garden definition)  
The definition should also include a statement that “if low permeability soil conditions exist, an under-drain may need to be installed to assist drainage”, or similar.

### **Section 3. Applicability of the Minimum Requirements**

- L-9. (pg. 8. 3.1 Thresholds)  
“Use the thresholds in sections 3.2 and 3.3 at the time of application for a subdivision, plat or a short plat. The thresholds apply to a common plan of

development or sale as defined in the definitions and acronyms section of this permit”.

We could not locate a reference to common plan of development or sale in the definitions and acronyms section of the permit.

“For projects without development plans involving only land disturbing activities, (e.g., clearing or grading), the thresholds apply at the time of application for the permit allowing or authorizing that activity. Note the exemption in Section 1 for forest practices”.

If a project does not yet have a development plan, but triggers MR 1-5 or 1-9 at the time the clearing and grading permit is required, it may not be known what type of LID or treatment system would be appropriate to the final site plan.

In addition, the definition of LID includes the language: *stormwater management practices that are integrated into a project design*. If a project design or development plan doesn't exist, it is not appropriate to implement MR 5 or 6 until such time as the project is determined.

For example, the Port of Tacoma recently conducted demolition of several nuisance buildings. We obtained a clearing and grading permit from the City of Tacoma and followed the City requirements. The Port spent an excessive amount of time trying to explain that the project was not an improvement, and that in fact the amount and type of impervious surfaces will decrease because of the project. The Port has no current plan to develop the site, therefore, it would not be appropriate to install LID or other stormwater infrastructure until we redevelop the properties as anything that would be installed would likely not be consistent with future re-development plans and would have to be demolished.

L-10. (pg11. 3.3 Redevelopment)

“The following redevelopment shall comply with Minimum Requirements #1 through #9 for the new hard surfaces and converted pervious areas:”

This requirement suggests that if you install pervious pavement, then treatment is still required. Please clarify this requirement and provide more information on the thought process that went into this than what is in the explanatory notes. The demolition project example above applies to this comment as well.

#### Section 4. Minimum Requirements

##### L-11. (pg. 20. 4.5 Minimum Requirement #5: On-site Stormwater Management) Project Thresholds

Text box: Should permeable pavements be included in the above list of required on-site management BMP's that apply to projects subject only to requirements #1 - #5?

Permeable pavements should not be required. It should remain an option for projects where it is feasible.. Ports have the following concerns about the use of permeable pavements:

Worker safety: the possibility of pervious pavement failure could endanger the lives of straddle carriers and other longshore workers. Labor unions may have serious concerns about putting their workers in unsafe situations.

Structural failure: engineering specifications for water dependent industrial construction do not allow for infiltration of water into structures. Bulkheads, wharfs and other similar structures are made particularly vulnerable by water infiltration. Adding water to the landward side of bulkheads could raise subsidence and failure.

Instability to heavy loads: permeable pavement may not be suitable for the heavy loads that are common at industrial facilities such as ports.

Exacerbating or creating contaminant plumes in soil and groundwater: in industrial areas, especially historical industrial areas with a history of contamination problems as is common to Ports, permeable pavement will introduce significant amounts of potentially polluted surface/storm water into the subsurface which will affect the hydrogeology of the area. The increased infiltration may exacerbate or change the conditions of existing contaminant plumes or create new contaminant plumes in soil and groundwater. Contaminated groundwater plumes can migrate to waterways and the Puget Sound creating a threat to human health or the environment. These conditions may cause the owner (i.e., the Port), the tenant/operator, the primary Phase I Permittee jurisdiction (i.e., City of Tacoma), and the DOE to become PLPs to existing or new Cleanup sites or Superfund sites.

Text Box: Should Ecology allow local governments to accept LID performance standard compliance as an option to the specific BMP requirements as listed below for projects in this size range?

Yes, in particular those projects within highly urbanized or industrial basins.

L-12. (pg. 22. Mandatory List)

"For a commercial building, a vegetated roof or an impervious roof with runoff routed below pavement. If the latter option is not used, a cost analysis is necessary to claim infeasibility of a vegetated roof."

Please give an option for runoff to be treated, harvested, or reused, rather than routed below pavement. The term "routed below pavement" above is vague. Is it DOE's intent to allow the runoff to be routed below pavement and connected a stormwater drainage system or did DOE intend to reference the definition terminology of "infiltration below pavement"?

L-13. (pg. 22. Mandatory List)

Page 7 of the Explanatory Notes says, "The mandatory list specifies that runoff, and overflows from other LID BMPs, should be routed through bioretention facilities of a designated minimum size." The Bioretention section of the mandatory list says, "Bioretention BMPs (See Volume V, Chapter 7) through which all runoff and overflow from *permeable pavement* must pass...." Please clarify the intent of this requirement.

Further, it is unclear why this is required and what the purpose is. Does this requirement mean that runoff from rain gardens (overflow or underdrain) would also have to be directed through a bioretention facility?

## **Section 8. Feasibility Criteria for Selected Low Impact Development Best Management Practices**

L-14. (pg. 34. Permeable Pavement)

Please include a loading criteria for permeable pavement. Heavy cargo and equipment loads and safety concerns at Port terminals and other industrial areas makes permeable pavement infeasible. The Port's concerns documented above under L-10 (for pg. 20. 4.5 Minimum Requirement #5: On-site Stormwater Management) also apply to this comment on permeable pavement.

L-15. (pg. 36. Vegetated Roofs)

Please include the cost analysis criteria in this section that would allow cost to be considered for feasibility. Although it might be possible to retrofit a roof to make it structurally capable of accepting the additional

weight of a vegetated roof, the cost may be impracticable. In addition, the added maintenance of a vegetated roof may be cost prohibitive.

L-16. (pg. 36. Section 8)

Unique BMP requirements should be developed for the unique locations and needs of Port facilities. Additionally, because it's impossible to predict every possible scenario or problem that would result in a infeasibility decision, the permit should allow permittees to determine infeasibility decisions on a case-by-case scenario and/or have an Ecology review process to review infeasibility determination requests for scenarios that were not identified at the time of the development of this permit. After review of the infeasibility determination request, the permittee or Ecology would then issue a feasible or infeasible decision.

### Monitoring Preliminary Draft Language

M-1. (pg.8, S8.A.3.a) – The S8.D monitoring under the 2007 MSGP shall terminate at the end of the last water year under the 2007 MSGP, i.e., the 2011 water year ending September 30, 2011, or as defined by the Permittee's DOE approved QAPP. Per the MSGP, the 2011 water year monitoring data shall be reported in the 2011 Annual Report due March 31, 2012. The preliminary draft language should not reference “three complete water years”. Permittees have not planned or budgeted for additional monitoring beyond that required under the 2007 MSGP as permittees have been working under their DOE approved QAPPs and because all DOE planning and communication for the 2012 MSGP up to this point has indicated that the Regional Stormwater Monitoring Program (RSMP), the collaborative pay-in regional monitoring, would be the only monitoring required under the 2012 MSGP (other than TMDL or illicit discharge monitoring). It's been reiterated many times that no additional S8.D outfall monitoring would be required under the 2012 MSGP as this type of monitoring would be addressed under the RSMP. The Port believes Ecology honor its original position.

M-2. (pg.8, S8.A.3.a) – If for some reason the reference to “complete water years of data” is retained in the language it should be defined as “the data collected pursuant to the permittee's DOE approved QAPP during a water year (October 1<sup>st</sup> to the following September 30<sup>th</sup>)”.

M-3. (pg.9, S8.A.3.c.) – A third condition should be provided to state “iii. According to the DOE approved QAPP.”

- M-4. (pg.10, note to reviewers 1a) – The Port of Tacoma needs to know the monitoring cost by August of the previous year in order to incorporate it into the next year’s budget.
- M-5. (pg.10, note to reviewers 1b) – The Port of Tacoma doesn’t have a specific request, however, a mid-year payment would be best.
- M-6. (pg.10 table & pg.11 note to reviewers 2) – None of the options are equitable or representative to the Port of Tacoma for numerous reasons. The Port of Tacoma does not and cannot collect stormwater fees to help recover or pay for the costs to implement the MSGP or maintain infrastructure as Cities and Counties are able to do. In addition, the Port of Tacoma pays stormwater fees to the City of Tacoma, while still having to implement our own MSGP, and maintain our own infrastructure, which compounds the financial burden on the Port of Tacoma.

As the Port of Tacoma (and Port of Seattle) have less monitoring requirements under the MSGP, the RSMP cost allocation to the Ports, should be considerably less than the respective city jurisdiction that the Port is within. For example, the 2007 MSGP monitoring requirements (S8.D, S8.E, and S8.F) allowed the Port’s to monitor less outfalls and BMPs than the cities and counties for these reasons.

The Port of Tacoma understands that the three cost allocation (payment) options are based on various scenarios/equations involving population. The Port of Tacoma does not understand the current population assumption or estimate for the Port and does not agree with the estimate or the resulting cost allocation/payment. The Port of Tacoma understands that DOE calculated an “equivalent population” or population estimate by adding the population of the Phase I city and county served by each port and dividing by eight. However, the spreadsheet detailing the cost allocation that was provided to the Port of Tacoma does not estimate the Port of Tacoma’s equivalent population (75,000) to be 1/8<sup>th</sup> of the City of Tacoma and Pierce County. Furthermore, the Option 1 payment for the Port of Tacoma is not 1/8<sup>th</sup> of the sum of the City of Tacoma’s payment and Pierce County’s payment. The Port strongly disagrees with calculating the equivalent population based on the City of Tacoma’s AND Pierce County’s population combined.

The current DOE cost allocation is not equitable to the Port of Tacoma. For example, according to the table on page 10, the Port of Tacoma pays 37% to 81% of what the City of Tacoma pays (options 1-3), but the Port is a much smaller area, can’t collect stormwater fees, has to pay City of Tacoma stormwater fees, maintains our own MSGP, has less MSGP monitoring requirements, and maintains our own stormwater

infrastructure. In contrast, the Port of Seattle only pays 20% to 24% of what the City of Seattle pays. In addition, the Port of Tacoma pays almost as much as Clark County pays entirely.

Of the three cost allocation options presented, Option 1 maybe most appropriate if the population estimates for secondary permittees (i.e., ports) is more realistic. The Port of Tacoma supports the two cost allocation methods proposed by the Port of Seattle, but tailored to the Port of Tacoma and based on the City of Tacoma statistics. The two proposed methods are reproduced below:

- 1. Calculate "equivalent population" based on the size of the permit coverage area and the density (persons per acre) of the surrounding jurisdiction (i.e. City of Seattle from 2010 census is approx 6.7 people/acre). While the Port has nowhere near the residential population of surrounding City areas, this method will likely over-estimate the actual "population" of the Port. This calculation method could be easily reproduced and recalculated.*
- 2. Use the definition in the NPDES NOI, which defines "equivalent population" as the total residential and commuter populations. For Ports, the resident population would include the live aboard population at residential marinas. The commuter population would include Port employees and tenant employees (possible based on building capacity). Note that this estimate will "double count" employees in the monitoring program cost allocations, as each Port and tenant employee is already counted in the population of the City or County in which they reside.*

Of the two methods proposed by the Port of Seattle above, the first method based on density would likely be the easiest to calculate and most reproducible. Alternatively, the Port of Tacoma would welcome a cost allocation method for all permittees based on drainage basin or over all acreage.

Why does the table for payments state "Fourth and Subsequent Payments"? The amount and number of payments should be explicitly stated in the table so that permittees can budget for these costs. As the MSGP is a five year permit, only five years of payments should be noted in the table. Subsequent permits would address any additional monitoring and payment requirements.

The Port of Tacoma requests DOE meet with the Ports to help DOE develop a fair and equitable cost allocation method.

- M-7. (pg.11 note to reviewers 3) – The Port does not want DOE to have an option to opt out or decline participation in any aspect of the RSMP, including effectiveness studies. Allowing permittee's to opt out will not reduce any overlap, quality control, or consistency issues and will result in a higher allocation cost to the remaining permittees participating in the effectiveness studies under the RSMP. Permittees should still have input into the effectiveness studies by recommending studies and locations for the studies to the RSMP.
- M-8. In general, the timing of the termination of the existing permit, a rumored extension of the existing permit, the issuance/effective date of the new permit, and rumored monitoring requirements in between all of the aforementioned timeframes, is not well communicated and defined.
- M-9. (Phase I Explanatory Notes, pg.27) – The first paragraph states that WSDOT is not included in the cost allocation because they have a separate permit cycle. However, the inclusion of WSDOT now would decrease the allocation to all permittees. The monitoring is expected to benefit the entire region, including WSDOT, but WSDOT does not currently have to make any payments towards the RSMP. Can WSDOTs payments be phased in and taken into account now or will WSDOT payments lower the current permittee payments or will the amount or type of RSMP work increase due to increased funding?

The Port of Tacoma appreciates Ecology's time and effort to consider our comments and concerns. If you have any questions regarding the above information please contact me at (253) 592-6793.

Sincerely,



Lisa Rozmyn, Environmental Project Manager  
Port of Tacoma