



**City of Seattle**  
Seattle Public Utilities

July 1, 2011

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

Subject: NPDES Phase I Municipal Stormwater NPDES Permit – Low Impact Development  
Preliminary Draft Permit Language

Dear Ms. Beale:

Thank you for the opportunity to provide informal comments on Washington State Department of Ecology's preliminary draft language for the low impact development (LID) and monitoring sections of the NPDES Phase I Municipal Stormwater NPDES Permit (Permit(s)). The City of Seattle (Seattle) appreciates the work of Ecology, and the LID advisory groups to develop Permit requirements that are both meaningful and practical for protecting our region's valuable water resources.

The City of Seattle commends the Washington State Department of Ecology's efforts to articulate clear LID requirements for municipalities as part of future municipal stormwater NPDES Permits. Seattle recognizes the challenges of writing clear requirements that apply across the range of urban and rural areas in western Washington and our comments reflect an emphasis on issues associated with implementing green stormwater infrastructure (GSI)/LID in urban areas. Seattle has long believed that LID is an integral part of stormwater management where appropriate and looks forward to seeing the increased use of LID in Washington. As such, an effective set of stormwater Permit requirements for LID has the potential not only to improve regional water quality and flow control, but to further build regional expertise in designing and building LID facilities.

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To help achieve these goals, Seattle has provided comments in the following attachments:

- Attachment 1. Detailed comments related to LID preliminary draft LID Permit & Appendix 1 language.
- Attachment 2. A tracked-changes version of the preliminary draft LID Permit Appendix 1 language that includes suggested alternative language.

While we recognize the benefits of LID BMPs and support their use, Seattle has identified the following primary areas of concern about the proposed LID requirements:

1. Interpretation of the Pollution Control Hearing Boards (PCHB) decision,
2. Unintentional effects of the regulations on urban infill development,
3. Potential conflicts with the Growth Management Act,
4. Apparent incompatibility of the proposed Permit framework with Seattle's current LID implementation approach, and
5. Specific technical and feasibility issues with the standards and proposed BMPs.

#### **1. PCHB Decision**

In places, Ecology's proposals exceed the PCHB's "LID where feasible" Phase I ruling. The PCHB did not conclude that the Permit must require LID "to the maximum extent feasible," "to the extent feasible," or "except where infeasible." The PCHB did not require Ecology to include a LID performance standard in the Permit. The PCHB concluded that in comparison to the 2007 Permit, Ecology must require "*greater application of LID techniques, where feasible, in combination with the flow control standard*" and require "*the application of LID, where feasible, and conventional engineered stormwater management techniques....*" The PCHB explicitly acknowledged that its LID ruling was limited by feasibility constraints: "*Our recognition that use of LID is to be employed where feasible recognizes that, like all stormwater management tools, it too is subject to limitations in its practical application by site or other constraints.*" (CL 16, p. 58; see also 8/7/08 Phase I ORDER, pp. 71-72) Similarly, in Seattle's experience, implementing GSI/LID in an urban environment, feasibility has at least three aspects required for consideration: technical, economic, and competing needs.

Additionally, the PCHB acknowledged that the costs of implementing LID through basin or watershed planning were speculative and that implementing basin or watershed level LID would involve additional cost and practical considerations not analyzed by the PCHB. (FF 62, pp. 43-44; CL 66, p. 46) Seattle has similar concerns about the general feasibility and effectiveness of watershed planning, and is especially concerned about how the proposal would affect urban infill within substantially developed areas. In addition, as currently proposed, the analysis of water quality and hydrologic impacts and target establishment are infeasible.

## **2. Urban Effects**

Seattle is concerned that the broader implications of the proposal, standards and requirements, which appear to be written primarily for suburban development and small cities, could inadvertently discourage urban density, encourage sprawl and all of the associated impacts to water resources (and farmland, air quality, climate, terrestrial habitat, etc.). In addition, feasibility limitations in urban areas are not adequately accommodated in any of the three main areas: site-level requirements, code review and revision, and watershed-scale stormwater planning.

To promote successful LID, Ecology must provide greater flexibility in the most developed parts of designated Urban Growth Areas. Under the Growth Management Act (GMA), regional and local plans have identified regional growth centers as the areas best situated to accept housing and employment growth through infill and increased density, with the least environmental impact. These locations also have intense competing demands that cannot be fully anticipated or quantified in advance of development. Applying rigid LID requirements to accompany development in these already-developed locations, which typically have relatively small lots and complex utility infrastructure, could discourage private development in these locations and frustrate the goals and targets associated with the GMA. More rigid LID proposals are better focused on less-urban areas, where space is available and historical flow patterns may still be present.

In the comments in Appendix 1, Seattle provides edits to adjust feasibility criteria for incorporating LID in typical urban development. Seattle also proposes adjustments to phrasing like “to the extent feasible” that we consider problematic for urban areas. The PCHB did not decide how LID must be used in the face of urban competing needs and economic constraints. For already-developed areas, proposed Permit language exceeds the PCHB’s decision that Ecology “*require permittees to adopt enforceable ordinances that require use of LID techniques where feasible in conjunction with conventional stormwater management methods.*” (8/7/08 Phase I Order, p. 72) Therefore, Ecology has ample discretion to balance LID with urban needs through appropriate feasibility criteria.

In addition to concerns about how the proposal could affect urban infill development in Seattle, the proposal does not provide sufficient guidance for industrial, manufacturing, factory and other similar uses and occupancies.

## **3. GMA Concerns**

In addition to the qualitative goals of the Growth Management Act, local governments around Puget Sound receive quantitative long-range population forecasts from the State Office of Financial Management that each local jurisdiction must accommodate. The Comprehensive Plan, in turn, guides subsequent creation and revision of local codes.

Under the Regional Growth Strategy developed by the Puget Sound Regional Council and approved and followed by all the jurisdictions in the 4-county region, Seattle and Bellevue

are expected to take over 40% of all the growth that occurs in King County, where there are 37 other cities and substantial unincorporated area. Both cities (but especially Seattle) are largely built out, with most land already developed in some use. Meeting growth management expectations in these cities will require significant amounts of infill development.

Accommodating growth targets is not just about making sure there is enough zoning capacity, but also maintaining housing affordability, providing infrastructure and services to support new residents and jobs, providing adequate open space, and protecting environmental resources. Balancing these competing interests is complicated, particularly in a developed city seeking to draw infill development. Overly aggressive LID standards that do not allow that balancing could easily have unintended but detrimental environmental results that would outweigh benefits. For example, a one-size-fits-all requirement to require bioretention for all lots above a certain size could result in less zoning capacity or higher construction costs required for taller buildings, which could affect affordability and/or push more development (and infrastructure) out into undeveloped areas.

LID promotes one aspect of GMA Goal 10 (protecting water quality), but the comprehensive issue is how LID affects achieving GMA Goals 1 and 2 (encouraging urban growth and reducing sprawl). The legislature has not directed that Goal 10 is more important than Goals 1 and 2, so local governments have the responsibility and authority to balance these goals. In fact, encouraging urban growth in already developed areas promotes Goal 10 by protecting developmental impacts on water quality at a regional scale. For these reasons, the Permit should reflect the legislature's intent that local governments should balance all the goals, and the Permit should retain the local governments' flexibility to evaluate the best methods to do so.

The PCHB recognized that the GMA could present limits for future LID Permit requirements when it concluded that "*Ecology may, within the bounds of the GMA, require use of LID as a management tool.*" (CL 27, p. 65) In the August 8, 2008 PCHB decision in which the Board first addressed basin planning efforts for LID, the Board's focus was explicitly on undeveloped areas: "**...The areas should be relatively undeveloped where new development is occurring, and from which discharges may impact aquatic resources.**" This limited emphasis makes sense not only in terms of where basin planning is most feasible and beneficial, but also in terms of harmonizing GMA goals and requirements with stormwater regulations; applied in substantially developed cities, the requirements as proposed by Ecology could unreasonably and infeasibly constrain good land use planning for infill development.

Seattle is concerned about the growth management implications of the proposals on watershed planning, the full review of codes and rules, stormwater site plans, and defining competing needs. In addition to the attached comments and proposed language, Seattle would like to continue a dialogue with Ecology on this topic.

To assist in redrafting, Seattle, in Attachments 1 & 2:

- Identifies urban examples for which aspects of the LID proposal would be inconsistent with state GMA goals and objectives and could inadvertently cause poor results for the environment and the regional community.
- Proposes metrics to distinguish between substantially-developed areas and those for developing areas, so appropriate requirements can be tailored to each.
- Proposes criteria and edits that encourage urban LID while beginning to accommodate competing urban infill demands.

#### **4. Seattle's Green Stormwater Infrastructure (GSI) Directors' Rule**

Seattle appreciates the comments Ecology has already incorporated into the draft permit from previous comments and input during the LID advisory committee meetings. In particular, Seattle is appreciative that Ecology has carefully considered Seattle's draft Directors' Rule to require GSI where feasible. Extensive work has gone into creating this approach and was developed with the intent of maximizing LID where feasible in an urban environment by taking into account site, engineering, and cost considerations while accommodating growth and density in urban areas. Seattle is concerned that Ecology's proposal for compliance with a site-based mandatory list or performance standard (without a feasibility assessment) would foreclose using the approach Seattle has developed to fulfill the City's NPDES Permit requirements. Revisions are needed in Ecology's proposal to provide more flexibility to allow Seattle (and other urban jurisdictions) to continue to use this type of approach to meet NPDES LID requirements. It is our belief that this approach also meets the intent of the PCHB decision.

#### **5. Technical Issues**

Seattle is concerned about the availability of sufficient information regarding maintenance, life cycle costs, and structural performance case studies of permeable pavement for residential and especially arterial streets. We are beginning to pilot permeable pavement installations to gain more experience with permeable pavement as a vehicular surface. Therefore, until more information is available regarding life cycle costs, pavement rehabilitation (structural and surface), pavement maintenance requirements/ costs and funding mechanisms, permeable pavements should not be considered feasible for roadways, especially on roadways with greater than 250 AADT.

One of the concerns Seattle has regarding the requirement to revise all local development-related codes, rules, and standards to incorporate and require LID is specific to the right-of-way. For example, curbs and gutters are an appropriate part of an urban environment as they provide an efficient and compact conveyance system as well as the curb providing required safety measures for pedestrians traveling adjacent to vehicular travel. While Seattle's rules and regulations for the right-of-way already incorporate LID BMP options such as bioretention facilities and conveyance swales as recommended by the Puget Sound Partnership guidance document, these BMPs are not appropriate in many urban scenarios.

For further discussion regarding the proposed requirement and timeline to revise all local development-related codes, refer to Attachment 1.

Additional comments and proposed language relating to technical details and other topics are found in Attachments 1 & 2.

In summary, we realize that in developed areas such as Seattle, natural processes associated with stormwater are unavoidably impacted and our efforts towards environmental protection of receiving waters must necessarily focus on addressing the important flow and water quality functions of those processes. LID is one set of the tools that we can use to protect water quality among others. The opportunity for the use of LID and its effectiveness is more limited in developed areas than in developing areas as its use in developed areas is affected by competing needs and density that is driven by overall growth strategies designed to reduce regional environmental impacts of development. To acknowledge these challenges, many of our comments are based on the need for flexibility in the application of LID in urban areas. While we strongly support use of LID where feasible, we recognize there are situations, particularly in urban areas, where creativity and other approaches are needed to address flow and water quality functions. We support requirements that both encourage the use of LID where feasible while allowing urban areas to select among the full range of options for achieving the intended functional outcomes.

Thank you for your consideration of Seattle's comments. We look forward to working with Ecology and other jurisdictions, organizations, and the public to protect and improve our aquatic ecosystems. If you have any questions regarding Seattle's LID comments, please feel free to contact Tracy Tackett (206-386-0052) or Sherell Ehlers (206-386-4576) of my staff.

Cordially,



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