COMMENTS ON ECOLOGY'S PROPOSAL FOR IMPLEMENTATION OF THE INSTRUCTION OF THE POLLUTION CONTROL HEARINGS BOARD REQUIRING THE USE OF LOW IMPACT DEVELOPMENT (LID) IN THE PHASE 1 MUNICIPAL PERMITS

In 2007 the Puget Soundkeeper Alliance appealed the Phase 1 and 2 Municipal NPDES Permits. PSA's primary contention was that the permit should have required greater use of Low Impact Development practices because traditional structural engineered stormwater management practices are not protective of water resources.

The PCHB's ruling of the appeal had several dimensions:

1. The flow control standard that Ecology imposed to regulate stormwater discharges had several critical limitations.
    a. While detention standards can mitigate the worst impacts of large storm events, they have little or no effect on small storm events that can also erode streams and transport significant pollutants.
    b. Structural storm water controls that are adequate to meet the flow control standard do not reduce pollution to the "maximum extent practicable" (MEP), as required by the federal Clean Water Act.
    c. Washington's Water Pollution Control Act has a similar requirement, "in that all wastewater discharge permits must incorporate permit conditions requiring all known, available and reasonable methods of treatment to control the discharge of toxicants and protect water quality (the "AKART" standard)." Structural controls alone are not AKART.
    d. A combination of structured engineering techniques and LID techniques are necessary to achieve MEP and AKART.
2. Contrary to Ecology's concerns about intruding too far into local governmnet's planning efforts under the growth management Act, "the GMA is not a barrier to greater use of LID but rather complements the efforts of Ecology to move forward with requiring the use of LID techniques under the Phase 1 Permit."
3. Basin Planning is highly desirable, and at a minimum, "The Board finds that information developed by permittees regarding their se of basin planning, and its possible interface with other planning efforts, would be very valuable to Ecology in its development of the next phase of the Permit."

COMMENTS:

1. PERFORMANCE STANDARD-- The proposed performance standard shows promise in effectively requiring the use of LID principles and techniques by requiring a higher degree of infiltration and minimizing runoff. It remains to be seen whether this requirement is adequate to protect water quality and streambeds, and whether it will be applied in enough instances. Projects should be closely monitored for effectiveness.

2. MODELING-- Efforts must be made to refine modeling so that both developers and regulators can achieve some confidence in predicting compliance with the Permit and in protecting water resources
3. MANDATORY LISTS-- The Mandatory lists are woefully inadequate. It is hard to see how the applications of the rather minimal techniques proscribed could approach the protective level of the performance standard, much less the 65-10-0 standard that has been widely accepted as the minimum for protecting water resources.
    a. Clause "b" in the Lists is especially troubling: "Use site-appropriate development principles to retain native vegetation and minimize impervious surfaces **to the extent feasible as required by local code."** (Emphasis added) This implies that unless and until local codes are adjusted to allow maximum application of LID techniques—much narrower roads, reduced sidewalks, pervious concrete, etc.—these techniques are rendered ineffective.
    b. The Lists suffer two huge flaws: they do not contain a **hierarchy** of principles that gives **prioritization** to the most effective techniques; and they are lacking several effective techniques. Dr. Richard Horner has described how LID works: "From a process standpoint the methods include an array of practices: (1) preservation of existing vegetation and soils; (2) numerous site design strategies intended to reduce creation of impervious surfaces, such as clustering buildings and related developed features; narrowing streets, driveways, and parking areas; and covering parking; (3) bio<u>retention</u> cells, channels, and filter strips (<u>retention</u> indicates that precipitation is prevented from being converted to surface runoff through the previously listed mechanisms); (4) stormwater planters of various designs, which essentially are small-scale bioretention cells; (5) permeable paving; (6) green roofs; (7) water-storage cisterns and tanks; and (8) roof runoff subsurface drain systems and other applications of infiltration trenches.
    "The best strategy for choosing among and implementing these practices is an integrated one making maximum possible use of the first two listed and then selecting among the remaining ones in relation to the localized and overall site conditions."
    c. The Lists should be prioritized as Dr. Horner describes, and at least several elements should be added:
        i. Retention of native vegetation
        ii. Soil amendments
        iii. Water harvest
4. BASIN PLANNING-- The provision for basin planning in the proposal is well below the minimum described by the PCHB in their decision, and is completely out of touch with the many watershed and basin planning efforts already underway.

a. All jurisdictions should be performing the analysis as described in the proposal and there should be coordination and sharing of information among jurisdictions in the same basins and watershed.
b. The Permit should require municipalities to consider the effects of the loss of forest cover to water quality in the watershed, basin, and sub-basin.
c. Require identification and prioritization of retrofits for Green Infrastructure,
d. Analyze areas of new development and apply the performance standard according to a basin analysis of sensitive receiving waters.
e. Extending stormwater permit authority—to implement basin and watershed planning some additional areas must be brought in to the system. Ecology should use its residual designation authority to consolidate coordinated planning. An alternative is to extend authority through the petition process set up for this purpose.

5. REMOVAL OF BARRIERS— The removal of barriers to LID has been given some attention. The Puget Sound Partnership and the Puget Sound Action Team before it have administered a Local Jurisdictions LID Assistance Project with mixed results. Jurisdictions such as Kitsap County and the City of Bremerton have voluntarily adjusted codes and ordinances. But there is still almost nowhere in the Puget Sound region where a fully-implemented LID project such as SEA Street in Seattle could be built without expensive and time-consuming variances from local codes. Ecology should immediately commission the development of a Model Ordinance that would specify what LID standards must be allowable for its successful implementation.

ADDENDUM: Paper by Dr. Richard Horner with LID principles and examples of specific code language. This paper is included as an attachment.

Respectfully submitted,

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