Carnegie Group of Olympia
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Olympia, WA 98501

8 August 2011

Governor Christine Gregoire
Office of the Governor
PO Box 40002
Olympia, WA 98504-0002

Dear Governor Gregoire:

SUBJECT: Department of Ecology's (ECY) Proposed Low Impact Development Standard Will Not Protect Watersheds

We urgently ask that you intervene to prevent the adoption of a proposed rule that most likely will spell the demise of Puget Sound by failing to protect tributary watersheds.

In August 2008, the Pollution Control Hearings Board (PCHB) issued a ruling declaring effectively that ECY's storm drainage regulations did not adhere to requirements of the federal Clean Water Act. It ruled so because the board was convinced that AKART (All Known and Reasonable Technology) must include low-impact-development practices. (Such practices are not required in today's standards.) In response, ECY formed a technical advisory committee in October 2009 to define "low impact development" and to determine criteria for feasibility of low impact development. The committee finished its work in summer 2010.

As a result of this overly long process, ECY now proposes to write a perplexing version of "low impact development" into National Pollution Discharge Elimination System (NPDES) permits for municipalities. The proposed standard offers no improvement over the existing standard. The existing (and proposed) standard can be summarized using the numeric shorthand invented by King County: ECY proposes the 0/100/100 standard. That is, on any development site, zero forest retention is permissible, 100 percent hardened surfaces are acceptable, and 100 percent discharge of precipitation to surface water is OK. (The proposed ECY standard requires only that storage of stormwater be provided before discharge.)

For perspective, we note that a perfectly healthy watershed would be characterized by the 100/0/0 standard (that is, 100 percent forested, no hardened surfaces, and no overland flow discharge). ECY's proposal is therefore the exact inverse of the characteristics of a healthy watershed. It is thus a virtual certainty that watersheds built-out using the proposed ECY standard will suffer near complete degradation, as have all watersheds that have been urbanized to date. ECY proposes that the 0/100/100 rule be incorporated into NPDES permits that will be in effect until 2019 (and probably longer).

Moreover, the predictable massive removal of forest from developing sites, inevitable with ECY's rule, coupled with ECY's proposed emphasis on infiltration, will result in an attempt to greatly increase the volume of infiltrated water. This strategy will likely fail. On the shallow soils over hardpan that predominate in the Puget Sound Basin, the attempt to infiltrate more water than would occur under natural conditions makes landslides and surfacing "boils" of water a certainty on many sites. Examples abound of such failures, and these have been called to our attention by several engineers on ECY's Technical Advisory Committee.

The science of watershed health is clear: forest disturbance results in stream degradation. Many studies over the course of decades have noted stream destabilization and loss of habitat with increasing urbanization. Booth, Hartley, and Jackson (2002) have written:

> "*Twenty years of empirical data display a good correlation between readily observed damage to channels and modeled changes in flow regime that correspond to loss of about 1/3 of the forest cover in a "typical" western Washington watershed. A similar degree of observed damage also correlates to a level of watershed effective imperviousness (EIA) of about ten percent*."

A recent study by Dr. Ryan King (Baylor University and University of Maryland, Baltimore) notes:

> *"…aquatic life actually shows significant loss of biodiversity with less than two percent of developed land in a watershed."*
>
> (http://www.sciencedaily.com/releases/2011/06/110608122958.htm)

In deference to such studies, several jurisdictions in the Puget Sound Basin have adopted ordinances that provide developers an option that would preserve at least 65 percent of forest cover on a development site. Indeed, even the department in its Stormwater Management Manual for Western Washington offers an optional "best management practice" (BMP T5.30) that would cause 65 percent of forest cover to be preserved on a development project. However, it should be emphasized that applying BMP T5.30 to a watershed would likely degrade the stream to the very brink of destabilization. There is no safety margin.

In conclusion, it is clear that ECY's proposed standard for low impact deveopment is far too weak and permissive to prevent fatal damage to Puget Sound and watersheds. Because NPDES permits have a nominal five-year life and an actual life of perhaps 8 to 10 years, it is highly likely that we will lose the rest of the watersheds in the path of development by 2020. If the last streams with habitat are lost, Puget Sound will not be far behind. We suggest that the state take the following actions as soon as possible:

1. ECY must be prevented from amending NPDES permits as they have proposed. New NPDES permits must impose a low-impact-development standard that acknowledges the characteristics of a healthy watershed.

2. "Low impact development" should be defined to mean development that adheres to BMP T5.30 (effectively the 65/10/0 standard) in the department's stormwater management manual. It is further suggested that stream buffers not be counted as contributing to the 65 percent forest set-aside (in acknowledgement that 65 percent forest reserve, more likely than not, provides inadequate protection to streams).

3. A moratorium on greenfields development outside city limits should be placed in the Puget Sound Basin. Many scientists recommend that all remaining good habitat for anadromous fish in the Puget Sound Basin be set aside and protected from further development. The moratorium should remain in effect until those watersheds with good or excellent habitat can be identified and permanently protected.

4. All major re-development projects should cause a net increase in forest cover in the Puget Sound basin. Ecology's BMP T5.30 should apply to all major redevelopment projects.

Please take action now. To delay is to allow an already dire situation to worsen and to make the death of Puget Sound the only possible outcome.

Sincerely,

Carole Richmond, President
The Carnegie Group of Olympia

The Carnegie Group of Olympia is a voluntary organization of citizens concerned about the financial, social, and environmental costs of growth at the local, regional, and state levels.