TOP THREE COMMENTS ON DOE DRAFT PROPOSAL FOR LID IMPLENTATION

REFERENCE: LID Standard proposed at the joint meeting of Technical and Implementation Advisory Committees on 12 August 2010

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As you have requested, below are my comments regarding the DOE proposal for defining standards for and implementing low impact development.

1. DOE's proposed standard for low impact development will not abate the steep decline in the health of Puget Sound and its watersheds. DOE's proposed standard is the so-called Flow-Duration standard. It does not impose limits on loss of evapotranspiration, area of hardened surfaces, or overland flow discharge to surface waters. The literature and our collective experience show that this approach has no chance in protecting receiving waters. Of what possible value is a low impact development standard (or any stormwater design standard) if it does not protect receiving waters?

   DOE must abandon this approach and adopt a development standard that restricts evapotranspiration loss, area of hardened surfaces, and prohibits overland flow discharge from developing sites to surface water.

2. The massive loss of evapotranspiration from developed sites inevitable with DOE's proposal and DOE's emphasis on infiltration of all precipitation will likely cause failures on till soils. Till soils do not generally have the capacity to accept the additional water occasioned by the mass loss of evapotranspiration capacity. The shallow soil/gravel horizon (over the hardpan) makes landslides and re-surfacing water inevitable on many sites. Examples abound of such failures associated with

so-called "low impact" projects. Such examples have been called to our attention by several engineers at Technical Advisory Committee meetings (spanning eleven months since October 2009).

DOE must adopt a standard that would limit the loss of evapotranspiration and limit hardened surfaces to avoid wide-spread failures that could threaten low impact development as a stormwater management practice.

3. Another definition of low impact development is needed. Our initial effort to define low impact development some months ago has evidently failed to capture the essence of this land use type. I propose that LID be defined as:

   "Low Impact Development means development that prohibits overland flow discharge of stormwater, limits area of hardened surfaces, and limits native soil and vegetation removal and results in so little disturbance to the watershed that significant and unacceptable damage to aquatic life and stream morphology are avoided."

   And the corollary for low impact redevelopment is:

   "Low impact re-development means rebuilding in a damaged watershed such that soils and evapotranspiration volumes are largely restored to predevelopment condition, hardened surfaces are reduced to an area that can be safely infiltrated, surface water discharges are eliminated, and the characteristics of a healthy watershed are largely restored."