

From: [Jeff Rudolph](#)
To: [ECY RE WW SW Manual Comments](#)
Cc: [Bruce Wagner](#); [John Collins](#); [Harold Smelt](#)
Subject: Stormwater Manual Comments
Date: Friday, February 03, 2012 3:37:01 PM

Hello,

Pierce County Public Works and Utilities Road Operations Division (Road Ops) would like to thank the Department of Ecology for the opportunity to comment on the draft 2012 Stormwater Management Manual for Western Washington. Road Ops is responsible for the maintenance of storm drainage systems, roadways, and vegetation within the public right-of-way of Pierce County. Road Ops also operates and maintains several support facilities including offices, sand and gravel pits, decant stations, and equipment/materials storage and stockpiling sites. Road Ops is committed environmentally sound maintenance practices which preserve and protect water quality.

Road Ops has the following general comments on the draft as posted in November of 2011:

Volume I starting in Chapter 2 Minimum Requirements for New Development and Redevelopment. In general this section is very confusing and it is difficult to determine how it will impact maintenance activities. The inclusion of hard surfaces as a new development or redevelopment activity could make many maintenance activities such as shoulder work much more costly and time consuming. A common maintenance activity is to place rock on the shoulder of the road in areas where erosion or settlement has occurred. Since this would be adding a hard surfaced material, would it then be considered redevelopment or considered exempt as a maintenance activity? More clarification should be given on how maintenance will be affected.

Specific comments on the definitions included in Volume I are below:

Definitions

Converted Pervious Surface: How will this definition be applied for maintenance activities?
Page 2-5

Low Impact Development (LID): Delete "mimic pre-disturbance" add "allow" hydrologic processes of infiltration" If pre-disturbed is to be used, it needs to be clearly defined. Page 2-6

LID BMPs: Definition should be consistent with above. What is the purpose of creating LID BMPs? Page 2-6

LID Principles: Please delete this definition. This should emphasize stormwater

management and not land use. Page 2-6

Pervious Surface: Delete "A" add "Any" surface add "material". Page 2-7

Rain Garden: It should be clearly stated that this is not a flow control or Retention/Detention facility. Page 2-8

Vehicular Use: Please explain what types of projects this will apply to. Page 2-10

Volume II Western Washington Hydrology Model (WWHM) starting in Section 2-2, page 2-7. Many additions to the WWHM program are projected. Is the manual stating these additions will be acceptable when available, or required? If they are required, will updates be continuous or will they be released in predictable batches? It would be wasteful if a project was designed and in the permit process then had to be redesigned by a surprise update.

Volume II Infiltration Facilities for Flow Control and for Treatment starting in Section 3-3, page 3-65. Does the section apply to drywells used to control localized flooding without the addition of impervious or hard surfaces? Currently drywell installation is the preferred method of mitigating localized flooding in areas where it is suitable. The current method involves in-situ testing for groundwater depth and infiltration rates. If the section does apply, Road Ops would be required to use the small-scale pilot infiltration test which requires digging a test pit with a bottom area of at least 12 square feet and in areas of outwash soils can require 12 consecutive hours of monitoring (6 hours maintaining standing water and 6 hours verifying depth every 15 minutes). This requirement could become very cost prohibitive and time consuming. More clarification is needed.

Section 3.3.6 Design Saturated Hydraulic Conductivity Infiltration Rate Determination – Guidelines and Criteria, page 3-78. Soil determination by soil survey maps is no longer acceptable. Formal testing by grain analysis or PIT testing is required. (PIT is a specific test which requires a stop watch, measuring tape, and water)

1) Site analysis now requires:

- a. A survey prepared by a registered land surveyor
- b. A soils report prepared by a licensed geotechnical engineer or licensed engineering geologist
- c. A survey of existing native vegetation cover by a licensed landscape architect, arborist, or qualified biologists

This is a costly and time consuming requirement which should not be required for small projects.

Volume V Runoff Treatment BMPs, page 4-50. We would appreciate the opportunity to

view and comment on proposed stormwater maintenance standards for the following:

- d. Bioretention
- e. Compost-amended vegetated filter strips
- f. Permeable pavements
- g. Media filter drain

Volume V Runoff Treatment BMPs, page 9-18. The “Groundcovers and Grasses Suitable for the Upper Side Slopes of a Biofiltration Swale in Western Washington” have White Sweet Clover (*Melilotus alba*) as a grass approved for use in bioswales. We have found White Sweet Clover to be highly invasive and difficult to maintain because it can grow to 5 feet in height and has a large, woody stem. We would like to see this removed from the list of approved grasses.

Thank you for the opportunity to comment on the draft manual.

Jeff

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