



State of Washington
DEPARTMENT OF FISH AND WILDLIFE

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February 3, 2012

Carrie Graul
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Water Quality Program
PO Box 47696
Olympia, WA 98504-7696

RE: WDFW Comments on Proposed Revisions to the Stormwater Management Manual for Western Washington (SWMMWW)

Dear Ms. Graul:

Thank you for the opportunity to comment on the November 2011 draft proposed revisions to the Stormwater Management Manual for Western Washington. The Washington Department of Fish and Wildlife (WDFW) reviewed a previous draft of proposed Low Impact Development (LID) elements proposed by ecology, and provided a comment letter on August 28, 2010. We have reviewed the current proposal and offer the following comments for your consideration.

Volume I, Appendix I-A: Basin Planning

In our previous letter we expressed concerns about triggers for basin-scale hydrologic analysis. Although Minimum Requirement #9 (Basin Planning) has been eliminated, basin planning may be used to support alternatives within Minimum Requirements #5 On-site Stormwater Management, #6 Runoff Treatment, #7 Flow Control, and / or #8 Wetlands Protection. As before, WDFW believes that the technical guidance for basin-scale hydrological analysis that Ecology anticipates providing will be critical to determining effective local mitigation measures.

Moving the provisions for Basin Planning from being a Minimum Requirement, to being a more over-arching method of tailoring several other Minimum Requirements, should allow basin planning to be used in a wide variety of scenarios. As basin plans are not required under the current draft, our previous concern about triggers for basin planning has been addressed.

Volume I, Table 2.5.1: LID Requirements by Project Type and Location (p. 2-35)

WDFW appreciates the fine work that Ecology and its stakeholder advisory committees have performed determining viable approaches to integrate LID into local development codes. In general, we like the performance standard approach, whereby jurisdictions are allowed to choose techniques and code revisions that best fit their community, to minimize impervious surfaces and achieve on-site storm water infiltration.

The current table shows that projects on parcels 5 acres or larger will not have the option of using Mandatory List #2. As before, WDFW suggests that through broadening the list of acceptable techniques jurisdictions could be afforded greater flexibility while improving resource protection for downstream waters.

Volume I, § 2.5.5, Mandatory Lists #1 and #2 (pp. 2-35 – 2-37)

The Mandatory Lists enumerate, in preferred order, on-site stormwater management best management practices (BMP's) to implement. Both lists show a preference for BMP T5.30: Full Dispersion. This BMP calls for protecting at least 65% of the site (or a threshold discharge area on the site) in a forest or native condition. WDFW appreciates this preference given to protection of on-site resources.

The last bullet in this section, Native Vegetation Landscaped Areas (p.5-22), states that a restored area may serve as the “protected” area and qualify a site for full dispersion. Although this could be a great way to bring back habitat for native fish and wildlife, WDFW encourages much caution in the development of this guidance. A re-claimed area may take years for vegetation to mature and soils to develop before it functions at the same level as an existing forest. If re-claimed areas are allowed to be used as “preserve” areas, then this temporal lag needs to be considered. The following measures may be appropriate:

- Re-claim more area than is required, similar to a “mitigation ratio” concept, both to help compensate for temporal loss and to offset typical failure rates of restoration projects
- Require ongoing monitoring of re-claimed sites
- Require establishment of native vegetation prior to the development or redevelopment project construction
- Require financial guarantees to ensure project success
- Require restoration of natural soil structure as part of the reclamation

Volume I, § 2.4.1: New Development (p. 2-13)

We support the matching of appropriate LID techniques with new development based on development size, urban vs. rural setting, and infiltration rates. However, we are concerned with the minimum size thresholds triggering LID requirements. New development with less than 2,000 sq ft impervious area or less than 7,000 sq ft disturbance would be required to protect, but not implement LID. This approach would exempt a large proportion of residential sites, and may encourage segmented site review and development to avoid new LID requirements. Please consider broadening the application of new LID requirements to all new projects regardless of size.

Volume I, Appendix I-D, Guide Sheet 1: Criteria that excludes wetlands from serving as a treatment or flow control BMP/facility (p. D-3)

This section states that a wetland is not suitable as a treatment or flow control BMP/facility if it provides habitat for a breeding population of native amphibian species. Note that page D-16 states that information is required regarding the presence or absence of a breeding population of native amphibians. Although similar, these represent two different requirements. Page D-3 describes habitat while page D-16 describes an actual breeding population. We have communicated with Dr. Tom Hruby, who clarified that the intent is to disqualify wetlands with an actual population of native amphibians. Please revise the text of the document accordingly.

Determining whether a wetland contains a breeding population of native amphibians would ideally be done through a springtime egg mass survey. Observations of egg mass allow for relatively easy identification of presence and species, and also allow for confirmation of a breeding population. Other methods at different times of the year would involve different rates of detectability. At times when amphibians are less active, less vocal, and not actively breeding, amphibians could be difficult

to observe. It would be helpful to specify accepted methodologies for amphibian surveys in order to avoid potential conflicts between the timing of permitting activity and the timing of ideal amphibian detection.

Also please note that recent research has shown that many artificial wetlands, including constructed stormwater facilities, can serve as important amphibian habitat¹. This importance should not be down played.

We understand the intent behind ruling out amphibian habitat as treatment or flow control BMP/facility. It is related to the thresholds for acceptable variance in daily (20%) and monthly (15%) influent volume to the wetland compared to pre-development volumes. The assumption is that the wetland can handle inputs within about 1/3 of the mean input, based on the standard deviation in a statistical analysis of many natural inflow variations over 50 years. Existing models cannot predict how this would change water level fluctuations in the wetland, but since 15-20% is within normal natural range it has been deemed acceptable. To be extra cautious since the water level fluctuation piece is unknown, wetlands with amphibians are ruled out.

These informed assumptions and best professional judgment point to gaps in the science regarding the impact of changes in influent volume on water level fluctuations within a wetland. In King County, Klaus Richter reported that water level fluctuation >0.2 meters was significantly correlated with decreasing amphibian species richness², but existing models cannot predict whether this would occur. More research similar to this would better inform policy decisions intended to protect amphibians. At minimum, WDFW recommends monitoring water levels within wetlands before and after having changed influent volumes in order to test the assumptions that the proposed daily (20%) and monthly (15%) thresholds do not significantly affect water level fluctuation or native amphibians.

Furthermore, changes in wetland hydrology have potential to impact habitats and species other than amphibians. Forest birds, wetland obligate birds, fish, and native plants are a few examples of wetland-dependent species that could benefit from hydrologic policy guidance.

Again, thank you for giving WDFW the opportunity to provide comments on these important changes to the SWMMWW, and thank you for taking these comments into consideration. If you have questions, please contact me at (360) 906-6731 or george.fornes@dfw.wa.gov.

Sincerely,



George Fornes, Biologist
Priority Habitats and Species Program

cc: Knight, WDFW PHS/GMA Program Coordinator
Dave Howe, WDFW Region 5 Habitat Program Manager

¹ See <http://home.comcast.net/~cportfors/> and <http://www.uercportland.org/?q=node/46>

² See <http://green.kingcounty.gov/wlr/science/seminar/pdfs/PDF68.pdf>