

November 6, 2008

Comments on the “Draft Clark County Response, October 16, 2008”

These are the Dept. of Ecology’s comments on the memo containing Clark County’s summary responses to Ecology’s August 14, 2008 review. We have commented only where we think additional information would be useful to the County, or where the County’s proposal needs to be supplemented or changed from what is proposed. Ecology is not providing additional comment wherever the County’s proposed response indicates an acceptable action will be taken, or where the County has indicated that additional changes are “under review” or currently in development. Ecology reserves the right to review those proposals for permit compliance when they are submitted. The County should proceed to make the changes that it has indicated, and to consider these additional comments before re-submitting its proposed ordinances and manual for a final Ecology review.

The numbers below correspond to the numbers assigned in the County’s October 16 response.

Clark County Ordinance 40.380

#1. Section 010.C.1.d

There isn’t a page A-1 of the Phase 1 permit. The federal rules exempt these sites from the requirement to obtain an NPDES permit. That exemption should not be extended to exempting these sites from local stormwater requirements if they discharge into the MS4.

#4. Section 010.C.2.f.

Ecology does not concur in exempting infill and re-development projects from the 0.1 cfs threshold that triggers application of flow control to new and replaced impervious surfaces. Ecology understands that the County does not intend to change its proposal.

#10. Section 020.B.5

The revised language should reference Chapter 4, not Chapter 2.

#12. Section 020.C.2.a.3.

Ecology does not concur in the County’s pre-development land cover proposal, i.e., “the land cover generating the least amount of stormwater runoff since 1955.” Ecology understands that the County does not intend to change its proposal.

#17. Section 040.E.3.b.2

The County's proposed Ordinance requires that variances must provide for equivalent environmental protection. That clearly means that proposals that do not provide equivalent environmental protection cannot be approved. Is that the County's intent?

Example: A developer proposes a commercial structure and parking lot on a steep-sloped lot. The project exceeds the 10,000 sq. ft. of impervious surface threshold, and exceeds the 5,000 sq. ft. of PGIS threshold. There is no place to safely locate a stormwater treatment or flow control facility. The site will drain to surface water. The developer applies for a variance.

Without a treatment facility, the proposal cannot be claimed to provide equivalent environmental protection. Even if a down-sized water quality treatment facility were possible, it would not provide **equivalent** environmental protection. Without a flow control facility to meet the duration standard, the project will not provide equivalent protection from higher flows. And even if a down-sized flow control facility – that did not fully meet the flow control requirement - were possible, it would not provide **equivalent** environmental protection. Therefore, would the county deny a variance to this project, and projects with similar circumstances? If the County denies variances in these instances, and in all instances where equivalent environmental protection is not being provided, its standard for approving variances is higher than Ecology's, and is approvable.

Regardless of the County's response to the above, the factors identified as 2(a) through (e) cannot possibly be interpreted as factors in answering the question of feasibility. Also, 2(f) requires an analysis of the feasibility of altering the project. But that is simply a re-statement of the lead-in clause to the listing of a through f.

Clark County Stormwater Manual

#13. Section 2.2.5 Sub-section 1 – Wetland Protection

I could not find the attachment that is referred to in the response . Please forward with your updated ordinance and manual submittals.

#15. Section 3.1.3 Continuous Simulation Models

Ecology will have to review the County's proposed calibrations of WWHM. Ecology will also have to review the methods identified by the County for developers to move soil types from one category to another.

#16. Section 3.1.3 Pre-developed Land Cover

I do not think the first 2 sentences in the first full paragraph on page 3-7 send a clear message. There are more prairies identified on the map than are listed in the text on page 3-7. That can give the impression that project sites in any of the prairies shown on the map can use prairie as the pre-development land cover. My understanding is that would be an incorrect interpretation.

It would be more straightforward for the text to be re-phrased to something such as the following: Areas within Clark County that are identified as historically prairie are Bear prairie, Fourth Plain prairie, Mill Plain prairie, and Lacamas prairie. The map in Appendix B displays the general locations, not definitive boundaries, of those prairies. A project site report (continue as in current text).

#19. Soil Infiltration Rates

The response did not address the County's intent in regard to guidance for assignment of correction factors. Please include a statement in your submittal.

If the County intends to allow use of a specific initial infiltration rate for bioretention facilities (to be adjusted by correction factors for determining a design infiltration rate), it will need to write a very tight specification for the rain garden soil mix. Seattle had proposed a similar approach. Their specification for a compost/aggregate mixture has requirements for the compost, the aggregate, and the mixture. (Ecology can provide a copy.) Ecology objected to Seattle's assumed initial infiltration rate primarily because the aggregate specification allows for 0% to 5% passing a #200 sieve. 0% passing will yield an infiltration rate for the mixture that is much higher than an aggregate/compost mix in which 5% of the aggregate passes the #200 sieve. So use of one assumed infiltration rate did not seem plausible for soils that could meet the specification. The former (0% passing) will produce too high of an infiltration rate for Ecology to consider the soil as a pollutant removal media. The latter (5%) will likely produce a mixture whose infiltration rate is quite low.

I can send a copy of a memo from Dr. Curtis Hinman on soil mix specifications for rain gardens; including infiltration rates. Please let me know if you want me to do so.

#20. Section 4.1.1 Bioretention Areas

The County's response is that it intends to reduce the minimum design infiltration rate of the underlying soil to 0.5 inches per hour- after application of a correction factor. The County would still require underdrains whenever the design infiltration rate of the underlying soil is less than 10 inches per hour?

I do not understand why the County thinks these restrictions are necessary. As long as the facility is designed to infiltrate (using the “design” infiltration rate) stormwater from its drainage area within 24 hours, it shouldn’t matter that the underlying soils have low infiltration rates.

#22. Section 4.1.1 Design Criteria for Bioretention

The last sub-section under this section indicates that if a designer wants to “receive credit” bioretention facilities need to meet all criteria and be modeled in accordance with the Stormwater Management Manual for Western Washington (SMMWW). This section needs to be a little more explicit and thorough. It needs to be revised to indicate that if a designer wants to use the WWHM to predict losses in runoff quantity, the bioretention facility(ies) need to be designed in accordance with the SMMWW. Also, if the County intends to allow projects to use bioretention as a water quality treatment facility that meets the Basic or Enhanced Treatment requirements (as allowed by the SMMWW), then the County needs to indicate that the design criteria in the SMMWW need to be used and the WWHM must be used to predict the amount of water infiltrated. The amount of water predicted to be infiltrated can be subtracted from the requirement to treat 91% of the runoff file. That would allow design of a smaller downstream water quality treatment facility.

The County should also consider whether to change its “design criteria for bioretention” so that it is consistent with the Ecology criteria, or to indicate explicitly under the above heading that bioretention facilities that do not meet the Ecology design criteria will not be considered adequate for treatment or flow control purposes.