

From: [David Harmsen](#)
To: [ECY RE WW SW Manual Comments](#)
Subject: Comments on draft 2012
Date: Friday, February 03, 2012 4:10:07 PM

Publication 11-10-084: "Focus on Stormwater Guidance", a multi page handout provided at the seminar

Excerpt from "Revised guidance on determining infiltration rates".

Ecology proposes the revisions on Volume III to limit the different methods used for determining infiltration rates. ...The proposed changes in Volume III should help bring consistency to infiltration determinations...

Comment:

Various methods for determining infiltration rates exist, are valid and do indeed produce different results. Although this sounds undesirable, valid methods may range in their complexity and expense while still producing valuable results. A hierarchy of valid methods should be allowed to exist from which the applicant could choose from. Consider these reasons for such a hierarchy:

- Not all methods are applicable to a particular site.
- Retrofit/enlarging existing infiltration systems pose unique problems. Proposed methods must not require destruction of or removal of existing systems.
- Crude and inexpensive methods which produce acceptable but conservative results may be "good enough" to produce a successful design. In this case, a more elaborate test may produce a larger infiltration value that is indeed more correct, but is also simply a more expensive answer for no benefit in some cases.
- More detailed and expensive methods may be necessary to demonstrate infiltration values when the simpler, conservative values are unacceptable –when design parameters are too tight and more elaborate testing with less conservative infiltration values is justified.

From proposed Western Washington Stormwater Manual, Volume I:

Bioretention BMP's (See Chapter 7 of Volume V) that have a minimum horizontally projected surface area below the overflow which is at least 5% of the of the total surface area draining to it.

Comment:

From the seminar and from this literal proposed statement, Bioretention facilities with areas less than 5% of their contributing basin will not be allowed.

The comment during the seminar was made that "we don't want postage stamp facilities all over the place" –and to that mental image we may agree. However, the math should be allowed to prevail as to the merits and benefits that a bioretention facility can offer on any particular site. Although "5%" may conjure mental images, it is a constraint without mathematical support. We can imagine a bioretention facility that may be the size of a football field, which is hardly a postage stamp. Mathematically and per this proposed rule, that football field sized facility may be less than 5% of the contributing basin (say, an entire college campus, shopping mall...) and is therefore not allowed at all based strictly on the 5% rule. I doubt this is the intention of the proposed 5% rule, but is indeed a mathematical truth.

Our goal is to provide water quality treatment. On many sites with unusual topography, complicated development, low gradient across the site (low head), we must use multiple water quality BMPs in order to achieve our goal for the site. There is no requirement (nor should there be) that only bioretention facilities can be used, or that bioretention facilities cannot be used in conjunction with other water quality treatment. To then arbitrarily limit the size of a facility is inappropriate and in fact will defeat or inhibit an applicant from reaching water quality goals on some sites.

Suggestion: Simply remove the 5% caveat from the proposal.

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