

Revision to Existing Practices & Credits

1. Incorporate findings from other researchers/UNH/other manuals
 - a. revise stormwater wetlands section
2. Consider Runoff Reduction Method (see CWP/Chesapeake SW Network)
3. Refine standards for gravel wetlands
4. Refine standards for wet swales (currently manual only includes diagram)
 - a. wet swale – linear wetland; volume based not flow based; 8ft maybe longer
 - b. reconsider maximum width
 - c. dry swale – linear filter
 - d. grass channel – 4 inches or less
 - e. revise check dam sentence
 - f. stone diaphragm and pea gravel are hard to maintain
5. Consider requiring designing for snow storage
 - a. maintenance issue; clogs infiltration systems
 - b. Towns have requirements for snow storage – check parking space requirements in Chittenden Co.
6. Refine standard for wet ponds
 - a. Re-evaluate 4 ft deep forebay requirement for smaller pond applications
 - i. Allow for more efficient pre-treatment options (filter strip or buffer) that don't require the full length
 1. Create a credit for treating WQv in a swale prior to a pond
 - ii. Extended detention for water quality treatment should be allowed to release for a minimum of 24hrs and a maximum of 48hrs.
 - iii. This allows a single orifice to be sized to meet both WQ and CPv
 1. a single orifice sized to meet the centroid to centroid detention requirement not only provides additional detention of the water quality storm, but also releases less discharge from the channel protection storm than 2 separate orifices designed to route the water quality and channel protection storms separately.
7. Grass Channels
 - a. Eliminate grass channel credit
 - i. Alternatively, grass channel must meet design requirements
 - ii. Allow partial credit
 - iii. Reevaluate “presumption of performance” for grass channel credit
 - iv. Instead of channels, sheet flow should be used on well drained soils
 - v. Is freeboard needed?
 - vi. Grass height requirement (4-6”) is not realistic
 - b. Allow for non-residential application of grass channel credit
 - c. Change dimension in grass channel

8. Re-evaluate disconnection credits:
 - a. could credit be given for disconnection on steeper slopes, shorter lengths, etc?
 - i. [Consider moderately sloped sites \(>5%\) to qualify for credits](#)
 - b. provide a chart depicting slope steepness and disconnection length options, ie, greater slope, greater length; less slope, less length required.
 - i. [Link to chart \(ME\)](#)
9. ESRD revision (Low Impervious Cover Credit)
 - a. Remove CPv requirement
 - i. detention for CPv storage requires concentrating site runoff; difficult to return to sheet flow
 - ii. eliminate requirement to evaluate impervious surface on per lot basis
 - b. Consider eliminating this credit. It seems to promote sprawl and is not environmentally sensitive.
 - i. [Allow for multiple types of credits. Localities have the authority to regulate the 'types' of development](#)
 - c. [Site design is an important BMP; build on the ESRD credit](#)
10. Evaluate current “formulas” (and the requirement to use them vs. some other design if it meets the intent)
 - a. what is the level of evidence and the level of risk that is acceptable?
11. Evaluate and update design examples in Volume II
12. Thoroughly evaluate what should be in “required” vs. guidance
 - a. [Reconsider guidance for fencing ponds – recommend that designers determine if it is an attractive nuisance](#)
13. Consider specific redevelopment/infill development standards and STPs
 - a. i.e. what if had a practice that could treat >16% TSS and >8% P (20% x 80% or 40%) from the entire site such that the impact on load was actually better than just treating 20% of the site or providing 20% of the water quality volume
 - i. How well does the “STP designed to capture and treat 20% of the water quality volume from the existing impervious area” work if you have all of the flow
 - b. Or for “infill” – same thing, if you are adding 25% more impervious to your site, could you treat enough to “offset + some” your additional impervious by treating ALL the flow to some lower removal efficiency?
 - c. See NY Redevelopment specific chapter – treat 25% of WQv from disturbed area of redevelopment if use standard practices, but allows for use of alternative practices (cisterns, green roofs, planters, permeable pavers) if treat 75% of WQv from those disturbed areas
14. [Pretreatment requirements](#)
 - a. [Allow flexibility](#)
 - i. [flexibility in size of pretreatment area – allow treatment area to be bigger](#)

ii. challenge in defining matrix of pretreatment/treatment

15. Update precipitation depths for WQ, 1yr, 10yr, 100yr to more recent research
 - a. Washington state – continuous simulation based model vs. design storms
 - b. Vermont state meteorologist figures
 - c. NE Regional Climate center – climate change, intense events
 - d. PA updated to Atlas 14 NOAA