

BMP Manual Errata
Updated December 5, 2012

This is a temporary listing of errata that will be changed in the next revision of the BMP Manual chapters.

<u>Page</u>	<u>Description</u>
9-12	<p>The wetland surface area percentages are incorrect and revised as follows:</p> <ul style="list-style-type: none">○ Deep Pools: 20-25% (including the forebay) of wetland surface. Ideally several deep pools should be provided throughout the wetland.<ul style="list-style-type: none">▪ Non-Forebay: 5-15% of wetland surface▪ Forebay: 10-15% of wetland surface○ Shallow Water (low marsh): 40% of wetland surface.○ Shallow Land (high marsh): 30-40% of wetland surface (maximize if pathogens are target pollutant).○ Upland: This is an optional design element. If upland area is included, it will not replace any of the required calculated surface area.

10-2 MDE 19 should read:

The permanent pool elevation shall not be greater than 6 inches below SHWT elevation. (see 10.3.2)

10-9 Section 10.3.2 of the chapter goes into more detail regarding MDE 19 on 10-2. The primary point of MDE 19 is to address the concern for the potential for draining wetlands and/or surface waters when the PPE is more than 6" below the SHWT. There has been confusion regarding ponds when the PPE is more than 6" above the SHWT. Beginning at the second paragraph it should be revised as follows (revisions in **bold**):

DWQ requires a soils report that includes a determination of the SHWT elevation for all wet pond designs. The permanent pool elevation shall meet the following requirements:

- 1. The PPE must be no more than six inches below the SHWT.**
2. If the design proposed does not meet the requirement of item 1 above, then the following...

It is recognized as good engineering practice that the proposed PPE be at approximately the same elevation as the SHWT **or above**. The Division has

established an acceptable range of SHWT elevation. This range will ensure that the pond does not adversely affect wetlands, surface waters, and buffers; and holds water as designed. Additionally, it provides some allowance for the potential inaccuracy of the exact SHWT elevation.

If the PPE is designed to be more than 6” above the SHWT, the designer shall determine if a liner or compaction of the soils is necessary to maintain the permanent pool of water. If site conditions do not allow the PPE to be designed within the preferred range for the SHWT elevation **or above**, then (1) an analysis of the proposed wet pond design...

12-18 In the third paragraph from the bottom; the third sentence should read:

A recommended minimum planting density is 400 stems/acre **of bioretention cell area.**

11-8 For clarification in Step 1,

WQV_{Adj}: Adjusted Water Quality Volume (ft³). This is used as the volume that must be contained between the sedimentation chamber (**above any permanent pool**) and the sand **chamber** (above the sand).

11-9 The Maximum Head on the filter should be clarified to read:

This is typically measured from the **top of the sand to the overflow/bypass elevation.**

11-10 The equation in Step 3 will not be true for all sand filter configurations. For it to work for other configurations, it should be:

$$[A_f (ft^2) * h_{fmax} (ft)] + [A_s (ft^2) * h_{smax} (ft)] \geq WQV_{Adj} (ft^3)$$

- h_{fmax} : Maximum head on the sand chamber. This is typically measured from the top of the sand to the overflow/bypass elevation.
- h_{smax} : Maximum head on the sedimentation chamber. This is typically measured from the top of any permanent pool of water to the overflow/bypass elevation.

5-11 At the bottom of the page in step 2, the internal slope (S) does not show the units. **S should be in ft/ft**, not percent.

18-16 To clarify language in the last paragraph of this page, the following sentence should read:

The borings shall be performed and reported in accordance with ASTM D 1452 Practice for Soil Investigation and Sampling Auger Borings **or** ASTM D 1586 Test Method for Penetration Test and Split Barrel Sampling of Soils.
