Comments on the Draft 2019 SWMMWW		
Draft 2019 SWMMWW Section (select from drop down)	Comment	Comment Made By
I-3.4.6 MR6: Runoff Treatment	The "Additional Requirements" box states that the local government can not approve untreated stormwater discharge to groundwater, except for infiltration and dispersion of runoff through LID BMPs. How does this apply when LID BMPs are also used to meet MR 6 or 7?	E. Emerson
I-3.4.6 MR6: Runoff Treatment	Is there a lower threshold where facilties are no longer considered to be discharging to groundwater? For example, are unlined stormwater ponds in Till soils exempt even if the underying soils do not meet treatment criteria? How about synthetic sports fields with infiltration rates less than 0.3 inches/hr, but still "some" infiltration potential?	E. Emerson
I-3.4.7 MR7: Flow Control	The note on page 142 states that if the discharge from a TDA is to a stream that leads to a wetland then both MR# 7 and MR#8 apply. Is there a reasonable limit to how far downstream the wetland is from the discharge for this standard to apply? It is possible for a stream to flow into a wetland miles downstream from a project's discharge. The effort involved in analyzing MR#8 in such a situation would be extensive and would likely result in the conclusion that the flow increases from the project would be insignificant relative to the runoff from the greater basin tributary to the wetland. For the sake of consistency with other elements in the manual a 1/4 mile cutoff would make sense.	E. Emerson
I-3.4.8 MR8: Wetlands Protection	The subsection "How Do I Reconcile the Flow Control Performance Standard with MR8?" states the a different flow control performance standard may be established to resolve conflicts between MR7 and MR8. However, no guidance is given as to how to determine the different flow control standard. While identifying that the wetland standard is the priority is helpful, without a limit to or guidance on how the flow control standard can be modified the door is open for abuse of the concession. Local agencies will be put in a position to have to make this determination on a case by case basis.	E. Emerson
I-3.4.8 MR8: Wetlands Protection	Consider adding a 1/4 mile (or some other distance) cutoff for sites that discharge through a convayance system to a wetland. Alternately, an area based methodology could be used, for example sites with more than XX% of the total tributary area to a wetland.	E. Emerson
I-4.2 How UIC Wells are Regulated	Please clarify what triggers the need to assess existing UIC wells. Is this only if a project action will impact an existing well, either by modifying it or changing the tributary are to it, or is the intent to retroactively assess and register all existing UIC wells. If the latter, who is responsible for ensuring that this occurs? Ecology, local agency, or solely the owner?	E. Emerson
I-4.13 Classification of Vadose Zone Treatment Capacity	Table I-4.2 indicates that "High" treatment begins at 0.3 in/hr hydraulic conductivity and progresses to lower treatment capacities and larger hydraulic conductivities. Can it be assumed that hydraulic conductivities lower than 0.3 in/hr do not infiltrate and therefore do not require treatment? For example, does an unlined plastic arch system need to provide treatment if infiltration testing shows a hydraulic conductivity less than 0.3 in/hr?	E. Emerson
I-4.13 Classification of Vadose Zone Treatment Capacity	In Table I-4.2 Clarify if all of the "Description of Vadose Zone Layer" criteria need to be met to qualify as a given treatment capacity classification, or just a majority. For example, does a soil which meets all of the "HIGH" criteria except falls short of the stated CEC level get classified as "High" or "Medium"?	E. Emerson
I-C.5 Hydroperiod Protection Guidelines for Wetlands	Water level fluctuation standards are given in metric units. Everything else in the manual is in Standard units. Shouldn't both be given, at least, for consistency with the rest of the manual?	E. Emerson
III-1.2 Choosing Your Runoff Treatment BMPs	Under the "Other Runoff Treatment BMPs" subsection, there is a discussion of the depth to impervious layers which includes both bedrock and till. Is a classification as Till soil sufficient to establish a soil as an impermeable layer, or is infiltration testing within this layer required? Allowing the use of a soil classification would simplify the BMP selection process significantly.	E. Emerson
III-2.2 Continuous Simulation Models	Near the bottom of Pg. 509 there is a discussion of areas which can be considered forest or pasture. The list should also include areas not under the control of the project such as offsite areas which flow into the project, or areas used in larger analysis such as MR#8 calculations or regional assessments.	E. Emerson
III-2.4 Flow Bypass and Additional Area Inflow	In the discussion about Inflow from Areas that Don't Require Flow Control consider clarifying how offsite inflow is modeled, noting that these areas are modeled with the same land use in both the predeveloped and developed conditions.	E. Emerson
III-3.2 Preparing a Stormwater Site Plan	Step 1(2)b requires that the results of the hydraulic conductivity testing be included in the Stormwater Site Plan. This should notes as "when conducted". Also, consider adding guidance which clarifies that the testing is not required if other infeasibility criteria (contaminated soils, high groundwater, etc.) preclude the use of infiltration based BMPs.	E. Emerson
III-3.2 Preparing a Stormwater Site Plan	Where are source control BMPs to be included in the Stormwater Site Plan? Step 5 includes subsections for all other types of BMPs, but not source contol. Recommend adding source control BMPs, especially operational BMPs, to the O&M manual.	E. Emerson
III-3.2 Preparing a Stormwater Site Plan	Step 7h- add a requirement that the manual should prominently indicate that the O&M manual be conveyed with the property if the property changes ownership.	E. Emerson

Executive Summary of Volume IV	Consider adding references back to Volumes 1 and 3 for determining how to select BMPs since this volume jumps right into specific BMPs.	E. Emerson
S410 BMPs for Correcting Illicit Connections to Storm Drains	Is a project action required before businesses are required to implement operational BMPs? Especially requirements like the first bullet to check facilities' plumbing.	E. Emerson
S436 BMPs for Color Events	What triggers requirements like this one? There is certainly nothing in the Surface Water Manual which requires this BMP, since events don't create new hard surface. Does the new Municipal Stormwater permit require permit holders to implement/enforce the BMPs in Volume V for non-project actions? Appendix 8 of the Draft Phase II permit doesn not seem to include businesses which would be involved in this type of activity.	E. Emerson
BMP T5.11: Concentrated Flow Dispersion	Figure V-3.1. The lower figure should have slotted drains and crushed rock pads called out. Callout currently says Diagonal Berm, which is the figure above. Also, the flow path is not perpendicular to the contours, which is important because flow path length must be measured down the slope.	E. Emerson
BMP T5.10A: Downspout Full Infiltration	In Design Criteria suggest stating emphatically that soil classifications with silt or clay are infeasible.	E. Emerson
BMP T5.10C: Perforated Stub-out Connections	Consider adding trench dams to Figure V-4.7 to ensure that water doesn't run down the trench if backfill is sand or gravel.	E. Emerson
BMP T5.15: Permeable Pavements	BMP allows use of 6" sand layer for treatment if underlying soils don't meet the Site Suitability Criteria. If the underlying soils meet the sand specification, but not the cation exchange and organic content requirements, is the sand layer needed? It's not intuitive to remove the native material to add a more porous layer for treatament.	E. Emerson
BMP T7.20: Infiltration Trenches	Figure V-5.6 calls for a minimum 0.5 in/hr infiltration rate. Should be 0.3 for consistency with text.	E. Emerson
BMP T7.20: Infiltration Trenches BMP T7.20: Infiltration Trenches	Figure V-5.6 calls for a minimum 0.5 in/hr infiltration rate. Should be 0.3 for consistency with text. Consider adding guidance on plastic arch and milk crate type storage in addition to Figure V-5.9, or at least acknowledging that similar standards would apply.	E. Emerson E. Emerson
BMP T7.20: Infiltration Trenches BMP T7.20: Infiltration Trenches BMP T7.30: Bioretention	Figure V-5.6 calls for a minimum 0.5 in/hr infiltration rate. Should be 0.3 for consistency with text. Consider adding guidance on plastic arch and milk crate type storage in addition to Figure V-5.9, or at least acknowledging that similar standards would apply. Pg. 898 - Bullet regarding minimum vertical separation from impermeable layer - the numbering between the two sizes is inconsistent. In the first section the PGIS and impervious area thresholds are numbered 1 &2 (and 3 is appended to line 2) while in the second section the corresponding thresholds are labeled 1a and 1b.	E. Emerson E. Emerson E. Emerson
BMP T7.20: Infiltration Trenches BMP T7.20: Infiltration Trenches BMP T7.30: Bioretention BMP T10.10: Wetponds - Basic and Large	Figure V-5.6 calls for a minimum 0.5 in/hr infiltration rate. Should be 0.3 for consistency with text. Consider adding guidance on plastic arch and milk crate type storage in addition to Figure V-5.9, or at least acknowledging that similar standards would apply. Pg. 898 - Bullet regarding minimum vertical separation from impermeable layer - the numbering between the two sizes is inconsistent. In the first section the PGIS and impervious area thresholds are numbered 1 &2 (and 3 is appended to line 2) while in the second section the corresponding thresholds are labeled 1a and 1b. Figures V- 8.3 through V-8.6 seem oddly placed as they are only marginally related to wet ponds and don't appear to be referenced in this section. Would these be beter suited to Volume III?	E. Emerson E. Emerson E. Emerson E. Emerson
BMP T7.20: Infiltration Trenches BMP T7.20: Infiltration Trenches BMP T7.30: Bioretention BMP T10.10: Wetponds - Basic and Large BMP T5.13: Post-Construction Soil Quality and Depth	Figure V-5.6 calls for a minimum 0.5 in/hr infiltration rate. Should be 0.3 for consistency with text. Consider adding guidance on plastic arch and milk crate type storage in addition to Figure V-5.9, or at least acknowledging that similar standards would apply. Pg. 898 - Bullet regarding minimum vertical separation from impermeable layer - the numbering between the two sizes is inconsistent. In the first section the PGIS and impervious area thresholds are numbered 1 &2 (and 3 is appended to line 2) while in the second section the corresponding thresholds are labeled 1 a and 1b. Figures V- 8.3 through V-8.6 seem oddly placed as they are only marginally related to wet ponds and don't appear to be referenced in this section. Would these be beter suited to Volume III? Runoff Model Representation appears to contradict Volume III modeling guidance on vegetation which requires that BMP T5.13 be legally protected in order to consider it pasture. Recommend dropping the requirement for legal protection for this BMP. Any change to areas which have implemented this BMP would be treated as new development and subjec to a new round of stormwater review. Requiring legal protection is likely to negatively affect developers willingness to use the BMP.	E. Emerson E. Emerson E. Emerson E. Emerson E. Emerson