



DEPARTMENT OF ENVIRONMENTAL PROTECTION

Marc Elrich  
*County Executive*

Adam Ortiz  
*Director*

January 21, 2021

Raymond Bahr  
Sediment, Stormwater, and Dam Safety Program  
Maryland Department of the Environment  
Water and Science Administration  
1800 Washington Blvd., Ste. 440  
Baltimore, MD 21230-1708

Dear Mr. Bahr:

Enclosed please find Montgomery County's comments on the draft National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit, 2020 accounting guidance update and 2020 monitoring guidelines, which were made available for public comment on October 23, 2020. The comments below and in the enclosed tables follow the order and structure of the draft permit, accounting guidance and monitoring guidelines documents.

Capacity for Additional Stormwater Restoration:

Montgomery County submitted a revised maximum extent practicable (MEP) package as requested by MDE on March 13, 2020 that included an analysis of the physical and financial constraints on our restoration program, as well as a portfolio of restoration projects to be implemented under the next permit. The County's project portfolio detailed the restoration of 1,649 impervious acres (beyond the 3,778 acres restored under our 2010 permit and 2,146 acres restored under our 2001 permit). This restoration goal was increased by 10 percent in the draft permit. The justification for this increase was that the restoration goal needed to be consistent with the Phase III WIP (which calls for continued restoration work at a rate of two percent per year), and that the increased opportunities and flexibilities in the 2020 accounting guidance mean that "more restoration is likely achievable." However, we still have a number of outstanding questions regarding the accounting guidance that were first submitted on February 14, 2020 and again on August 28, 2020, and to which we have still not received a response. The County is in the difficult position of being required to achieve a restoration goal that is higher than our MEP, without having clarity on how the accounting towards that goal will be done.

In addition to these concerns, it has been our experience that the cost of restoration work increases as easier and/or more readily available projects are implemented first, and the remaining restoration opportunities become more challenging. It is also important to keep in mind that every acre restored adds to the inventory of stormwater facilities and BMPs that the County must inspect and ensure are maintained ad infinitum.

Potential Impacts of the COVID 19 Pandemic on Program Funding:

Montgomery County is eager to move Maryland's MS4 program forward and has cooperated with MDE every step of the way as the Department has determined its preferred restoration approach for the next generation of permits. However, we would like MDE to acknowledge the uncertainties around potential impacts of the current global pandemic on our ability to meet permit requirements. We have every intention of continuing our permit and restoration programs, and we have a dedicated funding source to support that work. However, county businesses and residents have seen enormous economic impacts as a result of the ongoing COVID-19 pandemic, and the impacts on our budget are not yet fully understood. We have offered language to acknowledge this uncertainty in a way that would allow MDE to retain the sole discretion to decide whether to pursue enforcement for alleged noncompliance. This language is currently in effect in MS4 permits in Virginia. We offer the language again here and ask that it be included in Maryland's MS4 permits:

“In the event the permittee is unable to meet conditions of this state permit due to circumstances beyond the permittee's control, a written explanation of the circumstances that prevented permit compliance shall be submitted to the Department in the annual report. Circumstances beyond the permittee's control may include abnormal climatic conditions; weather conditions that make certain requirements unsafe or impracticable; or unavoidable equipment failure caused by weather conditions or other conditions beyond the reasonable control of the permittee (operator error and failure to properly maintain equipment are not conditions beyond the control of the permittee). The failure to provide adequate program funding, staffing or equipment maintenance shall not be an acceptable explanation for failure to meet permit conditions. The Board will determine, at its sole discretion, whether the reported information will result in an enforcement action. In addition, the permittee must report noncompliance which may adversely affect surface waters or endanger public health in accordance with Part 11.1.”

This language does not absolve the permittee from compliance with the permit requirements, it simply acknowledges that there may be circumstances beyond the permittee's control that prevent permit compliance. It requires the permittee to report the circumstances that prevented compliance to the regulator and allows the regulator to determine whether the reported information will result in an enforcement action. Maryland's MS4 permits should acknowledge that there are some situations, like the ongoing COVID-19 pandemic, that legitimately challenge even the most established MS4 program.

Raymond Bahr, Sediment, Stormwater, and Dam Safety Program  
Water and Science Administration, Maryland Department of the Environment  
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The County appreciates MDE's efforts in working to establish the next generation of Maryland MS4 permits. We look forward to MDE's response to these comments. Montgomery County is very proud of the great work completed by DEP and its partners to implement a successful MS4 program and will continue to lead stormwater efforts statewide under the new permit. Please feel free to contact me should you have any questions or wish to discuss the submittal in more detail.

Sincerely,

*Frank Dawson*

Frank Dawson, Chief  
Watershed Restoration Division

Enclosures: As stated

Cc: Jennifer Smith, Program Manager, Sediment, Stormwater, and Dam Safety Program  
Stew Comstock, Regulatory & Compliance Engineer, Program Review Division  
Adam Ortiz, Director, Montgomery County Department of the Environment (DEP)  
Patty Bubar, Deputy Director, DEP  
Amy Stevens, Chief, Planning, Outreach and Monitoring Section, Watershed Restoration Division, DEP

#	Draft Permit Section	Page	Comment
1	I.B. Permit Area	1	<p>The language has been changed to read: “This permit covers <u>all</u> stormwater discharges <u>into, through, or from</u> the municipal separate storm sewer system (MS4) owned or operated <u>jurisdiction-wide</u> by Montgomery County, Maryland.”</p> <p>Please confirm that stormwater discharges into the County’s MS4 that are covered by another permit (e.g. General Permits for Stormwater Associated with Construction or Industrial Activity, other MS4 permits) are not covered by this permit and are excluded from the County’s MS4 permit area.</p>
2	IV.B. Legal Authority	2	<p>The language has been changed from allowing the County to “specify a schedule for making the necessary changes to maintain adequate legal authority” to “<u>make</u> the necessary changes to maintain adequate legal authority <u>within one year of notification</u>.” This is not enough time. We recommend either returning to the existing language or allowing two years to make changes.</p>
3	IV.C. Source Identification	2	<p>New permit language specifies the use of Version 1.2 (May 2017) of MDE’s MS4 Geodatabase. Please provide guidance on how new permit elements, such as stream restoration protocols 4 and 5, that don’t exist in version 1.2 should be reported?</p>
4	IV.C.1. Storm drain system	2	<p>“All infrastructure” has been added to the list of storm drain features that must be reported. Please confirm that this is limited to stormwater infrastructure that is owned or operated by Montgomery County.</p>
5	IV.C.3. Urban best management practices (BMPs)	3	<p>The permit language says that stormwater management facility data for new development and redevelopment should be reported in the Urban BMP table, which appears to exclude restoration projects. However, the 2017 geodatabase says that BMPs treating redevelopment should be reported as restoration BMPs. Please clarify how redevelopment should be reported.</p>
6	IV.C.5. Monitoring locations	3	<p>Should the County elect to participate in the pooled monitoring, will reporting of monitoring locations still be required? What if the sites monitored under the pooled program are not located in the County?</p>
7	IV.C.5. Monitoring locations	3	<p>The permit language refers to Part IV.F (Countywide TMDL Stormwater Implementation Plan) in the context of monitoring locations. Should the reference be to IV.G (Assessment of Controls) instead?</p>

#	Draft Permit Section	Page	Comment
8	IV.C.6. Water quality improvement projects	3	The permit language specifies that BMPs reported as water quality improvement projects must be in accordance with the 2020 Accounting Guidance. Does this mean that restoration work from past permits should no longer be reported?
9	IV.D.4.b. (Property Management and Maintenance)	6	<p>New permit language states that “The County shall develop, implement, and maintain a good housekeeping plan (GHP) for County-owned properties not required to be covered under Maryland’s SW Industrial GP where the activities listed in PART IV.D.4.a. are performed.”</p> <p>Part IV.D.4.a. lists activities that typically require a SW Industrial GP:</p> <ul style="list-style-type: none"> <li>• maintenance or storage of vehicles or equipment;</li> <li>• storage of fertilizers, pesticides, landscaping materials, hazardous materials, or other materials that could pollute stormwater runoff.</li> </ul> <p>It is not clear how the same activities that typically trigger permit coverage can be used to identify properties that do not require a permit, but that should have a GHP.</p> <p>Also, how are hazardous materials defined?</p>
10	IV.D.4.d. (Property Management and Maintenance)	7	Please confirm that the salt management plan is to address roads only, and not other county properties.
11	IV.D.4.e. (Property Management and Maintenance)	8	Being located in the Property Management and Maintenance section of the permit, the evaluation of litter problems appears to apply only to county properties. Please confirm or clarify.
12	IV.D.5. Public Education	8	<p>The language has been changed to read: “These efforts are to be documented and summarized in each annual report, <u>with details on resources (e.g., personnel and financial) expended and method of delivery for education and outreach.</u>”</p> <p>It is not clear what details on resources expended and method of delivery should be reported. Is this required for each outreach initiative, or will the total cost for all permit-related outreach suffice?</p>
13	IV.D.5. Public Education	9	<p>Language was added that requires a minimum of 130 outreach efforts per year. It is not clear what qualifies as an outreach effort, particularly during the COVID-19 pandemic when most of our outreach must be done online. Please clarify.</p> <p>Is there a semi-colon missing between “website pages” and “mass media”?</p>

#	Draft Permit Section	Page	Comment
14	IV.E.3. (Stormwater Restoration)	9	Montgomery County still has outstanding questions that were submitted on the 2019 Accounting Guidance for which responses were never received, and which the 2020 update does not address. The County is in the difficult position of being required to achieve a restoration goal that is higher than MEP without having clarity on how the accounting towards that goal will be done.
15	IV.E.7. (Stormwater Restoration)	10	New permit language reads: "Montgomery County shall meet its impervious acre implementation requirement according to the annual restoration benchmark schedule provided in Table 1." Are the annual benchmarks in Table 1 based on calendar year or fiscal year?
16	IV.F.2. Countywide TMDL Stormwater Implementation Plan	11	Please confirm that these updated implementation plan requirements apply only to future TMDL implementation plans, and not to the implementation plans that have already been submitted to MDE for review.
17	IV.F.2.a. (Countywide TMDL Stormwater Implementation Plan)	11	New language requires TMDL implementation plans to include: "A list of stormwater BMPs, programmatic initiatives, or alternative control practices that will be implemented to reduce pollutants for the TMDL" Please clarify whether the list needs to include specific projects, or whether it can show types of projects?
18	IV.F.2.c. (Countywide TMDL Stormwater Implementation Plan)	11	New permit language reads: "Once approved by the Department, any new TMDL implementation plan shall be incorporated in the Countywide TMDL Stormwater Implementation Plan and subject to the annual progress report requirements under Part IV.F.3 of this permit." TMDL implementation plans will be developed on an individual pollutant and waterbody basis and submitted to MDE for review and approval. Once approved, the implementation plans are to be incorporated into the Countywide TMDL Stormwater Implementation Plan in order to report on implementation progress. The Countywide Plan should be renamed the Countywide TMDL Stormwater Implementation Progress Report to more accurately convey its purpose.

#	Draft Permit Section	Page	Comment
19	IV.F.4. Countywide TMDL Stormwater Implementation Plan	12	<p>New permit language reads: “Montgomery County shall provide continual outreach to the public and other stakeholders, including other jurisdictions or agencies holding stormwater WLAs in the same watersheds, regarding its TMDL stormwater implementation plans.”</p> <p>Please clarify what is meant by “continual outreach.” Does this outreach apply to both the individual implementation plans and to the Countywide TMDL Stormwater Implementation Plan/Progress Report? It makes sense to involve the public in developing an implementation plan, but it makes less sense to involve them in developing a progress report.</p>
20	IV.G.1.b (BMP Effectiveness Monitoring)	14-16	Bullets in sections IV.G.1.b.i. through iv should be changed to letters for navigation/citation purposes.
21	IV.G.1.b.i. Chemical Monitoring	14-15	Please confirm that changes to chemical monitoring parameters do not apply if the Breewood Tributary monitoring is continued. The County has invested over 10 years in monitoring and restoration implementation in the Breewood watershed, and we are in the process of collecting post-restoration data. Changing the sampling parameters now would jeopardize our ability to draw conclusions from the data.
22	IV.G.1.b.iv. Annual Data Submittal	16	<p>New permit language requires the annual data submittal to include: “Any available analysis of surrogate relationships with the above monitoring parameters.”</p> <p>Major issues have been identified with different turbidity measurements, most significantly, there is high variability at higher turbidity. Has Maryland identified a method, a calibration method, or a standard QA/QC protocol for TSS-Turbidity or Chloride-Specific Conductivity relationships? It will likely take multiple permit cycles to collect enough data to establish reliable surrogate relationships.</p>
23	IV.G.2.b. (Watershed Assessment Monitoring)	16	<p>New permit language reads: “The County shall submit a comprehensive plan for watershed monitoring by [one year and 4 months after permit issuance, date to be determined] related to stream biology and habitat, bacteria, and chlorides and commence monitoring upon the Department’s approval.”</p> <p>Please confirm that monitoring is conducted on a calendar year basis and will not begin until the first full calendar year after MDE approval.</p> <p>Also please confirm that there will be a one year lag between data collection and reporting to allow for QA/QC and analysis.</p>

#	Draft Permit Section	Page	Comment
24	IV.G.2.b.ii. (Watershed Assessment Monitoring)	16	New permit language requires: "Bacteria (i.e., E.coli, Enterococcus spp., or fecal coliform monitoring)" Please clarify which of the three forms of bacteria should be sampled.
25	IV.H.2. (Program Funding)	17	The permit language reads: "Lack of funding does not constitute a justification for noncompliance with the terms of this permit." Montgomery County and the other Phase I Large MS4s are eager to move Maryland's MS4 program forward and have cooperated with MDE every step of the way as the Department has determined its preferred restoration approach. We have asked repeatedly that MDE acknowledge the uncertainties around potential impacts of the current global pandemic on our ability to meet permit requirements. We have every intention of continuing our permit and restoration programs, and we have a dedicated funding source to support that work. However, county businesses and residents have seen enormous economic impacts as a result of the ongoing COVID-19 pandemic, and the effects of those impacts are not yet fully understood. Maryland's MS4 permits should acknowledge that there are some situations, like the ongoing COVID-19 pandemic, that can legitimately challenge even the most established MS4 program.
26	V.A.1. Annual Reporting	17	The permit requires the County to "submit annual reports on or before the anniversary date of this permit" and goes on to say that "all information, data, and analyses shall be based on the State's fiscal year." If the permit is issued in late spring or early summer, as MDE has indicated, please explain how MDE expects the County to report on a fiscal year that is either not yet complete (late spring) or has just ended (early summer). Time is needed to close out fiscal year activities, gather information, and prepare each annual report.
27	V.A.3. Annual Reporting	18	The language has been changed to read "County must <u>continuously</u> evaluate the effectiveness of its programs <u>and report any</u> modifications <u>in each annual report.</u> " Please clarify the intended meaning of the word "continuously."

#	Draft Permit Section	Page	Comment
28	VII.G.1.e. Permit Actions	23	<p>The following language has been added to the list of causes for which MDE may modify, suspend, or revoke and reissue all or part of the permit: “To incorporate additional controls that are necessary to ensure that the permit effluent limit requirements are consistent with any applicable TMDL WLA allocated to the discharge of pollutants from the MS4”</p> <p>Please confirm that “the permit effluent limit requirements” for NPDES MS4 permits are expressed as best management practices or other similar requirements consistent with the MEP standard, rather than as numeric effluent limits.</p>
29	Appendix B	B.1	<p>Appendix B includes eight stream restoration projects. Appendix H to the 2020 Accounting Guidance specifies the minimum qualifying conditions for stream restoration and shoreline management projects. Condition 5 states that “Before credits are granted, stream restoration projects will need to meet post-construction monitoring requirements, exhibit successful vegetative establishment, and have undergone initial project maintenance.”</p> <p>Will MDE give EIA credit for stream restoration at construction completion, rather than waiting until after post-construction monitoring, vegetative establishment and project maintenance? It is not clear that annual benchmarks in Table 1 can be met if credit is not granted until these post-construction activities are complete.</p>

#	Guidance Section	Page	Comment
1	II. Restoration Credits and Accounting Principles	1	The 2014 Accounting Guidance described how to establish baseline conditions for impervious area restoration and stormwater WLAs, but the draft accounting guidance is silent on this topic. The reality is that there are often reasons to update baseline conditions, for example when an existing BMP that was not previously in the BMP inventory is discovered, or when a BMP is decommissioned and removed from the inventory. It would be beneficial for MDE to provide guidance on how such adjustments should be made going forward, and this would also help maintain consistency across MS4 jurisdictions.
2	Table 1. EIAf and Load Reductions for Alternative BMPs	3	The EIA credit for septic practices was significantly reduced compared to the August 2014 guidance. Septic Connection was also reduced from 0.36 Ac in the June 2020 guidance to 0.23 Ac in the June 2020 guidance. Why?
3	III. 1. Structural Practices	4	Please clarify that Delivery Factors are not used in calculating Upland BMP IA Credits.
4	III. 1. Structural Practices	4	Please clarify how to calculate IA credit for wet pond to wet pond projects. Examples would be useful. [The assumption is that the existing wet pond was not built to current standards and therefore is not creditable for treatment of the impervious area in its drainage area.]
5	III. 1. Structural Practices	4	IA credit is based on rainfall depth treated. How should nested BMPs be handled?
6	III. 1. Structural Practices	4	How to address the IA from nested BMPs that are already considered MEP and/or credited?
7	III.2. Non-Structural Practices	4	The guidance states that "Nonstructural practices acceptable for MS4 restoration must meet the design criteria found in Chapter 5 of the Manual." In the previous permit, restoration work did not need to strictly meet this requirement as there may be site/design limitations and work was being implemented to the MEP. Can this be continued for restoration (non-new-development and non-redevelopment) work, or does the Manual have to be strictly adhered to?
8	III. 4. Redevelopment	5	If treatment of redevelopment is below fifty percent of the untreated existing, can partial credit be received?
9	III. 4. Redevelopment	5	For the scenario in Example 1 (see below): Assuming the school did not have any stormwater management before redevelopment and the redevelopment provided treatment for 100% of the untreated existing Impervious acres within its LOD. Would the impervious area for the school shown in the 2008 Orthophoto receive 100% impervious credit?

#	Guidance Section	Page	Comment
10	III. 4. Redevelopment	5	Is Redevelopment IA credit spatially limited to within the LOD for that permit, or can credit be granted for treatment within the upstream drainage area? LOD may not reflect the full treatment provided by the facilities installed.  If it's limited to within the LOD, what is the purpose of having delineated drainage areas for all (redevelopment) facilities?
11	III. 4. Redevelopment	5	What if the redevelopment project's LOD/treated impervious falls within the drainage area of another larger facility, i.e. regional pond – how is credit allocated?  a. New development and redevelopment are considered differently, but given we just finished the 2010 permit, what will that treated impervious be considered? All baseline, and everything new since then is either new or redevelopment? What if there's existing treatment within redevelopment LODs?  b. How are 'untreated' existing impervious acres determined? The County considers everything onsite untreated by default, whereas that's not necessarily the case in reality.
12	III. 4. Redevelopment	5	On a given site, there may be multiple facilities, but only the 1 LOD, how are impervious numbers allocated amongst the multiple facilities?
13	III. 4. Redevelopment	5	How is nutrient reduction accounted for in Redevelopment?  There is no EIA credit field in the MDE Geodatabase. Which impervious should be documented (existing impervious or the redeveloped impervious)?
14	IV. Pollutant Load Reductions for Upland Best Management Practices	7	Please clarify how to calculate Pollutant Load Reduction credits for wet pond to wet pond projects. Examples would be useful. [Same assumptions as comment 4 above].
15	IV. Pollutant Load Reductions for Upland Best Management Practices	7	Note 1 under Table 2. Stormwater BMPs for Upland Applications regarding regenerative step pool stormwater conveyance. Is this different from the form of outfall stabilization application or a stream restoration application? Does protocol 4 in the CBP expert panel only apply if it is constructed in streams?

#	Guidance Section	Page	Comment
16	V. Alternative Best Management Practices	11	<p>“Alternative BMPs must follow inspection frequencies as specified by the CBP expert panels, with the exception of land cover conversion BMPs, which require inspections at least every three years.”</p> <p>This pertains to practices such as Forest Planting, Conservation Landscaping, Impervious Surface Reduction, Street Trees, Urban Tree Canopy, Riparian Forest Buffers, and Riparian Conservation landscaping. Is there an inspection protocol for each of these practices? Or does each jurisdiction create their own protocol?</p>
17	V. Alternative Best Management Practices	11	Is it practical to inspect Street Trees and Urban Tree Canopy every 3 years? Is inspection perpetual? Or only during the permit term?
18	V. 1. Street Sweeping, Table 6	12	For the purpose of street sweeping, how many weeks are Spring and Fall considered to be?
19	V.2. Floating Treatment Wetlands, Table 8	13	For a pond in which the wet pool does not achieve full WQv (is either undersized or part of WQv is ED) do the % coverage, load reductions, and EIAf in Table 8 still apply, or would these be prorated by the % of the WQv that the wet pool addresses?
20	V.3. a. 1 Forest Planting	14	Do species planted need to be native to the Chesapeake Bay region?
21	V.3. a. 1 Forest Planting	14	Please see specific questions in Example 2 through 4 below.
22	V.3. a. 2. Conservation Landscaping	14	Please clarify that unmanaged (un-mowed) meadow means not mowed/maintained as turf, as some mowing is necessary for maintaining a condition as meadow – once or twice a year. Please clarify whether removal of invasive species is necessary for maintenance.
23	V.3. a. 2. Conservation Landscaping	14	Do all species (100%) in the Conservation Landscape need to be native the Chesapeake Bay region? Please define Chesapeake Bay region – does this mean the Chesapeake Bay drainage area?
24	V.3. a. 2. Conservation Landscaping	14	May turf converted to mulched areas and planted with native perennials, shrubs, and trees be considered Conservation Landscaping – as an equivalent of a meadow condition? May replacement of invasive species with this same condition also be considered Conservation Landscaping?
25	V.3. a. 2. Conservation Landscaping	14	May the transitional landscape between meadow and forest (shrub/scrub) be considered Conservation Landscape? And once this meets the Forest Planting requirements, can the credit then be converted to Forest Planting?

#	Guidance Section	Page	Comment
26	V.3.b. Riparian Land Cover Conversion BMPs	15	Do Riparian Forest Buffers and Riparian Conservation Landscaping need to meet the same requirements as Upland Forest Planting and Conservation Landscaping, such as native species, plant densities, etc?
27	V.3.b. Riparian Land Cover Conversion BMPs	15	Can other BMPs receive additional riparian credit? For example, would a rain garden within 100' of a tributary qualify for more nutrient reduction credit? Or just forest buffers and conservation landscaping?
28	V. 3.d Urban Soil Restoration Credit	18	This is a technique (soil ripping) that is probably not useful in Piedmont soils at all, given the rock structures in these soils. Also, the technique is not well defined with a performance standard other than ripping to a depth of either 15" or 20". Replacement of the soils amended with? What is the mix/ratio basis for compost/ standard for that compost? Compaction standard for stability? What is the impact of creating a mounded profile – also of concern is its usefulness on small lot sites – should this be considered only for certain conditions such as areas with no trees or native vegetation, minimal utility crossings? At what percent compaction is a site eligible before and how great a change in porosity must be achieved? This practice does not seem ready for prime time.
29	V. 4. Septic Practices	20	<p>“The Department’s approval [of a comprehensive program] is contingent upon the permittee’s septic maintenance program being able to ensure that registered homeowners pump out their septic tank when their storage chambers reach capacity (i.e., bottom of the scum layer is within 6 inches of the bottom of the outlet, or top of the sludge layer is within 12 inches of the outlet), and the septic systems are inspected annually for maintenance verification.”</p> <p>This would appear to require annual inspections of all septic systems. We are not aware of any local jurisdiction who implements this level of inspection frequency. Why are annual inspections necessary?</p>
30	V.6. Stream Restoration and Outfall Stabilization	22	<p>Please provide issue dates for:</p> <ul style="list-style-type: none"> <li>• Recommendations of the Expert Panel to Define Removal Rates for Individual Stream Restoration Projects,</li> <li>• Consensus Recommendations for Improving the Application of the Prevented Sediment Protocol for Urban Stream Restoration Projects Built for Pollutant Removal Credit, and</li> <li>• Recommendations for Crediting Outfall and Gully Stabilization Projects in the Chesapeake Bay Watershed.</li> </ul>

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31	V.6. Stream Restoration	22	It is not defined if credit is based on the existing or proposed length – wording is ambiguous on p. 65 of Appendix F. If final credit is based on protocols, it seems like it would inherently be based on the existing stream length.
32	VI. Credit for Additional Water Quality Treatment Volume	27	If a BMP has a PE over 3 inches should the actual PE be plugged into the equation or should 3 inches be used instead (as the maximum value)? For example, if a wet pond has a PE of 3.50 inches?
33	VI. Credit for Additional Water Quality Treatment Volume	27	How is IA credit assigned when retrofitting an existing, currently uncredited wet pond? Please provide example calculations for different retrofit scenarios
34	VI.2. Credit for Additional Storage (Watershed Management Credit)	28	If a pond provides partial WQ volume (treats less than 1” of WQV) and extended detention (full or partial), will there be storage credit for providing extended detention?
35	VI.2. Credit for Additional Storage (Watershed Management Credit)	28	What are the existing dry pond efficiencies defined as now?
36	VI.3 Green Stormwater Infrastructure Credit	28	Please confirm that GSI credit may be used even if the full WQT is not met.
37	VI.3. Green Stormwater Infrastructure Credit	29	Does GSI credit apply to Filterra (tree box) devices?
38	VI.3. Green Stormwater Infrastructure Credit, Table 20	30	<p>“Vegetation must be established to cover a minimum of 50% of the pond surface, as measured at the permanent pool design water surface elevation”</p> <p>This seems like a deal breaker for ponds – giving up a lot of volume to dedicate that much surface area to a ponding depth shallow enough to support vegetation. Easier to provide more wet volume or ED. Basically, the required and recommended criteria seem to be more geared toward wetlands than ponds.</p>

#	Guidance Section	Page	Comment
39	VI.4. Combining Water Quality Treatment Credits, GSI Credits, and WM Credits	31	Please confirm that we are allowed to count ED as WQt no matter what the wet volume's equivalent runoff depth treated is.  To use ED as WM credit, it's pretty clear that it only kicks in after you provide at least 1" of wet volume. To instead use ED as additional WQt, though, the document does not list any minimum threshold; it just says that you can credit a maximum of 3" WQt. I am assuming that there is no minimum wet volume requirement for this application, because it's not mentioned in either this guidance or in the Maryland stormwater manual.
40	VI.4. Combining Water Quality Treatment Credits, GSI Credits, and WM Credits	31	Does the WM or GSI credit plug into the RR and ST curves?
41	VI. 4. Combining Water Quality Treatment Credits, GSI Credits, and WM Credits	31	If extended detention is used to augment the wet volume (rather than counting separately as WM), what value gets plugged into the curves – the wet volume only (converted to runoff depth captured), or the wet volume augmented by extended detention? See Example 5 below.
42	VIII.1. Future Chesapeake Bay Program Expert Panel Updates	35	MDE will be posting future CBP reports to their site, will MDE post all the existing CBP Reports that they've adopted on their site to ensure we are all referencing the same reports?
43	Appendix H, Item 1	69	Please add the following note to the end of Item 1:  "Per the Consensus Recommendation, any projects already in the ground or under design as of January 1, 2021 shall not be subject to the Consensus Recommendations, but shall adhere to the definitions, qualifying conditions and Protocol 1 calculations laid out in the Stream Restoration Expert Panel Protocols (2014)."
44	Appendix H, Item 5	70	Post-construction monitoring requirements continue for 5 years or more after project completion. Please clarify what post-construction monitoring requirements are required for crediting. Would as-builts satisfy the crediting requirement?
45	Appendix H, Item 5	70	Given the extensive time needed to design, permit and construct a stream restoration project, this requirement may make credit for any new stream project unattainable during a 5-year permit term.
46	Appendix J: Data Reporting and Verification	77	Can MDE post the latest geodatabase user guide to their site as it gets updated?

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47	Appendix J: Data Reporting and Verification	77	Will MDE make changes to the reporting geodatabase to accommodate additional reporting requirements (i.e. Reporting EIA in the geodatabase)? MS4s would like to have some means of providing input into updating the geodatabase.
48	Appendix L, Phase III Watershed Implementation Plan	90	On page 48 of the guidance document: "Load Sources are aggregated for the purposes of calculating pollutant load reductions credits in this Guidance...". Please clarify how the load sources (and if all the load sources) were aggregated.

**Example 1. Redevelopment:**

**Cannon Road Elementary School: Site was redeveloped in 2012 (Yellow points – BMPs | Pink polygons – Drainage Areas)**



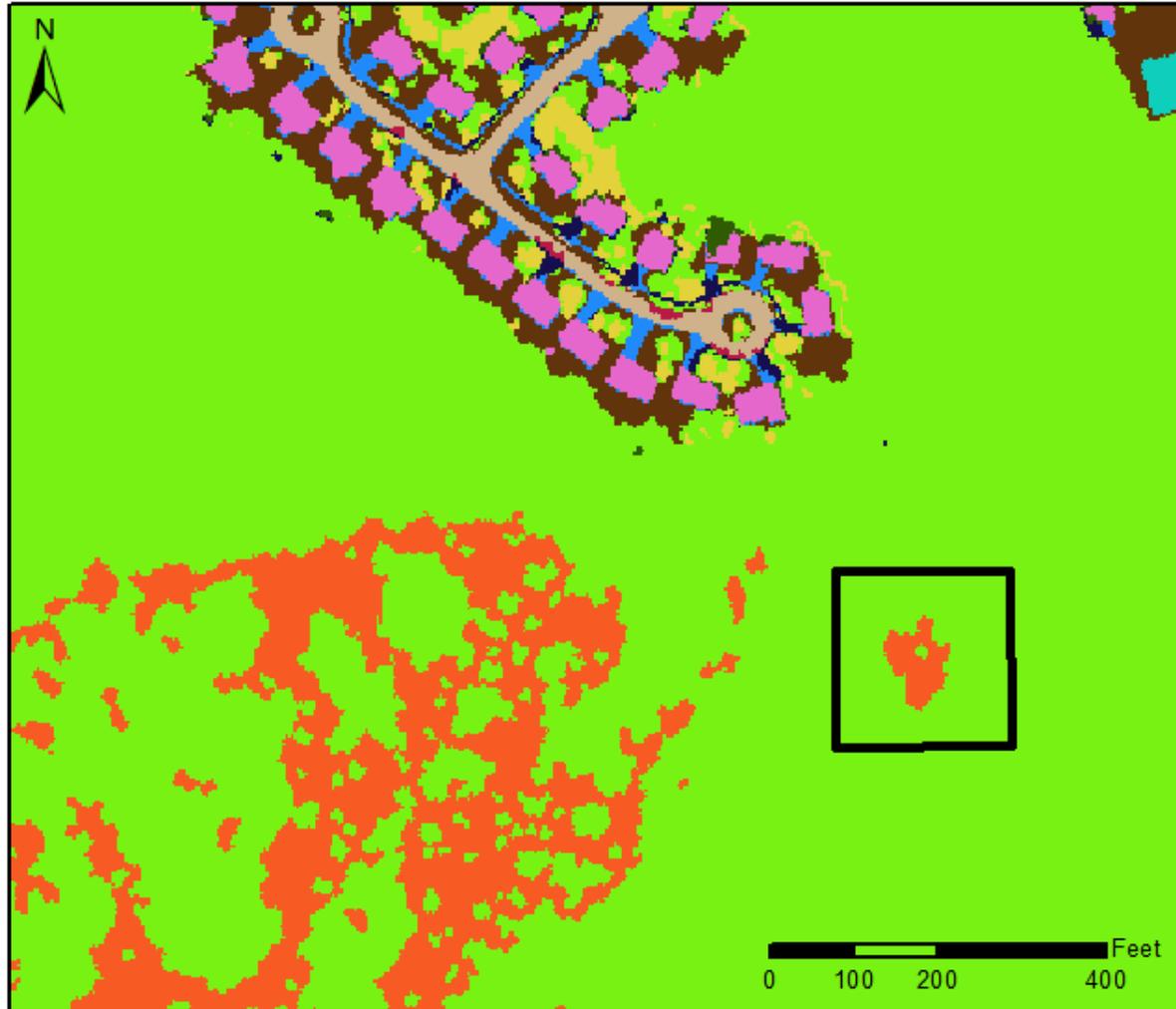
2008 Orthophoto



2019 Orthophoto

**Example 2. Forest Planting**

Credit for planting less than an acre if planting connects, fills in, or expands forest cover. The example below shows mixed open area (orange) within the black box that is approximately an acre in size. By planting the area in orange, it would fill in the area and eventually become part of the forest cover.



**Legend**

1 Acre

**Land Use \ Land Cover**

**LU**

- Water
- Forest
- Shrubland
- Mixed Open/Agriculture
- Barren
- Structures
- Impervious Surfaces
- Impervious Roads
- Tree Canopy Over Structures
- Tree Canopy Over Impervious Surfaces
- Tree Canopy Over Impervious Roads
- Turf
- Tree Canopy Over Turf

**Example 3. Forest Planting**

Area that is currently not considered forest but would become forest by expanding the area by tree planting. In the example below, the area shaded in yellow is not large enough to be considered forest. By planting the hashed area, it would connect the areas in yellow to meet the definition of forest. In this scenario. Can credit be claimed for the areas in yellow and in the hashed?



**Legend**  
 TYPE  
 Forest  
 Planting Area  
 Tree Cover

Montgomery County’s definition of Forest (Chapter 22A. Forest Conservation – Trees)

<https://montgomeryplanning.org/wp-content/uploads/2017/10/Chapter-22A-effective-October-2018.pdf>

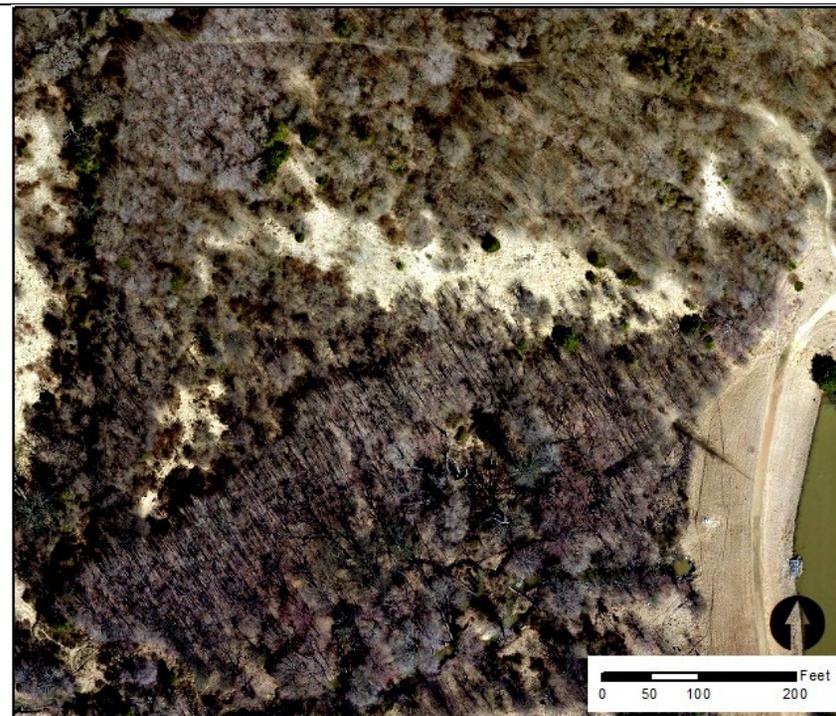
Forest means a biological community dominated by trees and other woody plants (including plant communities, the understory, and forest floor) covering a land area which is 10,000 square feet or greater and at least 50 feet wide. However, minor portions of a forest stand which otherwise meet this definition may be less than 50 feet wide if they exhibit the same character and composition as the overall stand. Forest includes: (1) areas that have at least 100 live trees per acre with at least 50 percent of those trees having a 2 inch or greater diameter at 4.5 feet above the ground; and (2) forest areas that have been cut but not cleared.

**Example 4. Forest Planting**

Can credit be claimed for natural regenerative forest? How is credit provided in the land use / land cover update in the bay model? In the example below, the image on the left is from 2014 and the image on the right is from 2019.



2014 Orthophoto



2019 Orthophoto

**Example 5. Co-Benefit Credit Calculation:**

A dry pond (PDQN) has 10 acres of currently untreated/uncredited IA within the county's MS4 jurisdiction. The proposed dry-to-wet retrofit will provide 50% of the required WQv in the permanent pool (wet volume). Between the permanent pool and the lowest opening on the riser weir, the retrofit will provide 24-hour extended detention (ED) using an appropriately-sized orifice (say 3" diameter). The ED volume provided is 125% of the required WQv. Under the new guidance, the ED can be used to double (at most) the wet volume to count as additional WQv provided (WQt). The retrofit does not qualify for GSI credit.

IA credit

- Scenario 1: If we are only allowed to count the actual wet volume toward credit, the IA credit would be 5 ac
- Scenario 2: If we can count ED as part of the WQv provided, the IA credit would be 10 ac

Pollutant removal calculations – assume no pervious in the loading calcs, and use the aggregate impervious unit loads from Table 4. The ST curve applies.

- TN
  - Scenario 1: 42 lb
  - Scenario 2: 60 lb (increase of 1.4x)
- TP
  - Scenario 1: 8 lb
  - Scenario 2: 11 lb (increase of 1.4x)
- TSS
  - Scenario 1: 18 tons
  - Scenario 2: 25 tons (increase of 1.4x)

If your starting point is, say, 100% WQv as wet volume, and you double that using ED, because you are starting higher on the curves, the relative increase in pollutant removal is not as great – closer to a factor of 1.15x. But for larger ponds, with more untreated IA, the pollutant load reductions become more significant in absolute terms, even if the relative increase is fairly low. Aggregated across many ponds, the additional credit can really add up, and could affect how many projects are needed to meet the remaining permit obligation from the portfolio.

The relevant text from the guidance is on page 28: “For water quality practices with extended detention, the volume of storage provided in extended detention that is equal to the wet pool WQT can be credited as WQT. Instead of using WM credits, this volume can be used for WQT credits up to a total treatment volume for a PE of 3.0 inches (i.e., when the wet pool WQT is 1.5 inches and the extended detention volume is an additional 1.5 inches). This is because 50% of the total water quality volume provided in these BMPs can be in the form of extended detention.”

#	Draft Monitoring Guidelines Section	Page	Comment
1	Introduction	2	<p>“The Department requests that each jurisdiction develop a Quality Assurance Project Plan (QAPP) for all monitoring requirements. QAPP development will allow for smoother incorporation of the data into State regulatory analyses and programs.”</p> <ul style="list-style-type: none"> <li>• Please clarify that QAPPs are not a requirement that must be fulfilled.</li> </ul>
2	BMP Effectiveness, Chemical Monitoring, Baseflow and Stormflow monitoring	4	<ul style="list-style-type: none"> <li>• Please confirm that changes to chemical monitoring parameters do not apply if the Breewood Tributary monitoring is continued.</li> <li>• The County has invested over 10 years in monitoring and restoration implementation in the Breewood watershed, and we are in the process of collecting post-restoration data. Changing the sampling parameters now would jeopardize our ability to draw conclusions from the data.</li> </ul>
3	BMP Effectiveness, Chemical Monitoring, Continuous Monitoring	5	<p>“Turbidity monitoring has been added to the MS4 permit due to recommendations from scientists in the research community because sediment is one of the primary stressors to impaired biological communities in many watersheds. Furthermore, results from continuous turbidity measurements can be used to establish a relationship between turbidity and sediment in urban stormwater.”</p> <ul style="list-style-type: none"> <li>• This relationship is highly variable and not consistent enough to reliably estimate TSS.</li> </ul>
4	BMP Effectiveness, Chemical Monitoring, Continuous Monitoring	5	<p>The paper cited (Gray &amp; Glysson, 2003) outlines major issues with different turbidity measurements. Major take away of high variability at higher turbidity. Maryland hasn't identified a method, a calibration method, or a standard QA/QC protocol.</p>
5	BMP Effectiveness, Biological, Habitat, And Physical Monitoring	6	<ul style="list-style-type: none"> <li>• Please confirm that the changes to biological, habitat, and physical monitoring do not apply if the Breewood Tributary monitoring is continued</li> <li>• The County has invested over 10 years in monitoring and restoration implementation in the Breewood watershed, and we are in the process of collecting post-restoration data. Changing the sampling parameters now would jeopardize our ability to draw conclusions from the data.</li> </ul>

#	Draft Monitoring Guidelines Section	Page	Comment
6	Watershed Assessment, Biological Monitoring, Objectives	8	<p>“As part of this effort, permittees are required to use the MBSS methodology to assess the community of <u>benthic megafauna</u> [...]”</p> <ul style="list-style-type: none"> <li>Benthic megafauna would include salamanders, benthic fish, mussels, and etc. Is this MDE’s intent or is the intent to assess the benthic macroinvertebrates community? If it is the latter, we suggest MDE change “megafauna” to “macroinvertebrates.”</li> </ul>
7	Watershed Assessment, Biological Monitoring, Sampling Design	8	<p>“In addition, collecting in situ dissolved oxygen data using guidance found in the MBSS Round 3 manual will be required (DNR, 2007)”</p> <ul style="list-style-type: none"> <li>Under Summary of Sampling Design, A. Mandatory, 2. b. there are several more requirements for in situ: environmental data, including temperature, DO, pH, turbidity, conductivity with multi-parameter probe. Should these all be collected using DNR 2007?</li> </ul>
8	Watershed Assessment, Biological Monitoring, Sampling Design	8	<p>“Additional recommendations are detailed below...”</p> <ul style="list-style-type: none"> <li>Please confirm that these are recommendations and not requirements.</li> </ul>
9	Watershed Assessment, Biological Monitoring, Sampling Design	9	<ul style="list-style-type: none"> <li>If the 1:24,000 scale map is a recommendation, not a requirement, one of the major challenges we’ve dealt with at MoCo will be ignored. There should be a standard scale used by all jurisdictions. There are potential IBI implications because the IBI is currently calibrated at the 1:100,000 scale.</li> </ul>
10	Watershed Assessment, Biological Monitoring, Summary of Sampling Design Guideline	9	<ul style="list-style-type: none"> <li>Bullet 2.b: Should “multi-param probe” be changes to “multi-parameter probe?”</li> </ul>
11	Watershed Assessment, Biological Monitoring, Summary of Sampling Design Guideline	9	<ul style="list-style-type: none"> <li>Bullet 2.c: This is MBSS summer habitat, to follow protocol would require a spring and summer visit. Does MDE expect only a spring sampling event? This needs to be explicitly stated.</li> </ul>
12	Watershed Assessment, Biological Monitoring, Summary of Sampling Design Guideline	9	<p>“Stranko et al., 2019; DNR, 2017 - for measuring in situ dissolved oxygen”</p> <ul style="list-style-type: none"> <li>We could not find this report in the list of references. Please provide a reference for and/or link to this report.</li> </ul>

#	Draft Monitoring Guidelines Section	Page	Comment
13	Watershed Assessment, Biological Monitoring, Summary of Sampling Design Guideline	9	<ul style="list-style-type: none"> <li>Please confirm that “B. Recommended Study Design Considerations” are recommended and not required.</li> </ul>
14	Watershed Assessment, Biological Monitoring, Summary of Sampling Design Guideline	9-10	<p>“Generalized Random Tessellation Stratified sampling (GRTS)”</p> <ul style="list-style-type: none"> <li>An MDE hosted training session or series on GRTS would be extremely helpful and would lead to consistency in site selection across MS4s.</li> <li>MDE should provide the stream map and stratification.</li> <li>MDE should define the population of interest.</li> </ul>
15	Watershed Assessment, Biological Monitoring, Summary of Sampling Design Guideline	11	<p>“Use a 1:24,000 Map”</p> <ul style="list-style-type: none"> <li>MDE should provide a streams layer and define the population. MoCo has 1<sup>st</sup>-5<sup>th</sup> order streams, not counting the Potomac, and MBSS sampling does not include 5<sup>th</sup> order. Additionally, there are many NHD and NHD+ layers and having an MDE source layer would be ideal.</li> </ul>
16	Watershed Assessment, Biological Monitoring, Table 2	13	<ul style="list-style-type: none"> <li>Montgomery County’s minimum sample size (33) does not match the sample size in Appendix III, Table 3 (30). Which is correct?</li> </ul>
17	Watershed Assessment, Bacteria Monitoring, Summary of Sampling Design Guideline	14	<p>“Monitor bacteria TMDL watersheds”</p> <ul style="list-style-type: none"> <li>Please confirm that Montgomery County will pick the bacteria monitoring sites in each TMDL watershed.</li> </ul>
18	Watershed Assessment, Bacteria Monitoring, Summary of Sampling Design Guideline	15	<p>“Monthly sampling with EPA approved methods”</p> <ul style="list-style-type: none"> <li>Please consider that weather conditions may make it unsafe to collect samples at approximately the same day and time of every month. Need flexibility to have an alternative day and time for safety issues. Extreme weather including thunderstorms, ice storms, tornados, hurricanes, blizzards, etc.</li> </ul>

#	Draft Monitoring Guidelines Section	Page	Comment
19	Watershed Assessment, Bacteria Monitoring, Summary of Sampling Design Guideline	15	<p>“Record flow conditions”</p> <ul style="list-style-type: none"> <li>This is a high level of effort for monthly sampling. We would prefer to simply identify baseflow vs. stormflow based on recent precipitation.</li> </ul>
20	Watershed Assessment, Chloride Monitoring, Objectives	18	<ul style="list-style-type: none"> <li>Please confirm that permittees are performing conductivity monitoring as a surrogate for chloride. The permittees are not conducting chloride monitoring.</li> </ul>
21	Watershed Assessment, Chloride Monitoring, Summary of Sampling Design Guideline	18	<ul style="list-style-type: none"> <li>Please confirm that MDE is asking for instantaneous, not the max conductivity reading over the 30 min period?</li> <li>Please provide more information on the selection of monitoring locations. The guidelines say that selection should be done in consultation with MDE and that monitoring locations should be in watersheds that: <ul style="list-style-type: none"> <li>Are identified as impaired by Chloride</li> <li>Contain significant mileage of county roads</li> <li>Are moderately to highly urbanized</li> </ul> </li> <li>What constitutes “significant mileage?”</li> <li>How are “moderately urbanized” and “highly urbanized” defined?</li> </ul>
22	Watershed Assessment, Chloride Monitoring, Data Report	19	<ul style="list-style-type: none"> <li>Please provide a copy of: Department’s Chloride Monitoring Quality Assurance Plan and Logger Instruction Manual</li> </ul>
23	Appendix I, Attachment A	31	<p>Pooled Monitoring Advisory Committee (PMAC)</p> <ul style="list-style-type: none"> <li>How does the PMAC proceed if one or several of the members become unavailable?</li> </ul>
24	Appendix II, Article II	36	<ul style="list-style-type: none"> <li>Can an MS4 opt in at any point with MDE approval?</li> </ul>
25	Appendix III, Table 3	42	<ul style="list-style-type: none"> <li>Montgomery County’s minimum sample size (30) in Table 3 does not match the sample size in Table 2 on page 13 (33). Which is correct?</li> </ul>