STORMWATER PARTNERS NETWORK OF MONTGOMERY COUNTY

March 1, 2023

Written testimony for HB942 - Wetlands and Waterways Program – Authorizations for Stream Restoration Projects [1]

Position: Informational Only

Submitted by: Eliza Cava and Jeanne Braha, Co-Chairs, Stormwater Partners Network of Montgomery County

Dear House Environment and Transportation Committee,

We offer our comments on behalf of the Steering Committee of the Stormwater Partners Network of Montgomery County (SWPN). SWPN is composed of 33 organizations and many individuals who support our mission and vision.[2] SWPN's mission includes advocating for (i) clean water, (ii) protecting, improving, and restoring our watersheds in ways that are equitable and ecologically sensitive, (iii) improving community resilience to stormwater impacts such as storm-driven flooding, and (iv) connecting communities to their backyard waterways. Our vision is that Montgomery County's waterways are clean, pollution-free, and resilient to the climate crisis, providing healthy, equitable, safe, and thriving green spaces for communities, families, and wildlife.

We appreciate the work of Delegates Tarrasa, Lehman, and Ruth to respond to concerns of Maryland citizens regarding stream restorations that appear to be inappropriate and destructive, as well as general debates more broadly regarding how to balance the protection and restoration of the Chesapeake Bay with Maryland's wealth of smaller streams that wind through our communities. Stormwater Partners Network has considered HB942 carefully and provides this informational testimony with regards to the current bill.

In 2020-2021, SWPN convened a working group of our membership to evaluate what at the time were calls to completely end or place a long-term pause on the practice of stream restoration, specifically to meet the requirements of an MS4 permit. Our members did not and do not have consensus on several important issues around stream restoration (including the fundamental issue of whether they should be done at all), as we detailed in comments to MDE on the Montgomery County MS4/Stormwater permit. These comments were signed by many of our members and are included as an attachment to this testimony. However, we all agreed to encourage County agencies that perform stormwater management to ensure that if stream restorations are undertaken, they be done with extraordinary care, caution, and forethought to ensure that they result in benefits to the ecology of the local stream valley and riparian system, as well as downstream beneficiaries of reduced sediment pollution such as the Potomac River and Chesapeake Bay. We have been

[1] HB942 - Wetlands and Waterways Program – Authorizations for Stream Restoration Projects. Available at: https://mgaleg.maryland.gov/mgawebsite/Legislation/Details/hb0942?ys=2023RS

[2] A full list of our current organizational membership can be found on our website, www.stormwaterpartnersmoco.net.

pleased to see the County using prioritization that reflects these priorities. Our membership also agreed that they should be tightly coupled with extensive upland retrofits, ideally before restoring the stream valley.

We appreciate that HB942 shares our concerns and attempts to address many of them.

Elements of HB942 that align with our recommendations on stream restoration:

- §5–203.2.(B)(1) requires the use of best available science in any decision-making on stream restoration by the Maryland Department of the Environment (MDE). We support these goals.

- §5–203.2.(B)(2)(I) directs the Department to incentivize the use of alternatives to stream restoration, such as the use of upland projects, by providing more credits for these types of projects. We support this approach to maximizing out-of-stream-valley projects and disincentivizing the use of stream restorations, ideally such that they will be used only when most appropriate and when other upland approaches have been exhausted.

- §5–203.2.(B)(2)(II)1. Requires that any stream restoration being undertaken "for the purpose of providing credits for wetland or stream impacts or losses resulting from future activities, be located in the same watershed as the wetland or stream for which mitigation is required." This clause is clearly meant to apply to mitigation banks, currently being developed and used across the state for such purposes as offsetting impacts to wetlands and streams from the proposed I-270 and I-495 expansions, as well as other large-scale construction projects. These types of mitigation banks are permitted by the U.S. Army Corps of Engineers, in partnership with MDE. Under the Mitigation Rule,[3] the Army Corps is already directed to prioritize mitigation within the same watershed where impacts occur, but has great latitude to define the scale of watershed to be used as well as to use their best judgment if they find in-watershed mitigation to be impractical. As written, this clause of HB942 will therefore be unlikely to change policies of MDE and the Army Corps in mitigation permitting. **The bill's sponsors could consider requiring that the Department and the Army Corps require that the applicant mitigate their impacts in the same HUC-12 or, at largest, HUC-10 sub-watersheds where the impacts occur.**

Elements of HB942 that do not align with our recommendations on stream restoration:

- §5–203.2.(B)(2)(III) requires a ten-year monitoring period to ensure stated goals are achieved before issuing any mitigation or pollution reduction credits. This is likely to completely disincentivize all stream restorations, which goes beyond our recommendations. **We would instead support intermediate milestones, assessed by monitoring, to release credits on a predictable**

[3] Federal Register, Thursday, April 10, 2008, Part II, Department of Defense, Department of the Army, Corps of Engineers: 33 CFR Parts 325 and 332; Environmental Protection Agency: 40 CFR Part 230; Compensatory Mitigation for Losses of Aquatic Resources; Final Rule (aka Federal Register / Vol. 73, No. 70 / Thursday, April 10, 2008 / Rules and Regulations) (hereafter referred to as the "Mitigation Rule") (https://www.epa.gov/sites/default/files/2015-03/documents/2008_04_10_wetlands_wetlands_mitigation_final_rule_4_10_08.pdf)

scale, as well as the "claw-back" of credits given at intermediary milestones if those projects are later found to have failed to achieve stated goals. We do agree that ten years is a reasonable time period for assessing the performance of biological goals and objectives, assuming those are among the stated goals of the project.

Elements of HB942 that are intriguing but could use more specificity:

- §5–203.2.(A) states that this bill will apply specifically to "authorizations for stream restoration projects associated with achieving local Municipal Separate Storm Sewer System (MS4) permit targets, Chesapeake Bay Total Maximum Daily Load (TMDL) goals, mitigation goals, or other restoration goals." We understand that the reason for this specification is to exempt projects whose primary purpose is to protect or maintain human infrastructure, such as where a stream is eroding a road or bridge abutment, a sewer or water line is exposed, etc. In our experience, a fair number of stream restorations are undertaken precisely for infrastructure reasons, and then the MS4 credit generated is a by-product. Conversely, compensatory mitigation rules already require that a project not be undertaken for any other reason. While infrastructure protection or safety concerns may need to take precedence over the bill's resource protection goals on some projects, the principles we outline in our previous comments (attached) are useful guidance for all projects that have a stream restoration element to them.

- §5–203.2.(B)(2)(II)2. Requires net biological uplift of instream biology as a stated goal. While in an ideal world every single stream restoration project would be intended and designed to achieve biological uplift, the reality is that it is very hard to ensure and demonstrate uplift in all cases, even when a stream restoration may be the most appropriate tool for a given site. Overall, we support this goal in theory but are not sure that it is workable in practice, particularly in highly urbanized streams that do not currently support diverse macrobiota.

- §5–203.2.(B)(2)(II)3. Requires that stream restoration projects "minimize tree removal and protect remaining trees, including the critical root zones of trees." We support this clause to the maximum extent practicable, although note that, like requiring mitigation "in the same watershed," it is not very specific and may not achieve more than is already available in state laws and regulation. For example, stream restorations are currently exempt from many aspects of the Forest Conservation Act. Some of our Network members believe this exemption should be reversed, while others feel that would create an unworkable burden for even highly needed stream restoration projects. Another possibility might be to reduce the credits available for mitigation or MS4/TMDL purposes in proportion to the loss of forest and trees. Where trees are removed or damaged, the area should be actively reforested with native trees and shrubs and monitored for reestablishment.

Sincerely,

Steering Committee of the Stormwater Partners Network

Eliza Cava (co-chair)
Director of Conservation, Nature Forward

Jeanne Braha (co-chair)
Executive Director, Rock Creek Conservancy

Tracy Rouleau
President, TBD Economics, LLC

Kit Gage
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Excerpt from Stormwater Partners Network Comments on 2020 MS4 Draft Phase I Permit for Montgomery County, January 21, 2021[4]

Stream Restoration

While stream restorations may well reduce a major source of sediment and bonded nutrients due to bank erosion, they can be hugely disruptive to the ecology of a stream valley and also divert resources from upland retrofits and impervious surface removal, both of which address the root cause of stream bank erosion and could eliminate the need for stream restoration projects. SWPN convened a stream restoration working group in fall of 2020 to discuss the issue and provide recommendations to our agency partners. Below are our working group's initial recommendations. We note that we do not have unanimity on every detail of the recommendations below, nor on the overriding question of whether stream restorations are ever or at all appropriate. But we do all believe that if they are done, they should be done with extraordinary care, caution, and forethought to ensure that they result in benefits to the ecology of the local stream valley and riparian system, as well as downstream beneficiaries of reduced sediment pollution such as the Potomac River and Chesapeake Bay. And, they should be tightly coupled with extensive upland retrofits, ideally before restoring the stream valley. We are pleased with the potential benefits of DEP's new targeting/prioritization maps for stream restoration and upland retrofits and look forward to assessing their practical results during this next permit term.

Upland Controls First

We all agree that upland control of stormwater should be required prior to installing a stream restoration to help ensure that ever-increasing storm flows won't just blow out the new channel. However, some of us believe that stream restorations should not be done at all since they don't address the root cause of stream bank erosion.

Incentivize Upland Retrofits over Stream Restoration

If stream restorations continue to be allowed, MDE's Accounting Guidance and permits must create an incentive structure where upland stormwater control is promoted over stream restorations, such that stream restorations are not used as a preferred engineering option to achieve compliance.

Biological improvements Rare or Very Slow with Stream Restoration

The scientific basis for the ecological benefits of stream restoration projects in our region is disputed in the scientific literature. For example, Hilderbrand et. al. (2020) says, "We sampled 40 urban stream restorations across the Piedmont and Coastal Plain physiographic regions in the greater Baltimore/Washington DC Metropolitan area of Maryland." "Despite the promise and allure of repairing

[4] SWPN Letter on Montgomery County MS4 Permit. January 2021. Full letter available at: https://stormwaterpartnersnetwork.squarespace.com/current-recent-campaigns/2021/1/26/stormwater-partners-network-comments-on-montgomery-county-draft-stormwater-permit.

damaged streams, there is little evidence for ecological uplift after a stream's geomorphic attributes have been repaired." "Unfortunately, the ecological aspects rarely improved despite the improved physical measures."[5]

Bill Stack, PE, one of the co-authors of the Expert Panel report (whose recommendations are used by MDE) states that, "…municipalities are spending enormous amounts of money on [stream restoration] projects that generate the necessary water quality credit but have no real impact on stream function."[6]

Prioritize Green Infrastructure Upland

There generally are alternative, upland (out of stream valley) stormwater retrofit (or control) projects that could be done in previously disturbed areas to meet the MS4 permit. These projects primarily consist of green infrastructure projects. Such projects would address the root cause of the problem – keeping stormwater from impervious surfaces out of streams. By controlling stormwater upland, stream bank erosion might decrease enough to possibly eliminate the need for stream bank stabilization entirely within the context of stream restorations, particularly in less urbanized watersheds. While we applaud the Accounting Guidance's new 35% bonus for upland, green infrastructure projects and would support an even higher increase, we remain concerned that the doubling of the stream restoration planning credit will still lead to them taking precedence over these critical upland solutions which could eliminate the need for stream restorations.

Riparian Improvements Before or With Stream Restoration

There are non-destructive riparian (along stream) alternatives to "stream restorations" allowed by the Accounting Guidance such as the less invasive practices of Riparian Forest Planting and Riparian Conservation Landscaping. Using less heavily-engineered bank stabilization practices could go a long way towards reducing bank erosion from a degraded stream channel without the heavy footprint of a full Natural Channel Design, Legacy Sediment Removal, or Regenerative Stormwater Conveyance restoration approach. Using the non-destructive riparian practices in addition to controlling stormwater upland as noted above, stream bank erosion might decrease enough to possibly eliminate the need for stream bank stabilization entirely within the context of stream restorations, particularly in less urbanized watersheds.

The complex web of interactions between fauna, flora, geology, and hydrology that interact in natural areas is irreplaceable and cannot be recreated on even a decadal time scale by engineering projects using bulldozers, backhoes, and trucked-in material to create artificial structures in our natural areas. We should be guided by the principal of "Do No Harm" in our stream valleys.

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[5] Hilderbrand, R., and Acord, J., (2020), "Quantifying the ecological uplift and effectiveness of differing stream restoration approaches in Maryland," Final Report Submitted to the Chesapeake Bay Trust for Grant #13141 https://drive.google.com/file/d/1ajZqeDvTNM0BtufkO58IHZQGusp2UKAZ/view?usp=sharing

[6] Stack, B., 2019, "Chesapeake Bay Program Stream Restoration Credits: Moving Toward Functional Lift?", Bill Stack, PE, Deputy Director of Programs, Center for Watershed Protection, September 12th, 2019; https://www.cwp.org/chesapeake-bay-program-stream-restoration-credits-moving-toward-functional-lift/

Just as the Chesapeake Bay has environmental value, so do the rich fauna and flora of our stream valleys. As proposed above, there are better ways to protect the Bay than by using stream restorations to destroy existing streams and streamside forests and wetlands and instead replace them with engineered stormwater conveyances.

Recommendations

Some of our members suggest that stream restorations should be removed completely from the Accounting Guidance given the concerns stated above. Others do not go so far but strongly recommend that MDE revise the credits and guidance available for stream restorations. **All upland practices (which do reduce stormwater runoff) should be exhausted before stream restorations are allowed to be conducted.** Therefore, **all signers of this letter recommend the following changes to the credits and guidance for stream restorations as follows:**

a) Less planning credit per linear foot should be given. Revert back to 0.01 EIAf per linear foot.

b) All stream restoration projects should require that biological uplift be demonstrated in a set timeline, reasonable to the condition of the stream prior to restoration and the location of the project (i.e., a longer timeline for more urban streams) in order to receive credit. These figures would be relative to pre-construction measurements. If such increases are not demonstrated, then no credit will be awarded to the project. This would include the retroactive "claw-back" of any partial credit awarded at any intermediate milestones.

c) Require justification of a stream restoration project versus a set of upland projects by comparing local ecological factors such as

    1. an accounting of the full range of flora and fauna that will be lost by conducting pre-construction field surveys by experts in the various fields of botany, herpetology, mycology, ichthyology, etc.

    2. a calculation of projected lost ecosystem services by experts (e.g., lost CO2 uptake, lost O2 production, food web disruption, etc.) during and after construction,

    3. the extent of hydrologic disruption due to soil compaction (e.g., destruction of seeps and springs; tree death due to critical root zone damage) by experts, and

    4. a comparison of the projected carbon footprint of construction activities by experts.

All proposed stream restoration projects should score higher than the alternative proposed set of upland projects (which can be in the same or different watershed or sub-watershed) on all four factors above and be required to demonstrate biological uplift compared to pre-construction measurements in order to receive MS4 Permit credit.

Some of our organizations suggest the following additional changes:

d) that stream restoration projects used for MS4 Permit credit should not be exempted from any state or local forest conservation or forest protection laws (and this non-exemption wording should become part of the MS4 Permit language).

e) Furthermore, replanting requirements should be, for example, at a 2 to 1 ratio based upon the diameter at breast height (dbh) lost. For example, the loss of one 24"dbh tree would be replaced with sixteen 3-inch dbh trees, twelve 4-inch dbh trees, or twenty-four 2-inch dbh trees.

Overall, Montgomery County DEP has shown a thoughtful approach to the need to attend to upland stormwater management when considering possible locations for stream restoration. Further, Montgomery County should be applauded for their weighting the value of potential biological uplift despite not being required to do so.