

## **HB 1165 - Whole Watershed Act**

### **COMMITTEE - Environment and Transportation**

#### **Testimony on HB1165**

#### **POSITION - Support WITH AMENDMENTS**

**Hearing Date - March 1st, 2024**

Good afternoon. My name is Allegra Cangelosi, a Maryland citizen of 35 years. Thank you for this opportunity to testify on HB 1165, introduced by Delegate Love. The intent of the bill is to improve the integrity of Maryland stream restoration contract services under the MS4 CWA program, by making restoration contractors accountable to a Licensing Board, among other provisions. This bill will indeed help to clear the industry of “fly-by-night” operators engaging in MS4-driven stream restoration work in Maryland, a major accomplishment. However, without amendment it will also have the adverse, perhaps unintended effect of cementing into place major defects of our current policies around MS 4 stream restoration. In the absence of critical amendments, this legislation will not have the intended outcome of resource protection and improvement in the State of Maryland. For that reason, my testimony is in **support with amendments**. Specifically:

- Focus stream restoration projects involving heavy equipment solely on streams that are in a heavily degraded state, as determined by the MDE.
- Generate program funds for MDE to better oversee stream restoration projects by reversing the exemption of restoration project application fees.
- Use a portion of the license fees to incentivize contractor use of BMPs to conserve natural stream beds and existing trees in MS4 proposed stream work wherever possible, *in lieu* of the “tear it up and rebuild it” approaches, currently dominant in the industry.
- Either include BMPs in the statutory definition of “stream restoration practices” or define BMPs separately and include them in the range of tools for which licensed firms conducting MS4 work must have competency. Currently they are absent from that required competency.
- Require MDE review of pre- and post-project mature tree maps and mature tree preservation plan to verify that losses were in fact minimized.
- Require applications to specify goals for biological and ecological uplift, water quality, and tree conservation.
- Require expanded public notice, transparency, and community engagement.

#### **Background:**

Maryland’s streams are work horses, and they come by it naturally. As complex ecosystems, they deliver critical ecological and human health services. Unfortunately, society has severely degraded them with deforestation, upland paving, chemical pollution and climate change. The MS4 stream restoration program within the Clean Water Act was designed to support efforts to repair and strengthen Maryland’s stream systems.

Unfortunately, artifacts of the process are making this hoped-for outcome play out in reverse. MS4 restorations as currently undertaken threaten to seriously harm Maryland’s finite stream resources, though less harmful methods are available. Specifically, Maryland MS4 Accounting

Guidance allows a range of stream restoration approaches. The most common of these focus on stream channel reinforcement with or without ecological considerations, otherwise known as “stream restoration.” These approaches entail wholesale disruption of the existing stream ecosystem and removal of upland trees to give heavy construction machinery access. Despite their high price tag, there is growing scientific evidence that these disruptive interventions, even if “replantings” occur, harm streams as functioning ecosystems in a manner they may never recover from. In particular, a reengineered stream bed and newly planted saplings are in no way equivalent to an existing, complex streambed-ecosystem and mature trees. Such disruptions should only occur when absolutely necessary. Science is showing these engineered restorations do not even reliably control storm water, as run-off volumes increase, such that these costly restorations require repair soon after completion.

Importantly, the MD Guidance also allows for far less disruptive and more cost-effective approaches, also known as Best Management Practices. These “green” approaches address run-off at its sources, allow conservation of existing trees, and preservation of complex streambed ecosystems. These methods manage stormwater better with fewer hidden costs over time. But they are simply underutilized. The most obvious reason for this fact is that there is big money to be made in disruptive restorations, and because disruptive restorations are the *de facto* “conventional” approach. The language and limited scope of provisions of this bill are clear evidence of this problem. For example,

- Contractors are allowed to solicit MS4 stream restoration work, rather than the State authorizing such work where most needed.
- There is no requirement of--nor required competency in—BMP implementation to the greatest extent possible, in MS4 stream restorations, particularly re mature tree preservation.
- The newly created licensing board is primarily composed of industry members with an interest in high cost/heavy equipment projects.
- Tree conservation is never specified among the measures that should be taken to enhance environmental soundness of stream restoration.
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Maryland law should be better supporting and incentivizing a transition to “green” approaches to MS4 stream restoration. It should be actively discouraging destructive alternatives. Unless amended, HB 1165 will cement this reality in place. There also is too little accountability to the public woven into the program.

### **Suggested Amendments to HB 1165**

These problems inherent in the current formulation of HB 1165 can be fixed, and in a manner consistent with the bill’s purpose to improve industry standards around Maryland MS4 stream restoration work. Specifically, the bill should be amended to:

- Focus stream restoration projects involving heavy equipment solely on streams that are in a heavily degraded state, as determined by the MDE.
- Generate program funds for MDE to better oversee stream restoration projects by reversing the exemption of restoration project application fees.

- Use a portion of the license fees to incentivize contractor use of BMPs to conserve natural stream beds and existing trees in MS4 proposed stream work wherever possible, *in lieu* of the “tear it up and rebuild it” approaches, currently dominant in the industry.
- Either include BMPs in the statutory definition of “stream restoration practices” or define BMPs separately and include them in the range of tools for which licensed firms conducting MS4 work must have competency. Currently they are absent from that required competency.
- Require MDE review of pre- and post-project mature tree maps and mature tree preservation plan to verify that losses were in fact minimized.
- Require applications to specify goals for biological and ecological uplift, water quality, and tree conservation.
- Require expanded public notice, transparency, and community engagement.

To summarize, Maryland streams are at a moment of truth. Restorations that unnecessarily destroy trees and stream beds, also often destroy Maryland stream systems. Better approaches, already subject to scientific evaluation, are out there, let’s put them to use in Maryland while we still can.

I urge you to carefully amend this bill to ensure it results in stream resource protection and improvement in the State of Maryland. Thank you for this opportunity to submit testimony. I provide below scientific and technical sources for this testimony. Thank you.

Sincerely:

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## RESOURCES

Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated Guidance for National Pollutant Discharge Elimination System Stormwater Permits”  
<https://mde.maryland.gov/programs/water/StormwaterManagementProgram/Documents/Final%20Determination%20Dox%20N5%202021/MS4%20Accounting%20Guidance%20FINAL%2011%2005%202021.pdf> 1

Fejerskov, Morten & Kristensen, Klaus & Friberg, Nikolai. (2014). Re-Meandering of Lowland Streams: Will Disobeying the Laws of Geomorphology Have Ecological Consequences?. PloS one. 9. e108558.

Hildebrandt et al Quantifying the ecological uplift and effectiveness of differing stream restoration approaches in Maryland Final Report Submitted to the Chesapeake Bay Trust for Grant #13141. Robert H. Hilderbrand and Joseph Acord, Appalachian Laboratory University of Maryland Center for Environmental Science And Collaborators Timothy J. Nuttle and Ray Ewing Civil and Environmental Consultants, Inc. 333 Baldwin Road, Pittsburgh, PA 15205

Johnson, Matthew & Thorne, Colin & Castro, Janine & Kondolf, George Mathias & Mazzacano, C. Zee & Rood, Stewart & Westbrook, Cherie. (2019). Biomic river restoration: A new focus for river management. River Research and Applications. 36. 10.1002/rra.3529.

Laub, Brian & McDonough, Owen & Needelman, Brian & Palmer, Margaret. (2013). Comparison of Designed Channel Restoration and Riparian Buffer Restoration Effects on Riparian Soils. Restoration Ecology. 21. 10.1111/rec.12010.

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Palmer, Margaret & Hondula, Kelly & Koch, Benjamin. (2014). Ecological Restoration of Streams and Rivers: Shifting Strategies and Shifting Goals. *Annual Review of Ecology, Evolution, and Systematics*. 45. 247-269. 10.1146/annurev-ecolsys-120213-091935.

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Wood, K.L., Kaushal, S.S., Vidon, P.G. et al. Tree trade-offs in stream restoration: impacts on riparian groundwater quality. *Urban Ecosyst* 25, 773–795 (2022). <https://doi.org/10.1007/s11252-021-01182-8>

Wortley, Liana & Hero, Jean-Marc & Howes, Michael. (2013). Evaluating Ecological Restoration Success: A Review of the Literature. *Restoration Ecology*. 21. 10.1111/rec.12028.

<https://www.umces.edu/research-highlights/restoring-streams#:~:text=Bob%20Hilderbrand%2C%20an%20associate%20professor%20at%20the%20University,back%20to%20the%20thriving%20ecosystem%20they%20once%20were.>

<https://www.epa.gov/chesapeake-bay-tmdl>

[https://www.fema.gov/pdf/about/regions/regionx/Engineering\\_With\\_Nature\\_Web.pdf](https://www.fema.gov/pdf/about/regions/regionx/Engineering_With_Nature_Web.pdf)