HB 1165 - Whole Watershed Act

COMMITTEE - Environment and Transportation

Testimony on HB1165

POSITION - Support with Amendments

Hearing Date - March 1st, 2024

Thank you for this opportunity to testify on behalf of the grassroots organization, Protect Our Streams. My name is Sharon Boies.

1. Maryland's natural stream ecosystems are invaluable...and finite. Md's natural stream ecosystems are complex, fragile and finite. Many Maryland streams begin as springs and are the headwaters for crucial sources of clean drinking water. Stream ecosystems encompass unique bio- diversity created from untold amounts of time existing as a community from the microbes in the soil and leaf litter to the sloped stream banks, and stream bed to the riparian and aquatic flora and fauna to the leaves in the treetops. Mature established stream corridor forests absorb stormwater runoff, capture and retain nutrients and silt and sediment and recharge the groundwater.

Streams and stream valleys, both valuable and finite, also benefit Maryland communities and environment in multiple ways. Stream ecosystems reduce heat island effects, absorb polluted stormwater runoff and nutrients, recharge and purify groundwater, sequester carbon, produce oxygen, and provide critical habitat. Wooded natural stream valleys also provide valuable human services such as outdoor recreational opportunities, connection with nature, and mental health promotion.

2. Maryland's natural stream ecosystems are complex, fragile and under stress. ,But streams can only deliver these services when they are healthy. Maryland streams have been under enormous pressure as they receive more polluted stormwater runoff from deforestation, development and increased rainfall totals due to climate change. These stressors are both within and outside our immediate control.

3. Maryland' natural stream ecosystems are also threatened by, of all things, our current methods of stream "restoration". I am testifying today because stream restoration projects are taking place in Maryland which are making matters worse. As you know, the Maryland Department of the Environment awards credits to municipalities and MS4 permit holders for restoration actions they directly or indirectly undertake to earn them. Stream restoration (as defined by the state of Maryland) is a common way to generate MS4 credits within this Total Maximum Daily Load Reduction system. A second driver of stream restorations in Maryland is the ability of projects to generate credits which can be banked and later applied to offset damages by proposed new development. Whether in service to state water quality objectives or offsets, credit generation is the primary driver of " stream restoration" project proposals. In both cases, credit generation is now big business for both municipalities and contractors. Currently, the nature of the stream restoration projects that may potentially generate water quality credits under this program ranges widely. Three fundamental types have been described in the scientific literature: 1) those focused on heavily engineered practices such as stream bank removal and reinforcement by armoring them

with imported rock, step pools and stream channel and meander re-alignment; 2) those incorporating ecological considerations but still focused solely on alterations of the stream channel by practices such as filling in the stream channel to raise the stream bed with imported materials and loose substrates which can wash out during a large rain event; and 3) those incorporating measures addressing the broader watershed area to attenuate storm water run-off to the stream channel. Unfortunately, the most common approaches in practice are those focused on direct stream bank and channel alterations and reinforcements to armor stream banks against erosion caused by heavy stormwater flows (the first two). These heavily engineered approaches (also known as "designed" approaches) necessitate counterproductive, often severe disruption of existing stream ecological communities, and removal of mature trees to give heavy construction machinery access (see photos in Appendix). Removing mature trees along streams seriously degrades the stream system *even if saplings are then planted*. Further, studies are finding that designed stream "restoration" projects like these lack effectiveness in biological improvement (uplift) for aquatic organisms, generally, over time. To put it plainly, as a functioning ecological system, the stream may never recover, new tree plantings or not. Finally, the engineered changes are unlikely to deliver even the hoped-for stream flow management over time because the problem of upland run-off volumes and rates remains unchanged or has worsened. That is why so many of these engineered systems require unanticipated repair so soon after completion. To summarize, we are fooling ourselves if we think we can tear streambeds up, remove large numbers of mature trees in the process, and then recreate a new drainage system that functions like a natural stream.

4. Stream restoration approaches that conserve mature trees have demonstrated storm water control effectiveness and often cost less. Fortunately, at least in some instances, construction-heavy and stream channel-centric restoration methods are not the only approaches available to manage stream flows consistent with MDE's Accounting Guidance to meet MS4 permit credit obligations. The Guidance already incorporates far less disruptive and more cost-effective approaches; they are simply overlooked and underutilized. These "green" approaches address the run-off problem at its source, reducing drainage to subject streams from upland areas. Techniques include strategic use of rain gardens, bioretention techniques, tree plantings (as opposed to counterproductive vegetation removal), permeable pavement, and native lawn vegetation. These upland practices reduce stormwater run-off before it can enter streams and can ultimately eliminate the need for disruptive streambed alterations altogether. Scientific evidence is showing alternative approaches such as these are more effective than engineered approaches at restoring biological assets of streams. Maintaining mature trees, imposing only minimal alterations to stream beds, and addressing run-off at its sources where possible works better, with fewer hidden costs over time.

5. Maryland law should incentivize stream restoration approaches that conserve trees, and discourage approaches that result in ever more tree loss, and carefully account for both. Qualitative admonitions to "minimize" tree loss currently in Maryland guidelines are clearly not enough. Maryland guidance and law surrounding stream restorations should disincentivize reengineered stream systems and incentivize green restoration alternatives. Maryland also should incorporate an accounting process for public review on the extent to which Maryland stream resources, including upland forests, have been conserved, or lost. There are not enough stream resources in the state of Maryland for the current "trial and error" approach to stream restorations driven by the MS4 program. Once we've lost them, they are gone forever. Maryland should take a precautionary approach by incentivizing less destructive methods.

6. Without amendment, HB1165 could have the effect of closing the door to stream restoration practices that conserve mature trees. While it is clear much effort has gone into the legislation currently before this chamber, left unamended, the Whole Watershed Act will, perhaps unintentionally, cement in place current heavily engineered approaches to stream restorations which are so destructive to mature trees. For example:

- Tree "preservation" is never mentioned among the measures that should be taken to enhance environmental soundness of stream restoration;
- Definitions of "stream restoration contract services" do not include expertise in mature tree conservation and preservation; and
- Re-planted saplings are a requirement for obtaining a waiver from The Forest Conservation Act but saplings do not equal mature trees when it comes to carbon storage and eco-benefits, that is, we cannot plant our way out of the loss.

If this legislation is not carefully amended to reduce loss of mature trees along Maryland streams to a minimum during these restoration events this may be "it" for Maryland's riparian forests. It would make financial sense as well; restoration methods that conserve stream processes and upland trees have been demonstrated to be more effective and less expensive over time than the "tear it out and replace it" approach currently so heavily in play. In summary, HB1165 should be amended to explicitly incentivize and/or require stream restoration practices which preserve our mature trees, not just "minimizing" unnecessary tree loss, but preventing it.

Specifics provisions on how to incentivize tree conservation and not just replanting saplings, and "green" restoration generally, in all future Maryland stream restorations must include:

- Provide additional funding to MDE by eliminating the exemption of application fees for stream restoration projects.
- Require pre- and post-project mature tree maps and a preservation plan.
- Require applications to include plans that specify how projects will improve or align with goals regarding biological and ecological uplift, water quality, forest preservation, and reduce the impacts of climate change
- Require expanded public notice, transparency, and community engagement in the process.

Finally, I am opposed to the stream restoration Contractors Licensing Board as drafted. Instead, a board comprising experts with no financial interests in the industry should carry out the functions proposed for the licensing board. Specifically, the legislation should instead create a scientific Advisory Board to assist MDE and other regulatory agencies in approval decisions.

If these suggested amendments are added to the bill, my hope would be that stream restorations practices in Maryland will become more aligned and consistent with what the current science suggests we must do to improve the health of our streams and to reduce the unintended consequences as a result of currently used processes. I consider this hope realistic because in many cases incorporating methods to conserve stream processes and upland trees will prove less expensive than the "tear it out and replace it" approach now in play.

In summary,

- **Replanting trees is not just as good as preserving trees.** In particular, rising stream water temperature—destructive of all kinds of native stream life—is exacerbated by the razing of

trees as a step in the heavy engineering approach to stream restorations. The resulting impacts on stream life and physical/chemical processes are long-lasting if not permanent.

- **If HB1165 as currently drafted is enacted without amendment to assure tree conservation and incentives for upland BMPs, the effect will be to cement in place dominance of destructive heavily engineered approaches to stream restorations in Maryland.** This in turn will guarantee on-going negative implications for Maryland's environment and budget moving forward.
- **Amendment of this legislation with the provisions described above, will go a long way toward avoiding unintended tree loss in the process of improving regulations around Maryland stream restoration.**

Thank you for this opportunity to submit testimony regarding potential risks of HB1165. Delegate Love's legislation as currently drafted and ways to improve it. I signed up to submit testimony as "Favorable with amendments", I urge you to only vote in favor of this bill if the amendments are adopted, otherwise I oppose this bill and I ask you to vote unfavorable if the vote is on the current suggested language.

Truly Yours,

Sharon Boies

Columbia MD

Protect Our Streams

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%20N 5%202021/MS4%20Accounting%20Guidance%20FINAL%2011%2005%202021.pdf 1

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

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