



## TMDL Program

Presented to Bay Stream Restoration Panel

Presented by:



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- Present protocols, enforcement, and self-verification system are not incentivizing stream uplift:
  - Project goals are typically for nutrients and sediment reductions, NOT uplift despite protocol language
  - Projects / permit focus on 0.01 acres impervious treatment/LF, and do not reward uplifts that do not directly equate to TMDL reductions. We regard these type of linear foot programs as a race to the bottom.
  - A one time reduction of sediment for the floodplain excavation is not explicitly stated in literature

# TMDL Implications

- Armoring approaches are being encouraged, despite the 2014 Expert Panel qualifiers:
  - Stream restoration projects that are primarily designed to protect public infrastructure by bank armoring or rip rap do not qualify for a credit.
  - The project must utilize a comprehensive approach to stream restoration design, addressing long-term stability of the channel, banks, and floodplain.
  - Special consideration is given to projects that are explicitly designed to reconnect the stream with its floodplain or create wetlands and instream habitat features known to promote nutrient uptake or denitrification.
- Stream restoration is a carefully designed intervention to improve the hydrologic, hydraulic, geomorphic, water quality, and biological condition of degraded urban streams, and must not be implemented for the sole purpose of nutrient or sediment reduction.
- There may be instances where limited bank stabilization is needed to protect critical public infrastructure, which may need to be mitigated and does not qualify for any sediment or reduction credits.



# TMDL Implications

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- Owners know these projects do not meet goals, expert panel standards and are not resilient
- Climate change is being blamed for what may just be inappropriate design
- Owners are still continuing to put these non-resilient projects in, with more armoring planned.

## Stream “Restoration” Projects Being Washed Away by Climate Change

By TOM PELTON • JAN 31, 2018

PROGRAM  
The Environment in Focus

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*Photo of residents examining the Stony Run project site in North Baltimore*

CREDIT TOM PELTON

Twelve years ago, Baltimore spent \$2.2 million on an erosion control project in a stream called the Stony Run that flows through a beautiful wooded park in North Baltimore. The city brought in bulldozers, cut down about 150 trees, and built rock walls and dams in an effort to slow the water's flow.

The project succeeded in creating a series of pools in which minnows now live. But there is no evidence that it achieved its main objective: catching and reducing sediment, nitrogen, and phosphorus pollution being washed downstream into the Chesapeake Bay.

1/31/2018 <http://wypr.org/post/stream-restoration-projects-being-washed-away-climate-change>



## How do we get better TMDL projects?

- Enforce the letter of the protocols
  - Deny credit for armoring projects
  - Verify approach using engineer's estimates
  - Insist on measurable uplift goals, not claimed uplift of top level functions through the removal of non-point source pollutants
  - Insist on biological and physical habitat uplift to attain credit, as determined through monitoring
  - Insist on adaptive management to fix poorly functioning projects
- Add wetland functions and values to Protocol 3, and make full Protocol 1 and 2 credit dependent on having those functions and values in the floodplain

## How do we get better TMDL projects?

- As such, armored TMDL projects should require compensatory mitigation to uplift top-level functions and values.
  - Give TMDL credit for armor, where only armor is appropriate
  - 404 Mitigate for armor at an appropriate ratio elsewhere in watershed
  - Where applicable, provide TMDL credit for wetland restoration to incentivize floodplain restoration and other wetland restoration practices where it can be successfully implemented
  - Permit bundling of credits for projects that follow 404 Mitigation process, and adhere to the higher standards



## Recommendation

- Insist upon a higher standard for TMDL projects.
- Treat armoring as an impact to streams, not a self-mitigating practice
- Ensure that high quality streams are not impacted by TMDL practices - insist on higher standards for full ecosystem restoration
- Meaningful alternatives analysis for TMDL. (Methods and sites) to limit high quality wetland / resource impacts for TMDL purposes, when other suitable sites with less impacts exist.
- Treat wetland impacts as permanent or temporary for TMDL or 404 projects based on a sound wetland functional assessment. Ensure restoration and no net loss.

## TMDL vs. Compensatory Wetland Mitigation Standards

- TMDL projects do not meet the rigorous screening and design standards of Compensatory Mitigation, despite similar impacts
  - Project success is “self-certified”
  - No guidelines for initial impairment degree, or project suitability – we have seen cow trails proposed for linear-foot based credit
  - Higher functions are not monitored
  - Project adaptive management, long term monitoring, easements and protections not required
  - Program administration /accounting guides design, not best possible design for long term success (split outfall example).

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