



Hudson Branch Stream Restoration Response to Comments

Background

The Town of Berlin and Maryland Coastal Bays Program are partnering to restore approximately 2,000 feet of the Hudson Branch stream through the Newport Bay Partnership. The Newport Bay Partnership is restoring and protecting the ecological health of the Newport Bay watershed through coordinated, science-based actions. The partnership is working to address water quality challenges and restore habitat thanks to a \$10 million investment through Maryland's Whole Watershed Program. This document provides responses to public comments about the stream restoration planned for Hudson Branch. Public comments were open for the Hudson Branch stream restoration project from April 10 until May 10, 2026. They were collected via email, Facebook, and in-person at the public meeting held April 29, 2026, in Berlin, MD. Similar comments were summarized as questions in the document below. Questions can be directed to kdaub@berlinmd.gov

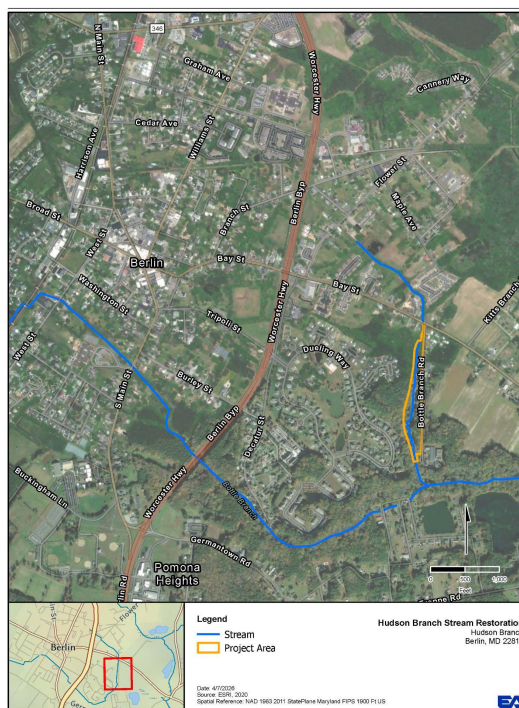


Figure 1: Map of location proposed for Hudson Branch Stream Restoration in Berlin, MD.

Comments and Responses

1. Why does the Hudson Branch need to be restored?

The stream has been modified through construction of large dual culverts under Assateague Road, the residential development to the west, and/or the Town of Berlin water treatment facility to the east. Impervious surface acreage (i.e. asphalt/cement) within Hudson Branch's contributing drainage area has increased as the Town of Berlin has grown. This in turn increases the volume and rate of stormwater discharge entering Hudson Branch. This is especially true during large rain events when peak flow is increased. More water moving quickly through the stream has caused the stream channel to become unnaturally deep, has destabilized the stream banks, and reduced connection to its natural floodplain. The project seeks to reestablish a natural pattern and floodplain connection to reduce the erosion to the stream banks and reduce nutrient loads to the Newport Bay.

2. How will this project address this?

Widening the adjacent floodplain and designing banks with a lower slope will reduce erosive impacts to the banks. A more natural stream configuration will support a wider array of aquatic life, slow down storm flows, reduce erosive impacts of higher flows, and allow for stormwater to expand into the newly developed floodplain rather than flows being heavily confined to the stream channel section.

3. When will the actual construction begin? How long will the project take?

The Town of Berlin will apply for joint permits in Summer of 2026. Within six months the project should be ready to put out to bid to allow construction to start by this winter. The project will take six to nine months with the majority of the work being earth moving to clear and grade the site. Active construction is expected to take 90 days.

4. How have residents been notified of the project?

The Town of Berlin mailed letters to all residents within 200 feet of the proposed construction, and a sign was put at the intersection of Bottle Branch Rd and Assateague Rd to notify residents of the project and public meeting. A public notice for the meeting was posted in the Ocean City Digest on April 23, 2026. A recording of the April 29 public meeting, slides from the presentation, and preliminary design plans are posted on the Water Resources section of the Town of Berlin website. Additional advertisements for the meeting and project were shared as follows:

- *Press release to local media and on Town of Berlin website on April 10, 2026*
- *Town of Berlin Facebook Page on April 23 and April 28, 2026*
- *Decatur Farm Resident Facebook Page on April 7 and April 28, 2026*
- *Maryland Coastal Bays Facebook Page on April 14 and April 28, 2026*
- *WBOC Evening news and online article on April 29, 2026*



- *Bayside Gazette article and calendar on April 14, 2026*

5. How will traffic and emergency access be impacted by the project?

The majority of the construction traffic, including dump trucks, will be on Bottle Branch Road out to Assateague Road and Route 113. The Decatur Farms community will not be impacted by the construction traffic. Emergency vehicles will have access to homes and the construction site throughout the project.

6. How will noise from the project impact adjacent homes?

No specific study has been conducted to estimate noise, but all construction projects produce noise. Berlin restricts the time of day for construction to daylight hours so night time noise should not be a significant nuisance for a prolonged period.

7. How will construction dust and debris impact adjacent homes?

There will likely be dust because of the earth work involved with construction. All requirements for airborne dust control will be followed to keep it onsite, including wetting the site down with water. Debris will be contained to the construction area.

8. How much will the restoration project cost?

Detailed budget estimates are not being shared at this time to protect the public bidding process for a contractor to complete construction.

9. How will the landscape and viewshed be altered for residents adjacent to the project?

Vegetation removal required to complete the stream restoration will be focused on the east side of the site against Bottle Branch Road. Limited vegetation removal within a 30 feet wide area will occur on the western bank of Decatur Farms HOA land. Some trees, brush and invasive plants will be removed from the area between the existing stream and Bottle Branch Road. Replanting with native trees and shrubs will occur during the project.

10. How will property values be impacted by the project?

There is no information that indicates this project should impact property values, but this was not formally assessed as part of the project design.

11. How would this project perform in a major storm or hurricane? How will flood risk be altered for residents adjacent to and upstream of the project?

The project was modeled up to the 100-year storm interval. The modeling predicts the limit of flooding occurring on private lands will be reduced with the majority of flows being contained within the project's created floodplain. The modeling does not predict this project will increase flood risk for properties adjacent to or downstream. The Town of Berlin has worked on a number of stormwater projects that have successfully reduced flooding in the Flower Street neighborhood over the last 20 years. This stream restoration project will enhance this effort.

12. How many trees, shrubs and grasses will be altered by this project?



The design avoided as many trees as possible to restore the stream to a more natural condition. Sections of trees have been evaluated and stands with high diversity and health were prioritized to stay, while stands with poor health, low diversity, or invasive species were targeted for removal. A forest stand delineation was performed in accordance with State of Maryland requirements. This includes a count of specimen trees, those that are 30 inches or greater diameter at breast height. Two mature specimen trees out of the 12 identified on site will be removed. They are both tulip poplar, which do not fare well in saturated soils and would likely not survive in the natural condition the stream will be returned to. No tree heights were measured. There are approximately 2.65 acres of forest that will be altered which includes the existing grass access path along the eastern stream bank and areas infested by invasive species. A direct count of all trees and vegetation to be removed is not required and was not conducted. The design process targeted areas with high invasive species concentrations and avoided healthy stands of trees as much as possible. Areas with high invasive species concentrations will be used as staging and stockpile areas and for access paths throughout the site to minimize disturbance.

13. What are the remediation plans for plants that are removed?

To mitigate trees and shrubs that will be removed during construction, we plan to plant approximately 400 native trees and 250 shrubs, pending final design and permitting approval. The construction contract will have a warranty period that will rectify items like stabilization, plant survivability, and structural log installation. A two year plant warranty will be outlined in the request for proposals for construction. The active construction period is expected to be approximately three months with planting occurring within the following three to six month time period to comply with growing seasons. Shrubs are expected to mature within 10 years, but trees will take longer to fully mature. The logs and other removed plant material will be reused on site either as structural logs within the stream or as mulch materials to support construction activities and comply with erosion and sediment control requirements.

14. On what scientific basis was the decision made to do a stream restoration project instead of alternatives like rain gardens or offline wetlands?

Multiple stormwater management practices are being used by the Town of Berlin on Hudson Branch. This section of Hudson Branch has eroded banks and an incised (deeply cut) stream bed. There have been a series of stormwater improvement projects constructed upstream of the restoration site since 2016. These include an offline wetland, submerged gravel wetland, rain garden, and multiple channel stabilizations. There are also several long-standing programs to promote best practices at the homeowner level. These upstream stormwater management practices combined with the stream restoration are predicted to reduce the peak flows within the stream. A formal alternatives analysis was not required.

This stream restoration is targeting floodplain reconnection which reduces bank height and overall erosion through the system. Floodplain reconnection also absorbs sediment and nutrients from upstream receiving discharges and reduces nutrient load into the receiving Newport Bay. The project is estimated to reduce 138 tons of sediment, 44 pounds of total phosphorus, and 425 pounds of total nitrogen per year (Based on calculations using "A Unified Guide for Crediting Stream and Floodplain Restoration Projects in the Chesapeake Bay Watershed" Prepared by David Wood, Tom Schueler, and Bill Stack). Monitoring will be



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conducted to quantify the impacts of the stream restoration. Water quality is sampled monthly upstream and downstream of the restoration. Stream flow will be estimated using USGS Flow Photo Explorer. Macroinvertebrates and fish will be sampled in 2026 before restoration and again after restoration to compare stream health scores following the Maryland Biological Stream Survey protocol. Monitoring of plants and stream dynamics will be conducted post-restoration to determine if corrective actions are needed.

15. Who is responsible for long term maintenance of the stream and riparian forest and repairs after the construction warranty?

The Town of Berlin is responsible for maintenance and repairs after the 12-month construction warranty period. An easement has been discussed between the Town of Berlin and Decatur Farms HOA and both parties are in agreement that the Town would be given rights to access and maintain the project that falls on Decatur Farms HOA property. A written easement agreement will be established between the Town and Decatur Farms before construction begins. The system is designed to be natural and primarily self-maintaining. Some minor maintenance may be needed such as maintaining native plants and removing invasives after the warranty period, clearing trash and debris from the waterway that obstructs flow, and re-mulching the access path. If the project needs major repairs after the warranty, the Town will be responsible for identifying funding, possibly through collaborative grants like the one funding this project.

16. How will water quality issues downstream of Town of Berlin limits be addressed?

This project is part of the Newport Bay Partnership which is implementing water quality improvement projects throughout the watershed. In future years, projects will be implemented in other areas of the watershed including working with rural landowners to implement best management practices for drainage infrastructure, salt marsh restoration, septic to sewer conversion and many more. This is the first year of the Partnership which is currently funded by the State of Maryland through the Whole Watershed Program through 2030.

17. Will there be any funding for projects like pervious surfaces for parking lots to address the runoff before it reaches Hudson Branch?

The Newport Bay Partnership is currently seeking matching funds that could be used to implement projects like permeable paving. Whole Watershed Program funding would not be eligible for projects like this.

18. Will a National Environmental Policy Act (NEPA) review be completed for this project?

No, a NEPA review is not required. Design funds were provided for this project from EPA through the National Estuary Program. Per the FY 2025 - 2028 National Estuary Program Guidance: "Appendix 11: National Environmental Policy Act The National Environmental Policy Act does not apply to grants and projects funded under Clean Water Act Section 319 (33 U.S.C. 1329), nonpoint source management programs or CWA Section 320 (33 U.S.C. 1330) National Estuary Program. Specifically, CWA 511(c)(1) (33 U.S.C. § 1371) exempts the application of NEPA for the EPA actions except for "the provision of Federal financial assistance for the purposes of assisting the construction of publicly owned treatment works as authorized by Section 1281 [CWA 201] of this Title and the issuance of a permit under Section 1342 of this



title. . . .” Although both the CWA Section 319 and CWA Section 320 grant programs may occasionally fund implementation projects that fall under the definition of “treatment works” in CWA 212(2)(A) (33 U.S.C. 1292), the funding is not authorized under CWA 201. Therefore, the NEPA exemption in CWA 511(c)(1) applies.”

19. How will the contractor prevent their work from causing undesirable outcomes such as alterations to groundwater/septic, excessive iron flocculate, warmer water temperatures, altered Ph and dissolved oxygen levels, etc.?

All required federal, state and local construction regulations will be followed to control undesirable outcomes. Groundwater will be impacted locally with minimal anticipated change beyond the boundaries of the project. The majority of the work is lowering the floodplain to match the groundwater table.

Iron flocculate typically forms when iron-rich soils oxidize. Oxidation is caused by soils drying, followed by re-saturation. Because the channel has not had significant downcutting and the end goal of this project is to lower and stabilize the floodplain to the level of the groundwater table, the soils are expected to not experience the drying and saturating process. Therefore, in this project, the risk of producing iron flocculate is significantly reduced.

Water temperatures may increase temporarily due to a decrease in tree canopy coverage. However, a large portion of the stream section is already exposed to direct sunlight as a result of the existing cleared grass access path. In addition, the majority of the upstream sections of Hudson Branch are exposed fully to direct sunlight so the change should not negatively impact in-stream fauna. In the long term, the additional trees that are being planted directly adjacent to the work are anticipated to slightly lower the water temperatures.

The pH should not be altered due to the restoration efforts and dissolved oxygen levels should increase with the introduction of the pool structures being installed.

