Cassia Drive Stream Restoration Public Meeting Minutes

Date: 6/24/2026

Time: 6:00 PM

Location: Edgewater Library (25 Stepneys Ln, Edgewater, MD 21037)
Virtual via Zoom (meeting recording posted on Arundel Rivers Federation project web page)

Attendees:
Jennifer Carr, ARF (jennifer@arundelrivers.org)
Lily Hariton, ARF (lily@arundelrivers.org)
Charlotte Graves, ARF (charlotte@arundelrivers.org)
Mal Box, ARF (mal@arundelrivers.org)
Molly Ratz, ESA (mratz@esatoday.com)
Jessica C.
Unnamed attendee

Note: The meeting was recorded in accordance with the Whole Watershed Act and will be posted on the project web page: https://www.arundelrivers.org/projects-1/cassia-drive

Presentation

Meeting Overview
- Introduction to Arundel Rivers Federation (ARF)
- Project context and goals
- Proposed design
- MDE stream restoration authorization checklist
- Questions and answers

Arundel Rivers Federation
- Mission: Deeply rooted in the South, West, and Rhode rivers, Arundel Rivers Federation heals and protects our waterways and champions clean water across Maryland.
- Departments: Riverkeeper, Education and Outreach, and Restoration.

Project Location
- Gully behind Cassia Dr. and Admirals View community in Edgewater, MD.

Existing Site Conditions
- The stream is a very incised gully carrying sediment into Church Creek.

- Over time, stormwater has and continues to erode stream banks.

Why are we doing the work

- This is a voluntary water quality improvement project for the Chesapeake Bay.
- Not for mitigation – not for something already built or being built and cannot be used as mitigation for anything built in the future.
- To reduce nitrogen, phosphorus, and sediment transport to the bay.
- Protect downstream restoration project (in the Wilelinor community) and properties adjacent to gully.

Project Partners

- Funders: Chesapeake Bay Trust (CBT) and Anne Arundel County Bureau of Watershed Protection and Restoration (BWPR).
- Landowners: Private individuals and Admirals View HOA.
- Permitting agencies: Maryland Department of the Environment (MDE), US Army Corps of Engineers (USACE), and Anne Arundel County.

Nutrient Loads Reduced

- 68.7 lbs. TN/year
- 45.7 lbs. TP/year
- 111,635.93 lbs. TSS/year
- Calculated and by engineering team.

Whole Watershed Act Public Presentation Requirements

1. The project design report and plans:
    - The design report is posted on the project's web page.
    - The 60% design plans will be presented in the next slides and are posted on the project's web page.
2. The forest stand delineation:
    - Presented in the next slides and posted on the project web page.
3. MDE's Stream Restoration Authorization Checklist:
    - The checklist will be presented after the design plans.
    - Will be posted on website when complete as we get closer to submitting permits.

Project Design

- We will NOT clear entire Limit of Disturbance (LOD)/Limit of Clearing (LOC).
- Only anticipate removing 4 significant trees (18"+ diameter at breast height (DBH)).
- Will remove as few trees as possible regardless of size.
- In existing site conditions photos, can see tree precariously perched on undercut bank that is likely one of the trees to be removed.

- Riffle weirs/riffle structures are rock structures that will be installed for grade control – to keep stream from continuing to erode the channel bed.
- Riffle weirs drop about 1' vertically to control grade.
- Headcuts are places in stream bed where there's a very abrupt drop – these places will be stabilized with riffle weirs or rock cascades.
- Rock cascades will be installed in steeper headcuts (that drop 3-4') to stabilize those areas.
- Intent of rock structures is to slow water and prevent erosion to existing channel.
    - Slowing water gives it a chance to soak into the stream bed – provides habitat benefits, also prevents erosion.
- A few rock structures touch Admirals View HOA property line and the stabilization of the outfall from the stormwater pond is on Admirals View HOA property.
- The goal is to take away the erosive nature of the water so it can pass through the site in a way that won't continue to degrade it.
    - Continued degradation will lead to more tree loss and widening of the gully.

<u>Forest Stand Delineation (FSD)</u>

- This is done to identify large and specimen trees.
- Helps engineers get a handle on quantity, density, and what type of trees are in the study area – what could be impacted and what types of trees to replant after construction.
- Is a permitting requirement but also beneficial to the design process.
- Identified 5 specimen trees (30"+ DBH) – none proposed to be removed, will work around them.
- The 4 significant trees to be removed are closer to 18" DBH.

<u>MDE Stream Restoration Authorization Checklist</u>

1. Project purpose:
    - TMDL/WIP through sediment and nutrient reduction.
    - Other grant-funded project: habitat protection and creation.

2. Restoration activities:
    - Stream and floodplain restoration.

3. Required information:
    - Design report, which includes the hydrological and hydraulic study, is posted to the website.

4. Public engagement required by the Whole Watershed Act:
    - ARF will certify to MDE that we have notified all residents and businesses within 200 ft of the project by mail – this letter has been sent.

- Public meeting minutes and the meeting recording will be posted to the ARF website.
- Will provide details to MDE on other outreach that has taken place.

5. Alternative site analysis:
    - Design report (posted to website) details alternatives analysis.

6. Assessment of site condition and function for intermittent streams:
    - *Biological habitat quality-based parameter:* a Modified EPA Rapid Bioassessment Protocol Habitat Assessment is appropriate for the site.
    - *Geomorphology/hydraulic function-based parameter:* Existing stream conditions do not exhibit lateral or vertical stability:
        - *Lateral stability*: Instability evidenced by eroded banks.
        - *Floodplain connectivity (vertical stability):* Headcuts (sudden drops in stream bed) are evidence of stream bed erosion and vertical instability. Narrow and confined stream channel with stream at the bottom of a "canyon" is also evidence of lack of floodplain connectivity and vertical instability.
    - *Riparian Areas*:
        - FSD details the assessment of existing conditions and function of riparian areas on the project site and is posted to the Arundel Rivers website.
        - *Best practices we use to reduce impacts*:
            - Use the streambed as construction access to reduce impacts to trees and stream banks.
            - Limiting road widths to only that needed for construction equipment, and by using the shortest paths possible.
            - Designed around specimen trees. Clearly mark trees for removal.
            - Bring in material only as needed to reduce clearing for staging areas.
            - Use the smallest equipment possible for construction.
            - Where it is demonstrated that large trees must be removed, reuse them in the restoration design as habitat elements.
            - Do not raise water levels to heights where extensive tree loss is anticipated – this project is not designed to raise water levels.
            - Use materials and designs which allow for movement of aquatic life through, over, or around the structure.
            - Avoid impacts to state-listed rare, threatened species or species in need of conservation – nothing of concern at this site.
            - Planting larger caliper trees when possible.

        - Assess upland conditions and design to ensure that floodplain connectivity remains in place.
        - The design drawings currently uploaded to the website depict the Limit of Disturbance (LOD), Limit of Clearing (LOC), and any individual trees identified as part of the FSD to be removed.
        - Reducing and mitigating impacts is a continuous conversation throughout project design.

7. Impacts/conversions/enhancements*:*
    - Functional uplift:
        - Project will restore hydraulic and geomorphic functions of the stream – horizontal stability (bank erosion) and vertical stability (stream bed erosion) will improve and flows will move more slowly.
    - Tradeoffs: there are tradeoffs due to the disturbance of construction, but net benefit is a functionally restored stream no longer sending polluting sediment downstream.
    - Resource improvement: improved and more varied habitat. Riparian forest, pools in stream – varied habitat can support different flora and fauna.
    - Avoidance and minimization of impacts:
        - We will avoid as much disturbance to wildlife and vegetation as possible, as discussed earlier.
        - Streams in Maryland are subject to annual time of year stream restrictions; probable stream closure at this site during early summer means that no construction will happen during the closure to protect aquatic life. This will be assigned during permitting process.
        - We are surgical in removing trees, no benefit to removing more than necessary.
        - If able, will contract with someone to prevent invasives after construction is complete.
        - Project design avoids removing specimen trees, as detailed earlier.

8. Co-benefits: Funder and ARF goals for this project extend beyond stabilization and water quality to incorporate multiple co-benefits, including:
    - The restoration and creation of wildlife, riparian buffers, and wetland habitat.
    - Carbon sequestration.
    - Climate change mitigation, adaptation, and resilience.

9. Monitoring:
    - The permit applicant is required to conduct post-construction monitoring for a period of at least 5 years after completion of construction of the project to ensure project goals are met. The applicant provides MDE with periodic reports

in accordance with the Authorization documenting stream stability, stream and floodplain function, and vegetation viability within the project area, as well as any adaptive management actions taken to ensure continued stream stability, stream and floodplain function, and vegetation viability.

- ARF does monitoring and reporting for all of its projects.
- MDE is working to make monitoring reports available to the public.

Proposed conditions

Pictures of similar-sized projects with step pools in other forested systems: Preserve at Broad Creek and Harness Creek Overlook. Photos show examples of preserving trees while working in the stream channel.

Questions

Two in-person attendees said they will email any questions. Any questions ARF receives will be added to the meeting minutes and posted to the website.

No emailed questions were received as of 7/29/2026.

No one joined the meeting virtually to ask any questions via chat.