



Maryland Nontidal Wetland Award Program

FY 23 Request for Proposals



Maryland
Department of
the Environment



Chesapeake Bay Trust

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Maryland Nontidal Wetland Award Program

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At A Glance

Program Summary:

This program is designed to support no net loss of nontidal wetland acreage and functions in the state of Maryland. This program seeks proposals for nontidal wetland restoration, nontidal wetland creation, nontidal wetland enhancement, and/or nontidal wetland preservation projects. Proposed projects must have the potential to enter into a permanent protection mechanism.

Deadlines:

Application:

Wednesday, January 17, 2024, at 4:00 PM EST

Pre-Application Site Visit:

Complete by Friday, January 5, 2024

Eligible Project Locations:

This program funds projects throughout the state of Maryland.

Eligible Applicants:

Both not-for profit organizations AND for-profit entities may apply

Request Amounts:

Requests up to \$950,000

Submit Your Application:

Follow the instructions online at

https://www.GrantRequest.com/SID_1520?SA=SNA&FID=35708

Contact:

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Sadie Drescher, Director of Restoration Programs, 410-974-2941 ext. 105, sdrescher@cbtrust.org

This Request for Proposals was released on 10/6/2022

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Introduction to the Chesapeake Bay Trust

The Chesapeake Bay Trust (Trust) is a nonprofit, grant-making organization dedicated to improving the bays, streams, rivers, forests, parks, and other natural resources of our local systems, from the Chesapeake to the Coastal Bays to the Youghiogheny River. The Trust, supported in large part by Maryland's Chesapeake Bay License Plate and partnerships with other regional funders, engages and empowers diverse groups to take actions that enrich natural resources and local communities of the Chesapeake Bay region. Since 1985, the Trust has awarded over \$140 million in grants to municipalities, nonprofit organizations, schools, and public agencies throughout the Chesapeake Bay watershed.

The Maryland Nontidal Wetland Award Program is a partnership between the Trust and the Maryland Department of Environment (MDE).

Program Goals

The Trust and MDE welcome requests from local governments, nonprofit organizations, government agencies, contractors, and for-profit entities for nontidal wetland projects in Maryland. The goal of this program is to implement cost-effective wetland projects to provide valuable wetland functions, including habitat for a wide range of species and improved water quality, flood attenuation, recharge of groundwater, and aesthetics in the State's local watersheds and ultimately the Chesapeake Bay, Youghiogheny River, and Atlantic Coastal Bays.

The output of this program is to design, construct, monitor, and protect nontidal wetland sites and their associated buffers in the State of Maryland. Funded projects will be considered as In-Lieu Fee compensatory wetland mitigation sites and regulated wetland areas.

MDE funds for these projects are generated from payments made as compensatory mitigation for authorized nontidal wetland losses; civil or criminal penalties; and other contributions. Funded projects will be considered as In-Lieu Fee compensatory wetland mitigation sites and regulated wetland areas. As a result, *projects that receive funding in this program are not eligible for Watershed Implementation Plan (WIP) credit under local Total Maximum Daily Load (TMDL) allocations, are not eligible for other programs such as the Conservation Reserve Enhancement Program (CREP) and are not eligible for other reforestation or tree planting programs.*

In addition to the program goals stated above, the Trust is committed to the advancement of diversity and inclusion in its award-making and environmental work. As a result, the Trust strongly encourages applications directly from underrepresented groups, and for projects that increase awareness and participation of communities that are traditionally underrepresented, such as communities of color. For a full description of the Trust's efforts to engage under-engaged groups, see our strategic plan at www.cbtrust.org/strategic-plan and <https://cbtrust.org/diversity-inclusion/>.

Similarly, MDE supports the goal of achieving environmental equity for all Maryland residents. Accordingly, as MDE implements state laws and programs to protect and restore the environment, it is the Policy of MDE to implement environmental laws and programs wherever possible in a manner that reduces existing inequities and avoids the creation of additional inequities in Environmental Justice (EJ) Communities. As a result, MDE recently developed an EJ Screening Tool that allows users to identify potential EJ or overburdened communities. MDE's EJ Screening Tool is intended to enhance agency compliance, oversight, monitoring, and to enhance communication and outreach in areas with permitting activities in EJ or overburdened communities, or underserved communities. Potential applicants are encouraged to visit MDE's EJ Screening Tool at <https://mdewin64.mde.state.md.us/EJ/>.

Information Session

An Information Session at which the program will be described and questions from potential applicants will be answered is planned for November 2, 2022. Register to attend at the following link: https://docs.google.com/forms/d/e/1FAIpQLSebbU00ziWIHla9EuLcCGdDVTbBRISD32aDv20XN3r4ysvYcw/view_form?usp=sf_link (this link will take you to an RSVP form). After you register, you will be sent a confirmation email containing information to join the meeting (meeting link, meeting ID, passcode). Any updates to this Information Session will be posted on this program's website. *Please note: This program cannot support projects required under an existing or pending regulatory process or permit, or that are required by a regulatory authority for any other reason. It is the sole responsibility of the applicant to determine if any regulatory requirements or conditions exist prior to applying to this program.*

Eligible Project Types, Location, and Size

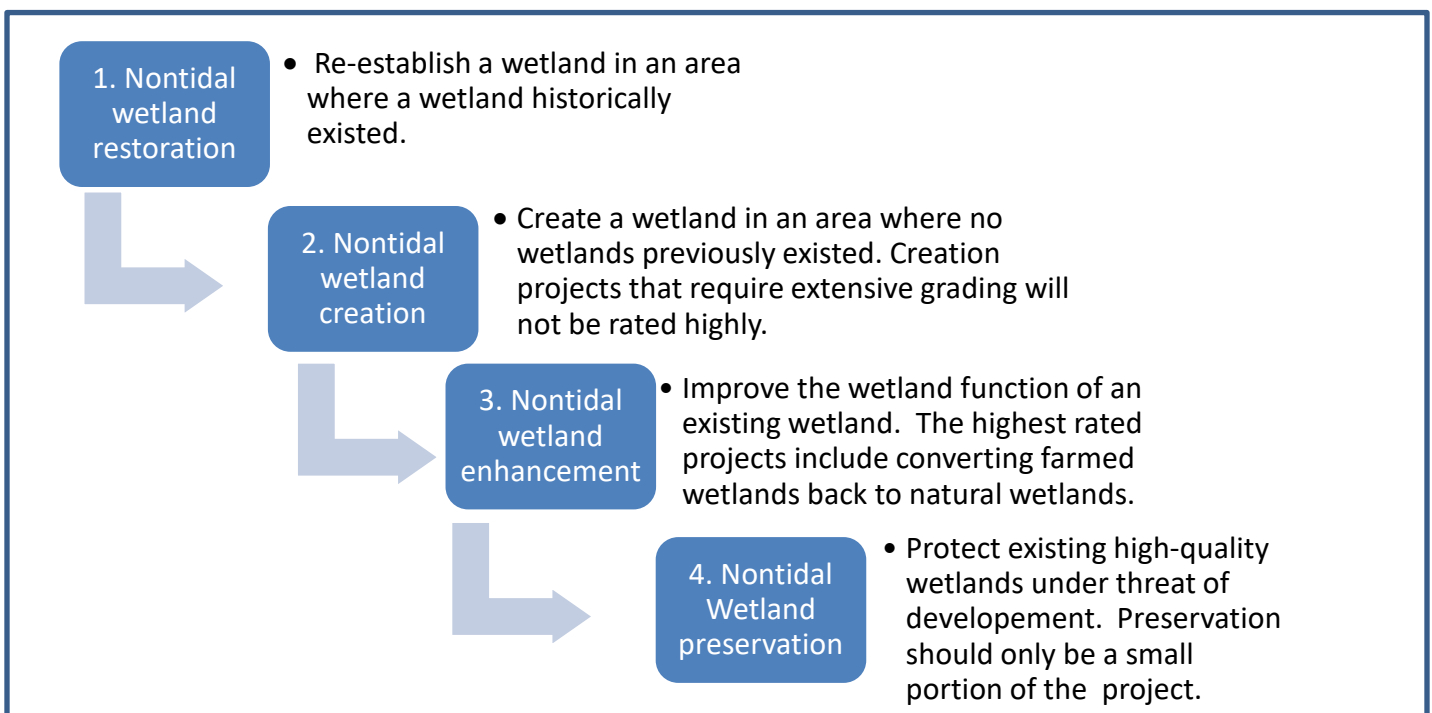
Eligible Project Types

MDE and the Trust seek proposals for nontidal wetland projects in Maryland. Eligible project types include the project types described in the graphic below, ranked in the order in which they are listed here:

1. Nontidal Wetland Restoration
2. Nontidal Wetland Creation
3. Nontidal Wetland Enhancement*
4. Nontidal Wetland Preservation**

** Due to the generally high likelihood for success and high functional uplift, enhancement of farmed wetlands may be ranked higher than Nontidal Wetland Creation. **Nontidal Wetland Preservation will only be considered if it is a small part of a larger package that includes significant wetland restoration, creation, or enhancement of farmed wetlands.*

Figure 1. Eligible Project Types by Rated Priority and Ranked by MDE Preference.



Eligible Project Locations

Eligible project locations include the watersheds described in Table 1, ranked in the order in which they are listed (primary watersheds being the highest importance). Projects located in the primary watershed will be given priority over secondary and tertiary watersheds. The program will consider proposals for nontidal wetland projects on individual private, commercial private, community-owned, nonprofit, and/or public property in the priority watersheds described in Table 1 below. A map of the watersheds can be found here: <https://cbtrust.maps.arcgis.com/apps/webappviewer/index.html?id=736cb42a74ed4bed9907ae5b25805953>

Table 1. Eligible Project Locations in Priority Watersheds.

Priority of Watershed	General Location	8-Digit Federal Hydrologic Code	Watershed Name	MD 8-Digit Watershed	
1. Primary	Eastern Shore ¹	Chincoteague 02040303	Isle of Wight Bay	2130103	
2. Secondary	Eastern Shore ¹	Chincoteague 02040303	Assawoman Bay	2130102	
			Sinepuxent Bay	2130104	
			Newport Bay	2130105	
	Western Shore ¹	Severn 02060004	Magothy River	2131001	
			Severn River	2131002	
			South River	2131003	
			West River	2131004	
			Patuxent River 02060006	Patuxent River, Lower	2131101
				Western Branch	2131103
			3. Tertiary	Eastern Shore ¹	Chester-Sassafras 02060002
Miles River	2130502				
Wye River	2130503				
Kent Narrows	2130504				
Lower Chester River	2130505				
Langford Creek	2130506				
Corsica River	2130507				
Southeast Creek	2130508				
Middle Chester River	2130509				
Upper Chester River	2130510				
Kent Island Bay	2130511				
Lower Elk River	2130601				
Bohemia River	2130602				
Upper Elk River	2130603				
Back Creek	2130604				
Little Elk Creek	2130605				
Big Elk Creek	2130606				
Northeast River	2130608				
Furnace Bay	2130609				
Sassafrass River	2130610				
Stillpond-Fairlee	2130611				

3. Tertiary	Western Shore ¹	Severn 02060004	West Chesapeake Bay	2131005
	Deep Creek Lake/ Western Maryland ²	Youghiogheny River 05020006	Youghiogheny River	5020201
			Little Youghiogheny River	5020202
			Deep Creek Lake	5020203
			Casselman River	5020204

NOTES: ¹ = Project size must be at least 5 acres; ² = Project size must be at least 2 acres.

Eligible Project Size: Projects must result in a minimum number of acres of restored, created, enhanced, and/or preserved nontidal wetlands by region, as noted in Table 1 above and Table 2 below.

Table 2. Eligible Project Size.

General Location ¹	Minimum Project Size
Eastern Shore	At least 5 acres
Western Shore	
Western Maryland	At least 2 acres

NOTES: ¹ = General location is defined above in Table 2.

Project Requirements

Overall Project Requirements:

- ✓ **Site Visit:** A Pre-Application site visit with MDE and the Trust is required for each proposed project prior to applying to this program and must be completed by January 5, 2024. Contact Sarah Koser at skoser@cbtrust.org or Sadie Drescher at sdrescher@cbtrust.org to schedule a site visit.
- ✓ **Landowner Approval:** Description of landowner willingness to consider long-term protection, including a letter of commitment for the project signed by the property owner, including a description of the long-term protection instrument or other mechanism that is proposed for the project.
- ✓ **Financial Assurances:** For all awarded projects, a financial assurance must be secured that is acceptable to the MDE and the Trust to cover the entire cost of the project. Generally, the awardee will purchase a payment bond and a performance bond for the project through a surety (typically an insurance company). An insurance policy may also be accepted as the financial assurance. The financial assurances will be held until MDE and the Trust determine that through monitoring reports, visual observations, and best professional judgment, the project site meets the five-year performance standards.
 - **Performance Bond:** A performance bond is a type of surety bond that guarantees that the contractual obligations under a project will be completed to satisfactory performance. A performance bond will be required if the project is awarded, which will guarantee complete performance of the contract. Additionally, performance bonds:
 - Shall be in the form specified in COMAR 21.07.02.10, Exhibit A (<http://mdrules.elaws.us/comar/21.07.02.10>) and an example performance bond is included here: <https://cbtrust.org/wp-content/uploads/Performance-Bond-and-Payment-Bond-Examples.docx>;
 - Are notarized and cover 100% of the project cost (which can include up to an additional 5% of the bid amount); and
 - Ensure that in the event the contractor does not complete the work, the performance bond insurance company (the surety) may either cover the cost of hiring a new contractor

to complete the work or provide compensation back to the funder (the Trust) and allow them to use the money to complete the project as deemed fit.

- **Payment Bond:** A payment bond guarantees that the contractor will pay in full all bills and accounts for materials and labor used in the work, as provided by law. A payment bond is a type of contract surety bond that guarantees a contractor or subcontractor will pay their subcontractors, material suppliers or laborers for the work and materials provided. Additionally, performance bonds:
 - Shall be in the form specified in COMAR 21.07.02.10, Exhibit A (<http://mdrules.elaws.us/comar/21.07.02.10>) and an example payment bond is included here: <https://cbtrust.org/wp-content/uploads/Performance-Bond-and-Payment-Bond-Examples.docx> and
 - Are notarized and cover 100% of the project cost (which can include up to an additional 5% of the bid amount).
- **Insurance Policy:** An insurance policy may also be accepted as the financial assurance
- ✓ **Professional Liability Insurance:** Awardees will be required to maintain Professional Liability Insurance in full force and effect during the term of the Contract, the usual and customary amounts of liability insurance coverage in connection with the performance or failure to perform services under the Contract.

Design and Permitting Requirements:

- ✓ **Forested Wetlands:** For wetland restoration, creation, and enhancement projects, the **resulting system should generally be designed as a forested wetland** (e.g., at least 90% forested wetland, with up to 10% of open water/emergent/scrub-shrub habitat pockets). Higher composition of other vegetative types may be considered on a case-by-case basis but must be discussed with and approved by MDE and the Trust prior to submission.
- ✓ **Wetland Buffer:** Designs must include a wetland buffer at least 25 feet around the project perimeter unless adjacent land is already protected through a long-term protection instrument/mechanism.
- ✓ **Avoiding Impacts:** Avoidance of natural resources is required, including avoidance of trees; impacts to existing wetlands should be minimized to the extent practicable.
- ✓ **Self-Sustaining System:** Designs will be evaluated to ensure that completed projects are self-sustaining and will not require continuous manipulation to establish and maintain appropriate hydrologic or vegetative properties (e.g., mowing, adjusting water structures, controlled burns, etc.)
- ✓ **Design Approval:** Approval of the design from the Interagency Review Team (IRT) may be required. The IRT is generally comprised of the following agencies: MDE, Maryland Department of Natural Resources, National Marine Fisheries Service, U.S. Army Corps of Engineers (USACE), U.S. Environmental Protection Agency, and U.S. Fish and Wildlife Service.
- ✓ **Regulatory Permits:** Authorization from applicable Federal/State/County and other permits is required.

Site Protection, Monitoring, and Maintenance Requirements:

- ✓ **Performance Standards:** All proposed projects must acknowledge and confirm the ability to adhere to the **Ecological Performance Standards and Monitoring Protocol** described in Appendix A. Please note that the projects in this award program will be considered *voluntary* wetland projects, so performance standards will not be formally included in the permit authorizations by MDE/USACE for these projects. Instead, the performance standards for these awards must adhere to Appendix A.
- ✓ **Monitoring and Maintenance:** The awardee will be required to monitor and maintain/remediate the project for five years following construction and planting of the project to ensure the site is meeting performance standards (Appendix A), including replanting, controlling invasive plant species, adjusting

hydrology, controlling erosion, maintaining structures, etc. Adaptive management of the site is required as part of the five-year monitoring and maintenance period. At the end of the five-year period, if the awardee has successfully met the required performance standards (Appendix A) and site has been approved and accepted by MDE, the awardee will no longer be responsible for project maintenance. At the end of the five-year period, if the awardee has NOT successfully met the required performance standards, MDE could require further remediation, extend the monitoring period, and/or call the financial assurance for the project issued by the insurance company or bank if the project is not satisfactorily completed.

- ✓ Site Access for Monitoring and Maintenance: Land must be owned by an individual or entity that will agree to permanent protection, including a provision for periodic access for monitoring and maintenance activities in perpetuity by MDE, the USACE, and the IRT, or their respective representatives, including a future Long-Term Steward, as necessary for monitoring and maintenance. Access to perform long-term monitoring/maintenance and the ability to evaluate the condition of the site is required.

- ✓ Long-Term Site Protection: Projects must be protected in perpetuity to ensure the conservation goals for the projects are preserved. The site protection mechanism must be approved by the Trust and MDE prior to recordation and must be recorded prior to initiation of construction unless an alternate timeline is approved by the Trust and MDE. ***Projects must have guaranteed long-term site protection. Land protection mechanisms that are acceptable in this program include (by order of preference):***
 1. New protection/ownership by federal, state, or local government (e.g., USFWS, MDNR, County parkland) on land with no existing site protection.
 2. New conservation easement on land with no existing site protection:
 - A conservation easement is a binding agreement between the landowner and another party called an easement holder that permanently limits some uses of the land to protect natural resources.
 - After the five-year monitoring and maintenance period and upon successfully meeting performance standards, a conservation easement holder agrees to monitor the land and take action to prevent or halt activities on the property that are incompatible with the conservation goals for the project. See Appendix B for a description of the standards and criteria required for a conservation easement holder.
 - Conservation easements held by state or local governments, other federal or state agencies, or non-governmental groups such as land trusts are preferable. However, other parties may be legally acceptable (Appendix B). The criteria defined in Appendix B will be used to determine whether the proposed conservation easement holder is acceptable in this program.
 3. Existing long-term land protection already in place (e.g., land that is already protected through existing parkland) that ensures the site is maintained for the environmental conservation goals of this program.
 4. New Declaration of Restrictive Covenants on land with no existing site protection.
 5. Land that is non-parkland, but already partially protected land. Examples include if land is already protected through the Maryland Agricultural Land Preservation Foundation (MALPF), or similar protection mechanism. *Note that these areas will still need to be protected through a new conservation easement (preferable) or a new Declaration of Restrictive Covenant as part of the program requirements.*

Land Ownership and Acquisition Value Requirements (including Allowable Expenses):

- ✓ Land Ownership: Land must be owned by an individual/entity that agrees to permanent protection.
- ✓ Landowner Acquisition Value Costs: Must be documented for a fee simple land purchase, if applicable, including if land would be converted to federal lands (e.g., USFWS), state lands (e.g., MDNR), or local lands (e.g., County parkland).
- ✓ Landowner Easement Acquisition Values (Easement Payment):
 - Use Table 3 below to determine the land value. Applicants may request funds to support easement acquisition values (easement payment) at or below the per acre cost in Table 3 without a land appraisal.
 - Obtain a Land Appraisal: If the request of per acre easement values is above the rates in Table 3, the applicant must submit two recent appraisals (< 5 years old) from a state-certified professional land appraiser to justify the higher easement value. Final easement payment per acre will be valued at the average of the two appraisals. Additionally, the land value must reflect the reduction in value due to conversion of land type (e.g., cropland to wetland).

Table 3. Landowner Easement Acquisition Values (Easement Payment) per Acre by Geographic Area.

Region	Existing Land Type ¹	2023 (\$/acre) ²
1	Cropland	\$5,500
1	Wooded	\$2,800
2	Cropland	\$11,500
2	Wooded	\$8,000
3	Cropland	\$11,000
3	Wooded	\$5,500
4	Cropland	\$10,000
4	Wooded	\$5,000
5	Cropland	\$7,500
5	Wooded	\$3,500

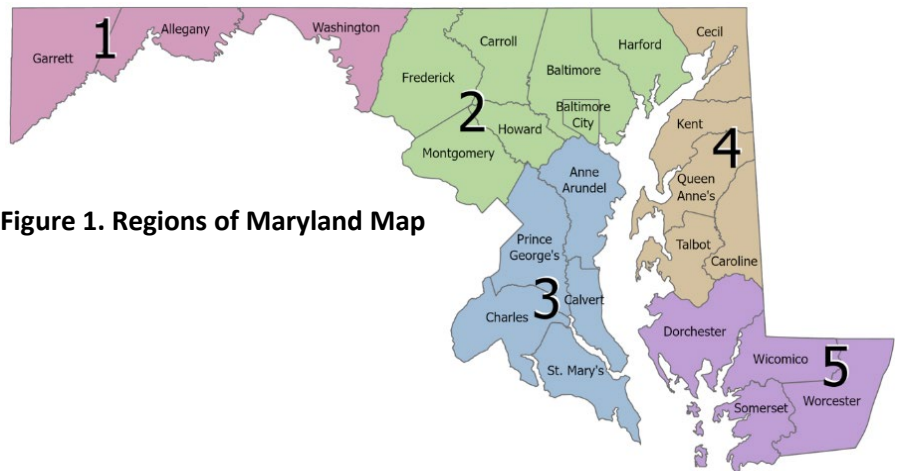


Figure 1. Regions of Maryland Map

Notes : ¹Avoidance of forested impacts is required. ² From Fiscal Year 2023 Market Analysis and Geographic Area Rate Cap or (GARC) - Natural Resources Conservation Service (NRCS) Agricultural Conservation Easement Program – Wetland Reserve Easement (ACEP-WRE), 2023. Projects on Land Types not listed above must provide land appraisals.

Evaluation Criteria

The following criteria will be used by external technical expert reviewers to evaluate applications. We recommend reviewing your proposal or having a colleague review your proposal against these criteria before submission to ensure that you have addressed all the relevant criteria. Preference will be given to applications that meet multiple criteria. **Note that not all bulleted items will be weighted equally.**

Project Location, Type, Need, and Context (Scale of 1-20):

- Is the project located within a priority watershed, as defined in Table 1?
 - Projects located in primary watersheds will be highly rated, followed by secondary and tertiary watersheds.
- What is the proposed project type (restoration, creation, enhancement, and/or preservation)?
 - Restoration of wetlands areas will be rated higher.
 - Creation of wetlands is generally considered to be higher risk and will only be considered when it is a smaller portion of the site (e.g., most of the site is restoration), or documentation has been provided in the proposal that supports strong site hydrology.

- Enhancement of wetlands that are being actively farmed will be rated higher.
- Sites that require extensive excavation are discouraged and will be rated low.
- Preservation will be rated lower than restoration, creation, and enhancement. Preservation will only be funded if it is a relatively small part of a project that includes restoration, creation, or enhancement of farmed wetland.
- Does the applicant justify the project background, existing conditions, and need for the project clearly?
- What is the proposed landscape context? Is the project well-connected to other important natural resources (e.g., forest interior dwelling species (FIDS) habitat, wetlands, upstream/downstream riparian buffers, Targeted Ecological Areas, etc.)? The applicant is encouraged to consult the Watershed Resources Registry (WRR at www.watershedresourcesregistry.org) to evaluate landscape connectivity.
 - Projects that provide connectivity to high-quality natural resources will be rated highest, while projects that are isolated from resources will generally be rated low.
 - Is the project located within or adjacent to existing protected lands, especially parkland, and/or does the project provide significant public access/recreation/education opportunity? **Projects that increase size of local, state, or federally protected conservation areas (parks) will be ranked higher.**
- Have adverse impacts to natural resources associated with project been avoided to the extent practicable (e.g., minimal tree removal, protection of sensitive resources, minimal habitat loss, etc.)? Include a description of the existing tree canopy and number of trees and/or existing wetland acres potentially impacted (directly or indirectly). **The project should avoid impacts to existing habitat and forest acreage.** If selected for an award, funding partners will work with awardees to minimize adverse impacts on surrounding natural resources (forests and wetlands). **The applicant should be willing to consider alternative design techniques to avoid or minimize adverse impacts to natural resources** (if applicable).

Proposed technique and potential ecological benefit/functional uplift (Scale of 1-20):

- What is the specific restoration technique being considered for design, and has the applicant demonstrated a sound technical approach in the conceptual plan? Was an alternatives analysis completed for the design technique? Why was this specific restoration technique chosen at the site, and on what information was the decision based? The design should mimic the historic system as much as possible.
- What other techniques or strategies were considered, and why were they rejected?
- What is the anticipated functional uplift, based on an evaluation of the proposed change in aquatic resource function(s)? Is the proposed approach appropriate and feasible for the site to accomplish the expected ecological benefits and functional uplift?

Project feasibility/readiness (Scale of 1-15)

- Has the applicant clearly demonstrated landowner willingness of the project?
- Has the applicant demonstrated that the project will not create environmental inequities and avoids the creation of new environmental or other inequities in Environmental Justice (EJ) or overburdened communities? To explore factors of environmental justice concern, MDE's EJ Policy Statement and Environmental Justice Screening Tool is located here: <https://storymaps.arcgis.com/stories/2811cd8bc6504faf8942f51596ad41ac> and the Maryland Environmental Justice Screen Mapper is located here: <https://mdewin64.mde.state.md.us/EJ>
- Is the project supported by the local or adjacent community, and has appropriate outreach been conducted?
- What is the level of support from agencies, organizations, etc. needed for project success? Has coordination with these groups occurred?
- Does the project have a high potential to meet MDE's Proposed In-Lieu Fee (MDE ILF) Program requirements, including likelihood that the project will be approved by the IRT and reducing additional factors that could limit incorporation of the project into the MDE ILF Program?
- Does the project conform with applicable USACE and MDE mitigation policy and guidance?
- Is the project likely to be permissible by regulatory agencies?
- Is there a high likelihood the project will meet the proposed schedule and/or required deadlines?

- Is there a high likelihood the project will achieve anticipated ecological benefits and results.

Long-term success (Scale of 1-20):

- Is the site positioned in a location with sufficient hydrology in the near and long-term to support the proposed wetland system? The Technical Review Committee will evaluate the proposed designs to ensure that completed projects are self-sustaining and will not require continuous manipulation to establish and maintain appropriate hydrologic (or vegetative) conditions.
- Has a high likelihood of long-term site success/sustainability been demonstrated? Consider factors that may result in higher long-term risk and maintenance (e.g., invasive species, climate change, etc.).
- Has documentation of a plan for long-term site protection mechanism been completed?
 - If a conservation easement is proposed, who will hold the easement, and has the easement holder committed to site protection? Projects protected through a conservation easement will be rated highest.
 - A Declaration of Restrictive Covenants will only be considered when it is demonstrated that a conservation easement is not feasible. Projects protected through a Declaration of Restrictive Covenants will be rated lower.
 - If the project is proposed on government-owned land, did the application explain how the site will be maintained as conservation land (e.g., MOU, Master Plan, etc.)? If adjacent to parkland, was the site incorporated into the park (or if not possible was that detailed in the application)?
 - Projects are preferred on land that is not already protected, unless it is within parkland. Projects proposed on land that is already under protection mechanisms consistent with the long-term preservation and sustainability goals of this award program may be considered but will be ranked lower. For example, project sites already protected through another mechanism like a MALPF easement could be feasible and will be considered but will be scored lower under this criterion.
- What is the completeness and feasibility of the monitoring and maintenance plan (e.g., invasive species control, supplemental tree planting, etc.) specific to the needs of the proposed project and surrounding land use/conditions?

Cost-Effectiveness/Budget (Scale of 1-15):

- Does the project have a high cost/functional uplift benefit?
- Is the project cost-effective considering the location, land values, existing site conditions, earthwork, etc.?
- Is the project size and acreage restored appropriate for the cost and budget? Projects should be large enough to justify staff time to manage the resulting project as well as the required five years of monitoring and maintenance.
- Has a clear and detailed budget been included that considers fair market costs that align with budget line items? Cost considerations include hourly rates, number of hours devoted to the project, the indirect rate, and other proposed expenses.

Project Team Capacity (Scale of 1-10):

- What is the experience of the contractor/applicant? What is the degree to which the contractor/applicant demonstrates successful experience in managing, designing, constructing, and maintaining this type of project?
- Is the overall project team appropriate for the project and have necessary partner organizations, contractors, their areas of expertise, and their role(s) in your project been demonstrated in the application? Include partners such as design consultants, contractors, landowners, and technical support. Applicants are encouraged to upload a letter of support from each partner outlining the partner's role in the project.

Eligible Applicants

MDE and the Trust welcome requests from ***not-for profit organizations, for-profit entities, and government agencies.***

Funding Availability, Timeline, Ineligible Projects, and Other Information

Funding Availability: The funding partners anticipate funds available in FY23 as follows:

- ◆ Up to \$950,000 is available for awards.

Project Timeline: Projects must be constructed within 2 years upon receipt of the award. Requests to extend project completion period will be reviewed and considered on a case-by-case basis. The awardee will be required to monitor and maintain/remediate the project for five years following construction and planting of the project to ensure the site is meeting performance standards (Appendix A).

Ineligible Projects: Projects that are required under an existing or pending regulatory process or permit, are required for mitigation, or are required by a regulatory authority for any other reason are not eligible for this program. Projects that receive funding in this program are not eligible for other voluntary programs such as the CREP, or other reforestation or tree planting programs. Sites with expired CREP easements may be considered and will be evaluated based on the current site conditions. Reach out to the Trust with any questions prior to applying regarding site eligibility but please note that the applicant is solely responsible to determine if any regulatory requirements or conditions exist prior to applying.

Tax Advantage Information: Use of funds from this grant program for certain types of easement payment costs could result in loss of donative intent and therefore ineligibility to claim certain types of tax advantages associated with donating easements unless easement value is proven to be less than market value. Applicants interested in tax benefits are encouraged to consult with a tax professional.

Eligible Budget Items

Applicants may request funding for the below items, that shall be detailed in the project budget (see *Budget Instructions* section for details):

- ✓ Land appraisals:
 - Applicants requesting funds to support per acre easement values (payments) greater than the values listed in Table 3 must submit a recent appraisal (< 5 years old) from a certified professional land appraiser to justify the higher easement value. Costs for a second appraisal must also be included in application budget to correlate the per acre value identified in the first appraisal submitted by applicant.
 - Final easement payment per acre will be valued at the average of the two appraisals.
 - Costs of both appraisals will be reimbursed if the project gets funded in this program. Applicants will not be reimbursed for those costs if the project does not get funded in this program. Reimbursement for each appraisal can be requested up to \$5,000.
- ✓ Land Acquisitions and/or Protecting the Site:
 - Applicants may request funds for a fee simple land purchase to transfer full ownership of the property.

- Applicants may request funds to purchase an easement; easement payments for projects proposed on land with existing protection, including but not limited to existing easements or covenants, may be prorated. The prorated easement payment should be negotiated between the Trust, MDE, the applicant, and the landowner prior to applying, and should be based on the reduction of land value.
- Applicants may request funds related to developing and securing the long-term protection mechanism, such as survey and legal work involved in easement development.
- A title report for the property is required for all projects.
- ✓ Site Surveys: Contractual services to complete the site survey, including a formal wetland delineation and Jurisdictional Determination (JD).
- ✓ Design: Contractual services to complete the project design.
- ✓ Permitting: Obtaining all required permits.
- ✓ Construction: Constructing or procuring contractual services to construct and plant the project.
- ✓ Construction Oversight: Overseeing construction and planting.
- ✓ Monitoring: Monitoring the project for five consecutive years after the first season of planting.
- ✓ Maintenance: Providing maintenance and remediation during the monitoring period to ensure the site is meeting performance standards.

Deadline

Applicants must contact the Trust to arrange a project site visit with the Trust and MDE staff before applying. The site visit should also include the project applicant organization, landowner, project designer, and any other relevant project partners/collaborators. We strongly recommend that you contact the Trust to schedule the site visit. The site visit must be completed by January 5, 2024. The applicant is required to provide the design concept drawings and the Pre-Application Wetland Worksheet (Appendix C) to the Trust two weeks prior to the scheduled site visit.

Applicants must submit applications in the Chesapeake Bay Trust Online System by 4:00 PM EDT on January 17, 2024. Late applications will not be accepted, and the online funding opportunity will close automatically and promptly at 4 PM EST. Applicants are strongly encouraged to submit at least a few days prior to the deadline given the potential for high website traffic on the due date. The Trust cannot guarantee availability of technical assistance for our online system on the deadline date.

Application Review Process

Each application is reviewed by a technical external peer review committee, called the Technical Review Committee (TRC), composed of individuals who are experts in the fields supported by this RFP and represent communities served by projects funded by this RFP. The TRC ranks and scores all applications based on the criteria listed in the “Evaluation Criteria” section above, then meets to discuss the application merits. The TRC then recommends a suite of applications to the Trust’s Board of Trustees.

The funding partners reserve the right to fund projects and budget items that advance their missions and meet specific funding priorities and criteria.

To allow applicants to set expectations prior to investing time in an application, the Trust provides historical application approval rates for the same or similar programs. The average approval rate from the last three rounds (FY15, FY16, and FY18) of this award program is 50%, including both fully and partially funded applications.

Awards and Notifications

All applicants will receive an emailed letter stating the funding partnership's decision. An application may be declined, partially awarded, or fully awarded. The Trust and MDE may request adjustments to the concept plan to avoid and/or minimize impacts to natural resources.

Award Process: If approved, the Trust will send a contract with award conditions and due dates of status and final reports. In the agreement, awardees will agree to the terms in the Requirements of Awardees section. The Trust uses an online system for the application process, and if awarded, project management. In addition, all final products will be provided to the funding partners for use and distribution at the sole discretion of the funding partners.

In cases in which the awardee fails to submit a status report or final report by the due date, the Trust reserves the right to terminate the agreement. During the project term, awardees will submit status reports and products/milestones outlined in the contract (e.g., deliverables). Organizations with outstanding status or final reports will not receive additional awards.

The FY 2023 MDE Nontidal Wetland awards will be announced in May 2024.

Contact

For technical assistance contact Sarah Koser at 410-974-2941 ext. 106 and skosermail@cbtrust.org or Sadie Drescher at 410-974-2941 ext. 105 and sdrescher@cbtrust.org.

Narrative Questions

Your project "Narrative" should address *all narrative questions in the section below*. You will upload your Narrative as a MS Word or PDF file into the online application system. The Narrative shall not to exceed five (5) pages of text, excluding photos or materials such as Letter(s) of Commitment or required technical information.

This section also includes a description of the required technical information. These items can be combined with the "Narrative" file or may be uploaded as additional file attachments in the online application system; the online application system allows for a maximum of four additional file attachments.

PROJECT NARRATIVE QUESTIONS:

1. **Project Site:**

- a) Define the project location, including property address, latitude/longitude coordinates of the project, and the watershed (see Table 1 for eligibility).
- b) Describe the current conditions of the project site, including the existing land use, the number/size/type and/or acreage of trees present, the location of any utilities (water/sewer/electric/gas), infrastructure, and easements (e.g., temporary CREP easement), and existing streams or wetlands present. *Indicate whether a wetland delineation has been conducted at the site; an informal wetland delineation is required with your application. However, a formal wetland delineation or jurisdictional determination (JD) is not required unless your project is awarded.*
- c) Describe the proposed project:
 - i. Size and the acreage of each project type (e.g., nontidal wetland restoration, nontidal wetland creation, nontidal wetland enhancement, nontidal wetland preservation, or a combination).
Example: This project will result in 14 acres of nontidal wetland restoration and 2 acres of nontidal wetland enhancement.

- ii. Size and acreage of each proposed vegetative type (forested, scrub-shrub, emergent, open water).
Example: This project will encompass 18.5 acres that will include 12 acres forested wetland restoration, 1 acre emergent wetland restoration, 1 acre emergent wetland creation, 2 acres wetland enhancement of farmed wetland to forested wetland, 1 acre of forested wetland preservation, and 2.5 acres of a 25-foot forested buffer surrounding the wetlands. Overall, the site will be 95% forested and 5% open water/emergent habitat upon completion.
- iii. Describe the functional uplift expected as a result of the project, based on an evaluation of the proposed change in aquatic resource function(s). Is the proposed approach appropriate and feasible for the site to accomplish the expected ecological benefits and functional uplift?
- d) Describe the proposed Impacts: Avoidance of adverse impacts associated with project on existing project conditions is required (e.g., tree removal, habitat loss, etc.). Describe all proposed natural resource impacts, including tree impacts and/or existing wetland acres, floodplains, or waterways impacted because of the project.
- e) How was the project identified, what was the impetus, and why is this project needed?
- f) Property Ownership: Describe and/or list the current landowner(s). A signed Letter of Commitment must be included in your application from any landowner(s) on whose property the project is proposed (except in cases in which the applicant is the landowner) OR who has the authority to allow site access for construction, monitoring, maintenance, and/or long-term management purposes. Use the Trust’s definition of Letter of Commitment at: https://cbtrust.org/wp-content/uploads/Chesapeake-Bay-Trust-Letter-of-Commitment-Policy_082819.pdf.
- g) Describe the value of the project site land and respond to the following two questions:
 - i. Are you requesting per acre easements values equivalent to or less than values listed in Table 3? (Yes/No)
 - ii. If you answered “No” and are requesting per acre easements values above the values listed in Table 3, you must submit a recent appraisal (< 5 years old) from a state-certified professional land appraiser to justify the higher easement value. A list of appraisers certified in Maryland is located here: <https://cbtrust.org/wp-content/uploads/DNR-Approved-Appraiser-List-Final.xls>. Please note, the land value should reflect the reduction in value due to conversion of land type (i.e., cropland to wetland) rather than the total value of the land. See Project Requirements and Eligible Budget Items for details on easement and land appraisals.

2. **Long-term Site Protection:** All funded projects must be protected in perpetuity to ensure the conservation goals for the projects are preserved. The site protection mechanism must be approved by the Trust and MDE prior to recordation and must be recorded prior to initiation of construction unless an alternate timeline is approved by the Trust and MDE.

- a) Describe whether the site is under a current long-term land protection mechanism and what type of long-term protection mechanism is in place.
- b) If the land is not already protected, describe the process by which the land will be protected.
- c) Describe whether a *Conservation Easement Holder* has been identified and provide a letter of interest from the potential Conservation Easement Holder. A Letter of Commitment is required from the Conservation Easement Holder if the project is awarded. Refer to Appendix B for details and criteria that will be used to determine whether the proposed conservation easement holder is acceptable in this award program.

3. **Proposed Methodology:** Describe the methods, timeline, and capacity to accomplish the below tasks (and include cost estimates in your budget spreadsheet for each of these tasks):

- a) Task 1: Landowner agreement and long-term protection.
 - i. Obtaining a landowner agreement and a Letter of Commitment,
 - ii. Identifying a Conservation Easement Holder and obtaining a Letter of Commitment,
 - iii. Obtaining a land protection mechanism for the site, and

- iv. Obtaining a title report for the property (to ensure the property is cleared of any liens, easements, or other issues that would prevent the implementation and long-term protection of the project).
- b) Task 2: Financial Assurances
 - i. Obtaining and securing a payment bond and a performance bond, or
 - ii. Obtaining and securing another acceptable financial assurance for the project (e.g., insurance policy).
- c) Task 3: Land Surveys
 - i. Obtaining a topographic survey, and
 - ii. Completing a wetland delineation and obtaining a JD.
- d) Task 4: Design and Permitting
 - i. Completing the conceptual design (and applicable pre-survey information); 30% design (preliminary design based on survey data to include proposed grading and wetland features); 60% design (semi-final design to include proposed grading, wetland features, planting plan, erosion and sediment control plan, typical sections and profiles); 100% design (final design to include proposed grading; wetland features; planting plan; erosion and sediment control plan; typical sections and profiles; and traffic control plans, if applicable).
 - ii. Permitting shall include any necessary permits or authorizations obtained, including MDE/USACE wetlands and waterways permits, sediment and erosion control plans, and Notice of Intent (NOI) permits.
- e) Task 5: Construction (Implementation)
 - i. Completing construction and planting services including outlining bid and procurement procedures.
 - ii. Completing construction and planting installation including organizing and reporting on progress.
- f) Task 6: Maintenance and Monitoring:
 - i. Monitoring and maintaining the site for five years per performance standards (Appendix).
 - ii. Submitting annual monitoring reports.
 - iii. Providing maintenance, remediation, and adaptive management at the site as necessary in the first five years to ensure that the site is meeting performance standards (see Appendix A – Ecological Performance Standards and Monitoring), including replanting, controlling invasive plant species, adjusting hydrology, controlling erosion, and maintaining structures.

4. **Deliverables:** Provide a deliverables schedule using the table format below, including details for each deliverable format (e.g., excel spreadsheet). A template is provided below in Table 4; as applicable, add rows for additional deliverables and include total cost in the last row. **Awards will be managed as firm-fixed-price contracts.** The deliverables table should reflect the completion of Tasks 1 through 6 above in Proposed Methodology. **Multiple invoices may be proposed for each Task, but the last payment for Task 6: Maintenance and Monitoring, must equate to 15% of the total cost of the project.**

Table 4. Example Project Deliverables and Timeline.

Task # and Description	Project Deliverables	Date of Delivery	Invoice Amount
Task 1: Landowner agreement and long-term protection	<u>The deliverables include:</u> <ul style="list-style-type: none"> • (add name of deliverables here, along with format of each deliverable) 	X/X/20XX	\$
Task 2: Financial Assurances	<u>The deliverables include:</u> <ul style="list-style-type: none"> • (add name of deliverables here, along with format of each deliverable) 	X/X/20XX	\$

Task # and Description	Project Deliverables	Date of Delivery	Invoice Amount
Task 3: Land Surveys	The deliverables include: <ul style="list-style-type: none"> (add name of deliverables here, along with format of each deliverable) 	X/X/20XX	\$
Task 4: Design and Permitting	The deliverables include: <ul style="list-style-type: none"> (add name of deliverables here, along with format of each deliverable) 	X/X/20XX	\$
Task 5: Construction (Implementation)	The deliverables include: <ul style="list-style-type: none"> (add name of deliverables here, along with format of each deliverable) 	X/X/20XX	\$
Task 6: Maintenance and Monitoring	The deliverables include: <ul style="list-style-type: none"> (add name of deliverables here, along with format of each deliverable) 	X/X/20XX	\$*

**Note: the invoice for Task 6 must equate to 15% of the total cost of the project.*

5. **Qualifications and Experience:**

- a) Briefly describe your project team. Describe the experience of your organization, the staff selected in your organization to perform this work, and the contractors selected to perform this work. Describe your project team’s past experience in completing similar and successful wetland projects, including all applicable project phases listed above (bonding, land protection, procurement, construction management, monitoring, and maintenance). Resumes may be added to the application package as an Appendix and will not be considered in this proposal narrative’s page limit.
- b) Provide past project examples completed in the last five years and include the project name, location, short description of the project, and photos for each project. Project references may be provided but are not required.

6. **Permit Status:**

- a) All submitted proposals must be permissible projects. Describe what permits will be required, where the project is in the permitting process, and provide a schedule/timeline for obtaining all required permits.
- b) List the county, state, and/or federal agencies you have been in contact with about your project.

7. **Sustainability:** The Trust aims to invest in projects that have the longest potential longevity, after the award period has ended. Several threats exist that may result in loss of project value: change in public interest in an effort; changes in rainfall or sea level associated with climate change; change in land use; etc.

- a) Discuss the future you see for the work for which you are requesting funds. What factors may affect its long-term value and how will you ensure that its long-term value is maximized?
- b) How will addressing climate change impacts be incorporated into the project assessment, plan, or design? For climate resources such as mapping your project area with future water levels, see the *Additional Resources* section.
- c) If the project or program will need ongoing financial resources to maintain its value, please provide an abbreviated plan describing how the project will be sustained beyond the term of the proposed funding request.

8. **Demographics:** The applicant must demonstrate that the project will not create environmental inequities and avoids the creation of new environmental or other inequities in EJ or overburdened communities.

- a) What is the demographic information about the community or population involved in or served by the project? When considering project locations, the Trust encourages applicants to review the Maryland Environmental Justice Screening Tool to explore factors of environmental justice concern: <https://mdewin64.mde.state.md.us/EJ/>.

- b) If applicable, how has or will the population and/or the community been meaningfully involved in the planning, development, and implementation of the proposed project. Describe if outreach is proposed to involve the local community.
- c) What is your organization’s experience working within the specific communities that you will be prioritizing/engaging? If you have not had significant experience working with or as part of your prioritized audience, how do you intend to address this issue?

9. **Technical Information Applicable to Projects:** Use Table 4 below to determine what technical information is required for your project. Some items will be provided with the application and some items you will detail here why they are missing and how they will be compiled, if awarded.

Table 4. Checklist of Technical Information.	
Items listed are noted in the table as either required or preferred at the time of application. All items identified as “preferred” but not submitted in the application will be required after the award is made as a contingency of the award. For items applicable to your project that are not submitted with the application, tell us why you are unable to provide this information now and/or your plan to provide this information later.	
Site Visit	Completed Pre-Application Site Visit and project details known/discussed (required). The Pre-Application Wetland Worksheet (Appendix C) should be submitted two weeks prior to the site visit.
Photos	Site photos (required)
Project Location and Current Site Conditions	Address and lat/long coordinates (required)
	Project site map, including project boundary, current land use, property ownership, and existing easements within or adjacent to the proposed project (required)
	Existing natural resources map: mapped wetlands, 25-foot wetland buffers, streams, floodplains/forest, trees, etc. (required)
	Completed preliminary wetland delineation at site (required)
	Map of existing invasive plant species at or adjacent to site, if available (preferred)
	Field survey of topography for existing conditions, if already completed (preferred)
	Mapped utilities and roads, including water/sewer/electric/gas/etc. (required)
	Distance to nearby airports and airport names (required)
	Correspondence with resource agencies for projects with sensitive resources, if applicable - e.g., historical properties, RTE species (preferred)
	Map of the soil survey and field confirmation of soil drainage class (preferred); the National Resource Conservation Service (NRCS) web soil survey is a free mapping site: https://websoilsurvey.nrcs.usda.gov/app/HomePage.htm
Wetland Project Details	Concept Plan; the conceptual sketch must include an identified 25-foot buffer around the perimeter of the proposed wetland (required)
	Map showing existing and planned easements within or adjacent to the proposed project (e.g. utility easements, Forest Conservation Easements, etc.) (required)
	Proposed project map of impacts to existing natural resources, including forests, wetlands, 25-foot wetland buffers, waterways, and floodplains impacted by project (required)
	Design plans, plan-views, cross-sections, if already completed (not required)
	Proposed surface water intake (where runoff enters your project area) and project outfall (where water will exit your project area) (preferred)
	Planting plan, if already completed (not required)
Additional Reports to Support the Project	Previously completed reports or information for your project may be included (but are not required) such as: <ul style="list-style-type: none"> • Design Report • Hydraulic and Hydrology (H&H) Reports • Groundwater (or well) data • Water budget

- | |
|--|
| <ul style="list-style-type: none"> • Natural Resources Inventory • Description of Functional Uplift • Record of communication with regulatory agencies to date • Geotechnical report or soil borings data • Cost estimate |
|--|

Budget Instructions

Financial Management Spreadsheet – Application Budget Upload

You will be asked to upload your budget using the “Application Budget” worksheet of the Chesapeake Bay Trust’s **Financial Management Spreadsheet (FMS)**, an excel file template. The template can be found by visiting <https://cbtrust.org/forms-policies/> where you can also watch a video with instructions on how to complete the FMS.

Financial Management Spreadsheet – Application Budget Information

This online application component will ask you to enter budget category and request totals. These totals will be automatically calculated in the FMS Application Budget, so you will only need to copy and paste the values from the FMS to the Online Application.

Additional Budget Justification

This online application component will ask you to provide a descriptive budget narrative to justify and explain costs. If the success of the work is contingent upon award of other funds, make this clear in your budget justification section.

Online Application Submission Instructions

The Trust uses an online system for the application process, and if awarded, project management. To apply for an award, go to <https://cbtrust.org/grants/non-tidal-wetlands/> and click on “Start a New Application” to begin an application. This will open a new window asking you to log in or create an account on our online system. If you have applied in the past, use your existing username and password (if you have forgotten either of these use the ‘forgot password’ feature). If you have not used our online system before, click on “New Applicant” and follow the instructions.

Applicants must submit applications in the **Chesapeake Bay Trust Online System** by **4:00 pm EDT on January 17, 2024**. Late applications will not be accepted, and the online funding opportunity will close promptly at 4:00 pm.

By submitting an application to this program, applicants acknowledge that: 1) they are compliant with federal employment and non-discrimination laws and 2) they have not been debarred, convicted, charged or had a civil judgment rendered against them for fraud or related offense by any government agency (federal, state or local) or been terminated for cause or default by any government agency (federal, state, or local). In addition, all final products will be provided to the funding partners for use and distribution at the sole discretion of the funding partners.

Watch our video on how to apply for and submit an application using our online system at <https://cbtrust.org/grants/>.

Online Application Form

You will be asked to provide the following information on the online application form. Some items are required in order to submit your application. Refer to the online application for details.

- Eligibility Quiz
 - This three-question quiz is meant to assist you in determining if your project meets the requirements of this award program and that your staff/organizational structure best supports a successful application.

- Applicant Information Tab
 - Provide the organization's name, mailing address, phone number, organization type, mission, EIN number, and DUNS number.
 - Provide the Executive Officer and Project Leader's name, title, address, phone, and email address.
 - Both an Executive Officer and a Project Leader, two separate individuals, must be identified for all applications.
 - The Executive Officer and Project Leader must both be able to make decisions on behalf of the organization either as a board member, an employee, or other approved position recognized by the organization but not a contractor of the application.
 - The Executive Officer is the individual that oversees the organization (e.g., Executive Director, Chief Executive Officer, Mayor, President or Vice President, Principal (for schools), etc.) and has the authority to sign/execute award agreements on behalf of the organization. The Executive Officer information is tied directly to all the organization's applications and should not vary from application to application. If the Executive Officer could be listed as the Project Leader in a future proposal, we recommend listing a Board Member or other higher-ranking position of the organization as the Executive Officer in order to reduce the variation in the Executive Officer across applications.
 - The Project Leader will be responsible for all project coordination and correspondence with the Trust for the duration of the project. The email address entered here **MUST** be the same as the email address you used to log in to the online system. The Project Leader is the primary point of contact for the application, and the email address used to submit the application via the online system must be that of the Project Leader. Applications in which the email address associated with the Project Leader in the applicant information tab of the online opportunity does not match the email address used to submit the application will not be considered for funding. The Trust cannot conduct any official correspondence with contractors or other project partners. If at any time the Project Leader cannot continue in the position, the organization must contact the Trust and assign a new qualified Project Leader.
 - To avoid conflict of interest issues, individuals associated with for-profit entities to be engaged in the project cannot serve in either role.

- Project Information Tab
 - Provide a project title; project abstract; the watershed, county, and legislative district in which the project is located; and the latitude and longitude coordinates of the project location.

- Timeline Tab

- Add the project start and end date. Provide a project timeline that includes major tasks and their associated start and end dates.
- Deliverables Tab
 - Provide estimated metrics for your proposed project such as project participants and outreach and restoration outcomes.
- Volunteers Tab
 - Provide a description of volunteer activities, the number of volunteers, and total number of volunteer hours.
- Project Partnerships
 - Provide a list of project partner organizations or contractors, individuals, their areas of expertise, and their role(s) in your project.
 - Applicants are encouraged to upload a letter of commitment for the project from each partner describing in detail the partner’s role or contribution to the project. Applications including strong letter(s) of commitment often receive higher scores. If not submitted with the application, letter(s) of commitment may be required prior to the release of any awarded funding. To better understand the Trust’s definition of and policy on Letter(s) of Commitment, visit our Forms and Policies webpage: www.cbtrust.org/forms.
- Narrative & Supporting Documents Tab
 - Upload a Microsoft Word or PDF file that contains your answers to the narrative questions found in the Narrative Questions section of this RFP. Upload additional supporting documents, if needed/required.
- Budget Tab
 - Upload your application budget, provide the budget category and request totals, and provide additional budget justification. Use the Trust’s Financial Management Spreadsheet and fill out the “Application Budget” worksheet. Refer to the Budget Instructions of this RFP.
- Terms and Conditions Tab
 - Agree to the specified terms and conditions for the program for which you are applying.

Additional Resources

These resources can support your project’s application:

- **Priority Watersheds** (the Nontidal Wetlands award program will consider proposals for projects in the priority watersheds shown on the following map):
<https://cbtrust.maps.arcgis.com/apps/webappviewer/index.html?id=736cb42a74ed4bed9907ae5b25805953>
- **MDE’s Components of a Compensatory Mitigation Plan - Guidance for Developing Wetland and Waterway Mitigation in Maryland (April 2022)**:
<https://mde.maryland.gov/programs/Water/WetlandsandWaterways/AboutWetlands/Documents/Components-Mit-Plan-Guidance.pdf>

- **Water Resources Registry** (site details, including topographic lines, land uses, and soils): <https://watershedresourcesregistry.org/states/maryland.html>
- **MDE’s EJ Policy Statement and Environmental Justice Screening Tool:** <https://storymaps.arcgis.com/stories/2811cd8bc6504faf8942f51596ad41ac>
- **Maryland Environmental Justice Screen Mapper** to explore factors of environmental justice concern: <https://mdewin64.mde.state.md.us/EJ/>.
- **The Trust’s Additional Resources Page**, specifically the “Restoration,” categories: <https://cbtrust.org/additional-resources/>
- **The Chesapeake Bay Trust Native Plant Species Selection Guide:** https://cbtrust.org/wp-content/uploads/External_Final-Trust-Draft-Plant-Species-Selection-Guide- Oct2021.pdf
- **NRCS Web Soil Survey:** <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>
- **2018 Sea Level Rise Projections for Maryland:** <https://www.umces.edu/sea-level-rise-projections>
- **NOAA Sea Level Rise Viewer:** <https://coast.noaa.gov/digitalcoast/tools/slr.html>
- **Climate Impacts to Restoration Practices** (supported through the [Pooled Monitoring Program](#)): https://cbtrust.org/wp-content/uploads/Grant16928-Deliverable11-FinalProjectReport_120820.pdf
- **Piloting the Development of Probabilistic Intensity Duration Frequency (IDF) Curves for the Chesapeake Bay Watershed** (supported through the [US EPA Goal Implementation Team program](#)): <https://www.rand.org/pubs/tools/TLA1365-1.html>
- **Financial Assurances:** For all awarded projects, a financial assurance must be secured that is acceptable to the MDE and the Trust to cover the entire cost of the project. Financial assurances can include the awardee purchasing a payment bond and a performance bond for the project through a surety (typically an insurance company). An example performance bond is included here: <https://cbtrust.org/wp-content/uploads/Performance-Bond-and-Payment-Bond-Examples.docx>. An example payment bond is included here: <https://cbtrust.org/wp-content/uploads/Performance-Bond-and-Payment-Bond-Examples.docx>. The payment and performance bond shall be in the form specified in COMAR 21.07.02.10, Exhibit A (<http://mdrules.elaws.us/comar/21.07.02.10>).

Appendix A: Ecological Performance Standards and Monitoring Protocol

APPENDIX A -
ECOLOGICAL PERFORMANCE STANDARDS AND MONITORING PROTOCOL FOR
NONTIDAL WETLAND SITES APPROVED THROUGH THE TRUST AND MDE NONTIDAL
WETLAND AWARD PROGRAM

Updated: October 6, 2022

Nontidal wetland sites that are funded through the Chesapeake Bay Trust (Trust) and Maryland Department of the Environment (MDE) Nontidal Wetlands Award Program (“site”) shall conform to the following interim-based and final performance standards (Section I below) by the end of the monitoring period, unless otherwise determined by MDE, in coordination with the Trust. MDE may also coordinate with the Maryland Interagency Review Team (IRT) to determine if the site is meeting performance standards. Monitoring timeframes, monitoring reports, monitoring report measurements, and adaptive management for sites must be consistent with the requirements in Sections II-V below. In addition, please see, “Standard Methods for Monitoring Vegetation, Hydrology, and Soils in Wetland Mitigation Sites in Maryland” below (pages 11-17) for the recommended techniques for monitoring wetland restoration, creation, or enhancement sites.

I. Performance Standards: The Awardee shall provide all required documentation, including monitoring reports, construction completion reports, and as-built surveys to MDE and the Trust. MDE, in consultation with the Trust, will use visual observations during site visits and monitoring reports to evaluate attainment of performance standards and performance-based milestones and in determining whether part of or the entire site is successful or whether corrective actions are warranted. Except for standards for Invasive Species and Wetland Species Richness, which will be determined by cell, success for each of the following standards will be determined at each sampling plot and/or well location. Presenting averages or means of plot data across a site is not satisfactory to demonstrate success. All the following standards and milestones will be used to assess project success and must be achieved each monitoring year.

A. Wetland Area(s):

1. Wetland Vegetation Dominance: Wetland vegetation dominance, defined as a vegetation community where more than 50% of all dominant plant species across all strata are rated obligate (“OBL”), facultative wet (“FACW”), or facultative (“FAC”), using the vegetation sampling procedures as described in the appropriate regional supplement to the Corps of Engineers Wetland Delineation Manual, must be achieved; and

2. Aerial Cover Vegetative Standards:

- a) By the end of year one, the site shall have a minimum of 50% native (FAC or wetter) species cover.
- b) By the end of year two, the site shall have a minimum of 60% native (FAC or wetter) species cover.
- c) By the end of year three, the site shall have a minimum of 70% native (FAC or wetter) species cover.
- d) By the end of year five and each monitoring year thereafter, the site shall have a minimum of 85% native (FAC or wetter) species cover.
- e) Volunteer species should support functions consistent with the project design goals; and

- 3. Non-Native and Invasive Species:** The goal of any wetland site is to have no non-native or invasive species. However, if non-native or invasive species are present, no more than 10% of relative plant cover¹ over the entire site shall be made up by non-native or invasive species, with no individual colony greater than or equal to 5% of relative plant cover. No more than 5% of relative plant cover over the entire site shall be made up of *Phragmites australis*², *Persicaria perfoliata*, *Pueraria montana*, or *Lythrum salicaria*. The presence, location, and percent cover of invasive and/or non-native species shall be noted on the approved plan. Invasive species are identified on the 2010 National Park Service/U.S. Fish and Wildlife Service document *Plant Invaders of Mid Atlantic Natural Areas*³ and the Maryland Invasive Species Council Invasive Species of Concern in Maryland⁴. Native status will be based on the Natural Resources Conservation Service Plants Database⁵. *Phalaris arundinacea* and *Typha* spp. may also be considered as an invasive species by MDE. Alternatively, for specific problematic species, MDE, in consultation with the Trust, may consider justification for different requirements; and
- 4. Wetland Species Richness:**
- For scrub/shrub wetlands, establish a minimum of three species of native wetland shrubs (FAC or wetter) with no more than 65% relative cover of one species, over the entire site. Loblolly pine cannot be more than 35% relative cover.
 - For forested wetlands, establish a minimum of three species of native wetland trees and two species of native wetland shrubs (FAC or wetter) with no more than 65% relative cover of one species, over the entire site. Loblolly pine cannot be more than 35% relative cover; and
- 5. Wetland Vegetation Density for Scrub-Shrub and Forested Wetlands:** For scrub-shrub or forested wetlands, native wetland (FAC or wetter) plant density of at least 435 living trees/shrubs per acre with a minimum height of 10 inches shall be achieved by the end of year one and maintained each monitoring year thereafter through the end of the monitoring period; and
- 6. Wetland Vegetation Cover for Forested Wetlands:** For forested wetlands, average tree height of tallest five native wetland (FAC or wetter) trees within each sample plot shall be at least three feet in height at year three and at least five feet in height at year five and each monitoring year thereafter; and

¹ “Relative plant cover” is defined as the cover of a particular species as a percentage of total plant cover. Thus, relative cover will always total 100%, even when total absolute cover is quite low.

² American Common Reed, *Phragmites australis* subsp. *americanus*, while uncommon, is not considered to be an invasive plant.

³ <https://www.invasive.org/alien/pubs/midatlantic/midatlantic.pdf>

⁴ <http://mdinvasives.org/species-of-concern/>

⁵ <https://plants.sc.egov.usda.gov/>

7. Wetland Hydrology:

- a) At a minimum, the site must be inundated (flooded or ponded) or the water table is 12 inches or less below the soil surface for 12.5 % or more consecutive days during the growing season in most years (greater than or equal to 50 percent of the years). Monitoring must consider the normality of rainfall occurring prior to and during the monitoring period when addressing the frequency requirement. For the purpose of this determination, the growing season should be based on median dates (i.e., 50 percent probability) of 28°F air temperatures in spring and fall, based on the long-term data for the nearest appropriate weather station, as recorded in the WETS tables available from the NRCS National Water and Climate Center (https://www.wcc.nrcs.usda.gov/climate/navigate_wets.html), or as specified in the appropriate regional supplement to the Corps of Engineers Wetland Delineation Manual, or
- b) The overall seasonal hydroperiod (depth, degree, duration, and periodicity) shall be similar to that of an MDE-approved reference wetland or targeted wetland type, with the acceptable range of the seasonal hydroperiod specified in the approved plan.

8. Anaerobic Soil Conditions: The entire wetland restoration or creation area must meet the Hydric Soil Technical Standard (Technical Note 11) developed by the National Technical Committee for Hydric Soils for saturated conditions and anaerobic conditions at a minimum frequency of 3 years out of the 5 monitoring years (50 percent or higher probability):

- a) Free water must exist within 10 inches (25 cm) of the ground surface for at least 14 consecutive days; and
- b) Anaerobic conditions must exist within 10 inches (25 cm) of the ground surface for at least 14 consecutive days. Anaerobic conditions may be determined by one of the following methods⁶, as detailed in the Hydric Soil Technical Standard:
 - (1) Positive reaction to alpha-alpha dipyridyl, determined as least weekly.
 - (2) Reduction of iron determined with IRIS devices (tubes or films) installed for 30 days.
 - (3) Measurement of redox potential (Eh) using platinum electrodes, determined at least weekly.

9. Topsoil: For areas where grading occurred or topsoil has been removed, the entire wetland restoration, creation or enhancement area must have a depth of at least 6 inches topsoil, or other depth as specified in the approved plan. Imported topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand, unless previously approved by MDE. Imported topsoil must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter. If the soil surface has a Munsell value or chroma >3, then soil organic matter (using the Walkley-Black method), must show the site has at least 2% organic matter. Alternatively, if the site was designed to have similar soils as an approved reference wetland soil, the organic matter content is within the range specified in the approved plan.

10. Bulk Density: The subsoil shall have a bulk-density of less than 85 lbs/cubic foot (1.35

⁶ In order for results to be valid, methods must follow the “Standard Methods for Monitoring Vegetation, Hydrology, and Soils in Wetland Sites Approved through the Trust and MDE Nontidal Wetland Award Program” located at the end of this document.

g/cc) for loamy and finer textured soils and less than 107 lbs/cubic foot (1.70 g/cc) in sands (prior to adding topsoil or organic matter). Sites designed to be precipitation driven may include alternate bulk density requirements specified in the approved plan.

11. Microtopography: Microtopographic variations are up to 0.5 feet from design elevation, with no more than 25 percent of each wetland cell remaining at the design elevation. Alternatively, if microtopography was designed to mimic a reference wetland, the elevation variations are within the range specified in the approved plan.

12. Woody Debris: Coarse woody debris (e.g., logs, brush piles, root wads, overturned stumps, standing snags, etc.) is present throughout the site at a density and type specified in the required Restoration Plan approved by MDE and the Trust..

13. Delineation of Aquatic Resources: At the mid-term monitoring year (year 3) and at the final year of the monitoring period (year 5), the wetland boundary area (established/ re-established/ restored/ enhanced/ preserved) as shown on the approved plan, shall be delineated using the wetland criteria outlined in the Corps of Engineers Wetlands Delineation Manual (1987) and appropriate regional supplement(s)). Delineated wetlands shall be broken into projected vegetative type (e.g., emergent, scrub-shrub, forested) based on species present and density. In addition, all special aquatic sites, other waters, such as lakes and ponds, and all streams, within the approved site shall be identified and delineated. The delineated aquatic resource areas as verified by MDE shall be consistent with the approved plan and contain at least as much wetland acreage and waterway linear feet as required in the approved plan. Deep water habitats and unvegetated areas that do not meet wetland criteria shall not be included in area measurements.

14. Wetland function assessment: The site should meet the intended goals and objectives of the project, as specified in the approved plan. An assessment of the specific wetland functions and values being provided should be conducted.

B. Buffer Area(s): The Buffer Area Performance Standards are required to be met if the buffer is getting credit. If upland or wetland areas were cleared to provide access for construction, but will not be getting credit, they will still be required to meet the following Performance Standards:

1. Aerial Cover Vegetative Standards:

- a) By the end of year one, the site shall be vegetated with a minimum of 50% native species cover.
- b) By the end of year two, the site shall be vegetated with a minimum of 60% native species cover.
- c) By the end of year three, the site shall be vegetated with a minimum of 70% native species cover.
- d) By the end of year five and each monitoring year thereafter, the site shall be vegetated with a minimum of 85% native species cover.
- e) Volunteer species should support functions consistent with the project design goals; and

2. Non-Native and Invasive Species: The goal of any site is to have no non-native or invasive species. However, if non-native or invasive species are present, no more than 10% of relative plant cover¹ over the entire site shall be made up by non-native or invasive species, with no individual colony greater than or equal to 5% of relative plant cover. No more than 5% of

relative plant cover over the entire site shall be made up of *Phragmites australis*², *Persicaria perfoliata*, or *Pueraria montana*. The presence, location, and percent cover of invasive and/or non-native species shall be noted on the approved Restoration Plan. Invasive species are identified on the 2010 National Park Service/U.S. Fish and Wildlife Service document *Plant Invaders of Mid Atlantic Natural Areas*⁷ and the Maryland Invasive Species Council Invasive Species of Concern in Maryland⁸. Native status will be based on the Natural Resources Conservation Service Plants Database⁹. Alternatively, for specific problematic species, MDE, in consultation with the Trust, may consider justification for different requirements.

3. **Vegetation Density for Forested Buffers:** For forested buffers, native plant density of at least 435 living trees/shrubs per acre with a minimum height of 10 inches shall be achieved by the end of year one and maintained each monitoring year thereafter through the end of the monitoring period; and
4. **Vegetation Cover for Forested Buffers:** For forested buffers, average tree height of tallest five native trees within each sample plot shall be at least three feet in height at year three and at least five feet in height at year five and each monitoring year thereafter.

II. Monitoring Timeframe:

- A. The Awardee will be responsible for monitoring the site annually for a period five years.
- B. The monitoring period begins the year the planting occurs, unless planting occurs after April 15, in which case the monitoring period will not begin until the following year. For each monitoring report, vegetative monitoring shall be conducted between May 1 and September 30 for forested/scrub-shrub systems and between June 15 and September 30 for emergent systems. Site visits should preferably be during a period with normal precipitation and groundwater levels.
- C. Monitoring must be conducted a minimum of once per year. For certain sites, more frequent monitoring (e.g., twice a year during spring and fall) and reporting may be beneficial during the early stages of development to quickly identify and address problems and/or concerns. MDE, in consultation with the Trust, may extend the original monitoring period upon a determination that performance standards have not been met. Remediation measures¹⁰ (e.g., invasive species management, replanting, controlling encroachment, etc.), if required, should not have occurred during the last two full growing seasons prior to monitoring termination to ensure the site is self-sustaining. If remediation occurs during years four or five, the monitoring period may be extended¹¹. If a natural disaster occurs during the monitoring period, remediation or adaptive management may be required and the monitoring period may be extended.

⁷ <https://www.invasive.org/alien/pubs/midatlantic/midatlantic.pdf>

⁸ <http://mdinvasives.org/species-of-concern/>

⁹ <https://plants.sc.egov.usda.gov/>

¹⁰ An exception may include treatment for small amounts of invasive species that are not likely to persist.

¹¹ If signification remediation is required (e.g., regrading of a significant portion of the site), year one of the monitoring period may re-start after the remediation is complete.

III. Monitoring Reports: Monitoring reports should be concise and effectively provide the information necessary to assess the status of the site. Reports should provide information necessary, including supporting data such as plans, maps, and photographs, to illustrate site conditions and whether the site is meeting its objectives and performance standards.

A. Monitoring reports, a paper copy, and an electronic version, must be submitted to MDE and the Trust by December 31 of each year. Failure to submit monitoring reports will result in the extension of the monitoring period.

B. Content: The following information must be included with the monitoring report:

- 1. Monitoring and Performance Standards Summary Report and Table** comparing the required performance standards to the conditions and status of the developing site must be completed and attached to the beginning of the Monitoring Report. The table will list the monitoring requirements and performance standards, as specified in the approved plan, and evaluate whether the overall site, including each area (plot, well or cell as appropriate), is successfully achieving the approved performance standards or trending towards success. This table should include whether each performance standard was met for the current and past monitoring report years, to allow easier review of how the site is progressing.
- 2. Project Overview / Background Data:**
 - a) Title page indicating the nontidal wetland site name, monitoring year, Awardee identification (name, address, phone number, and email address) and preparer identification (name, address, phone number, and email address).
 - b) Written description of the location, any identifiable landmarks of the site, including information to locate the site perimeter(s), and coordinates of the site (expressed as latitude and longitude).
 - c) Date(s) of site inspections.
 - d) A brief paragraph describing the goals and objectives of the site, including the proposed acreage by aquatic resource types specified as part of the approved plan. Include the dates the construction was started, and the planting was completed.
 - e) A brief narrative description of the site addressing its position in the landscape, adjacent waterbodies, and adjacent land use.
 - f) Describe methods used to evaluate performance standards. Plot locations should be clearly identified on the appropriate maps.
 - g) A short statement on whether the performance standards are being met.
 - h) A narrative description of existing site conditions and functions and how the site has or has not achieved the goals, objectives and performance standards established for the project.
 - i) Dates of any recent corrective or maintenance activities conducted since the previous report submission.
 - j) If additional monitoring or site inspections were conducted, this data should also be included.
 - k) Specific recommendations for any additional corrective or remedial actions.
 - l) Estimate the percent of the site that is establishing into wetland and the type of wetland system (e.g., forested, scrub-shrub, emergent). If this differs from what was planned, show the boundaries of the actual wetland area/types on the plans or maps.
 - m) Estimate the percent of the site buffer that is establishing into forested buffer. If this

differs from what was planned, show the boundaries of the actual forested buffer area on the plans or maps.

- n) Discussion of growing season and how it was determined for this site.
3. **Summary data:** Summary data should be provided to substantiate the success and/or potential challenges associated with the project. Refer to Section IV below for monitoring report measurements to include for the overall site.
4. **Photographs:** Take one set of photographs from established photographic points any time between May 1 and September 30 of each monitoring year (pictures should be taken at the same time of year when possible). Photo location points should be identified on the appropriate maps and labeled with the direction in which the photo was taken. Submitted photos should be formatted to print on a standard 8.5 by 11-inch piece of paper, dated, and clearly labeled with the direction from which the photo was taken. It is highly recommended that aerial photos are also provided, as these are good indicators of hydrology and vegetative cover.
5. **Maps and Plans:** Maps should be provided to show the location of the site relative to other landscape features, habitat types, locations of photographic reference points, transects, sampling data points (e.g., vegetation plots, wells, soil samples, etc.), and/or other features pertinent to the approved plan. GPS coordinates should be shown on the plans for each photographic reference point and sample plot. In addition, the submitted maps and plans should clearly delineate the site perimeter(s), which will assist the project managers in locating the area(s) during subsequent site inspections. Each map or diagram should be formatted to print on a standard 8.5 by 11-inch piece of paper and include a legend and the location of any photos submitted for review. As-built plans should be included if they were not already submitted to MDE and the Trust.
6. **Conclusions:** A general statement shall be included that describes the conditions of the site. If performance standards are not being met, a brief explanation of the difficulties and potential remedial actions proposed by the Awardee, including a timetable, must be provided. MDE, in consultation with the Trust, will ultimately determine if the site is successful for a given monitoring period.

IV. Monitoring Report Measurements. Monitoring reports should include all the following information for the overall site, and each plot, well or cell:

A. Wetland Area(s):

1. **Vegetation:**
 - a) Estimate the actual and relative percent cover by plant species, in order of dominance, across all strata for each plot. Include this information in a table. For each species listed in the table include native/non-native status and wetland indicator status. Summarize the data by plot, cell, and overall site. The presence, location, and percent cover of colonies of invasive and/or non-native species shall be mapped on the approved plan.
 - b) For scrub-shrub or forested wetlands, estimate the percent survival of planted trees and number of native wetland (FAC or wetter) trees/shrubs per acre (including volunteer woody species at least ten inches). Data should be summarized for each plot and by cell

and overall site. Please note that projects where the vegetation is inconsistent throughout the site may not meet the performance standards (e.g., a site where some portions have high densities of woody species, but other portions have low densities).

- c) For scrub-shrub or forested wetlands, measure the height of the tallest five trees within each sample plot in each monitoring year. In the final year of monitoring, measure canopy cover of native wetland (FAC or wetter) trees and shrubs.
- d) Summarize the results from the vegetation plot study, including how the vegetation meets/does not meet performance standards. Data should be summarized for each plot, by cell, and for the entire site. Include a discussion of water movement into and through the site. Do not include the raw plot data in your monitoring report.

2. Hydrology:

- a) Estimate percent of site that is inundated or saturated to the surface on the dates of the site visits.
- b) Monitoring data for surface water and groundwater, including hydrograph of measured depth to water table, after calibrating for above-ground height of well. Data should be included for each well separately.
- c) Discuss analyses of how precipitation, drought, and other climatic factors during this monitoring year compared with the normal range of those factors that would be expected, based on data collected at or near the project location over a rolling 30-year period. Climatic and precipitation normal ranges are informed through the use of multiple tools and site-specific data such as, but not limited to, the antecedent precipitation tool (APT¹²), WETS tables¹³, Standard Precipitation Index¹⁴, NOAA/National Weather Service Meteorological Stations, National Weather Service – MidAtlantic River Forecast Center – Precipitation Departures¹⁵, USDA National Water and Climate Center¹⁶, aerial photography, soil mapping, LIDAR, topographic mapping, NWI maps, site-specific physical and biological field indicators, etc. It is important to recognize that APT and other tools inform normal conditions at the surface, and groundwater levels are not necessarily reflected. Precipitation data taken ≥ 3 months before the observation should be evaluated to determine if preceding dry conditions have potentially impacted current groundwater tables (e.g., lag times in the recovery of groundwater tables and discharge)
- d) Provide hydrograph showing well data (see example at end of document). *This should include ground elevation on the Y axis, with the ground surface and 12 inches below ground surface clearly marked. The X axis should be time.* The data should include well water levels and precipitation over that period. The hydrograph should also clearly mark the beginning and end of the growing season and should highlight the periods of time where the hydrology criteria was met.
- e) Summarize results of the hydrology monitoring for each well, by cell, and for the entire site, including if each meets/does not meet the performance standards. Estimate percent of site that has wetland hydrology.

¹² <https://github.com/jDetters-USACE/Antecedent-Precipitation-Tool/releases/latest>

¹³ https://www.wcc.nrcs.usda.gov/climate/wets_doc.html

¹⁴ <https://www.ncdc.noaa.gov/temp-and-precip/drought/nadm/indices>

¹⁵ https://www.weather.gov/marfc/Precipitation_Departures#

¹⁶ <https://www.wcc.nrcs.usda.gov/>

3. Soils:

- a) Monitoring data to determine if hydric soils are actively developing. Data should be included for each sample location. This must include evidence that saturated and anaerobic soil conditions are being met, as measured by alpha-alpha dipyrityl, IRIS devices (tubes or films), or platinum electrodes.
- b) For the first monitoring report, include monitoring data to determine if at least 2% organic matter is present in the entire depth of topsoil. Data should be included for each sample location.
- c) For the first monitoring report, include monitoring data to determine the bulk density of the subsoil. Data should be included for each sample location.
- d) Provide a soil profile description with accompanying soil photos for each soil location tested above.
- e) Summarize results of the soil monitoring for each sample location, by cell, and for the entire site, including if each meets/does not meet the performance standards.

4. Physical Structure:

- a) Estimate percentage of site with microtopography and compare with approved plan.
- b) Estimate density and type of coarse woody debris (e.g., logs, brush piles, root wads, overturned stumps, standing snags, etc.) and compare with approved plan.

5. Wetland function assessment: Provide an assessment of the specific wetland functions and values being provided at the site.

B. Buffer Area(s):

1. Vegetation:

- a) Estimate the actual and relative percent cover by plant species across all strata for each plot. Include this information in a table. For each species listed in the table, include native/non-native status. Summarize the data by plot, cell, and overall site. The presence, location, and percent cover of colonies of invasive and/or non-native species shall be mapped on the approved plan.
- b) For scrub-shrub or forested buffers, estimate the percent survival of trees and the number of native trees/shrubs per acre (including planted or volunteer woody species at least ten inches). Data should be summarized for each plot and by cell and overall site. Please note that projects where the vegetation is inconsistent throughout the site may not meet the performance standards (e.g., a site where some portions have high densities of woody species, but other portions have low densities).
- c) For scrub-shrub or forested buffers, measure the height of the tallest five trees within each sample plot in each monitoring year. In the final year of monitoring, measure canopy cover of native trees and shrubs.
- d) Measurements of vegetation based upon performance standard and methods used to evaluate the vegetative success of the site. **Do not include the raw plot data in your monitoring report.**

C. Remediation:

1. Describe any problems observed within the wetland or buffer, such as: excessive inundation, insufficient hydrology, seasonal drought conditions, invasion by undesirable species of plants or wildlife, disease condition for plants, poor plant establishment, human encroachment, adverse water quality impacts (e.g., excessive sediment loading, water pollution, etc.) and slope failures or erosion problems.
2. Describe the proposed remedial measures to address the problems noted above. Note: even if some performance standards are met when summarizing across a cell (e.g., tree density), if some plots are not meeting the performance standards, remediation should be proposed for the area represented by the failing plot. Additionally, a site walk may help to identify other issues not captured in the plot data, which should still be remediated.
3. Remedial measures proposed by the Awardee are subject to review and approval by MDE, in consultation with the Trust, prior to implementation. Remediation should be completed within a year of identifying the deficiency. If remedial measures are implemented, the monitoring period may be extended on a case-by-case basis. The treatment of non-native invasive plant species does not need the approval of MDE but should be completed at the correct time of year by someone with a current pesticide applicator certification and the required MDE toxic materials permit.

V. Adaptive Management Review

- A. The Awardee assumes all liability for performing approved measures through adaptive management strategies or alternative wetland restoration, creation, or enhancement should MDE or the Awardee determine the site is not meeting performance standards or satisfying the objectives of the approved plan. The approved adaptive management plan will guide decisions for revising approved plans and implementing measures to address circumstances (foreseeable and unforeseen) that adversely affect site success. Any deviations from the approved plan requires approval from MDE, in consultation with the Trust.
- B. The Awardee must include appropriate information in the monitoring reports about performance issues and implementation of approved adaptive management measures to allow the MDE and the Trust to assess how the project is progressing. The Awardee must notify MDE and the Trust as soon as possible if the site is not achieving its performance standards as anticipated. MDE, in coordination with the Trust and Awardee, will evaluate any deficiencies and determine if proposed measures will address those deficiencies and/or require modification of the approved plan(s). The proposed measures must be designed to ensure that the modified project provides aquatic resource functions comparable to those described in the approved plan objectives. The Awardee shall implement the strategies in the adaptive management plan until the site has been determined by MDE and the Trust to have met its goals, objectives, and performance standards.

STANDARD METHODS FOR MONITORING VEGETATION, HYDROLOGY, AND SOILS IN WETLAND SITES APPROVED THROUGH THE TRUST AND MDE NONTIDAL WETLAND AWARD PROGRAM

Below are the recommended techniques for monitoring nontidal wetland restoration, creation, and enhancement sites. Alternate techniques may be considered but must be approved in writing by MDE, in consultation with the Trust, prior to the commencement of the monitoring period.

Recommended Wetland Vegetation Density Measurement Technique

- a. The following method for measuring the success of the vegetative colonization should be conducted once between May 1 and September 30 for forested/shrub-shrub systems and between June 15 and September 30 for emergent systems during each year requiring submittal of a monitoring report, unless an alternate schedule is agreed upon by MDE, in consultation with the Trust.
- b. Vegetation sample plots shall be located on a stratified random basis over the site to sample all areas of wetlands at locations adjacent to each photo location marker. Plots should be located within each planned and actual vegetative type and hydrologic regime. Plot locations should be determined prior to construction and shown on the approved plan. Once the sample plots are specified as part of the approved plan, they should be stationary, unless the Awardee recommends, and MDE, in consultation with the Trust, agree to moving the permanent plot location. In conjunction with the permanent plots established within the rehabilitated, enhanced, reestablished, and/or established wetlands, additional wetland vegetative monitoring plots will be randomly selected every monitoring year during the maintenance and monitoring phase of the site. A minimum of half the plot locations will be permanent and the remaining half will be randomly selected every monitoring year. Alternatively, MDE or the Trust may also recommend the relocation of some or all the sample plots to better reflect the plant communities. Potential justification for moving sample plots may include that the plot location is an outlier, or the actual vegetative type/hydrologic regime differs from what was planned, resulting in some representative areas not being monitored. The following minimum numbers of samples will be required:
 - i. If the site is < 5 acres, then a minimum of 3 plots/acre is necessary.
 - ii. If the site is > 5 acres but less than 20 acres, then a minimum of 3 plots/acre is required for the first 5 acres, then 2 plots/acre is required for the remaining acreage.
 - iii. If the site is > 20 acres, then a minimum of 2 plots/acre is required for the first 20 acres, then 1 plot/acre is required for the remaining acreage.
 - iv. All cells shall be sampled. A targeted vegetation monitoring approach that correlates monitoring stations with vegetative signatures on aerial photography may be useful for larger sites.
- c. Each plot shall be of a size no less than 400 square feet for woody plants and 3'x3' for herbaceous plants (or circular with approximately the same surface area). The vegetation data shall be collected during the growing season and shall include:
 - i. Dominant vegetative species identification
 - ii. Percent ground cover assessment
 - iii. Number of woody plant stems greater than 10 inches in height (total and #/acre)
 - iv. The percentage of dominant species FAC or wetter
 - v. Percent survival by planted species
 - vi. A non-native/invasive species assessment including percent cover

Recommended Buffer Vegetation Density Measurement Technique

- a. The following method for measuring the success of the vegetative colonization should be conducted once between May 1 and September 30 of each monitoring year, unless an alternate schedule is agreed upon by MDE, in consultation with the Trust.
- b. Vegetation sample plots shall be located on a stratified random basis over the site to sample all areas of wetland buffer at locations adjacent to each photo location marker. Plots should be located within each planned and actual vegetative type and hydrologic regime. Plot locations should be determined prior to construction and shown on the approved plan. Once the sample plots are specified as part of the approved plan, they should be stationary, unless the Awardee recommends, and MDE, in consultation with the Trust, agree to moving the permanent sample plots. In conjunction with the permanent plots established within the rehabilitated, reestablished, and/or established wetlands, additional wetland vegetative monitoring plots will be randomly selected every monitoring year during the maintenance and monitoring phase of the site. A minimum of half the plot locations will be permanent and the remaining half will be randomly selected every monitoring year. Alternatively, MDE or the Trust may also recommend the relocation of some or all the sample plots to better reflect the plant communities. Potential justification for moving sample plots may include that the plot location is an outlier, or the actual vegetative type differs from what was planned, resulting in some representative areas not being monitored. The following minimum numbers of samples will be required:
 - i. If the site is < 5 acres, then a minimum of 3 plots/acre is necessary.
 - ii. If the site is > 5 acres but less than 20 acres, then a minimum of 3 plots/acre is required for the first 5 acres, then 2 plots/acre is required for the remaining acreage.
 - iii. If the site is > 20 acres, then a minimum of 2 plots/acre is required for the first 20 acres, then 1 plot/acre is required for the remaining acreage.
 - iv. All cells shall be sampled. A targeted vegetation monitoring approach that correlates monitoring stations with vegetative signatures on aerial photography may be useful for larger sites.
- c. Each plot shall be of a size no less than 400 square feet for woody plants (or circular with approximately the same surface area). The vegetation data shall be collected during the growing season and shall include:
 - i. Total actual and relative percent cover of native plant species.
 - ii. Number of native woody plant stems greater than 10 inches in height (total and #/acre).
 - iii. A non-native/invasive species assessment including relative percent cover.

Recommended Groundwater Well Placement and Data Collection

- a. Determine if this wetland is groundwater fed or has a perched water table. Soil profile descriptions must be assessed prior to well installation to identify any restrictive layers to downward water movement. Wells should be installed following the techniques described in the 2005 Corps document entitled *Technical Standard for Water-Table Monitoring of Potential Wetland Sites ERDC TN-WRAP-05-02*. They should not penetrate the restrictive layer but should instead be no deeper than the top of the restrictive layer. In most cases, a standard monitoring well installed to 15 inches below the soil surface should be used. Shallower installation depths should be utilized if restrictive soil depths are located within 15 inches of the soil surface. Well design and installation shall be consistent with current Corps' guidance.
- b. Specific details on the groundwater monitoring wells and locations shall be specified in the approved plan and must be approved by MDE, in consultation with the Trust.
- c. The following minimum numbers of groundwater wells will generally be required. The Awardee may propose alternate well requirements as part of the approved plan, based on justification from the proposed design:

- i. If the site is < 10 acres, then a minimum of 1 well/acre is necessary.
 - ii. If the site is 10 to 20 acres, then a minimum of 1 well/acre is necessary for the first 10 acres, then 1 well/2 acres is necessary for the remaining acreage.
 - iii. If the site is > 20 acres, then a minimum of 1 well/acre is necessary for the first 10 acres, 1 well/2 acres is necessary for the next 10 acres, and 1 well/5 acres is necessary for the remaining acreage.
 - iv. Hydrologic zones differentiated by a 1-foot change in elevation should have a minimum of one groundwater monitoring well installed.
 - v. For sites with multiple cells, each cell should have at least one well.
- d. Begin the collection of groundwater well data within fourteen days of the start of the growing season. Take groundwater well readings once every 7 days for the first two months of the growing season and every 30 days for the remainder of the growing season. Data loggers are highly recommended, as they provide a continuous recording of water levels. Record to the nearest inch. Well data should be collected every year during the monitoring period and included in the monitoring report. If well data confirms the presence of wetland hydrology during multiple years of monitoring, the Awardee may request that well data not be required every year. MDE, in consultation with the Trust, will consider the evidence of hydrology, based on the monitoring reports, site visits, and local precipitation, to approve or deny this request.
- e. The growing season should be based on median dates (i.e., 50 percent probability) of 28°F air temperatures in spring and fall, based on the long-term data for the nearest appropriate weather station, as recorded in the WETS tables available from the NRCS National Water and Climate Center (https://www.wcc.nrcs.usda.gov/climate/navigate_wets.html), or as specified in the appropriate regional supplement to the Corps of Engineers Wetland Delineation Manual.
- f. Measure and record any surface water present at the monitoring wells.
- g. Include a copy of the plan showing the location of the wells and surface elevation beside each well. Summarize the information regarding groundwater and surface water elevations and provide monthly rainfall data for the areas.

Indicator of Saturated and Anaerobic Conditions to Demonstrate the Presence of Active Hydric Soil Conditions

- a. The Hydric Soil Technical Standard (HSTS) developed by the National Technical Committee for Hydric Soils (Technical Note 11) requires documentation of anaerobic conditions and saturated conditions for a soil to be considered hydric:
- i. For a soil to meet the Saturated Conditions part of the HSTS, free water must exist within 10 inches (25 cm) of the ground surface for at least 14 consecutive days; and
 - ii. Anaerobic conditions must exist within 10 inches (25 cm) of the ground surface for at least 14 consecutive days. Anaerobic conditions may be determined by one of the following methods, as detailed in the HSTS:
 - (1) Positive reaction to alpha-alpha-dipyridyl, determined at least weekly.
 - (2) Reduction of iron determined with IRIS devices (tubes or films) installed for 30 days.
 - (3) Measurement of redox potential (Eh) using platinum electrodes, determined at least weekly.
- Methods to demonstrate the presence of anaerobic conditions are outlined at (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051608.pdf).
- b. If using alpha-alpha dipyridyl to show soil reduction, soils should be measured at least weekly during the growing season, at a depth of six inches. Note that alpha-alpha dipyridyl is also available as paper strips for easier measurement.
- b. Soil testing should be conducted during the time of the growing season anticipated to have the highest amount of soil reduction (often in the early growing season).

- c. Samples should be taken in a representative portion of the site with similar micro topography, vegetative community, etc., rather than in the lowest/wettest areas. Some samples should also include the areas with higher elevations. Additional tests should be taken for larger sites and sites with higher changes in elevation.
- d. At least one soil sample plot location should be established for each hydroperiod present at the site. Soil sample plots shall be located within five feet of the monitoring well and shall be performed during each monitoring year. Additional soil monitoring plots may need to be established to ensure saturation occurs (12.5% or more consecutive days of the growing season) to provide corroborative evidence that wetland hydrology is present. Additional soil monitoring may also be required if soil monitoring occurs during extremely wet or dry years.
- d. Include a copy of the plan showing the location of the soil data collection, summarize the information, and provide monthly rainfall data for the area.
- e. If soil testing confirms the presence of actively reducing soil conditions during at least three years, the Awardee may request that soil testing not be required every year. MDE, in consultation with the Trust, will consider the evidence of anaerobic soil conditions, based on the monitoring reports, site visits, and local precipitation, to approve or deny this request.

Recommended Method of Indicator of Reduction in Soils (IRIS) Film Placement and Data Collection.

- a. Label Fe-coated films.
- b. Roll one Fe-coated film into 1” clear polycarbonate delivery tube, with Fe-coating facing out.
- c. Create a pilot hole in the soil using a 1” push probe. The hole should be slightly deeper (1-2”) than final depth of film.
- d. Insert rod into the delivery tube, being sure to hook the rod into the hole at the bottom of the film.
- e. Insert the “loaded” delivery tube into the hole until the mark on the tube is at the soil surface (50 cm).
- f. Holding the rod to ensure the film stays in the soil, pull out the delivery tube.
- g. Pull out the rod, being careful not to pull out the film.
- h. Insert foam plug into the top of the film, using two O-rings to secure the film around the plug.
- i. If the films are installed to shallower depths (e.g., gravel layer inhibits full depth for pilot hole), mark the depth of the soil surface on the films with a permanent marker.
- j. Install five replicates, up to a meter apart, within the study area.
- k. Films should be left in place for two to four weeks and then should be removed and replacement films can be installed in the same holes for an additional two to four weeks. **Films left in for longer than four weeks cannot be used to meet required performance standards.**
- l. Gently wash off any adhering soil from the films.
- m. Estimate the amount of paint removed from each film by overlaying with a mylar grid and marking and counting the grid¹⁷, or by using some other IRT-approved procedure.
- n. Find a six-inch area on the film, entirely within the upper 12 inches, with the most paint removed. Estimate the percentage of paint removed from this six-inch area and document the depth of this six-inch area.
- o. To meet the Technical Standard for reducing soil conditions as currently specified in the National Technical Committee on Hydric Soils, 30% or more of paint within this six-inch section must be removed.
- p. At least three of the five replicates must show this paint removal for the soil to demonstrate that it is reducing.

¹⁷ Rabenhorst, M.C. 2012. Simple and Reliable Approach for Quantifying IRIS Tube Data. Soil Sci. Soc. Am. J. 76: 307-308.

Recommended Method of Indicator of Reduction in Soils (IRIS) Tube Placement and Data Collection
(summarized from the 2008 document entitled *Protocol for Using and Interpreting IRIS Tubes*).

- a. Create a pilot hole in the soil using a 7/8” push probe. The hole should be slightly deeper (1-2”) than final depth of tube.
- b. Be sure tubes are labeled.
- c. Insert the IRIS tube into the hole until the mark on the tube is at the soil surface (50 cm). If they are installed to shallower depths, mark the depth of the soil surface with a permanent marker.
- d. Install five replicates, up to a meter apart, within the study area.
- e. Tubes should be left in place for two to four weeks and then should be removed and replacement tubes can be installed in the same holes for an additional two to four weeks. **Tubes left in for longer than four weeks cannot be used to meet required performance standards.**
- f. Gently wash off any adhering soil from the tubes.
- g. Estimate the amount of paint removed from each tube by wrapping a mylar grid around tube and by marking and counting the grid, or by using some other IRT-accepted procedure.
- h. If visual estimations are used, to improve accuracy, have two (or more) people estimate the amount of paint removed, then average the two sets of data.
- i. Find a six-inch area on the tube, entirely within the upper 12 inches, with the most paint removed. Estimate the percentage of paint removed from this six-inch area and document the depth of this six-inch area.
- j. To meet the Technical Standard for reducing soil conditions as currently specified in the National Technical Committee on Hydric Soils, 30% or more of paint within this six-inch section must be removed.
- k. At least three of the five replicates must show this paint removal for the soil to demonstrate that it is reducing.

Recommended Method of Application of the Alpha-Alpha Dipyrindyl Paper Test Strips

- a. To meet the anaerobic condition requirement using alpha-alpha dipyrindyl test strips, tests should show positive reaction to alpha-alpha dipyrindyl at least three times in a row (e.g., sample on Day 1, sample a week later, sample another week later).
- b. Excavate a soil pit to a depth of at least 14-16 inches*. A fresh slice of the profile should be cut from the side of the pit and laid out for observation and characterization. Apply the test strips to the targeted layer(s) at several locations within the representative area to ensure that the majority of the layer is reduced. Document at what depth the positive reaction(s) to the test occurred. The procedure for problematic soils (Step 4d) discussed in Chapter 5 of the Regional Supplements requires that **at least 60% of a layer 4 inches or more thick and located within 12 inches of the surface**, react positively from liquid alpha-alpha dipyrindyl solution. **Note: The depth of soil excavations for profile characterization can be much deeper depending upon the required depth and thickness requirements of some hydric soil indicators.*
- c. It is important that the test strips are applied only to a fresh, broken face of the desired layer(s). Do not add moisture to soil samples or rub soil against or on to the paper, simply press the paper against a fresh, broken ped face on the soil sample(s). Be sure not to test soil samples that have been exposed to digging equipment to prevent false positive reactions. Record all observations of soil moisture, limit of saturation and the depth to water table on a data form and or in your notes.
- d. A positive reaction on the paper (turning pink or red) should occur in a few moments but can take longer especially during colder periods. The manufacturer indicates that the reaction normally takes place within about 30 seconds.

- e. To increase the validity of your findings, test the targeted layers at several different locations within the same representative area and any other layers which meet an indicator.
- f. Testing multiple samples can exhaust your supply quickly but you can double your reserves by cutting the strips in half. Be careful not to use cutting instruments that could contaminate a sample.
- g. The test should be performed as soon as you remove the sample and all information (depths, layers, etc.) recorded in the appropriate fields of the data form (i.e., hydrology remarks, soil layer comments, soil remarks, etc.). Your soil profile description should also be performed as soon as possible using one of the representative pits. In addition to photo documenting your soil profile, document the application of the strips before and after any potential reaction.
- h. If the soil is allowed to dry before implementing the test strips or characterization of the profile, dig another representative pit and start over.

Recommended Method for Evaluating Organic Matter in the Topsoil

- a. Topsoil organic matter should be evaluated at multiple representative locations through the site after construction is complete or during the first monitoring year. A sample should be taken near each monitoring well. Locations of topsoil organic matter samples should be shown on the monitoring plans.
- b. Data should be included for each sample location. Data should include a soil profile description to a depth of at least 12 inches for each sample location with all information in the Soil Profile Description table of the Wetland Determination Data Form.
- c. If the entire top 6 inches (or depth of topsoil required in the approved plans if different than 6 inches) has a Munsell value and chroma ≤ 3 , then soil organic matter does not need to be tested in the laboratory. If it has a Munsell value or chroma > 3 , then the soil organic matter must be tested using the Walkley-Black or Loss on Ignition method.
- d. Soil tests must be completed at a soil testing laboratory listed on the University of Maryland Extension website. Soil samples must follow instructions from the soil testing lab.
- e. Remove leaves or debris from the top of the soil. Collect a core soil sample that is a depth of 6 inches (sampling the top 0-6 inches). Put this sample in a clean bucket and mix well. Fill the soil sample bag with the amount specified by the soil testing lab. Soil samples from different locations on the site should not be mixed together but should be clearly labeled.
- f. To convert total organic carbon to organic matter, use this formula: total organic C (%) * 1.72 = OM (%).

Recommended Method for Testing Subsoil Bulk Density

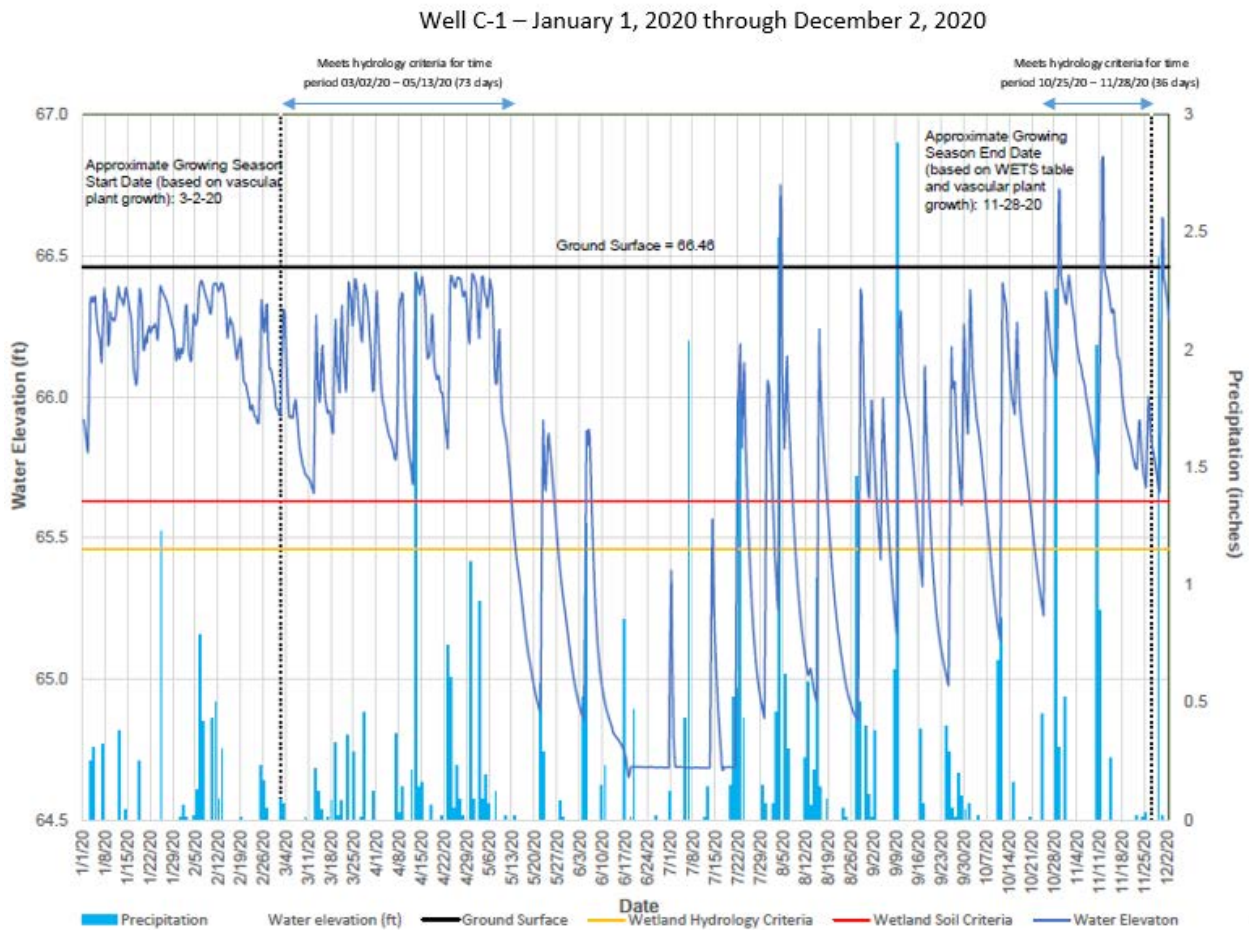
- g. Bulk density should be tested at multiple representative locations through the site after construction is complete or during the first monitoring year. A sample should be taken near each monitoring well. Locations of bulk density samples should be shown on the monitoring plans.
- h. The bulk density sample should be extracted soon after the topsoil has been replaced.
- i. Topsoil should be carefully removed. Samples should be taken immediately below the topsoil. The sample should represent only one soil horizon and be a minimum thickness of four inches.
- j. Extract a known volume of soil. This can be done by driving in an open-ended can or ring (e.g., 3-inch diameter) into the soil to extract a set volume. The thickness should be a minimum of 4 inches. The volume of the ring must be calculated. Using a mallet or similar tool, drive the ring into the subsoil to the depth of the ring. Make sure the top surface of the ring is level with the subsoil surface. Dig around the ring. With a trowel underneath, carefully extract the ring to prevent soil loss. Remove any excess soil from the sides, top, and bottom of the sample with a flat-bladed knife. The bottom and top of the sample should be flat with the edges of the ring.

- k. Using a flat-bladed knife, push out the soil sample into a plastic sealable bag. Place the entire soil sample into the sealed bag. Soil samples from different location on the site should not be mixed together but should be clearly labeled.
- l. Dry the sample in a microwave at full power for two or more four-minute periods, allowing venting between cycles.
- m. Weigh the sample. To verify that the soil is totally dry, heat the sample in the microwave again and reweigh. Continue until the sample weight does not change.
- n. Weigh an empty plastic bag and remove this weight from the sample weight.
- o. Calculate the bulk density as follows:

$$\text{Soil bulk density (g/cc)} = \frac{\text{oven dry weight of soil}}{\text{volume of soil}}$$

Note: for more details on this method or if the soil is gravelly or rocky, please follow the Cylindrical Core Method described in the July 2001 U.S. Department of Agriculture Service’s document Soil Quality Test Kit Guide, Section I, Chapter 4, pp. 9-13.

Example Hydrograph



Appendix B: Standards for Conservation Easement Holders

APPENDIX B –
STANDARDS FOR CONSERVATION EASEMENT HOLDERS FOR THE TRUST AND
MDE NONTIDAL WETLAND AWARD PROGRAM

Updated: May 23, 2022

A conservation easement is a binding agreement between the landowner (Grantor) and another party called an easement holder (or Grantee) that permanently limits uses of the land to protect natural resources. The easement holder agrees to monitor the land and take action to prevent or halt activities on the property that are incompatible with the conservation goals for the project.

Conservation easements held by state or local governments, other federal or state agencies, or non-profit groups such as land trusts are preferable. However, other parties may be legally acceptable as the Grantee in Maryland. If it is not practicable to establish a conservation easement for the mitigation site, documentation of these efforts should be provided.

The following criteria will be used to determine whether the proposed conservation easement holder is acceptable.

1. Grantee should be empowered to hold an interest in real property under the laws of the State of Maryland or the United States.
2. Grantee should have a stated conservation mission.
3. Grantee should be a qualified “land trust” in accordance with the Md. NATURAL RESOURCES Code Ann. § 3-2A-01. "Land trust" means a qualified conservation organization that:
 - a. Is a qualified organization under § 170(h)(3) of the Internal Revenue Code and regulations adopted under § 170(h)(3); and
 - b. Has executed a cooperative agreement with the Maryland Environmental Trust.
4. Grantee should be a nonprofit tax-exempt organization pursuant to 26USCA 501(c)(3)) of the Internal Revenue Code with a stated conservation mission. IRS evidence of non-profit status is required.
5. Grantee organization’s Board of Directors should have adopted the current Land Trust Alliance’s Standards and Practices as guiding practices of the organization. The Land Trust Standards and Practices is available from the Land Trust Alliance (LTA), 1250 H Street NW, Suite 600, Washington, DC 20005, telephone: 202-638-4725, website is www.lta.org.
6. The Grantee should be accredited by the Land Trust Alliance. *This is preferred, but not required.*
7. Grantee has successfully managed at least 2 other conservation easements. Summarize the qualifications of the Grantee to successfully execute and manage conservation easements. Include information describing the number and type of other easements that the organization holds, monitoring schedules, any experience with non-compliance, encroachment, or litigation and the outcomes, and available funding obligations to provide long-term management, monitoring, and/or stewardship of the real property.
8. Grantee should receive from the Awardee, or allocate, funds sufficient for the purpose of stewardship, monitoring, management, and legal defense. The use of these funds is restricted to these purposes and shall be deposited in a fund separate from the Grantee’s operational funds or as a line item separate from other budgetary categories.

Appendix C: Pre-Application Worksheet

APPENDIX C - PRE-APPLICATION WORKSHEET

Project location (address)	
Project location (lat/long)	
Project location (watershed)	
Briefly describe current project site conditions (existing land use(s), presence of utilities (water/sewer/electric/gas), existing infrastructure, and existing stream or wetlands present)	
Describe if the site is already protected (temporary or permanent easement) and how the site is protected (CREP, etc.)	
Has a wetland delineation been conducted at the site? <i>NOTE: an informal wetland delineation is required with your application; a formal wetland delineation or jurisdictional determination (JD) is not required unless your project is awarded.</i>	
Describe the proposed size and the acreage of the project (e.g., nontidal wetland restoration, nontidal wetland creation, nontidal wetland enhancement, nontidal wetland preservation, etc.)	
Describe the proposed vegetative type (forested, scrub-shrub, emergent, open water)	
Describe the current (and proposed) property ownership	
Describe whether the site is under a current long-term land protection mechanism and what type of long-term protection mechanism is in place. If land is not already protected, what is the proposed process to protect the land?	
Has a Conservation Easement Holder been identified? If so, please describe. <i>A Letter of Interest is required in your application from the Conservation Easement Holder; a Letter of Commitment is required if the project is awarded.</i>	
What is the project status (e.g., how far along is the project)?	
Has a contractor for project design been identified? If yes, please name.	
Has a contractor for project construction been identified? If yes, please name.	
Have permits been submitted or obtained?	
Has any outreach been completed in the adjacent community?	