# 2018 Chesapeake Bay Trust- Anne Arundel County
# Watershed Restoration Grant Program Application Package

**www.chesapeakebaytrust.org / 410-974-2941**

## AT A GLANCE

The Watershed Restoration Grant Program encourages on-the-ground restoration activities that reduce storm flow and pollutants and engage Anne Arundel County residents in the restoration and protection of the local rivers and streams of Anne Arundel County.

*In this Application Package:*

Program Overview and Application Instructions

**Appendix A**: Watershed Restoration Project Guidelines by Category

*Deadline:*
Thursday, December 7, 2017 at 5pm

*Grant Requests of:*
$20,000 to $300,000

*Submit Your Application by following instructions at:*
https://cbtrust.org/anne-arundel-county-watershed-restoration/

## I. Introduction

The Anne Arundel County Government and the Chesapeake Bay Trust announce a grant program to support watershed restoration projects and programs throughout Anne Arundel County. This program aims to improve water quality in the County's local streams and waterways, as called for in the County's Municipal Separate Storm Sewer System (MS4) Permit and Watershed Implementation Plan (WIP), which require reductions in storm flow volume and pollutants entering the County's waterways. Projects must be implemented in Anne Arundel County, Maryland, and applications must include at least one partner that represents a stakeholder group based in the County.

The Chesapeake Bay Trust (the Trust), supported in large part by the *Treasure the Chesapeake* license plate program, promotes public awareness and participation in the restoration and protection of the Chesapeake Bay and its rivers. Since 1985, the Trust has awarded over $90 million in grants to municipalities, nonprofit organizations, schools, and public agencies throughout Maryland. The Trust is acting as the administrator for this grant program which is funded entirely through the Anne Arundel County Watershed Protection and Restoration Fund (www.aarivers.org).

## II. Goals of the Program

The Anne Arundel County Watershed Restoration Grant Program will fund projects to reduce pollutants through the implementation of watershed restoration practices. All projects will be evaluated by a Technical Review Committee. Projects must accomplish on-the-ground restoration at a competitive cost per impervious acre treated or other metric that will help the County meet local water quality and runoff reduction improvement goals. See section IV for specific criteria and guidelines.

## III. Eligible Project Types

Funding partners will support the construction of the following types of watershed restoration implementation projects to achieve reductions of storm flow and pollutants to County waterways:
- Bioretention cells, bioswales, rain gardens, and other low impact development stormwater practices;
- Stormwater wetland and marsh creation and enhancement;
- Stream and wetland restoration;
- Regenerative conveyance systems (coastal plain outfalls, step pool storm conveyance, etc.);
- Living shorelines (on community or public property); and
- Green roofs.

If you have a project idea that is not listed, but that you believe meets the goals of the Grant Program, please contact Trust staff to discuss your idea before applying.

*Funding partners are not able to support 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. It is the sole responsibility of the applicant to determine if any regulatory requirements or conditions exist prior to applying for the grant.*

*Projects will not be permitted in road or utility right-of-way areas; inlets and outfalls that cross these right-of-ways are subject to County approval.*

*Projects shall be separated into two (2) categories, described in detail in Appendix A. In general, Category 1 projects are small-scale restoration projects that have a disturbance footprint less than 5,000 square feet or disturb less than 100 cubic yards of earth; Category 2 projects are large-scale restoration projects with greater that have a disturbance footprint greater than 5,000 square feet or disturb more than 100 cubic yards of earth . See Appendix A of this application for guidance specific to each project category.*

## IV. Criteria and Guidelines

- Applicants are encouraged to rely on widely-accepted watershed restoration best management practices. For practices that are not included on the Chesapeake Bay Program (CBP) list of approved practices (A full list is included in Maryland Department of the Environment Guidance document, page 36, included below), background information on the practice, relationship to those approved by the CBP, and a justification of its use must be provided.

- Outcomes: Proposals must include an estimate of the total drainage area and total area of impervious surface treated by the project. Proposals must provide calculations of nutrient and sediment loads reduced by the project using a nutrient calculator compatible with Maryland Department of the Environment MS4 Permit reporting requirements. In addition, other quantifiable outcomes, such as square feet of bioretention created, number of trees planted, and square feet of buffer planted must be provided. Guidance for providing information on these outcomes can be found on the Maryland Department of the Environment's website:

  http://www.mde.state.md.us/programs/Water/StormwaterManagementProgram/Documents/NPDES%20MS4%20Guidance%20August%2018%202014.pdf

  Cost effectiveness, measured in cost ($) per impervious acre treated and cost ($) per lb. of nitrogen, lb. of phosphorus, and ton of total suspended solids removed per year will be a key component in project evaluation. In general, the most competitive projects will cost less than $70,000 per impervious acre treated.

- Proposals must include site photos, a site/concept plan and project design. For requirements by project type, please see **Appendix A**. The Trust is available to provide assistance on elements of design, including drainage area, nutrient reduction, and sediment reduction calculations.

- Proposals must include costs for as-built drawings to be completed by the project consultant that accurately reflect the construction methods of the project.

- Applicants are encouraged to seek projects in watersheds that are high priorities for restoration. For detailed watershed assessments of Anne Arundel County waterways, please click the following link:
  - http://www.aacounty.org/departments/public-works/wprp/watershed-assessment-and-planning/watershed-studies/

- Applicants are encouraged to explain their project in context of the County's local Watershed Implementation Plan (WIP):
  - A copy of the WIP can be found at the following link:
    - http://www.mde.state.md.us/programs/Water/TMDL/TMDLImplementation/Documents/FINAL_PhaseII_Report_Docs/Final_County_WIP_Narratives/Anne_Arundel_WIPII_2012.pdf
  - Alternatively, applicants can explain their project in the context of a subwatershed approach following a local or community-based watershed action plan. A copy of this plan should be included in the application.
  - Such context will allow project ideas to be compared based on local watershed and countywide restoration priorities and ensures that the most cost-effective, community-relevant projects are given priority. For information most relevant to Urban Stormwater please see Section 4.4 of County's Local Watershed Implementation Plan – linked above.

- Projects must be carefully planned and technically sound. Projects should ensure they do not adversely affect public safety, any infrastructure, and/or existing properties.

- If the applicant organization does not possess the technical expertise to lead a project on staff, qualified technical experts, agencies, or organizations must be identified as partners or contractors. Applicants lacking technical expertise are encouraged to bring on an organization or individual to serve as project manager and may use grant funds or matching funds to cover those costs. Please note: the Project Officer in your grant application will be the individual responsible for corresponding with the Trust and providing project updates and must be a part of the grantee's organization in some capacity (for example: an employee, a board/committee member, etc.).

- Applicants are highly encouraged to solicit estimates or bids from more than one consultant or contractor that can be utilized to prepare the budget for this application.

- Projects will be evaluated on the likelihood of success in implementation and long-term maintenance of the project as designed.

- Anne Arundel County Department of Public Works (DPW) will provide long-term structural maintenance for the project upon completion, excluding living shorelines (see third bullet below), and thus the landowner must agree to allow DPW to maintain the structural integrity of the project through a permanent Memorandum of Understanding (MOU).
  - Assurance of long-term protection of the project must be provided. Anne Arundel County staff will assist with the creation of a document that will allow long-term access to the site for maintenance and to ensure project sustainability. Anne Arundel County will lay claim to any water quality, resource improvements, and/or credits that result from the project.
  - If the applicant is awarded funding from this grant program, a MOU between the property owner and County will be required. These documents are not required to be executed before submitting a grant application. However, a letter from the landowner documenting support for the project is required and the letter must also express a willingness to execute the MOU as part of the application package. Please contact the Trust for samples of the MOU.
  - Living shoreline project landowners must execute a MOU that includes a private maintenance agreement between the landowners and the County. Such an agreement provides the County assurances of long-term protection and that the project will be maintained, **wholly by the landowner**, in accordance with Maryland Department of the Environment and Chesapeake Bay Program Best Management Practice Verification Protocols. The agreement will also assign any and all water quality, resource improvements, and/or credits that result from the project to the County.

- Projects on public property, property owned by nonprofit organizations, community-owned property, and property with conservation easements are preferred. Projects on other private property may be considered

if the landowner is prepared to execute a MOU, as outlined in the bullet above, to guarantee long-term protection of the project.
- o If the grantee is not the landowner, the application must provide a letter of support and commitment from the landowner that states that they:
  - Agree to the implementation of the project;
  - Will perform all routine maintenance (e.g., mowing, weeding, replanting, mulching, etc.); and
  - Acknowledge and accept the terms of the MOU outlined above bullet.

- Partnerships with other organizations to leverage organizational strengths and enhance project proposals are strongly encouraged. Partnerships must be documented in the application by letters of commitment from proposed partners that specify level of staff, technical assistance, funding, or other resources to be provided by that partner for the proposed project.

- Cash and in-kind match are not required, but match is a criterion on which the project will be judged. Preference will be given to projects showing matching contributions of funds or in-kind services from project partners and other sources.

- Connecting projects to other existing, complementary community watershed stewardship efforts, such as school-related projects, outreach projects, and volunteer projects is encouraged.

- Proposing projects that provide ecological benefits in addition to water quality benefits is encouraged but not mandatory with the expectation of living shoreline projects as noted in Appendix A, Category 2.

- Requests for "soft costs" (consultant costs, such as for soil borings, surveys, designs, permit fees, project management, travel costs, and administrative costs) associated with project development and implementation will be considered, but should be limited. Soft cost requests will be included when calculating the cost effectiveness of the project. Applicants are encouraged to use matching funds from other sources to help defray soft costs.
  - o Applications requesting design funding must submit a concept design plan that clearly demonstrates the ability to treat a proposed amount of stormwater entering the proposed facility, as well as be able to secure permits and build the project within one year of the award. Final designs resulting in a reduced level of treatment will result in a reduced grant award.
  - o All requests for soft costs should be accompanied by a clear and compelling justification.

- Proposals for projects at publicly visible, demonstration-oriented sites must request funds for **interpretive signage** and include an implementation plan for the interpretive signage. Anne Arundel County will provide interpretive signage examples and will review proposed signage designs.

# V. Eligible Applicants

Funding partners welcome requests from 501(c) non-profit organizations, such as:
- Local watershed groups
- Community associations
- Service, Youth, and Civic groups and
- Faith-based organizations

Non-profit organizations are eligible to propose projects on private property or on public school properties, with assurance that the landowner is in support of the project.

**Applicants must contact the Trust to arrange a site visit between Trust and funding partner staff before applying for funding.** It is recommended that site visits be scheduled by November 10, 2017, to allow sufficient time to visit the site and receive feedback for your submission. The Trust's Program Officer is available to review

materials, conduct preliminary site visits, explain the application, and to answer your other questions. Please see VIII for contact information.

An Executive Officer and Project Officer, two separate individuals, must be identified for all proposals. The Executive Officer and Project Officer must be able to make decisions on behalf of the organization either as a board member, an employee, or other approved position. The project officer will be responsible for all project coordination and correspondence with the Trust for the duration of the project. The Trust cannot conduct any official correspondence with contractors, consultants, or other project partners. If at any time the project officer cannot continue in the position, the organization must contact the Trust and assign a new qualified project officer. To avoid conflict of interest issues, individuals associated with for-profit entities to be engaged in the project cannot serve in either role. Applicants that are not based in Anne Arundel County must have an Anne Arundel County-based partner, the role of whom should be clearly articulated in the proposal and in a letter of support.

## VI. Funding Availability and Restrictions

Requests will generally not exceed $300,000; however, requests may exceed this level with additional justification and prior approval by the Trust.

## VII. Project Timeline

Projects should be completed within one year upon receipt of the grant agreement. The estimated time frame for this projects awarded funding from this grant program is March 2018 – March 2019.

When the project is complete, grantees are required to complete final reports, including submission of all invoices, receipts, timesheets, and any other documentation to verify funds were spent appropriately. Organizations with outstanding reporting requirements will not be awarded additional grants.

## VIII. Contact

Please contact the Trust early in project development. The Trust can help you develop your project idea, assess its fit within this grant program, and discuss partnerships to get you the technical assistance you need. For technical assistance with projects, please contact either:

Abbi Huntzinger at (410) 974-2941 ext. 106 or ahuntzinger@cbtrust.org
Katie Hart at (410) 222-0136 or pwhart30@aacounty.org

**Applicants must contact the Trust to arrange a site visit between the Trust and the funding partner staff before applying for funding.** It is recommended that site visits be scheduled by November 10, 2017, to allow sufficient time to visit the site and receive feedback for submission.

## IX. Application Submission Instructions, Process, and Deadlines

To apply for a grant, follow instructions at https://cbtrust.org/anne-arundel-county-watershed-restoration.

Click on "New Application" and follow the on-screen instructions if you have not yet registered to use the system.

Applicants must submit proposals using our Online Grants System by **5:00 pm on December 7, 2017**. Late applications will not be accepted, and the online funding opportunity will close promptly at 5:00 pm. **Applicants are strongly encouraged to submit at least a few days prior to the deadline** given potential for high website traffic on the due date. The Trust cannot guarantee availability of Online Grant System technical assistance on the deadline date.

A Technical Review Committee will evaluate each proposal on a case by case basis using the above criteria to judge general merits of the project. The review process will also take into account an analysis of any engineering and regulatory issues that may exist. Funding partners reserve the right to fund projects and budget items that advance the County's progress to meet its MS4 permit implementation requirements and meet specific funding priorities and criteria.

***Grant awards will be announced in February 2018.***

All applicants will receive a letter stating decision on the application. An application may be declined, partially awarded, or fully awarded. If approved, the Trust will send a grant agreement letter with grant conditions and due dates of status and final reports. Grantees must sign and return the grant agreement letter with original signatures. The Trust will mail funds to the requesting organization following (a) the Trust's receipt of the signed grant agreement and (b) satisfaction of any award contingencies. Status reports and final reports may also be required during the course of the project. In cases where the grantee fails to submit a status report or final report by the due date, the Trust reserves the right to terminate the grant agreement and require a refund of funds already transferred to the grantee. **All final products will be provided to the funding partners for use and distribution at the sole discretion of the funding partners.**

When the project is complete, grantees are required to complete final reports, including submission of all invoices/receipts and records of personnel time if applicable. Organizations with outstanding final reports will not be awarded additional grants.

# X. Proposal Instructions

When completing the online application process, you will be asked for the following information:

**Project Title:** List the title of your project

**Organization Information**
1) Organization name
2) Address & Phone Number
3) Mission of Organization
4) Organization Type
5) EIN Number

An Executive Officer and Project Officer, two separate individuals, must be identified for all proposals. The Executive Officer and Project Officer must be able to make decisions on behalf of the organization either as a board member, an employee, or other approved position. The Project Officer will be responsible for all project coordination and correspondence with the Trust for the duration of the project. The Trust cannot conduct any official correspondence with contractors, consultants, or other project partners. If at any time the Project Officer cannot continue in the position, the organization must contact the Trust and assign a new qualified Project Officer. To avoid conflict of interest issues, individuals associated with for-profit entities to be engaged in the project cannot serve in either role.

**Executive Officer of Requesting Organization:** A name, title, address, phone, and e-mail is required.

**Project Officer:** A name, title, address, phone, and e-mail is required.

**Grant Information:**
1) Amount of Watershed Restoration Grant funding requested
2) Grant Period: enter project start and end dates
3) In which Anne Arundel County stream, river, or watershed will the project be located?
4) Latitude and Longitude (in decimal degrees) of project site

**Project Abstract**
In a text box, you will be asked to provide a brief (3-4 sentences) summary of the project, including details such as type of project, location, and main objectives. You may copy and paste from a word processing document, but you MUST use the paste plain text button in the rich text tool bar at the top of this box; this is necessary in order to remove all formatting (such as bullets, indentations, bold, etc.).

**Project Timeline**
You will be asked to enter a table of major tasks, with start and end dates.

**Project Deliverables**
You will be asked to fill in estimated deliverables for a variety of metrics, for example number of trees planted, square feet of riparian buffer restored, etc.

**Volunteer Involvement**
Indicate the number of volunteers that will be involved, the total number of volunteer hours, and a description of volunteer activities.

**Project Partnerships and Qualifications**
You will be asked to enter project partner organizations, individuals, their areas of expertise, and their role(s) in your project. Applicants are strongly encouraged to upload a letter of support and commitment for the project from each partner describing in detail the partner's role in or contribution to the project. Applications including strong letters of support and commitment often receive higher scores. If not submitted with the application, letters of support and commitment may be required prior to the release of any awarded funding.

Please include only letters from partners with a specific role in the project. No letters of support from Anne Arundel County Executive Branch agencies or MS4 permit co-permittees will be considered as part of the project rating process.

**Project Narrative Upload**
You will be asked to upload an MS Word or PDF file not to exceed 5 pages of text, excluding photos or materials such as letters of support, addressing the following questions. **To ensure that you address all questions, we recommend that you copy and paste the questions and use them as an outline in your narrative, keeping the <u>outline numbers and headings</u> in place.** Additional file attachments may also be uploaded during this step, not to exceed four file attachments total.

1. Objectives: What are the specific objectives of the project?

2. Background: Describe the background of the project. Why is this project needed? How was it identified? What was the impetus? Is the project specifically described in a local Watershed Implementation Plan (WIP)?

3. Watershed planning context: Is your project identified within the County's WIP or a more local watershed plan? If so, please identify the plan and explain the project in context of the plan.

4. Long-term project protection: Are you willing to execute a Memorandum of Understanding (MOU) to provide permanent long-term protection of the project as well as your willingness to allow Department of Public Works (DPW) to maintain your project?
> Long-term protection of the project and maintenance by DPW are both requirements of this grant program, excluding living shorelines. If your project is a living shoreline, please describe your willingness to execute an MOU including a private maintenance agreement, providing long-term protection of the project, and a commitment of the **landowner to provide full structural and routine maintenance**. Please note: ecological benefits of living shoreline projects will be weighted equally with pollutant load reductions. Therefore, applicants are encouraged to utilize practices that provide a diversity of subaquatic and terrestrial habitats and allow easy access to marsh zones by aquatic organisms.

5. Experience: Describe your organization's experience in completing similar projects.

6. Consultants: Has/will a consultant be hired and has a contractor been selected? Please describe your consultant/contractor selection process, including justification and background of the selected consultant/contractor. If using a bid process, please describe the process. The Trust strongly recommends that applicants get at least two competitive bids, estimates, or quotes.

7. Community Context: The best projects will connect to other existing community watershed stewardship efforts. Please indicate how this project fits into other watershed stewardship activities occurring in the community. For example, are neighboring faith-based organizations or homeowner's associations who may already be undertaking environmental activities going to be engaged in this project? Do you have an outreach plan or communications plan for this project? Outreach programing associated with your proposed project is not required, but strongly encouraged.

8. Demographics: In light of the Trust's commitment to the advancement of diversity in its grant-making, please provide demographic information about the community or population involved in or served by the project. Please provide your organization's experience working within the specific communities that you will be prioritizing. If you have not had significant experience within your prioritized demographic, please explain how you intend to address this issue; the Trust encourages applicants to establish partnerships with local organizations that may have greater cultural competencies within the targeted demographic(s).

9. Regulatory issues: Projects or programs that are wholly required by a separate Federal, state, or locally issued permit, decree, or enforcement action will not be funded. In some cases, funding will be considered for any portions of required projects that are in excess of regulatory requirements. Please state if any part of your project is required under and existing or pending permit, decree, or enforcement action. If so, does your project exceed the regulatory requirements?

10. Technical information: Please include within the same uploaded file (as opposed to attaching separate files):
   A. A completed site plan and project design to include:
      1. Site photos
      2. Existing conditions
      3. Proposed conceptual or complete design documents
      4. Proposed grades (if earthwork is proposed)
      5. Material volumes (if earthwork is proposed)
      6. Planting plan
         a. This should include a list of any native plants used. Funding is restricted to native species only; the Trust typically funds native perennial plants at $6-$8 each and trees and shrubs at $25-$35 each. If requests differ from those amounts please justify.
      7. A completed underlined drainage area data table for each standard Best Management Practice (BMP) (with exception of Living Shoreline and Stream Restoration practices):

| | |
|---|---|
| MDE Classification of Practice (ESD, Runoff Reduction, Structural, or Alternative) | |
| Total Drainage Area (in acres): | |
| Total Impervious Coverage within Drainage Area (in acres): | |
| Total Forested Coverage within Drainage Area (in acres): | |
| Total Open Space (permeable surface) within Drainage Area (in acres): | |
| Volume of Water Captured by BMP (in cubic feet): | |
| Surface Area of BMP (in square feet): | |
| Storm Event Treated by BMP (in inches): | |

*The above drainage table is not needed for living shoreline or stream restoration projects. Contact the Trust for a stream restoration or shoreline data table that will help with calculations required below.*

8. Calculations showing amount of stormwater runoff to be treated by the BMP, including pounds of nitrogen, pounds of phosphorus, and tons of sediment reduced annually. Use MDE Guidance provided in Criteria and Guidelines Section of this document.
   a. Please indicate what methods were used to calculate reductions and show how final reduction amounts were derived.
   b. For Step Pool Storm Conveyance Systems (SPSC, Coastal Plain Outfall, etc.) designed in a dry/ephemeral channel, consider the practice as a micro-bioretention facility and calculate the load reduction rate accordingly.
9. Indicate whether this project falls into Category 1 or 2 and provide any additional items required for your type of project described in Appendix A.

B. A letter of support and commitment from the landowner that states that they:
   1. Agree to the implementation of the project;
   2. Will perform all routine maintenance (e.g., mowing, weeding, replanting, mulching, etc.); and
   3. Acknowledge and accept the terms of the MOU outlined in section IV.

C. A maintenance plan signed by the entity responsible for maintenance and the landowner (if different).

**Budget**

As part of your application, you will be asked to upload a proposed budget using the Chesapeake Bay Trust Budget Form, in the form of an excel file template.

1. Copies of the form can be obtained in two ways:
   a. from the "Budget" section of the Online Funding Opportunity
   b. by going to the Trust's Forms and Polices webpage (cbtrust.org/forms-policies/) and clicking on 'Application Budget Form'
2. Please be as detailed as possible. For example, elements of planting requests (example: plant material, planting preparation costs, planting labor) must be listed separately
3. For any staff cost requests, please list the percentage of overall time devoted to the project by each staff member in the budget item column. Salary costs must match payroll costs and may include no other costs. Benefits may not be combined with salary and must be listed separately
4. Matching resources are not required but encouraged. Explain your efforts to seek matching resources for your project. Do not evaluate volunteer hours in terms of dollars. Please indicate whether each match entry is applied for, pledged, or in-hand
5. You will be asked to enter budget category totals in the online budget form. These totals will have been automatically calculated in the Chesapeake Bay Trust Budget Form excel template for ease of submission.
6. Please review the "Funding Availability and Restrictions" section of Application Instructions above before submitting.
7. **Additional Budget Justification** - Use the budget justification section to provide a budget narrative. The narrative should include, in addition to general budget justification information, (a) detailed justification for staff cost requests, if requested, including a specific scope of work, specific tasks, and hours associated with those tasks and (b) the source of any construction cost estimates. If you will contract with a consultant and have a proposed scope of work please attach it to your application. Err on the side of too much information.

# Appendix A: Watershed Restoration Project Guidelines by Category

The purpose of this guidance is to identify for applicants and grantees the minimal elements of project design associated with successful projects, while keeping in mind constraints and scale of community-based, voluntary projects. Partners prefer complete project design to consider funding implementation phases of projects. Applicants are strongly encouraged to contact the Trust for assistance and further guidance when creating proposals to discuss how they can best qualify for the Watershed Restoration Grant Program.

Since this grant program funds many types of watershed restoration practices, specific design requirements and the definition of "complete design" varies among project types. Projects will not be permitted in road or utility right-of-way areas; inlets and outfalls that cross these right-of-ways are subject to County approval. To help guide you in determining what is required for the design component of your proposal, restoration practices have been broadly grouped into two categories. Please read the list below and identify in which category your proposed project falls. Then read the design requirements below that section. If you are unsure which category your project belongs, please contact the Trust for further assistance.

Proposed projects should by designed consistently with Maryland Department of the Environment's "Maryland Stormwater Design Manual, Volumes I & II" and Anne Arundel County Department of Public Works' Stormwater Management Design Guidance.

MDE Stormwater Design Manual:
http://mde.maryland.gov/programs/water/StormwaterManagementProgram/Pages/stormwater_design.aspx

Anne Arundel County Stormwater Management Design Guidance:
http://www.aacounty.org/departments/public-works/wprp/watershed-resources/AACO%20DPW%20Design%20Manual%20Chapter%2006.pdf

All projects must submit as-built drawings with final reporting requirements. Drawings are to be completed by the project consultant that accurately reflect the construction methods of the project.

## Category 1: Small-scale restoration projects with projected pollution reduction benefits

*Category 1 Project Types*
- Bioretention and rain garden projects, in which surface water is not collected by, or distributed to, adjacent properties that have a disturbance footprint less than 5,000 square feet or disturb less than 100 cubic yards of earth

*Category 1 Design Requirements*
- Site map showing:
  - 2 foot topographic data, available online at:
    http://gis-world2.aacounty.org/silverlightviewer/?Viewer=WERS
    - For best results please open in Internet Explorer
    - To reach topographic information, click the plus sign to the left of the "Terrain Data" section and check the boxes for "Topo 2011," "Topo Labels 2011," and "Terrain Data"
    - Zoom to desired location and allow data layers to load
    - You may then take a screen shot of the image or click the "Tasks" tab and select "Print Map"
    - You may now save the map as a PDF
  - Project boundary and drainage area boundary

- ▪ Survey information, marked on site map, of the surface water intake (where runoff enters your project area) and project outfall (where you would like water to exit your project area)
        - ▪ Mapped utilities and roads
        - ▪ Proposed design - plan view (this should show the approximate existing and proposed elevations of the project area and the size of the practice)
        - ▪ Landowner signature on the plan that indicates project endorsement
- Copy of soil survey mapping and <u>field confirmation of soil drainage class</u> – the NRCS web soil survey can be found at http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm
- Approximate earthwork volumes (existing soil to be removed, bioretention soil to be added, etc.)
- Drainage area size (obtained from topographic maps described above) and percent impervious cover within the drainage area in acres
- Calculations to determine amount of stormwater runoff which will be treated by the stormwater practice, including pounds of nitrogen, pounds of phosphorus, and tons of sediment reduced annually
- Planting plan
- Site photos

## Category 2: Complex Restoration Projects

### *Category 2 Project Types*
- Bioretention and rain garden projects that have a disturbance footprint more than 5,000 square feet, disturb more than 100 cubic yards of earth and/or affect surface flow from/to adjacent properties, including public and private right-of-ways
- Wetland and marsh enhancement/restoration/creation projects
- Coastal plain outfall, step pool storm conveyance systems, or floodplain restoration projects
- Stormwater retrofit projects (conversions and structural changes)
- Bank/slope stabilization projects
- Stream restoration projects
- Living shorelines
- Green roofs

### *Category 2 Design Requirements*
- Site map showing:
        - ▪ Field-run topographic survey of existing conditions
        - ▪ Project boundary and drainage area boundary
        - ▪ (As applicable) Mean high water, full pool elevation, 100-year storm elevation
        - ▪ Proposed design (grade changes, drainage structures, rock placement, etc.)
        - ▪ Landowner signature on the plan, which indicates project endorsement
        - ▪ Mapped utilities and roads
        - ▪ Property boundaries
- Copy of soil survey mapping and <u>field confirmation of soil drainage class</u> – the NRCS web soil survey can be found at http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm
- Detailed earthwork volumes (cut, fill, stockpiled, etc.).
- Drainage area size (obtained from topographic maps described above) and percent impervious cover within the drainage area in acres. Please include the map outlining the drainage areas.
- Calculations to determine amount of stormwater runoff which will be treated by facility, including pounds of nitrogen, phosphorus, and sediment reduced annually.
- Planting plan
- Site photos
- Living Shorelines also need to provide:
        - ▪ Shoreline orientation and fetch
        - ▪ Water depths 10, 30, and 50 feet channel-ward from the existing shoreline.
        - ▪ Details about the presence and location or absence of existing natural resources (e.g., submerged aquatic vegetation, oyster reefs, etc.).

- Current rates of erosion
  - Recommend using Maryland's Coastal Atlas: http://gisapps.dnr.state.md.us/coastalatlas/WAB2/index.html
- Justification of any proposed bank grading.
- Details of high and low marsh zones.
- Please note: ecological benefits of living shoreline projects will be weighted equally with pollutant load reductions. Therefore, applicants are encouraged to utilize practices that provide a diversity of subaquatic and terrestrial habitats and allow easy access to marsh zones by aquatic organisms.