



# NFWF

## CHESAPEAKE BAY SMALL WATERSHED GRANTS IMPLEMENTATION Full Proposal Project Narrative

### Catalyzing Countywide Action Plan (CAP) Implementation in the Tri-County Region Submitted by: Capital RC&D

#### A. Objectives:

This project aims to advance Countywide Action Plan goals of the three partner counties, Adams, Cumberland and Franklin, through the implementation of cost effective agricultural best management practices (BMPs) and through verification of existing BMPs not reflected in CAST (Chesapeake Bay Assessment Scenario Tool) due to lack of reporting. We plan to accomplish these goals by piloting BMP verification methods that create outreach opportunities for additional BMPs on farms. We are proposing implementation of the following BMPs: riparian forest buffers, grassed riparian buffers, pasture infrastructure for prescribed grazing, streambank fencing, and agricultural stormwater BMPs.

Capital Resource Conservation and Development (Capital RC&D) is a regional resource for the agricultural community in seven counties in South Central Pennsylvania. For this proposed project, Capital RC&D will work with three counties in our region to pilot a “boots on the ground” BMP Verification program. These counties and partner, Alliance for the Chesapeake Bay (ACB), believe that one-on-one interactions with landowners are the key to future projects on private properties. This innovative program involves landowners directly in the process as the primary source of information regarding on-farm conservation need that can be managed with conservation practices.

Our planned methodology below addresses NFWF Priorities 1, 2, & 7: *(Steps 1-4 address Priority 7 - Assess Local Watershed and Habitat Restoration Needs and Opportunities by using GIS technologies to efficiently build an inventory of BMPs for verification and re-verification, and an inventory of landowners for BMP implementation needs assessments, across nearly 60,000 acres in the tri-county region.)*

**STEP 1:** Perform remote sensing analysis on focus watersheds in each county, and use resulting high-contrast satellite imagery to locate existing, unreported BMPs for verification in each priority HUC-12 watershed.

**STEP 2:** Determine which BMPs found in high-contrast images are currently recorded in the county’s Practice Keeper (PK) database and are within their credit duration, creating an inventory of BMPs for verification & re-verification. Evaluate inventory to determine parcels not currently working with Conservation Districts for highest priority visits.

**STEP 3:** Perform site visit with field BMP verification packets. While on the farm, assess additional BMP and conservation needs through one-on-one farmer education. Build a list of potential future projects and assess landowner’s interest in technical/financial assistance and update current BMP information in PK.

**STEP 4:** Assess project opportunities collected during on-site outreach visits, resulting from one-on-one farmer education and determine how best to assist the farmer with financial and technical assistance.

*(Steps 5-7 address Priorities 1 & 2 - Managing Agricultural and Urban Runoff & Improving Water Quality and Stream Health Through Riparian Restoration and Conservation by implementing cost-effective, site-appropriate BMPs on farms visited by BMP specialists or ACB in the tri-county region to reduce agricultural-related nitrogen runoff and infiltration.)*

**STEP 5:** Follow-up with the landowner regarding BMP opportunities discussed during site-visit and



ensure they are aware of technical and funding opportunities from all sources. Begin planning for BMPs committed to by owner, funded through this program including:

- Agricultural Stormwater Management
- Forested & Grass Buffers
- Prescribed Grazing - Fencing, Watering
- Streambank Exclusion Fencing

**STEP 6:** Progress with designing BMPs into implementation with design approval, contracting, and construction, coordination with landowner, overseen and assisted by Capital RC&D.

**STEP 7:** New BMPs will be entered into appropriate databases for progress toward county nutrient reduction goals (CAP Progress).

To streamline the process and increase the capacity of the counties, Capital RC&D will handle administrative duties related to both the grant award and resources (human and technical) needed to carry out the program from on-site verification/education to final BMP implementation. ACB will lead the partnership with their expertise in community outreach and installation of vegetative practices, such as buffers, and administer their “Buffer Bonus” program. Both Capital RC&D and ACB will work alongside county partners who will coordinate efforts in each of their respective counties.

**B. Outcomes:**

Focus	Outcome	Activity
Water Quality	Reduce nitrogen, phosphorus, and sediment pollution to the Chesapeake Bay and its tributary rivers and streams	☒ Improving water quality in agricultural areas by implementing best management practices to reduce polluted runoff
		☒ Restoring riparian forest buffer and associated riparian habitat in order to continually increase the capacity of forest buffers to provide water quality and habitat benefits throughout the watershed
		☒ Improving the health and function tributary rivers and streams
Eastern Brook Trout	Maintain and increase Eastern brook trout populations in stronghold patches	☒ Increasing habitat integrity in stronghold patches through protection and restoration of riparian areas, stream restoration, nonpoint source pollution controls and land use protections
Capacity and Planning	Motivate individuals in the watershed to adopt behaviors that benefit water quality, species, and habitats	☒ Enlisting individuals in local volunteer events to restore local natural resources and providing hands-on education and skill-building for individual action
		☒ Developing or improving conservation, watershed, or habitat management plans that provide guidance to landowners, organizations, or local governments on how to manage properties and communities for improved conservation outcomes

**C. Project Location:**

Each county considered county-specific criteria to determine the HUC-12 watersheds to focus their efforts and prioritize implementation of new BMPs. If the project is not successful in implementing all of the proposed BMPs in the target watersheds, other areas within each county will be considered in order to implement the proposed BMPs and meet our metrics.

The tri-county area has watersheds identified by Trout Unlimited in the Brook Trout Atlas and this project



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partnership is committed to supporting and conserving these watersheds. To that end, in Cumberland County, the work will be focused in the Big Spring Creek/Upper Yellow Breeches Creek watershed/Thompson Creek-Burd Run HUC-12 watershed. Farm operations exist in this watershed, including some preserved farms, and the Conservation District/Lancaster Farmland Trust have relationships in the area that will enhance the anticipated success of the on-the-farm portion of the project.

Adams County chose Pine Run-Conewago HUC-12 due to the number of old Chesapeake Bay Program Projects located in the watershed. Many of these projects would be beyond their given credit duration and are due for re-verification. An analysis was done on all the old Chesapeake Bay projects, and Pine Run-Conewago Watershed was found to have the largest number of these projects.

Franklin County chose to focus efforts in the Rowe Run HUC-12 watershed. Rowe Run is identified as one of Franklin County's priority watersheds, determined by estimated nitrogen loading and presence of impaired streams. Through aerial photo analysis, Rowe Run was also identified as an area with a significant amount of unreported/identified BMPs as well as opportunity for further BMP implementation.

#### **D. Current Conservation Context**

Each partner county has developed a Countywide Action Plan (CAP) for clean water in their county and is in the process of implementation. This project is intended to support the CAP and add additional implementation results to decrease upland agricultural runoff pollution.

Franklin County has piloted BMP verification through PADEP CAP BMP Verification funds. Upon being awarded \$30,000, Franklin County contracted Capital RC&D to perform verification work, based on their existing portfolio of cover crop and no-till verification, as well as their network of agricultural professionals. Capital RC&D hired a retired NRCS technical staffer to conduct verification efforts of existing BMPs in Franklin County, and they are in the process of hiring a second contractor who will verify additional types of agricultural BMPs. Through this process, their contractor has identified approximately 50 farms with "expired" but functioning structures around Franklin County, potentially eligible for renewed credit. Approximately 15 farm visits have been performed to date resulting in renewed credit for functioning practices while gaining cooperation and program participation from landowners.

This year, a similar approach is occurring in Cumberland County through a remote sensing project with the Chesapeake Conservancy and Herbert, Rowland, and Grubic, Inc. (HRG). This proposed project will build from that effort's success in practice verification, new BMP opportunity identification, and producer relationship building with conservationists. It will also streamline funding to advance cost-effective BMP installation and educate producers about their contribution to water quality, especially for the local trout population.

#### **E. Current Partnership Context**

Capital RC&D has a long and successful history working with the agricultural agencies in Adams, Cumberland, and Franklin Counties including working with them on our biannual cover crop/tillage surveys and in partnership with NRCS in providing grazing infrastructure grants. As mentioned above, Capital RC&D has been working with Franklin County Conservation District on BMP verification and resource concern identification since February 2022 and the District has developed operation-appropriate information collection tool/packets to record farmer visits, current BMP status, and identify potential BMP needs. We also provide technical assistance and educational programs to the farming community in



the participating counties and work in partnership with county NRCS and Conservation District staff to deliver these and other projects.

We will work with the CAP Coordinators and CAP supporting groups, agricultural agency staff, and Alliance for the Chesapeake Bay to coordinate project efforts and ensure project results. Frequent communication will be critical throughout the project period requiring regular meetings to ensure that the project is moving forward according to our timeline. Assignment of agricultural technician and intern staff to each county will be coordinated so that all three counties remain on target for the work planned.

Capital RC&D will contract with individual landowners who will be receiving BMP funding and work within a timeline to make sure the technical service providers or Conservation District staff are providing planning, oversight and inspection for BMP implementation. Project staff will work at each County Conservation District as well as traveling throughout the project area for producer visits both for BMP verification and new BMP identification.

Alliance for the Chesapeake Bay will install buffers on ag operations including those identified by this project. They have an independent team of technical experts as well as buffer planting volunteers who will be deployed in the entire tri-county area.

**Communities Engaged and Impacted:**

This project will directly support farmers in Adams, Cumberland, and Franklin Counties, Pennsylvania, specifically those in the three focus watersheds. Farming can be a challenging profession to make profitable, especially on small farms which are common in Pennsylvania, and the dairy industry. Assistance with agricultural BMPs not only yields conservation gains, but operational benefits that enhance a farm's profitability and the welfare of the family.

According to the EPA Environmental Justice Screening and Mapping Tool, the focal geography includes populations with the following demographics: Up to the 70th-80th percentile nationally for Demographic Index (a combination of people of color and low-income households), up to the 95th-100th percentile nationally for low income (with a bulk of the subwatersheds being 70th-80th percentile), up to 90th percentile unemployment rate and up to 90th percentile for lower than high school education.

This project will entail a farm-to-farm outreach approach that will result in the reaching of nearly every producer in the focal geography. It will also engage local communities (both rural and urban, such as Shippensburg, Carlisle, and Newville) through plantings of riparian forest buffers, which will be open to volunteers and advertised in the communities. Tree planting is a proven way to engage the public in conservation work, and more fully understand the watershed-level conservation and their place in protecting mutual natural resources.

**Work Plan:**

Activity Description	Associated Deliverables	Responsible Parties	Completion Quarter/Year
Hire, train, and deploy staff for remote sensing and field verification/BMP opportunity identification	Finalize BMP verification forms and procedures, BMP opportunity mapping	Capital RC&D and CAP Coordinators	Quarter 1, 2023



Activity Description	Associated Deliverables	Responsible Parties	Completion Quarter/Year
Field visits begin in second month	First group of farm visits List of follow-up opportunities	Capital RC&D and CAP Coordinators	Quarter 1, 2023
Identify candidates for rotational grazing and develop grazing plans	Landowner contracting and Plan development	Capital RC&D	Quarter 2, 2023
Identification of potential projects and planning for projects to be installed/constructed	Landowner contracting, Project designs and construction documents	Capital RC&D and Alliance for the Chesapeake Bay	Quarter 3, 2023
First year evaluation and project plan update	Updated project plan	Capital RC&D and all partners	Quarter 4 2023
Grazing infrastructure implementation and begin work on other BMP	BMP design, BMP installation	Capital RC&D and County Conservation Districts,	Quarter 1, 2024
Install non-grazing related agricultural BMPs	BMP installation	Capital RC&D, County Conservation Districts, construction contractor	Quarter 4, 2024
Buffer opportunity identification and installation	Acres of grass and forested buffers	Alliance for the Chesapeake Bay	Quarter 4, 2024

### F. Data Collection Activities:

This project proposes using GIS information to identify potential BMPs for follow-up visits to the farm, it is unclear if this activity will require additional review using a QAPP. We also propose on-site collection of information about existing BMPs to ensure they are functioning within NRCS guidelines. In addition, the work flow includes receiving information from the producer about any natural resource concerns, i.e. erosion, wet areas, etc., and suggesting that agricultural agency staff consult. Planning for new BMPs funded by this project will comply with NRCS technical guidelines.

### H. Tracking and Sustaining Implementation Progress:

We are proposing implementation of the following BMPs: riparian forest buffers, grassed riparian buffers, infrastructure for rotational grazing, streambank fencing, and agricultural stormwater BMPs. We plan to develop positive long-term relationships with producers that don't normally work with agricultural agency staff with one-on-one relationship building during BMP verification and any resulting BMP installation. Landowner agreements will be required for all practices installed and will include operation and maintenance requirements and copy the lifespan requirements used by NRCS. Many of the practices chosen for this project will result in unmistakable producer benefits, grazing infrastructure, streambank fencing, and agricultural stormwater BMPs will all require a 50% match from the producer, and therefore, give them additional incentive to maintain the BMP. Alliance for the Chesapeake Bay has a 25-year maintenance agreement with buffer recipients. We plan to mirror Franklin County's 10-year agreement for grass buffers.