Improved Technical Service Delivery to Landowners:

Collaborative Restoration Networks and Training Opportunities

Focus geographies:
Central Pennsylvania
Delmarva peninsula
Rappahannock Watershed, Virginia

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Table of Contents

Executive Summary

Maintain Healthy Watersheds Goal Implementation Team (GIT), through Chesapeake Bay Trust, funded a series of workshops to gather information about how to improve technical service delivery to private landowners as it comes to implementing water quality and habitat Best Management Practices (BMPs). Over 150 restoration professionals, referred to as technical service providers (TSPs), participated in this series of workshops to provide perspective and feedback on working as a network to engage private landowners. While there were open invitations to a variety of TSPs, the agendas were mostly geared towards the agricultural sector and working with landowners and land managers of farming operations. Conversations from these workshops were synthesized to identify recommendations to improve service delivery and provide a conceptual framework for how these recommendations can be best integrated into the restoration process. A quick summary of next steps is as follows, but a more detailed table of recommendations can be found in Appendix B of this report.

Overview of Essential Next Steps:

- ☐ There needs to be more sustained funding to support partnership alignment, including: a dedicated regional coordinator, facilitated conversations to identify common goals and catalog areas of expertise, and support for planning exercises.
- ☐ More support is needed to organize outreach efforts, especially: documenting available tools and resources, providing additional training for new/unique/effective outreach strategies that are inclusive of a more diverse landowner population, and bolstering peer-to-peer outreach initiatives.
- ☐ Disencumber individual service providers by hiring more staff and better utilizing the network of TSPs to share specific expertise needs (technical, programmatic, or administrative).
- ☐ Standardized reporting on project implementation and long-term maintenance that is then connected back to and utilized for planning efforts.
- ☐ Update funding programs to be more flexible and better aligned with each other.

Introduction

The Chesapeake Bay watershed faces a myriad of pressures that have led to decreased water quality and degraded habitat conditions. Goals and action plans have been put in place to restore healthy conditions, but will require the support of the entire community to achieve success. We rely on Technical Service Providers (TSPs) to engage private landowners, providing technical and financial assistance for forest and farmland restoration/conservation/management. These TSPs include, but are not limited to: Soil Conservation Districts, regional foresters, non-profit conservation and restoration professionals, government agencies, land trusts, watershed restoration specialists, landscaping professionals, and agro-tourism consultants. These TSPs have expertise in landowner financial assistance programs, Best Management Practice (BMP) designs, barriers to practice adoption, and effective incentive structures. However, much of this knowledge is currently held by individuals working in the field and not collectively synthesized or shared across the broader TSP network and restoration community.

This lack of an overarching knowledge network creates missed opportunities for combining programmatic work for multi-BMP delivery and whole farm approaches, or regional planning efforts to accelerate BMP implementation plans and financing. This project sought to better understand collaborative networks within the restoration community and identify opportunities to further promote coordination among TSPs in the Chesapeake Bay watershed. Within three chosen sub-geographies, the project team hosted a series of workshops that dove into the relationship between TSPs and the private landowner, as well as the relationships between TSPs. We used these workshops to gather feedback and information that was then compiled and used to develop the recommendations described later in this report and detailed in Appendix A. Along with these recommendations, the project team has included a few resources to elevate this project report into a transferability package that can be used by groups within the Chesapeake watershed to take the next steps towards improving the process for TSPs to deliver technical and financial service to private landowners for the implementation and management of BMPs.

Pre-workshop preparation

In April 2020, Chesapeake Conservancy held a kickoff meeting for this project with a steering committee (listed in Table 1) pulled together with the help of our project officer, Christine Conn. This group guided the project team in deciding key factors related to the set-up and execution of the project. The first step was to determine three geographic areas within the Chesapeake Bay Watershed to focus on for the workshops and associated surveys. After several discussions and considerations, the project team landed on these three geographies: (1) Central Pennsylvania, specifically focused on Centre, Clinton, Huntington, Lycoming, Snyder, and Union counties, (2) the Delmarva peninsula, which encapsulates 9 counties in Maryland, 2 counties in Virginia, and 3 counties in Delaware, and (3) the Rappahannock watershed in Virginia, comprised of 17 counties. These geographies (outlined in Image 1) were chosen as they were in various stages of TSP coordination and represented a wide diversity of landscapes, landowner types, and jurisdictional oversight.

Within these three geographies, the project team started reaching out to contacts and developing a list of known TSPs for each region (detailed in Appendix D). While a wide variety of TSPs were included, the focus was on those who have expertise in agricultural BMPs. These lists were used to invite TSPs to participate in an information-gathering survey that was used to guide the discussion topics for regional workshops and guide initial recommendations that led to the conceptual model for enhancing TSP coordination described later in this report.

Table 1. List of steering committee members

| Name	Organization
Amy Jacobs	The Nature Conservancy
Anne Hairson-Strang	MD Dept of Natural Resources
Christine Conn	MD Dept of Natural Resources
Joanna Ogburn	JBO Conservation
Kathy Boomer	Foundation for Food & Agriculture Research
Kathy Stecker	MD Dept of Environment
Lisa Wainger	University of Maryland Center for Environmental Science
Nancy Nunn	Hughes Center for Agro-Ecology
Rachel Felver	Chesapeake Bay Program
Renee Thompson	Chesapeake Bay Program
Sally Claggett	United States Forest Service
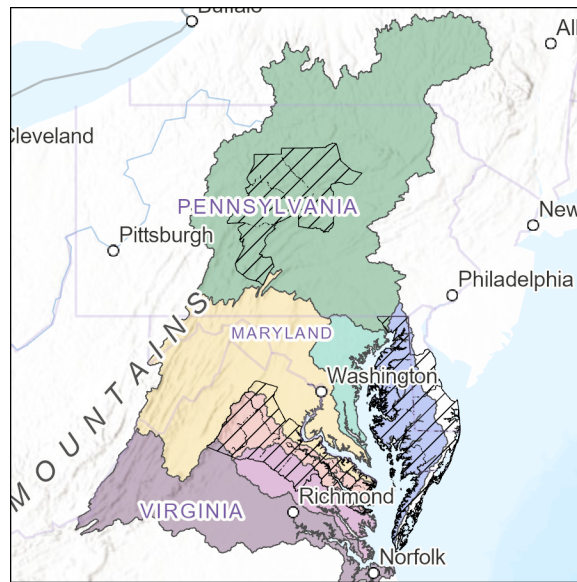
Figure 1. Boundaries for the focus geographies are highlighted above as hatched areas shown overtop of major watershed boundaries within the Chesapeake Bay watershed. The three focus geographies are found in Central Pennsylvania, the Delmarva peninsula, and in the Rappahannock watershed in Virginia.

As a part of workshop preparation, the project team also identified ongoing initiatives that had similar goals and target audience (detailed in Table 2). We convened a series of discussions between the project leads to better understand the overall objectives for each project and potential redundancies among tasks or audience. The intention of these conversations was to promote coordination among these projects and identify the niche for this effort. Based on the discussions, this project team decided to shift its focus away from broader topics (e.g. effectiveness of particular outreach strategies or documenting landowner reception to certain approaches) and instead to narrow its focus to the TSP network and coordination between the various organizations involved in restoration.

This re-focusing provided an opportunity for synergy across ongoing projects, as well as a chance to use these workshops as a jumpstart for regional conversations about collaboration. With a narrower topic in mind, the project team then turned to our pre-workshop survey as an opportunity to collect some baseline data to guide the development of our workshop agenda. We also used this as a chance to continue collaborating amongst the related projects, using feedback from previous surveys and incorporating questions that others were interested in asking the target audience. The surveys were sent out to the list of known TSPs within each region, mentioned earlier in this document. The questions were split into the following categories: general information, landowner outreach, training opportunities, and TSP networking. For specific details on the pre-workshop survey questions and responses, please reach out to one of the report authors listed on the title page.

Table 2. List of projects and main contacts for other initiatives related to improving TSP delivery to private landowners.

Project Title	Main Contact	Main Objective
STAC Workshop: Advancing Regenerative Agriculture: Exploring Barriers & Incentives to BMP Adoption	Kathy Boomer (FFAR)	Explore alignment between the design of current (public and private) conservation strategies (including incentive structures and technical incentives) and understanding stakeholder decisions.
STAC Workshop: Overcoming the Hurdle: Addressing Implementation of Agricultural Best Management Practices (BMPs) Through a Social Science Lens	Kurt Stephenson (VT)	Review conservation programs within the CBW and the behavioral and economic factors which impact BMP adoption to help identify barriers to implementation and the strategies/mechanisms to overcome these challenges.
MDE Bay Technical Assistance Provider's Forum	Kathy Stecker (MDE)	To identify gaps within the TSP network in Maryland and increase coordination to overcome the challenges presented by these gaps to best support WIP goals.
NIFA Thriving Agriculture in Urbanizing Landscapes	Lisa Wainger (UMCES)	To better understand current approaches for engaging farmers in sustainable agriculture, develop techniques for collaborative agricultural-environmental problem solving, and to collect evidence about strategy effectiveness.
Capacity Building Initiatives through CBT and NFWF	Kacey Wetzel (CBT) Jake Reilly (NFWF)	To build capacity among individual organizations and support a shared network among TSPs using collective impact and social impact network theories that will in turn enhance regional collaboration in priority regions.
NFWF INSR: Envision the Choptank - Breaking Barriers to Agricultural BMPs	Joanna Ogburn (Envision the Choptank)	To pilot the use of Landowner Assistance Coordinators as a way to increase and improve technical service delivery to landowners and cooperation across TSPs

The pre-workshop survey was an interesting juxtaposition between the three focus areas, with a number of similarities between the regions, as well as a few differences. Overall, the project team received over 50 responses from individual TSPs that were used to guide the development of our workshop topics and anticipated discussions. Anyone interested in specific survey results can reach out to the project leads, but a few brief take-aways are listed below. These take-aways are particularly interesting as they reflect aspects of the conversations had during the workshops.

- Many TSPs focus their services by county/state boundaries. On the Delmarva peninsula, there were several respondents who service watersheds instead of specific jurisdictions. This insight was relevant when we discussed challenges with funding programs.
- There is a divide in the collective experience of the respondents - most service providers have been in the field for 10+ years, while many others have less than 4 years. It would be interesting to determine why there are not many with 5-9 years of experience. As this divide can lead to challenges with institutional knowledge if not appropriately addressed.

- The Delmarva peninsula had the highest density of newer TSPs with 43% of respondents having less than 4 years of experience.
- Each geography finds its own challenges to implementing BMPs, but funding and landowner willingness was highly ranked as most limiting factors in all three geographies.
- Many TSPs are not using digital decision-making support tools to help identify landowners or support outreach efforts (Rappahannock: 55%, Delmarva: 38%, Central PA: 30%).
    - Of the tools being used, locally/regionally focused tools are commonly used in all three geographies. This could indicate that tools are most valued at this scale.
    - In Central PA, nearly half of the respondents are using state-provided tools.
    - In Delmarva, over a third of the respondents are using the NRCS toolkit.
- TSPs across all regions are relying heavily on a first-come-first-serve basis for project identification. Respondents in Delmarva get referrals from other TSPs; whereas, respondents in Central PA and Rappahannock are working proactively to identify projects in priority water quality or habitat restoration areas.
- Each region has completely different priorities for new training opportunities as it relates to working with underserved communities among agricultural landowners. This shows the need for regional training opportunities and greater awareness of population dynamics.

Workshop Summary

The original intentions of the workshops as described by Chesapeake Bay Trust in the original scope of this project were to convene TSPs in our three focus geographies to share knowledge about landowner attitudes, barriers to adoption, effective incentives, and individual BMP effectiveness. This collective knowledge would then be used to develop a conceptual model for holistic service delivery to private landowners (mainly farm and forest landowners) that would be sustainable and reproducible across the entire watershed. The idea was to build off of lessons learned from New England's Regional Conservation Partnerships to better enhance collaboration among TSPs within the Chesapeake that would in turn lead to better service delivery.

However, when this project was awarded, several other initiatives were identified that had similar target audiences and goals (as described in Table 2). To better align with ongoing efforts and avoid duplication of efforts, the goals for this project were revised to prioritize conversations about inter-TSP coordination and regional collaboration. With this in mind, the project team started researching existing regional collaborative efforts and met with representatives from each of these efforts to better understand the role of each of these efforts in the regions and which might be good matches to provide lessons learned to our focus geographies. We invited 9 of these organizations to participate as speakers for our workshops—to share their experiences and lessons learned along the way. They spoke on why their TSPs felt the need to form a partnership and the steps they took to do so. For each focus geography, we chose a panel of 3 organizations to kick-off the conversations for the course of the workshops. These presentations and subsequent discussions set the stage for delving into discussions about collaboration and the roles individual organizations play within a cooperative environment.

Table 3. List of regional collaborations and lead contacts.

Name	Coverage Area	Lead Organization	Lead Contact
Central Pennsylvania Precision Conservation Partnership	(PA) Centre, Clinton, Lycoming, Huntington, Union, Snyder	Chesapeake Conservancy	Adrienne Gemberling
Delmarva Conservation and Restoration Network	Delmarva peninsula: (MD) Cecil, Kent, QA, Dorchester, Caroline, Talbot, Wicomico, Somerset, Worcester (VA) Accomack, Northampton (DE) Kent, Sussex, New Castle	Lower Shore Land Trust	Kate Patton
Envision the Choptank	(MD/DE) Choptank River Watershed	Envision the Choptank	Joanna Ogburn
Heart of Maryland Conservation Alliance	(MD) Catoctin & Antietam Watersheds + a few key regional parks/landscapes	Catoctin Land Trust	David Lillard
Lancaster Clean Water Partners	(PA) Lancaster County	LCWP	Allyson Gibson
One Water Partnership	(MD) Baltimore Region, Anne Arundel County, Harford County, Lower Shore Region, Howard County (Pa) Lancaster County	Interfaith Partners for the Chesapeake	Matthew Heim
Rappahannock River Roundtable	(VA) Rappahannock River Watershed	Friends of the Rappahannock	Bryan Hofmann
Rappahannock-Rapidan Conservation Partnership	(VA) Rappahannock-Rapidan River Watershed	Piedmont Environmental Council	Maggi Blomstrom
Safe Water Conservation Collaborative	(WV) Eastern Panhandle	West Virginia River Coalition	Tanner Haid
Shenandoah Valley Conservation Collaborative	(VA) August, Frederick, Page, Rockingham, Shenandoah, Warren	Alliance for Shenandoah Valley	Kevin Tate
Upper and Middle James Riparian Consortium	(VA) Upper and Middle James River Watershed	James River Association	Amber Ellis
Upper Susquehanna Coalition	(PA/NY) Upper Susquehanna River Watershed: Allegany, Bradford, Broome, Chemung, Chenango, Cortland, Delaware, Herkimer, Livingston, Madison, Oneida, Onondaga, Otsego, Potter, Schoharie, Schuyler, Steuben, Susquehanna, Tioga NY, Tioga PA, Tompkins, Yates	USC	Wendy Walsh

Due to health concerns and safety restrictions, the planned workshops were held virtually. The project team chose to use this as an opportunity to use breakout rooms and live-polling to engage the audience and encourage discussion. To reduce "zoom fatigue," the full-day workshop was broken into two half-day sessions. Detailed agendas are shown in Appendix C, but the overall goal was to focus the workshop around predominant rationales from all three groups of TSPs on why coordination among their organizations is helpful: funding, shared expertise, and landowner outreach. Each of these topics were identified as hindrances to implementation progress, but also as opportunities for support from collaborative networks. As such, we thought they would be a good nexus between clarifying pinch points and discussing recommendations and solutions.

Since funding was the most consistently mentioned topic, it was prioritized in the first half-day session. A panel of funders was invited from each of the regions to participate in the discussions, with the prompt that we wanted their perspective not just as a funder, but as a part of the collaborative restoration network. This was highlighted in the discussions, as funders can offer more to the restoration process than just monetary resources; many funders have other expertise and community relationships that can be leveraged. The panel was asked a series of questions about how the funders view collaborative efforts, what they like to see in proposals, and what their programs can offer to the overall network beyond implementation funding. These discussions were then followed up with a project spotlight from each region, showcasing examples of collaborative funding opportunities and successful proposals.

After the panel discussions, participants were separated into breakout groups where project team members worked alongside volunteer facilitators to engage each small group in focused conversations. These discussions focused on general responses to the content, identifying challenges to adopting collaborative strategies, ideas for inclusive partnerships, and suggestions for overcoming the barriers related to funding restoration. Some key take-aways from these conversations are as follows:

- Regional collaboration is highly valued by all TSPs, but is "easier said than done" as many organizations don't currently have the capacity to engage in the necessary coordination actions (such as attending meetings, contributing to knowledge sharing, or developing shared resources). Moving from a "catalog of contacts" into a "network of partners" takes consistent and deliberate effort on several fronts, but is ultimately worth the investment. Specifically, many TSPs were vocal about wanting to see more engagement from NRCS and SWCD staff in collaborative initiatives.
  - It was also noted that the success of collaboration hinges on sustained funding for a backbone organization that facilitates coordination and maintains momentum.
  - Individual organizations do not have the capacity to sustain support for some types of tasks or roles, but shared funding could be utilized for these needs.
- Current funding programs are limiting, both for project work and for planning efforts. Funders should revamp funding programs to be more comprehensive and flexible, i.e.

focusing on programmatic goals and long-term commitments instead of focusing solely on implementation projects. Detailed recommendations will be shared later in this report.

- ○ Match requirements are difficult to navigate, especially project to project.
- ○ Lengthy project timelines due to funding and/or permitting issues can lead to loss of interest from the landowner. Streamlining the process from initial landowner outreach to implementation is essential for keeping landowners engaged.

● Including a wider diversity of organizations in restoration networks would be beneficial for expanding capacity and expertise. Examples that were brought up include:

- ○ Landscape professionals, including Master Gardeners and Naturalists
- ○ Real estate agents and HOAs
- ○ Agribusinesses, such as breweries/distilleries, ecotourism and agricultural retailers
- ○ Recreational communities
- ○ Grade schools and other youth organizations
- ○ Colleges and Universities

These conversations set the stage for the second half-day session. After discussing the general concepts and barriers to collaboration among TSPs, the project team wanted to focus on two additional pillars for coordination: shared expertise and communication strategies. For each region, we recruited TSPs that: (1) were involved in projects that showcase multi-BMP delivery, (2) were involved in projects that exemplify coordination between organizations for specific project roles and expertise, or (3) have unique and successful strategies for engaging private landowners, especially those who are often underserved or overlooked. For each region, we tried to find TSPs that could highlight a strategy that was identified in the pre-workshop surveys or the first half-day session as an area of interest for further training and exploration.

As Boomer's STAC-supported workshop and Wainger's NIFA-supported research (described in Table 2) both dove into specifics about individual strategies for landowner outreach and determining effectiveness of certain incentives, we chose to steer the conversations of the second session towards how coordination between TSPs could better support outreach strategies and opportunities to share lessons learned. The facilitated breakout discussions during the second session focused on generating ideas for engaging new partners; identified challenges to coordinating on a project-scale; and expressed a desire for increased training and knowledge-sharing related to outreach strategies. Some key take-aways from the discussion are as follows:

- ● Participants again highlighted the need for increased funding to support all steps of the restoration process, not just implementation of best management practices.
- ● Participants recommended landowner outreach should be more coordinated among organizations working within their regions. Limited communication between partners was listed as a barrier to achieving higher levels of collaboration among organizations conducting outreach. There were several examples of how partners thought they could effectively communicate with other TSPs and landowners:

- ○ Having a single point of contact for a landowner was identified as the best strategy for communication with that landowner on multi-BMP projects and was suggested to build trust faster than multiple points of contact.
  - ○ Having more cross-training opportunities to better understand the role each TSP can play in multi-BMP projects and to better understand the full suite of funding programs that could be offered to a landowner.
  - ○ Period of land transition between owners was identified as a potential opportunity for engagement with the conservation community, and an opportunity to leverage the realty community as partners in conservation.
- ● Participants strongly requested that ongoing outreach strategies also be informed by current best practices around Diversity, Equity, Inclusion, and Justice (DEIJ). TSPs were interested in additional trainings and capacity building around DEIJ topics.
  - ○ TSPs specifically requested more training from organizations in their geography who specialized in outreach to specific landowner segments (such as beginner farmers, plain sect farmers, and limited resource operations).

Overall, the six virtual workshop sessions engaged over 150 service providers and solicited 35 speakers. These service providers were identified with assistance from existing regional networks, specifically the Central Pennsylvania Precision Conservation Collaborative, Envision the Choptank, Delmarva Conservation and Restoration Network, and the Rappahannock River Roundtable. The breakout sessions were incredibly helpful to better engage participants and encourage dialogue between service providers in a virtual environment. In addition to the breakout sessions, [Mentimeter](#) polling activities provided an opportunity for live, anonymous, structured feedback. This style of survey was used at the end of the last session to gather some additional feedback. As not all service providers from each region could participate in our workshops and provide their perspective in survey/polling exercises, the project team encourages regional collaboratives to revisit these conversations for a more comprehensive understanding of their TSP network.

Conceptual Model for Enhancing Coordination, Recommendations for Next Steps and Needed Actions

After synthesizing notes from all six workshops, 5 key elements were identified as critical to accelerate the pace of restoration through regional collaboratives: partnership alignment; outreach to landowners; BMP planning, design, and implementation; long-term monitoring and maintenance of BMPs; and fundraising. The first four elements are specific points within the restoration process that are meant to inform each other and be revisited regularly. The fundraising element encapsulates the other elements, to reflect recommendations on comprehensive, flexible funding programs for restoration. This process is represented visually in Figure 2. While shown as a cyclical process, in a well-developed partnership, these elements are in constant motion and don't always happen linearly.
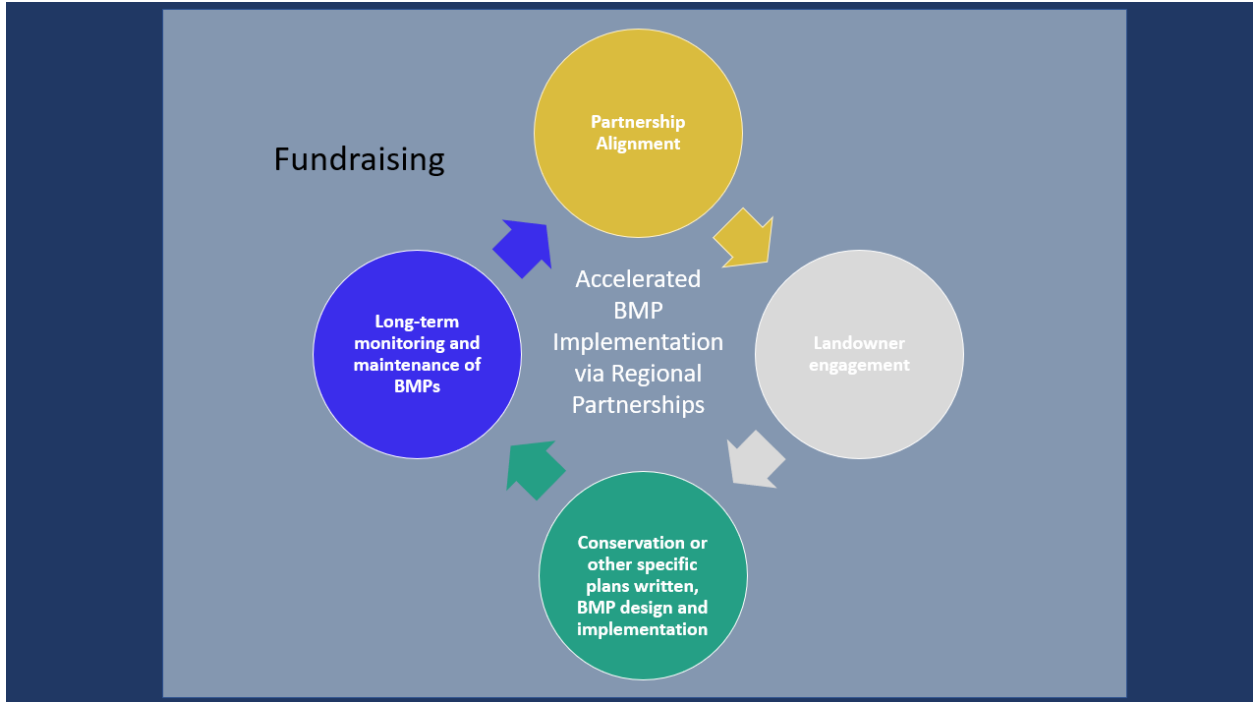
Figure 2. Conceptual Model for Enhanced Coordination and Accelerated BMP Implementation.

Woven into the five key elements are aspects of successful collaborative partnerships, pulled from the Collective Impact model. In this model, organizations take deliberate action towards a common goal, backed by a suite of centralized knowledge and infrastructure. Major elements of the Collective Impact model that should be incorporated into the five key steps include: a common objective, shared measurement, mutually reinforced activities, continuous communication, and dedicated backbone support. Combined, these elements support accelerated implementation and improved technical service delivery. A more detailed view of how these aspects are used within the restoration process can be found in Appendix A - a checklist for collaboration. This checklist documents effective and transferable elements of collaboration that can be used by partnerships (new or existing) to enhance cohesion and guide actionable decisions.

In addition to the checklist for regional partnerships, recommendations for actions that could be taken to strengthen each partnership's ability to accelerate on-the-ground restoration have been documented. These recommendations are not only for individual partnerships, but for the restoration community at-large. Many of these improvements will require the support of funders and decision-makers to move forward. These areas for improvement, along with the problems they help to address, are listed in Appendix B. The goal for this appendix is to encourage action on some these desired outcomes in the near future; as such, those who have the best agency to make progress on these recommendations have been listed.

Discussion and Reflections

During the workshops, TSPs had rich and deep conversations about current functions of collaboratives throughout the Chesapeake Bay watershed and methods that could be implemented to enhance coordination. There were many nuanced suggestions specific to each of these geographies, but this report only documented the most common and overarching topics. The goals for this project were to improve technical service delivery to private landowners through collaboration and coordination among the TSP network. For any who may be interested in diving into a specific region's conversations, contact one of the report authors to get access to the recorded webinars and types notes/meeting materials.

In order to carry out the strategies suggested in this report and achieve coordination between conservation organizations, all parties and components of the restoration community must be flexible and adaptable. Individual TSPs, organizations and agencies hosting TSPs, and funders will need to make changes to how they're functioning and how they work with others. Many of these strategies need to change over time, reflective of current best practices in order to meet the needs of the landowner population. Below, we highlight pieces of the process we've identified as most important for changing the way these partnerships function.

Flexible funding was discussed multiple times within all six of the hosted workshops. Service providers requested more leniency in terms of timing (longer grant periods with rolling deadlines) and more coverage in what funds are allowed to be spent on. Partners suggested many funders currently focus on installation of BMPs, but that is just one part of what is needed for these partnerships to function effectively. It was recommended that funds cover all steps of the restoration process in Figure 2. TSPs also highlighted needs for more sustained funding to support partnership alignment, including: a dedicated regional coordinator, facilitated conversations to identify common goals and catalog areas of expertise, and support for planning exercises. Additional funding was also requested to fill current staffing gaps and better utilize the network of TSPs to share specific expertise needs.

Managing the flow of information between partners was also a key point made among all regions. Having established systems across all stages of the restoration process are critical for partner alignment and efficiency working together. Designing infrastructure for shared knowledge was something requested but not currently present or fully functional across these 3 geographies. Partners identified the need for continued support for maintenance of all data repositories to ensure they stay up-to-date with information. This infrastructure could apply to: outreach resources and tools database, list of outreach priorities and organization assigned to specific areas or landowners, BMP project planning and tracking database, and BMP plan template database. It was not discussed whether or not these data repositories should be held within the same system or separate systems, but it is clear that as systems are developed, they should relate to one another. It was made clear that data reporting should be more cyclical - that

progress data should be looped back to support project planning and fundraising. In order to maintain coordination between TSPs over time, these repositories should be updated with regular frequency. As they are being developed, a plan for long-term maintenance and responsibility should be created to avoid the creation of another stagnant resource.

During the Pennsylvania meetings it was specifically discussed that partners want to set goals around accelerated water quality progress (rebound of in-stream health) vs accelerated BMP implementation. This was mentioned in other geographies as well, but was very prominent in the Pennsylvania workshops. Service providers feel pressured to meet numerical goals for implementation, regardless of the impact value to water quality and habitat health. A shift in focus on which metrics are being tracked and used for sharing progress is desired.

Finally, specific training recommendations included working with underserved communities (specific communities identified varied by region) and leveraging regional partnership tools and shared outreach materials. There are other groups focused on this training aspect currently, and we encourage TSPs to check out current workshop lists for organizations like the National Fish and Wildlife Foundation, the Chesapeake Bay Trust, and the Chesapeake Bay Program.

Recommendations and strategies highlighted in this section were those most frequently discussed during the workshops across all geographies. These strategies and recommendations are what partners attending the workshops identified as key to accelerating progress toward water quality and habitat goals. The notes and recordings which detail full discussions from individual workshops can be accessed by contacting the report authors. In order to best develop next steps to achieve many of these recommendations, the project team suggests further research (e.g. a dedicated workshop to refine recommendations on funding programs, additional compilation of successful outreach strategies, etc.). This project was focused on collaboration between TSPs, but we recognize that there are many other pieces to the puzzle. We suggest those within the restoration community pay attention to reports and outcomes from the projects listed in Table 2 and other upcoming projects.

Acknowledgements

Our project team would first and foremost like to thank Chesapeake Bay Trust and the Maintain Healthy Watersheds Goal Implementation Team through the Chesapeake Bay Program for supporting this project. Their financial support and guidance provided the means for this project.

We would also like to thank all of the speakers and facilitators who made the virtual workshops so successful. Without your contributions, none of these conversations could have happened. A list of the speakers for each workshop can be found in Appendix C. Workshop facilitators include:
> Christine Conn, Gabrielle Roffee, Renee Thompson, Kathy Boomer, Kathy Stecker, Dan Reed, Adrienne Gemberling, and Katie Walker

Of course, without all of the TSPs who participated in the workshops, we wouldn't have had any event or discussions - so a huge thank you for all the TSPs who took time out of their busy schedules to contribute to the conversations! For those already involved in existing collaborative networks - thank you for leading the charge and best wishes for continuing the momentum.

Thank you for all the folks who dedicated their time in numerous meetings to guide this project, especially:
> Our Steering Committee (listed in Table 1) who provided excellent insight.
> Those involved in other projects (listed in Table 2) that coordinated with us.
> Regional experts, especially Kristen Hughes Evans, Kristen Saacke Blunk, Kacey Wetzel, Stephanie Heidbreder, and Jake Reilly... your expertise was appreciated.

This project truly was a team effort, involving a wide variety of folks supporting restoration of the Chesapeake Bay watershed - here's to a future with healthier waterways and landscapes.

Appendix A. Checklist for Collaboration

- ☐ Identify a particular geographical region to align partners.
- ☐ Identify an inclusive list of service providers within area of interest. This list of service providers should include folks from a variety of sectors, including local government, NGO, state/federal agencies, academia, and private business.
    - ○ Understand service areas and areas of expertise for each partner; a GIS layer for mapping this out is recommended.
    - ○ Explore co-benefits of BMP implementation (i.e. carbon sequestration, flood mitigation, eco-tourism, etc) and community engagement that could expand the list of partners considered within this collaborative.
- ☐ Develop shared goals for restoration that are informed by individual priorities and desired outcomes.
    - ○ How detailed these goals and priorities are should be dependent on how many partners are involved and how broad a geography is defined.
    - ○ These goals should be data-driven: what data is used should be openly discussed with the partners and decided upon as a group.
    - ○ Decision-support tools are an excellent resource for guiding these discussions. Local, state, and federal tools should be explored as a partnership.
- ☐ Routinely meet as a partnership, either formally or informally, as needed.
    - ○ Create a shared digital repository for project and partner updates that is accessible and editable by all partners.
    - ○ Bolstering trust between partners via team-building exercises is recommended.
    - ○ Encourage peer-to-peer networking to fill technical expertise needs for meeting project needs and multi-BMP service delivery.
- ☐ Identify roles for each partner based on an understanding of expertise.
    - ○ Depending on the needs for your geography, some collaboratives develop both short-term and long-term workgroups and subcommittees for specific tasks/goals.
    - ○ Identify a backbone organization for coordination and facilitation of partnership, as well as the necessary funding to support this work.
- ☐ Align outreach efforts to avoid duplication, reduce landowner fatigue, and prioritize connectivity to previously implemented projects.
    - ○ Identify areas of interest for individual organizations.
    - ○ Identify trusted messengers within specific communities.
    - ○ Agree on a coordinated outreach plan.
    - ○ Develop/utilize a shared database that connects reported implementation with planned implementation, identifies priority parcels for future outreach, and lists the partner responsible for outreach.
    - ○ Develop/utilize a shared mechanism for tracking landowner engagement and responses that is viewable and editable by all partners.
    - ○ Explore opportunities to connect with underserved communities and landowners.

- ○ Revise current outreach strategies for diverse populations and leverage local experts for communication support.
- ☐ Develop/utilize a centralized repository/catalog of outreach materials and strategies.
    - ○ Regularly update outreach strategies based on lessons learned and trainings.
    - ○ Include communication strategies for co-benefits.
    - ○ Agree on common messaging for partnership goals and intentions.
- ☐ Identify and explore funding opportunities within your geography, including non-traditional funding sources such as tax incentive programs, co-benefit fundraising (i.e. carbon sequestration and flooding mitigation), and private/foundational grants.
- ☐ Strategize incoming funding to ensure support for each step of the restoration process.
- ☐ Leverage shared expertise among partners for multi-BMP delivery and whole-parcel restoration efforts.
    - ○ Ensure that consultants and private practice organizations are included in these plans to offer necessary technical assistance.
- ☐ Generate a flexible pool of funding to be shared between partners for project implementation and maintenance.
    - ○ Regularly update and communicate the available funding sources.
    - ○ Ensure partners understand how to market available funding sources to landowners.
- ☐ Develop aligned messaging for offered practices that is informed by available funding sources.
- ☐ Develop/utilize a repository to share templates for BMP designs/plans.
- ☐ Offer training and professional development for best practices and new techniques.
    - ○ Identify opportunities to get certified to perform BMP inspection and verification
    - ○ Identify opportunities for Continuing Education Units (CEUs) to maintain certifications
- ☐ Establish a shared database for project tracking that informs and is informed by project and outreach planning data. This database should be accessible and editable by all partners.
    - ○ Establish shared metrics for tracking progress and success.
    - ○ Perform regular monitoring checks for identified metrics.
    - ○ Communicate progress on metrics via visual dashboard
- ☐ Promote completed projects and celebrate successes
    - ○ Include landowners and community members in these communication and events
    - ○ Leverage existing landowner relationships to generate interest in future projects.

Appendix B. Table of Recommended Strategies

This table reflects specific actions that can be taken to improve technical service delivery to private landowners, as well as who has the best agency to lead this action. The recommendations are color coded to align with the conceptual model for improved technical delivery shown in Figure 2. The first column aligns with an element of the cyclical restoration process; this is used to group recommendations around a specific piece of the restoration process, but some of them are intertwined with other categories. The fourth column identifies who has the agency to move this recommendation forward; while multiple voices may be needed for many of these recommendations, we outlined who should take the lead on seeing it through. The 4 groups of stakeholders are: individual TSPs, regional collaboratives, funders, and policy/decision-maker. This list of recommendations is not exhaustive of what can be done to better support service delivery to private landowners, but it reflects the most focused, systemic concerns brought up during the workshops. Some recommendations for individual TSPs and regional partnerships can be found in a checklist for collaboration detailed in Appendix B.

Category	What is needed to improve service delivery	Problem it's solving	Agency to Move Forward
Partnership alignment	Dedicated central backbone organization for each geography.	Coordinating with partners in an intentional way is time-consuming and detracts from project work. Shared administrative support bolsters capacity for consistent fundraising and additional projects.	Funders / Regional Collaboratives
Partnership alignment	GIS map of partners, their service areas, and areas of expertise.	It takes a long time to develop a professional network. Many TSPs, especially those new to the field, don't know who else works in their regions or what services they can offer. TSPs need a better understanding of how their expertise can combine with others to offer landowners a more comprehensive restoration package.	Regional Collaboratives
Partnership alignment	Shared digital space for data management and partnership updates.	There are many TSPs doing work in any given region, but there is often no coordinated way to share updates on projects, materials for outreach, or programmatic announcements.	Regional Collaboratives

Landowner engagement	Provide training on how to connect with underserved populations via proactive outreach strategies.	Many TSPs are reactive when it comes to landowner outreach, but that limits the pool of landowners they are engaging with.	Regional Collaboratives
Landowner engagement	Revising strategies for diverse populations to help tailor messaging and what might best resonate with the landowner.	Outreach strategies are often framed as reaching out to the "general public," but more tailored strategies have the potential to be more effective. Many TSPs have shared that unique approaches are more successful.	Individual TSPs
Landowner engagement	Generate a parcel-scale prioritization for project opportunities and created a shared platform for tracking outreach efforts	When coordinating between multiple TSPs, there are a wide variety of goals and priorities (some of which may be conflicting). This limits the ability to decide landowners to work with and the best messenger for outreach.	Regional Collaboratives
Landowner engagement	Centralized catalog of outreach materials	Outreach information exists in silos within single or few organizations.	Regional Collaboratives
Plan writing, design, and implementation	Hire additional TSPs and provide more technical training opportunities for all	TSPs can easily become overburdened and lack the time or expertise to complete identified projects. Adding staff capacity for technical knowledge will increase partnerships ability to complete more BMP projects.	Policy and Decision Makers
Plan writing, design, and implementation	Streamlined permitting process for entire properties or multiple projects along a stream at same time	Permitting individual projects or individual BMPs is time consuming.	Policy Makers

Long-term Maintenance and Monitoring	Establish metrics and goals for tracking progress (i.e. in-stream monitoring, animal/insect population surveys, soil health, etc.)	Little data exists to demonstrate progress is happening. Demonstrating to partners that incremental progress is happening is critical to maintaining morale and tracking progress toward longer-term goals and having a set realistic timeline to meet them.	Regional Collaboratives
Long-term Maintenance and Monitoring	Database of previously implemented BMP projects that is accessible by restoration planners and implementers.	There are a lot of restoration projects installed by themselves without looking at connectivity. By linking projects, you can have an outsized impact on water quality and habitat.	Policy and Decision Makers
Long-term Maintenance and Monitoring	Shared systems of measurement to track progress.	Currently no centralized data systems exist that can easily show progress in 1 location. Having shared goals and shared measurement systems enables partners to easily see the work of the whole rather than just work of individual organizations.	Policy and Decision Makers
Long-term Maintenance and Monitoring	Transfer of knowledge between TSPs	Disparity between experience levels in TSPs and comfort level completing landowner outreach or BMP design.	Regional Collaboratives
Long-term Maintenance and Monitoring	Dedicated funding for maintenance.	Most major funders are not providing funds for maintenance of projects that occur outside the grant period. Maintenance is necessary to achieve on-going/lasting water quality benefits. Otherwise, the improvements will be short-lived.	Funders
Fundraising	Establish more multi-BMP grants	With multi-BMP delivery you typically have to pull together several funding sources to support them. The more funders that support several types of BMPs, the easier it is to deliver full-farm implementation.	Funders
Fundraising	Research project to gather	Funding in general has been a limiting factor in	Funders

	more specific feedback on what is most needed to revamp restoration funding programs. (i.e. longer grant periods, rolling deadlines,	restoration. Many TSPs have suggested changes to funding programs, but there is not yet a consensus on what exactly needs to change within specific funding programs.	
Fundraising	Increase up-front funding available and size of grants	Funding for restoration projects is often only available through grants when you have "shovel-ready" projects where the landowner is already on board and waiting for funding. This system is not designed to accelerate implementation. Having funds in hand to install projects when the landowner says yes greatly accelerates time from first engagement through final installation. Larger grants also lower the impact of administrative costs to individual projects.	Funders
Fundraising	Flexible funding to cover all aspects of restoration projects from partnership planning through maintenance and allow partners to adaptively manage the process	Funders are very focused on BMP implementation but not necessarily all of the steps it takes to get a project to this stage. Funding all aspects of collective impact work, outreach, design, and maintenance are also critical to yield the desired water quality outcomes.	Funders
Fundraising	Database of funding opportunities	Partners have trouble identifying what funding sources are available for projects. There isn't just one location where they can look for their region to identify what grants are available and when applications are due.	Policy and Decision Makers
Fundraising	Identify necessary incentives for different types of organization to be involved in collaborative events and initiatives.	Not all TSPs can or do prioritize collaborative work. Organizations have different limitations on what they can spend their time on, making it hard to easily participate in regional networking or collaborative projects.	Individual TSPs
Fundraising	Aligning grant cycles	Administrative burden is high when multiple grants have	Funders

| Fundraising | Increased cost share incentives per BMP. Explore different types of incentives--based on research with landowners and informed by TSPs. | reporting at different times of the year and projects reported to all are at different points for each report. Current cost-share incentives are not enticing enough for all landowners. To accelerate BMP implementation, better incentives could be offered. | Funders, Policy and Decision Makers |

Delmarva Specific Recommendation:

Category	Deliverable to improve network/comm support	Problem it's solving	Agency to Move Forward
Funding	Multi-state funding programs	State specific grants are a huge boundary to funding projects in Delmarva because the watersheds span multiple jurisdictions. Sharing resources within larger watershed projects gets difficult when monies can only be used in part of the watershed.	Funders, Policy and Decision Makers

Appendix C. Workshop Agenda and Speakers

Providing Technical Service to Private Landowners:
Understanding knowledge networks, training opportunities,
and challenges to landowner adoption of management practices

Purpose:
With pending goals for improving water quality and habitat, the conservation community has an increasingly important role to play in engaging private landowners and encouraging adoption of best management practices (BMPs). Technical Service Providers (TSPs) are an important branch of this work, as they translate conservation strategies and objectives through terms that landowners can better connect with. However, service providers do not work in isolation; improving the coordination between TSPs has the potential to reach more landowners and accelerate restoration and conservation actions. This workshop will explore how existing collaborative networks function, the role of funders within these networks, and available resources for technical service delivery. Lessons learned will be used to create a framework for sustainable and replicable TSP networks that will ultimately guide more effective service for private landowners. In order to develop this framework, we seek to:

- Understand what is needed to better coordinate efforts amongst TSPs
- Develop a knowledge network for TSPs to rely on that includes:
    - Sharing effective strategies and incentives for landowner outreach
    - Documenting available tools and resources
    - Identifying trainings to improve technical skills
- Strategize ways to improve diverse and inclusive outreach strategies

Intended Audience:
Folks who work directly with private landowners to provide technical services in order to implement management practices that improve water quality and habitat
- Public sector (ex. Conservation District and NRCS staff)
- NGOs (ex. Extension offices, watershed groups, restoration specialists)
- Private Sector (ex. Precision Agriculture, Ag Technology)

* Colored sections of the agenda show differences for each region
    Central Pennsylvania
    Delmarva peninsula
    Rappahannock

Agenda:

Session 1: Overarching Structure for Knowledge Networks & Funding Support
[10 minutes] Broad introduction
[10 minutes] Mentimeter icebreaker
[30 min] Panel discussion: sharing successful strategies and lessons learned from existing knowledge network leaders and time for questions (individual presentations)
- *Shenandoah Valley Conservation Collaborative (Kevin Tate)*
- *Upper and Middle James Riparian Consortium (Amber Ellis)*
- *Delmarva Conservation and Restoration Network (Kate Patton)*
- *Central PA Precision Conservation Partnership (Adrienne Gemberling)*
- *Rappahannock River Roundtable (Bryan Hofmann)*
- *Lancaster Clean Water Partners (Allyson Gibson)*
- *Safe Water Conservation Collaborative (Tanner Haid)*
- *Envision the Choptank (Joanna Ogburn)*
- *Upper Susquehanna Coalition (Wendy Walsh)*

[15 min] Q&A with panelists
[35 minutes] Breakout rooms + Report back
[10 minute] Break
[40 minutes] Funders perspective panel (round robin, moderated discussion)
- *PA DEP (Jason Fellon)*
- *DCNR (Teddi Stark)*
- *Foundations of PA Watersheds (Branden Diehl)*
- *MD DNR (Gabe Cohee)*
- *DNREC (Ben Coverdale)*
- *VA DEQ (David Evans)*
- *NFWF (Kristen Saacke Blunk)*
- *VEE (Roy Hoagland)*

[10 minutes] Project Spotlight
- *Lancaster Clean Water Partners (John Cox)*
- *Alliance for the Chesapeake Bay (Craig Highfield)*
- *Friends of the Rappahannock (Bryan Hofmann)*

[35 minutes] breakout room + reporting back
[20 minutes] Closing remarks

Session 2: Leveraging your Network to Effectively Engage with Landowners

[10 min] Welcome + Recap of Day 1
[20 min] Changing Landscape of Farmers (Ag Census) + Mentimeter Activity
[20 min] Project Spotlight: *This project will showcase coordination on initial outreach to landowners to help minimize duplicative efforts, target priority landowners, and utilize trusted messengers to "get the door open" and understand landowner motivations.*
     Halfmoon 319 Watershed Implementation Plan (Caitlin Glagola - CBF)
     Pocomoke (Mike Dryden - TNC)
     Headwater Stream Initiative (Maggi Blomstrom - PEC)
[20 min] Project Spotlight: *This project will provide an example for tapping into the wealth of expertise across multiple organizations to deliver technical service for multiple BMPs under one project, and how coordinating provides an opportunity for reducing landowner fatigue and finding funding.*
     Stream Restoration Partnership (Sean Levan - Montour County CD)
     Envision the Choptank (Whitley Gray/Matt Pluta - ShoreRivers)
     Piedmont Grassland Bird Initiative (Justin Proctor - SCBI)
[40 min] Breakout discussion + Reporting Back
[10 min] Break
[10 min] Funding Pilot: VA State Cost Share (Amy Walker)
[30 min] Moderated Panel Discussion: Focused Landowner Outreach
     Lancaster Farmland Trust (Jeb Musser)
     American Farmland Trust (Ashley Brucker)
     Ironwood Forestry (Andrea Ferich)
     Alliance for Chesapeake Bay (Mauricio Rosales)
     USDA NRCS (Buddy Bowling)
     UMD Extension (Shannon Dill)
     American Farmland Trust (Jacob Gilley)
     NRCS (Courtney Pooton)
     FutureHarvest CASA (Niahm Shortt) [not present, but provided responses]
[15 min] Q&A with panelists
[40 min] Breakout Discussions + Reporting Back
[20 min] Mentimeter: Next Steps and Needed Resources
[10 min] Closing Remarks

Appendix D. Technical Service Providers (by region)

Central PA

- Alliance for the Chesapeake Bay
- Centre County Conservation District
- Chesapeake Bay Foundation
- ClearWater Conservancy
- Clinton County Conservation District
- Huntingdon County Conservation District
- Lycoming County Conservation District
- National Fish & Wildlife Foundation
- National Trout Unlimited
- Native Creations Landscaping LLC
- Northcentral Pennsylvania Conservancy
- Partners for Fish and Wildlife/ Habitat Forever
- Penns Valley Conservation Association
- Pennsylvania Department of Conservation and Natural Resources
- Pennsylvania Department of Environmental Protection
- Pennsylvania No TIll Alliance
- Pennsylvania State University (PSU)
- R+R Engineering
- Seven Willows LLC
- Snyder County Conservation District
- Spring Creek Chapter Trout Unlimited
- Stroud Water Research Center
- TeamAg Inc
- Union County Conservation District
- United States Fish and Wildlife Service
- USDA Natural Resources Conservation Service (NRCS)
- Western Pennsylvania Conservancy
- Woods and Waters Consulting

Delmarva Peninsula

- Alliance for the Chesapeake Bay
- Chesapeake Bay Environmental Center
- Chesapeake Bay Foundation
- Chesapeake Wildlife Heritage
- Delaware Department of Agriculture
- Delaware Department of Natural Resources and Environmental Control
- Delaware Wildlands
- Delmarva Resource Conservation and Development Council
- DM4R Alliance
- Ducks Unlimited
- Eastern Shore Land Conservancy
- Ecotone, Inc.
- Environmental Concern
- Future Harvest CASA
- GreenVest
- JBO Conservation
- Lower Shore Land Trust
- Maryland Department of Agriculture
- Maryland Department of Natural Resources
- Nanticoke Watershed Alliance
- National Fish & Wildlife Foundation
- Orion
- Oyster Recovery Partnership
- ShoreRivers
- Sweetbay Watershed Conservation
- The Delaware Association of Conservation Districts
- The Land Group
- The Nature Conservancy Maryland
- The Virginia Association of Soil and Water Conservation Districts
- United States Fish and Wildlife Service

- University of Delaware Cooperative Extension
- University of Maryland Extension (UME)
- USDA Natural Resources Conservation Service (NRCS)
- Virginia Cooperative Extension (Virginia Tech and Virginia State University)
- Virginia Department of Agriculture and Consumer Services
- Virginia Department of Conservation and Recreation
- Washington College Center for Environment & Society

Rappahannock Watershed

- Alliance for the Chesapeake Bay
- American Farmland Trust
- Benchmark Agriculture Solutions
- Chesapeake Bay Foundation
- Essex County Conservation Alliance
- Friends of the Rappahannock
- Future Harvest CASA
- George Washington Regional Commission
- Goose Creek Association
- Northern Neck Land Conservancy
- Piedmont Environmental Council

- Rappahannock-Rapidan Regional Planning District
- Ready Reef
- Rivanna Conservation Alliance
- Shoreline Erosion Advisory Service (SEAS)
- Smithsonian Conservation Biology Institute: Virginia Working Landscapes
- Southern States
- Tellis Agronomics
- The Nature Conservancy
- The Virginia Association of Soil and Water Conservation Districts
- Tree Fredericksburg
- Trout Unlimited
- United States Fish and Wildlife Service
- USDA Natural Resources Conservation Service (NRCS)
- Virginia Association of Planning District Commissions
- Virginia Cooperative Extension (Virginia Tech and Virginia State University)
- Virginia Department of Conservation and Recreation
- Virginia Department of Forestry
- We Plant Trees
- Wetlands Watch