



Narrative Analysis

RIPARIAN FOREST BUFFERS- AUGUST 13TH 2020

The narrative analysis summarizes the findings of the logic and action plan and serves as the bridge between the logic and action plan and the quarterly progress meeting presentation. Based on what you learned over the past two years from your successes and challenges, you will describe whether the partnership should make adaptations or change course.

Use your completed pre-quarterly logic and action plan to answer the questions below. After the quarterly progress meeting, your responses to these questions will guide your updates to your logic and action plan. Additional guidance can be found on [ChesapeakeDecisions](#).

1. Examine your red/yellow/green analysis of your management actions. What lessons have you learned over the past two years of implementation?

Summarize what you have learned about what worked and what didn't. For example, have you identified additional factors to consider or filled an information gap?

Riparian forest buffers (RFB) are an essential and cost-effective practice for improving water quality and the health of the Chesapeake Bay watershed, but the current pace and scale of forest buffer implementation is inadequate. One result of the previous SRS cycle, the formation of a Riparian Forest Buffer Action team, continued to work on some of the identified gaps regarding actions that could help improve progress in each state. The Natural Filters Restoration Program concept evolved from the work of the Action Team and has become its overarching action. We plan to incorporate lessons learned from state and other partners, who have successfully tested new buffer programs using grant funding. Through these programs, we have learned more about the importance of incorporating both financial assistance and extensive technical assistance to landowners to help design, implement and maintain buffers. However, additional coordination and prioritization of buffer practices from CBP leadership is still needed to realize a Bay-wide buffer program.

Historically, we have relied on the Conservation Reserve Enhancement Program (CREP) to implement buffers, and there have been some promising developments for CREP in the last two years. For example, CBP leadership and CBC worked hard to get good provisions in the 2018 Farm Bill for forest buffers, but these still need to be translated into good implementing rules by USDA. Nonetheless, even a high-functioning CREP is estimated to deliver at most 20% of the total need for RFB as determined by the state WIPs and there are limitations with the design and delivery of CREP that despite previous efforts, have not improved (See [lists](#) of some of the identified issues needing resolution by state and Actions 1.4, 2.1, 2.3 in Workplan document). Although CREP remains an essential and valuable program, there is growing momentum to develop a

new Bay-wide buffer program that will be more flexible and effective at meeting our goals.

There have also been local successes in using existing landowner assistance programs to incentivize buffers. Some programs have required installing buffers to access other state or federal funding. For example, in New York, in order to access funds for a conservation easement, landowners are required to have riparian forest buffers. In parts of PA, federal funding (e.g., EQIP, CSP) for non-buffer practices has been prioritized to land that has a riparian forest buffer. These models could be expanded and further institutionalized throughout the watershed.

Another recent success was the development of an updated Chesapeake Forest Restoration Strategy. State forestry agencies and non-profit partners worked with USDA to update the Strategy to incorporate the latest science and data. This broad policy document is designed to guide states and regional coordinating bodies in advancing core restoration objectives in more specific and tailored actions within their watersheds and jurisdictions. Although the Strategy addresses multiple forest restoration practices, it also includes example that demonstrate progress in our ability to prioritize where buffers are most needed on the landscape. For example, multiple states are using land use/land cover data to identify priority planting areas, tree planting opportunity areas, and eco-hydrologically active areas where buffers may have the greatest benefits. The Strategy also includes new information about opportunities to use forest buffers for climate change adaptation and potential ways to make buffer plantings more resilient to a changing climate.

In addition to being able to target riparian areas that have the greatest potential to improve water quality, we have also improved our ability to target based on other priorities and data sources. Pennsylvania's Prime Prospects project provides an example for how to use biophysical and social science to identify places that have high amounts of potentially bufferable land and where there are landowners who are more likely to be willing to put in buffers. These sorts of analyses could help inform the identification of areas where new buffer programs may be most effective.

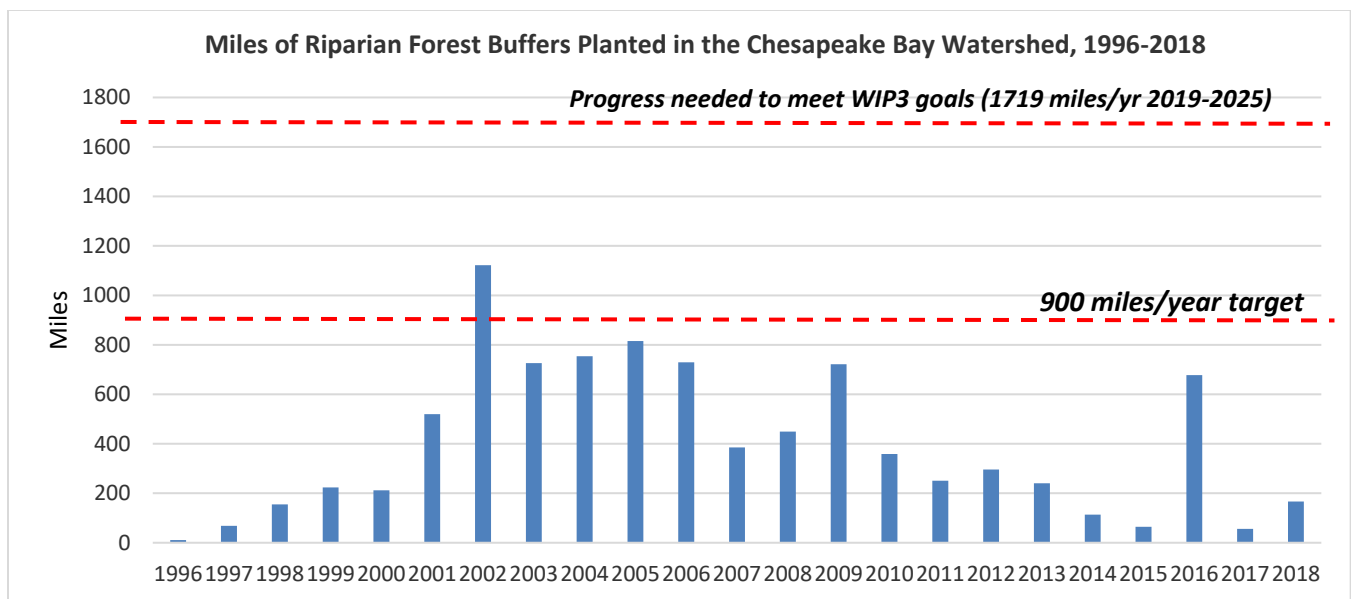
There were other RFB successes; however, more work is needed in all areas to improve progress towards meeting our forest buffer goals. For example, we were able to secure additional funding through the Farm Service Agency to continue funding 11 field personnel providing technical assistance in each state. Most of these positions have been in place since 2017 and for various reasons-- some associated with CREP being offline for some of that time-- these additional personnel have not yet generated a significant improvement in buffer implementation. This suggests to us that 11 positions is a fraction of the additional TA needed. Increased capacity such as additional buffer planting and maintenance contractors, tree nurseries, and coordinated outreach, education and verification also needed and would help to build a robust restoration economy.

2. Regardless of how successful your short-term progress has been over the past two years, indicate whether we are making progress at a rate that is necessary to achieve the outcome you are working toward. The example graph below illustrates this concept.

*Use the **editable** graph below (or your own chart) to illustrate your progress. Explain any gap(s) between our actual progress and our anticipated trajectory.*

We are well short of the 900-mile per year target outlined in the Watershed Agreement and furthermore, this target is inadequate to meet the buffer goals outlined in the Phase III WIPs. To fill the gap between 2018 Progress and 2025 WIP III goals, we would need to add over 1,700 miles of forest buffers annually between 2019-2025 (assuming 100 ft. buffer widths). Many of the same factors we identified in our previous workplan are still limiting our progress towards meeting our buffer goals (for example, a lack of consistent funding, inadequate government engagement at all levels, insufficient availability of technical assistance).

Although we are able to monitor progress towards meeting our short-term, 900-mile per year target through NEIEN and CAST, we need a clearer perspective on our progress towards meeting our long-term goal of having seventy percent of riparian areas throughout the watershed forested. The new high-resolution datasets should provide an updated calculation of the percentage of forested riparian areas throughout the watershed. Once this data is available, we should reassess whether the shorter-term goal of planting 900 miles/year is appropriate for reaching our long-term goals.



3. What scientific, fiscal and policy-related developments will influence your work over the next two years?

This may include information learned at the previous biennial SRS meeting or more specific information about your outcome such as an increase or decrease in funding, new programs that address gaps, and new scientific data or research. Describe how these developments are likely to impact your recommended measure(s) of progress, the factors you believe impact your ability to succeed, and newly created or filled gaps. These changes should be reflected in the first three columns of your revised logic and action plan after your quarterly progress meeting.

Existing sources of funding, while critical, do not ensure the dependability needed to create and maintain a well-functioning ecosystem of non-profits, volunteers and private restoration companies that is paramount to meeting our buffer goals. The availability of additional funding and the flexibility of that funding will influence our progress in the

coming two years in terms of our capacity to both directly fund buffers and to support the dedicated staff needed to facilitate these efforts.

Given limited public funding, we are particularly interested in exploring opportunities to utilize private finance to accelerate progress towards meeting our buffer goals. To do so, we need to start setting up partnerships and identifying pools of public funding that we can leverage to attract private dollars. For example, EPA Clean Water State Revolving Fund (CWSRF) dollars or 319 money could be dedicated to buffer implementation. There is also a potential for our buffer planting efforts to benefit from increasing public and private investments in the global Trillion Trees Initiative, which the United States has also committed to supporting. Our ability to develop the needed partnerships and public and private sources of finance will influence our success in developing conservation finance for riparian forest buffer implementation.

Although there were some promising provisions for CREP in the 2018 Farm Bill, the way these provisions are ultimately interpreted will influence our work over the next two years. The way the provisions are currently being interpreted raises many questions. For example, the provisions do provide some additional funding for maintenance, but they do not improve the overall financial incentive as they reduce total available funding for implementation. Bay partners have raised the question of whether they could update State CREP agreements en masse to adopt the new provisions without losing the previously negotiated cost-share rates. This would save months of work and also maintain the needed incentives to attract landowners.

The continuing impacts of Covid-19 will present both challenges and opportunities that are likely to affect our buffer planting and maintenance efforts. In terms of challenges, shrinking state budgets, hiring freezes and restrictions on activities may inhibit the planting of new buffers. At the same time, rising unemployment rates have generated renewed interest in building a workforce for conservation and restoration, including tree-planting. If stimulus dollars become available, these could be put towards increasing the available workforce for planting and maintaining buffers across the watershed.

As new high-resolution hydrography and land use data becomes available, we will have an even better idea of where the greatest opportunities are for implementing RFB across the landscape. This new data will also show where buffers are being lost to development – an unfortunate occurrence that will require even more work and expense to realize improved water quality. As capabilities improve, there may be potential to use remote sensing for buffer verification initially in individual states, but ideally this capacity would be built watershed-wide to limit the costs associated with monitoring and verification.

Another development that will influence our progress towards meeting buffer goals is the rapid expansion of stream restoration and streambank stabilization projects and the growth of a stream restoration industry. Although the expert panel and ad-hoc panel reports have done a good job of outlining key qualifying conditions that should minimize unintended adverse consequences for existing forest buffers, there is growing evidence that this is not happening and functioning forest buffers are being removed.

Finally, climate change impacts, both known and unknown, could have an overwhelming impact on forests and riparian buffers. Climate projections for the region suggest that generally speaking, conditions will become hotter and wetter, although there is also likely to be more variability. This means that riparian forests are likely to experience a greater frequency of both extreme flooding and late-season flash droughts that could

negatively affect tree establishment and growth. At the same time, riparian forest buffers will become increasingly critical for shading and controlling effects of rising temperatures on stream life, moderating the stream environment and triggering self-healing processes in the stream. We therefore will need to pay increasing attention to ensuring that riparian forest buffers are planted in a way that will be resilient to future climate change.

4. Based on your response to the questions above, how will your work change over the next two years?

Describe the adaptations that will be necessary to more efficiently achieve your outcome and explain how these changes will lead you to adjust your management strategy or the actions described in column four of your logic and action plan. Changes that the workgroup, GIT or Management Board consider significant should be reflected in your management strategy.

In the next two years, we will focus more on supporting new and existing buffer programs that offer greater efficiency and flexibility. There are some models for more effective and flexible buffer programs that could be replicated and expanded. For example, Pennsylvania DCNR funds buffers on a rolling, first-come-first-serve basis, rather than an annual, competitive grant process, making funding quickly accessible to fit the needs of both implementers and landowners. Making programs available to non-agricultural streamside landowners will also increase the reach of new buffer programs and help reduce the perception that farmers are the only landowners that need to install buffers. These buffer programs have also been effective in better integrating buffer maintenance and any new programs should ensure that buffer maintenance costs have been accounted for.

We will work to be more cost-effective in our delivery. Some feel that geographic prioritization is not as useful as efforts to identify willing landowners, as done in the Prime Prospects project. Even demographic targeting of willing landowners has limited return with the highest ranked targets only 2x more likely to be interested in a buffer than random contact. For the cost, non-targeted outreach may be more effective or some combination the two (e.g., mass outreach in those in locations that models say are ideal). Similarly, multifunctional buffers have been widely touted as a driver for scaling up RFB restoration, but may not be a sufficient, cost-effective driver and take funding away from more efficient programs. For example, PENNVEST funded 4 acres at cost of \$100,000 in an RFP only open to multifunctional buffer projects. The same funds could have done 40 acres in a competitive round with 1:1 match required, including all post-planting care. An increasing amount of state funds are going to these projects at the expense of other more cost-effective options like forest buffers.

We also plan to increase focus on conservation finance and exploring opportunities for private finance to accelerate buffer implementation. The USFS and the Alliance for the Chesapeake Bay have been working with a conservation finance consultant to explore possibilities for establishing a new Natural Filters Restoration Fund and plan to continue these efforts in the next two years. The goal of the Natural Filters Restoration Program is to bring long-term financial stability and certainty that is needed to grow our network of partners. This new program will focus on Pay-for-Success approaches that create win-win solutions for both the landowners and public entities. For example, we may work with private investors to design a scheme to enroll landowners in practices that generate water quality credits. Local municipalities would then be able to use those credits to meet

their regulatory requirements. With sufficient and stable funding, the Natural Filters Restoration Program will create jobs by providing certainty to non-profits and private restoration businesses, who will scale up in response to consistent program direction and funding. However, we will likely need to tie into other state programs, such as the CWSRF and MS4 programs to use public dollars to attract private finance.

To support the expansion of buffer implementation and maintenance efforts through new and existing programs, much more buffer technical assistance (TA) will be needed to find and recruit landowners as well as assist with buffer planning, planting and maintenance. As turnover among buffer TAs has stalled progress, we want to work to create new stable, permanent and well-paid buffer TA positions. At the same time, although we have made some progress in hiring buffer TAs to service USDA programs, it would also be beneficial to train more versatile buffer TAs that could assist with non-USDA programs. One of our goals with the Natural Filters Restoration Program will be to increase available funding for training dedicated buffer TAs who can deliver a wide range of natural filter practices, institutionalizing a restoration economy and workforce that delivers effective and efficient outcomes. This will involve extensive cross-training across sectors, including with the well-established and rapidly growing stream restoration industry. Training and expanding the buffer TA workforce is a good investment, as although landowners need extensive assistance initially, once established, buffers require little maintenance and can provide long-term water quality benefits.

We have also identified several opportunities to improve collaboration with other workgroups and GITs at the Bay Program. For example, we have been working with the wetlands workgroup as we have developed the concept for the Natural Filters Restoration Program and hope that this program could eventually accelerate implementation of both wetlands and buffers. We have also collaborated with the urban stormwater and stream health workgroups to develop a GIT-funding proposal that would identify opportunities to reduce the loss of forest buffers to stream restoration projects. If funded, we plan to continue working with these workgroups to better couple RFB and stream restoration BMPs.

However, there are also areas where we still need to develop better collaborative relationships with CBP workgroups and leadership. For example, as RFBs feature prominently in the Phase III WIPs, we need to work more closely with the Water Quality GIT leadership ensure that state water quality leads are identifying opportunities to expand buffer implementation through funding and dedicated staff to meet their WIP buffer goals. Another area in which we hope to work with the WQ GIT is to explore opportunities to address buffer verification issues. Forestry Workgroup members have expressed some confusion over verification and NEIEN and would benefit from additional reporting capabilities to confirm that they have effectively verified buffer acres in NEIEN.

We also want to work more closely with the Agricultural Workgroup to improve consideration of buffers as a part of whole farm planning with other conservation practices, like cover cropping. This whole farm planning approach can serve to address multiple resource concerns, while also improving the efficacy of buffers to improve water quality by increasing upstream infiltration and reducing concentrated flow issues. There are also opportunities to improve outreach on buffers with the agricultural community, who have historically been resistant to putting in more buffers. We would like to work with the Agriculture Workgroup to consider how we can better reach the agriculture community and incentivize additional buffer implementation.

Although we will be focusing more attention on supporting new and existing flexible buffer programs in the coming two years, there are opportunities for the Bay partnership to improve CREP. We will continue to work to ensure that CREP in the 2018 Farm Bill are interpreted favorably. We will also explore opportunities to provide additional flexibility with contracts, while still supporting the major objectives of improving water quality and wildlife habitat. In particular, there could be room to consider less expensive ways to install buffers, such as reducing the required planting density. Finally, we will consider ways to improve equity in access to federal funding for buffers across the watershed. Relaxing the federal match requirements for RFB could help ensure that communities that are less well-off economically can also access these critical federal funds. One option would be to implement a sliding scale for match based on the socio-economic strength of communities. We will work to facilitate collaboration between NRCS, FSA and EPA CBP to further consider opportunities to improve the efficacy of CREP.

What, if any, actions can the Management Board take to help ensure success in achieving your outcome?

Please be as specific as possible. Do you need direct action by the Management Board? Or can the Management Board direct or facilitate action through other groups? Can you describe efforts the workgroup has already taken to address this issue? If this need is not met, how will progress toward your outcome be affected? This assistance may include support from within a Management Board member's jurisdiction or agency.

Fundamental structural changes are needed to improve progress on RFBs in order to meet the extremely ambitious commitments made in the Phase III WIPs. There are many opportunities for CBP to provide leadership in these efforts. First, we would like additional support from Management Board and WQ GIT leadership in pursuing conservation finance for RFB through the new Natural Filters Restoration Program. To provide the structures needed for such a Program, CBP should encourage the development of state-wide buffer strategies that bring together a broad coalition of public, foundation and private initiatives. These coalitions should be formalized and should have active involvement from state and CBP water quality programs. Once available, the new land use imagery will support these coalitions by showing where buffers are still needed and where efforts should be focused across the landscape. The state buffer strategies should also look at ways to expand the buffer TA workforce, providing consistent training to service both USDA and non-USDA programs (including the Natural Filters Restoration Program, once operational).

In the near-term, the Management Board could assist with implementing the Natural Filters Restoration Program by identifying public funding opportunities that could contribute to this Program as leverage to attract private financing. For example, state CWSRF or 319 funds and potential COVID stimulus dollars could contribute. Although there are other demands on SRF and 319 dollars, the relative cost-effectiveness of RFBs over the long-term plus the multiple co-benefits they offer for living resources make them a good use of this money. We would like assistance in identifying the most promising funding programs in each state that could be leveraged and a knowledgeable state contact to shape these funding sources.

We would also benefit from more focus from the Management Board in identifying commitments that could be made by the partnership, other workgroups and GITs to prioritize buffers in existing programs. This should include both the planting of new

buffers and the conservation of existing buffers, to ensure we aren't losing buffers to other restoration practices. We would be particularly interested in working with the MB and state WQ leads to identify existing landowner assistance programs that could be modified to include or require buffer planting and/or maintenance. Once these programs have been identified in each state, we would like to work with the appropriate agencies to amend the programs as needed and pilot these changes. In terms of increasing high-level support for buffers, we would also welcome the opportunity for a future EC meeting to focus on forests and RFBs.

The Management Board could support efforts, some of which were identified by the PSC, to improve CREP. The MB should have a working understanding of the program to advocate for additional staff in their state, to troubleshoot problems and streamline processes, and to facilitate more intentional conversations between USDA agencies, water quality leads, entities currently external to the CBP partnership, and the general public.

Finally, we would like the Management Board to support the development of gap analyses in each state to better demonstrate why RFB need to be given greater priority in state water quality programs. The WQ GIT could coordinate this work to assess what we are losing in each state by not staying on track with meeting our buffer goals. Evaluation of water quality implications of slow buffer implementation should also address what we are losing in terms of biological impairments in streams and living resources. Each state WQ program could do this analysis, in coordination with their forestry departments, with the goal of producing a good state-by-state document of the benefits of RFBs. This document could, in turn, be used to support decisions to direct public funding to the Natural Filters Restoration Program and to better prioritize buffers through existing landowner assistance programs.