Project Description

Your Name: Matt Keefer
Goal Implementation Team: Forestry Workgroup, Water Quality GIT
Project Title: Assessing Multifunctional Riparian Forest Buffer Benefits
Project Type (See Section IV above)**:** Work plan implementation Project: Includes components of Economic modeling, Baseline analyses, Environmental monitoring, and Environmental demonstration and assessment project
Goal/Outcome:

-Understand how multifunctional riparian forest buffers will be classified in the Bay Model;
-Monitor and collect data to characterize the water quality benefits of multifunctional riparian forest buffers;
-Evaluate tree and shrub species' survivability;
-Ascertain initial options and barriers to identifying or establishing markets for products produced from multifunctional riparian forest buffers.

Estimated Cost: $65,000
Justification: Provide a 2 paragraph description of the work and why it is needed. It is recommended that you draw upon one or more work plans.

This project relates to several key actions identified in the Riparian Forest Buffer Management Strategy. Relationships to other work plans are noted below.

Riparian forest buffers are a key BMP identified in each jurisdiction's watershed improvement plan. Recent enrollments of riparian forest buffers in have declined across the Bay watershed. Without additional tools beyond the current offerings, Pennsylvania is unlikely to meet its goal. Adding greater flexibility in landowner eligibility, riparian forest buffer designs, allowable plant materials, and other elements, without compromising water quality, will help to reinvigorate interest in riparian forest buffers and accelerate participation across the Bay watershed. Allowing landowners to harvest products and produce an income from woody plants provides additional incentives to landowners to establish riparian forest buffers, to maintain them, and to retain them for the long-term. Virginia Tech has had some success with multifunctional buffer establishment.

In order to assess and monitor this innovative, more flexible approach to buffer implementation, grant funding would be used to plant multifunctional riparian forest buffers at a small number of sites. Each project would include a core, conventional buffer of at least 15 to 35 feet wide, and then include alternative designs for a multifunctional buffer. At each site, water quality, tree and shrub species survivability, and other data will be recorded to indicate the effectiveness of various multifunctional buffer designs, depending on site conditions and landowner preferences. Our current assumption is that these designs and plantings would meet the definition of and receive the same level of credit as "Forest Buffers" in the Bay Model. This project would provide data for the Forestry Workgroup or an Expert Panel if needed to confirm this understanding. To ensure that there is a viable path to market and sell products from multifunctional riparian forest buffers, research will also be performed on the existing options and obstacles in getting these products to market.

As previously mentioned, this project directly addresses several management approaches and key actions identified in the Forestry Workgroup's 2-year RFB work plan; including Leadership through establishing pilot projects; RFB Enhancements by establishing need for alternative funding options; RFB Technical Assistance by appealing to landowners' preferences and addressing their concerns; and more.

Methodology: Provide a 1-2 paragraph description of how the work is likely to be accomplished.

Funding would be provided to install multi-functional RFBs on private and/or public land in PA. These pilot sites would include several planting/buffer designs on a number of different sites/environmental conditions. Funding would also support an accompanying monitoring program to assess water quality improvements and tree and shrub species success and survivability. Additionally, the project would explore potential markets for products produced from the buffers. Data would be compiled, analyzed, and reported to the Forestry Workgroup and other appropriate Goal Teams.

Cross-Goal Benefits: What other goals may be advanced through this work?

This project can help to advance the work of several Management Strategies:

- Tree Canopy: these alternative buffers could be planted on non-farmland; thus increasing tree canopy in developed areas
- Stream Health: by providing baseline data
- Healthy Watersheds: relates to several key actions related to forest cover
- Citizen Stewardship: by providing potential volunteer opportunities in the form of planting or maintenance; and also supporting community engagement in watershed improvement activities and understanding local food markets

Are you willing to serve as GIT lead (see description of the role in Section VI above) If no, suggest other GIT lead – Yes. Matt Keefer or Tracey Coulter from PA DCNR are willing to serve as GIT lead.