Template 1. Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Template – Stream Restoration

Certain priority initiatives proposed in this plan do not have specific representation in the CAST model (e.g. reductions in winter manure spreading). In these cases, recommended BMPs were used in the CAST model to account for their associated reductions. As a result, targets listed here align with, but do not necessarily match numbers entered into the CAST model. Please see draft scenario tables and documentation for specific clarifications. *Additionally, for this reason, cost figures should be based on CAST scenario calculations, not performance targets.*

Green - action has been completed or is moving forward as planned **Yellow - action has encountered minor obstacles**
Red - action has not been taken or has encountered a serious barrier

Action #	Description	Performance Target(s)	Responsible Party(ies) and Partnerships	Geographic Location	Expected Timeline	Resources Available: Technical & Funding	Resources Needed: Technical & Funding	Potential Implementation Challenges/Issues
Priority Initiative 1: Stream Restoration								
1.1	*50 projects plus basic, cost effective monitoring (field inspections) of before and after water quality results that are shared* *Include sourcewater protection work*	*In-stream restoration* - *Urban (5,280 linear ft) and non-urban (40,000 linear feet) total by 2025.* *Wetland restoration in floodplain (50 acres)* *As site specific details become available, we will use the alternative BMP template for*	*Municipalities, LCCD, WSI, watershed groups, DTU, USFWS, LandStudies, USACE, DEP, Lancaster County Clean Water Consortium, DEP, PAFBC, EPA*	*Contiguous projects in priority watersheds TBD* *Specific sites TBD based on opportunity, permit cycles, and compliance needs* *The intention is to address source water issues as well*	*Implemented and/or funded by 2025*	*319 funding for Mill Creek, Conowingo, and Conewago* *Growing Greener funding* *Exelon funding* *Private funding* *NFWF funding* *Buffer work* *Practice Keeper as data hub for permits and projects*	*Regulatory certainty from state and federal agencies;* *More municipal education;* *Central data collection for monitoring data* *Carefully expand Practice Keeper to non-LCCD staff so a more collective effort is possible* *Need to identify short and long term goals* *Expedited permit process*	*Lack of funding available to achieve the projects at the pace we need* *long permit timelines* *presumed contiguous willing landowners when that may not be the case, especially in the short term* *Develop an acceptable monitoring protocol that includes a*

		floodplain and stream restoration projects with legacy sediment.				*Data experts like the Academy of Natural Science, SRBC, WSI, Chesapeake Conservancy, PSU, and more*	***Funding Needed*** *Growing Greener funding* *Exelon funding* *Private funding* *NFWF funding* *DCNR funding* *Dept Ag funding* *NRCS* *US Army Corps* *EPA* *PennVest* ***Estimates*** *$150 (bank stabilization, smaller –scale projects, etc) -$350 (legacy sediment or floodplain restoration type projects) per linear foot (this includes staff time)* *$75,000 per acre of wetland restoration* ***Add 20%*** *on top of all costs for pre- and post-project work (finding willing land owners, identifying the best*	*publically viewable format* *Greater state/federal permit process speed (especially for commercial projects)* *current MS4 set up limits municipal interest/availability to participate* *In general, current municipal ordinances do not make these projects an easy "yes" for a developer.*

							project locations, followed by monitoring, maintenance, etc) ***Staff*** - *Outreach staff to make initial contact with landowners* - *Permit processors (Harrisburg-based work)* - *Excavators* - *Technical assistants to install projects (contractors)* - *project managers* - *monitoring equipment and data analysis experts*	
1.2	*Dam removal notification system so that appropriate restoration accompanies any removals*		*County, PAFBC, Water Science Institute*	*Priority watersheds TBD*	*Implemented and/or funded by 2025*	*County, PSU, watershed specialists, PAFBC*		*A necessary comprehensive approach with connection between dam removal and restoration work; current situation allows a dam to be removed and the permitee to walk away, which results in much more sediment pollution*

Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Template

Each county-based local area will use this template to identify:

1. Inputs – These are both existing and needed resources, public and private, to implement the identified priority initiative. These include both technical and financial resources, such as personnel, supplies, equipment and funding.

2. Process – what is each partner able to do where and by when. These are the action items listed under each priority initiative.

3. Outputs and outcomes – both short and long-term. These are the priority initiatives identified by each county. The performance targets are the intermediate indicators that will measure progress.

4. Implementation challenges – any potential issues or roadblocks to implementation that could impede outputs and outcomes

For each Priority Initiative or Program Element: Use the fields, as defined below, to identify the inputs and the process that will be followed to achieve each priority initiative. This is the "who, what, where, when and how" of the plan:

Description = What. This may include programs that address prevention, education, or as specific as planned BMP installations that will address the Priority Initiative. A programmatic or policy effort will require some ability to quantify the anticipated benefits which will allow calculation of the associated nutrient reductions.

Performance Target = How. This is an extension of the Description above. The Performance Target details the unique BMPs that will result from implementation of the Priority Initiative and serves as a benchmark to track progress in addressing the Priority Initiative. Performance Targets may be spread across multiple Responsible Parties, Geographies, and Timelines based on the specifics of the Initiative.

Responsible Party(ies) = Who. This is/are the key partner(s) who will implement the action items though outreach, assistance or funding, and who will be responsible for delivering the identified programs or practices.

Geographic Location = Where. This field identifies the geographic range of the planned implementation. This could extend to the entire county or down to a small watershed, based on the scale of the Priority Initiative, range of the Responsible Party, or planned funding/resources. *NOTE: Resource limitations alone should not limit potential implementation as additional funding may become available in the future.*

Expected Timeline = When. Provide the expected completion date for the planned activity. This should be a reasonable expectation, based on knowledge and experience, that will aid in tracking progress toward addressing the Priority Initiative.

Resources Available: Technical & Funding = This field will note technical and financial resources secured/available to implement the program (Description). This is the total of the resources identified in the County Resources Inventory Template below allocated to the priority initiative as a whole; or, if available, to each action.

Resources Needed: Technical & Funding = This field will note technical and financial resources needed/outstanding to implement the program (Description). This is the total of the additional resources projected and identified as needed in the County Resources Inventory Template below allocated to the priority initiative as a whole; or, if possible, to each action.

Potential Implementation Challenges/Issues = This field will note challenges and issues that may delay program implementation (Description)