

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

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	Potential Implementation Challenges or Recommendations	Resources Available		Resources Needed		Annual Progress to Date (2022)
							Technical	Financial	Technical	Financial	
Priority Initiative 2: Agriculture											
2.1	Plain sect farmers outreach and engagement	<p>No specific target, success will be measured by implementation rates of BMPs on plain sect farms</p> <p><i>One farm-anchor project in 2022</i></p> <p><i>Game plan that includes Environmental Education (EE) Grant content details 1st qtr 2022</i></p>	Chester County Conservation District (CCCD)	All areas with inherent tie to prioritized catchments	<p>On-going with inherent tie to Action 2.3</p> <p>Game plan development in late 2021 to early 2022 that includes details for an Environmental Education (EE) grant application (game plan intended to detail who, what, where, etc. that forms the basis of an EE application)</p>	<p>Specific individual solely focused on plain sect community engagement and assistance (boots-on-the-ground)</p> <p>Organize teams (similar to PSU teams) to target 1 or 2 communities (reference BC efforts in Honeybrook area)</p> <p>“Bay Fisherman to Amish Country” endeavor (bring fisherman up from the Bay for field day)</p> <p>Macros training via Amish schools (Octoraro Watershed Association effort) and kits</p> <p>Funding for outreach individual is necessary to improve probability of finding the right individual*</p>	CCCD	<p>EE Grant</p> <p>Envirothon (being used for kits)</p>	Individual with a blend of technical knowledge, experience, and ability to successfully engage the plain sect community	\$35,000/year (assuming part-time individual to start)	<p>Outreach occurring as part of a broader outreach effort. In addition to regular interactions with the Plain Sect community through BMP implementation projects, individual meetings have been held for purely education and outreach purposes.</p> <p>These outreach visits have consistent topics including planning and implementation needs on each farm, program availability, and resources available for farmers.</p> <p>Since 8/1/2022, 15 outreach visits have been held on Plain Sect operations.</p> <p>Although we did not receive the EE grant identified yet, we received funds through Upper Oxford Township Outreach Agreement to perform outreach. We have not prioritized the “Bay Fisherman to Amish Country” endeavor because of the aforementioned opportunity in Upper Oxford TWP.</p> <p>An Aquatics Kit was created for use by educators through Envirothon funds.</p>

2.2	General ag-focused education and outreach	<p>No specific target, success will be measured by implementation rates of BMPs across the ag sector</p> <p><i>Game plan 1st qtr 2022</i></p>	<p>CCCD, Chester County Water Resources Authority (CCWRA), Technical Service Providers (TSPs), Penn State Extension, NRCS, watershed groups</p>	<p>All areas with emphasis provided towards prioritized catchments</p>	<p>On-going, with inherent tie to Action 2.3</p> <p>Game plan in late 2021 to early 2022</p>	<p>Digital and paper support materials (comparing compliance vs. stewardship)</p> <p>Series of publications outlining individual BMPs (build off CCCD initial efforts)</p> <p>One-on-one engagements with individual farmers.</p> <p>Funding for outreach individual is necessary to improve probability of finding the right individual*</p>	<p>CCCD, CCWRA, Penn State Extension, TSPs, NRCS, Ag Preserve Board</p>	<p>EE Grant</p>	<p>Individual with a blend of technical knowledge, experience, and ability to successfully engage the ag. community</p>	<p>See Financial Need for Action 1.1 for proposed individual</p>	<p>General outreach conducted through newsletters, mailings, and standard CCCD farm visits. CCCD's Back 40 Newsletter was organized and is set for publishing in early October. This newsletter is distributed to over 1000 individuals, the vast majority being within the farming community.</p> <p>Additionally, a focused effort commenced in partnership with Upper Oxford Township. As of September 27, 100 individual farms have been visited. Ultimately, all farms in the municipality will receive this focused visit, which includes a discussion of conservation needs, including planning, new BMPs, or maintenance to existing BMPs.</p>
2.3	Catchment Targeting Initiative	<p>Metrics inherently tied to other action items (needs will be established on a catchment-to-catchment basis)</p>	<p>Ag Action Team (AT), Data Management (DM) Action Team (AT), Catchment Targeting (CT) Action Team (AT), Municipal Action Team (AT), watershed groups, local municipalities, Brandywine Conservancy, CCCD, CCWRA, Environ. Advisory Committees (EACs)</p>	<p>Prioritized catchments (TBD)</p>	<p>Late 2021 launch with inherent tie to Priority Initiative (P.I.) 1- Catchment Targeting Initiative (with funding: 4 catchments in 2021, 20 in 2022)</p>	<p>Partner with Catchment Targeting (CT) AT during catchment prioritization efforts to identify individual catchment needs, BMP probabilities, etc. specifically for the ag sector</p>	<p>Practice Keeper (PK)</p>			<p>See P.I. 1 for overall catchment targeting financial needs</p>	<p>Currently solely focused in the Upper Oxford area to flesh out and finalize the process from start-to-finish. This will help better define partner outreach, technical considerations, etc. for the next set of catchments and watersheds.</p>
2.4	Focused Ag BMP implementation	<p><i>Soil Conservation and WQ Plans – 26,210 total acres</i></p> <p><i>Nutrient Management Core N – 12,000 total acres</i></p> <p><i>Nutrient Management Core P – 8,000 total acres</i></p>	<p>CCCD, NRCS, TSPs</p>	<p>All areas with emphasis provided towards prioritized catchments</p>	<p>On-going with inherent tie to Action 2.3</p>	<p>Promote broad slate of BMP types across ag industry and based on individual farm conservation needs based on initial implementation scenario</p> <p>Future scenario adjustments based on rates of implementation realized and progress</p>	<p>Farm survey, CCCD Bay Implem. Plan, Penn State Extension, NRCS, TSPs, CCCD, Ag Preserve Board</p>	<p>REAP, CEG, EQIP, RCPP, Most Effective Basin Funding (MEBF), State Reimb. Program, PennVEST, PL566</p>	<p>Practice Keeper (PK) entry/ mgmt at CCCD</p> <p>Long-term verification processes</p>	<p>\$110,000/yr – 2 persons (PK mgmt- individual dedicated to PK; verifications person/field)</p> <p>Capital Costs: ~\$14.6 million</p>	<p>BMP implementation has occurred throughout the Bay watersheds using a variety of available programs, including RCPP, REAP, EQIP, Chesapeake Bay Phase II Funding (PADEP), and CAP Implementation Funding (PADEP). In total, 78 BMPs were installed within the Chesapeake Bay watershed in 2022.</p> <p>In addition, applications for other grant programs through NFWF have been submitted for further implementation in the watersheds.</p>

		<p><i>Barnyard Runoff Control – 20 new acres</i></p> <p><i>Prescribed Grazing – 1,350 total acres</i></p> <p><i>Manure Storage Facilities – 11,925 new AUs</i></p> <p><i>Precision Feeding – 4,000 Dairy Cow AUs</i></p>				<p>under BMP reconciliation efforts</p> <p>Assume increased realized and/or capture of unreported acres through catchment targeting</p> <p>Farmer/Amish community resistance to buy-in (including farmers indicating they do not want assistance as they are unsure if they will still be in business in 2-3 years)</p> <p>Partner with Riparian Buffer (RB) AT for potential buffer bonus or buffers implementation</p> <p>Need to separate “inspections” from “verifications” and acquiring info/data from farmers</p>					<p>Further work has been accomplished to create a new application for future CAP Implementation Grant projects, which is now in use. A corresponding ranking tool has been finalized.</p> <p>Organizing has begun in anticipation of state ACAP funding with an emphasis on ensuring that CAP goals are addressed with this funding.</p>
2.5	Mushroom Farms Conservation	Metrics inherently tied to other action items	CCCD, TSPs	All mushroom farms	2022-2025 (4 year cycle, via Growing Greener funding)	<p>Continued specific individual at CCCD focused on mushroom industry (plans, assistance, and inspections)</p> <p>Mushroom composting as a delineated and specific BMP would provide reductions*</p>	Mushroom farm resource conserve. on staff (via GG funding), TSPs	Growing Greener (GG) funding for current staff	Resource Conserv. Focused on mushroom industry	GG app: \$200,000 (+~\$40,000 match)	<p>A Growing Greener grant was obtained, which will fund the mushroom position through 2024. This position focuses on the review of Mushroom Farm Environmental Management Plans (MFEMPs) submitted by consultants for individual operations. The position then works with partners to implement BMPs from these plans. Additionally, this position provides outreach to the mushroom farming community and works with DEP to maintain compliance on farms.</p>
2.6	BMP Reporting Reconciliation		Ag AT, Data Mgmt AT, Catchment Targeting AT	All areas with focused actions in prioritized catchments	Aligned with Action 2.3 activities	<p>Partner with Data Management AT for reconciliation of BMP reporting numbers (primarily through catchment targeting)</p> <p>Current perception/ organization of BMP targets is a mix of uncaptured/ underreported BMPs and additional BMP implementation. Reconciliation in conjunction with</p>	<p>CCCD, TSPs, NRCS, Ag. Preserv. Board, County DCIS (Dept. of Computer and Info. Services)</p> <p>PK</p>		See Action 1.4 for technical needs	See Action 2.4 for financial needs	<p>Efforts have been made to increase reporting of BMPs into PK throughout the county, and particularly within the Chesapeake Bay watershed. Plans are obtained during outreach visits and Phase II inspections, which are entered in PK. Previously installed BMPs associated with these plans are verified when appropriate and noted as such in PK.</p> <p>NRCS has begun adding practices 390 and 391 when planning exclusion fencing. None of these have been implemented yet, but this will help account for buffers in the future.</p>

						<p>catchment targeting will provide a pathway to delineate (and capture) underreported BMPs and needs for additional BMPs.</p> <p>Transfer of BMPs from NRCS and other entities into local PK platform would streamline process*</p>					
2.7	Horse Farms Conservation	Horse Pasture Management – 1,450 total acres	CCCD, TSPs, NRCS	All horse farms with outreach driven by prioritized catchments	<p>Coincides with Catchment Targeting Initiative and Action 2.3 (where horse farms are encountered)</p> <p>Current definition of horse pasture management does not provide nutrient reductions*</p>	<p>A number of pastures may meet requirements but are not captured at this time.</p> <p>Individual farms may present other opportunities based on conservation needs.</p>	CCCD, TSPs, NRCS, PA Horse Breeders Assoc. (PHBA)	Breeders Fund EQIP, etc.		\$521,739 (capital cost only-assuming full implement. required)	Increased outreach to equine operations demonstrated through manure management workshop specifically for horse operations. The event was held in April, and 9 participants left the meeting with a completed manure management plan.
2.8	Road run-off to farms	Game plan early 2022	CCCD, local municipalities, PennDOT, TSPs, EACs	All areas with emphasis on prioritized catchments	<p>Game plan late 2022 that determines method to capture farms and identifies and spells out partners that need to be involved and arena(s) for coordination</p>	<p>Delineate between PennDOT and local roads as distinct approaches required for each type of agency</p> <p>Infrastructure improvements may be required to mitigate impacts from runoff</p>	Local engineers, TSPs, PennDOT, County Planning	Metropol. Planning Org. TIP, American Rescue Plan Act (ARCA) Local Relief Fund, PennVEST	DEP		<p>In partnership with Upper Oxford Township, CCCD is seeking opportunities to reduce impact from roads onto farms and from farms onto roads.</p> <p>The newly developed non-ag sub-grants program includes preferences towards projects that reduce run-off damage to farms.</p>

2.9	Farmer's only Roundtable		Ideally minimum of five (5) local farmers	Active farmers located in the Chesapeake Bay Watershed (CBWS)	2022	<p>Extension of previous focus activities providing an arena for farmers ONLY (no others) that report back thoughts, recommendations, etc.</p> <p>Provide topics/talking subjects (e.g. how to create "win-win" scenarios)</p>	Local farmers				2022 This has not been done yet. Primary challenge is staff time as well as in-person meeting concerns. However, internal discussions have recently occurred about holding farmer meetings, including a farmer roundtable in 2023.
2.10	Soil Health BMP Implementation	<p><i>Tillage Mgmt High Residue – 11,000 total acres/yr</i></p> <p><i>Tillage Mgmt Conservation – 8,000 total acres/yr</i></p> <p><i>Cover Crop Traditional – 6,000 total acres/yr</i></p> <p><i>Cover Crop with Fall Nutrients – 12,500 total acres/yr</i></p> <p><i>Commodity Cover Crops – 300 total acres/yr</i></p>	CCCD, TSPs, NRCS	All areas with emphasis provided towards prioritized catchments	Coincides with Catchment Targeting Initiative and Action 2.3	<p>Future scenario adjustments based on rates of implementation realized and progress under BMP reconciliation efforts</p> <p>Assume increase on implementation through catchment targeting</p> <p>Limited definition of cover crops and what counts as a reduction*</p> <p>Potential gap between FSA reporting and CAST reported data</p> <p>Lock down and potentially expand transect survey process</p> <p>Funding to launch incentives for adopting cover crops would remove barriers for certain farmers*</p>	CCCD, Penn State Extension, NRCS, TSPs, transect survey, Penn State AEC/ farm survey	REAP, CEG, EQIP, RCPP, MEBF, PennVEST, PL566		<p>Capital Cost: ~\$1.4 million</p> <p>\$20,000 for cover crops incentive program start-up</p>	2022 This has not been done yet. Primary challenge is staff time. A preliminary plan for more fully assessing cover crop implementation is taking place. This would involve a visual survey of farms within the watershed followed by recording into PracticeKeeper. If this proves feasible, a similar effort will take place to record no-till implementation in the spring of 2023. Beyond that, promoting the adoption of new acreage into cover crops and no-till will be a focus of available ACAP funds in 2023.

2.11	Expanded Nutrient Management	<i>NM N Rate – 5,000 acres</i> <i>NM N Placement – 4,000 acres</i> <i>NM N Timing – 4,000 acres</i> <i>NM P Rate – 5,000 acres</i> <i>NM P Placement – 4,000 acres</i> <i>NM P Timing – 4,000 acres</i>		All areas with emphasis provided towards prioritized catchments	Coincides with Catchment Targeting Initiative and Action 2.3	Aim to increase level of organization and understanding of developed, implemented, and back-logged Soil Conservation Plans prior to tackling expanded nutrient management planning and approaches	CCCD, Penn State Extension, NRCS, TSPs, Penn State AEC/farm survey	REAP, CEG, EQIP, RCPP, MEBF, PennVEST		Capital Cost: ~\$230,000	There has been an effort to increase the amount of recorded conservation plans to give us a better understanding of what needs remain. This has mostly been done through collecting plans through outreach visits and inspections. This has also led to an increase in manure management plans being completed as farms in need have been found. Farms required to have an Act 38 nutrient management plan (CAOs, CAFOs) have not be found through this approach, but will be directed to if and when they are discovered.
2.12	Manure Transport	<i>Manure Transport out of Chester County – 1,000 DT/yr</i>	Farmers, haulers, CCCD, TSPs	All areas	On-going	Act 38 reporting	TSPs, NRCS, CCCD			Capital Cost: ~\$20,000	2022 This has not been done yet. Primary challenge is staff time.

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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.

Asterisk: Place an asterisk next to the action number(s) for action items that appear in both the County Planning and Progress Template and the Programmatic Recommendations Template.

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 through 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).