Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Chester County

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 # Green Yellow Red	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	Reason for Change to Action Item
							Technical	**Financial**	**Technical**	**Financial**		
1.1	Catchment Assessments and Prioritization	All 59 catchments assessed prior to 2025 Game plan outlining "step-by-step" analysis process by end of 2021	Chester County Conservation District (CCCD), Chester County Water Resources Authority (CCWRA), Technical Service Providers (TSPs), watershed groups, local municipalities, Environ. Advisory Committees (EACs), Ag Action Team (AT), Riparian Buffer (RB) Action Team (AT), Municipal Action Team (AT), Data Management (DM) Action Team (AT)	All areas (all catchments to be assessed)	59 total catchments 2021: 4, 2022: 20, 2023: 20, 2024: remaining (dependent on acquired funding) Timeline with no additional funding for 59 total catchments: 2021: 2-3 2022-2030 at 6/year	Use the Catchment Management Database (CMD) as preliminary prioritization to assess individual catchments and outline conditions, needs, opportunities, etc. "Political" overlay with initial steps including local municipality outreach to determine willingness or receptiveness is critical "Boots-on-the-ground" funding and capacity for engagements, assessments, etc. Coordinate with other action teams for agricultural, buffer, and urban conservation opportunities and needs	CCCD, Octoraro Watershed Association (OWA), Stroud, Alliance for the Ches. Bay (ACB), Ches. Bay Foundation (CBF), Chesapeake Conservancy, Brandywine Conservancy, Ag Preserve. Board, local engineers/ consultants, County DCIS (Dept. of Computer and Info. Services), TSPs, CCWRA	NFWF, Chesapeake Bay Trust (CBT)	Centralized database platform	$2,500/ catchment (~$50,000/yr) for on-the-ground efforts, engagements etc. (TOTAL: $147,500) Assume assessments personnel and funding will convert to long-term verifications personnel and funding; and potentially maintenance	**2024** The "Water Quality Modeling to Support Source Water and Aquatic Life Protection in Octorara Creek Watershed" project including local stakeholders, Stroud, USEPA, PADEP, and more continues to support the potential development of Alternative Restoration Plan (ARP) for the Octorara watershed. Water quality data collection and analysis with the intent to build a fully operational WQ model is the current focus of efforts. **2023** EPA has begun the preliminary process of creating an Advanced Restoration Plan in one or two catchments above the Octoraro Reservoir. EPA is looking for input on catchment selection. We have asked EPA if they are able to provide some quantitative information about each potential catchment in	

						Lack of funding would result in a timeline through 2029/2030 to cover all catchments with existing resources (~6/yr) Efforts should result in regional projects that provide multiple benefits where accelerated permitting processes would be ideal.* Action is inherently tied to all other priority initiatives. Catchment targeting will involve a desktop analysis step followed by game plan for outreach and field verifications outlining the who, when, where, etc.					Chester County. The Ag Team will be tasked with giving a qualitative evaluation of the ”human element” of each catchment to get a feel for openness to conservation the community is. One catchment has been looked at in this manner so far. Upper Oxford Township outreach visits were completed. **2022** Currently solely focused in the Upper Oxford area (primary watershed) to fully flesh the entire process out across all sectors (ag, urban/ suburban, natural sectors). Catchment selection has been dependent on existence of current partnerships (such as the Oxford Region Planning Committee and CCCD’s new partnership with Upper Oxford) where municipalities are working towards getting their PRPs approved and learning how to find resources for implementation. a sense of the “political overlay” of the region. The catchment assessment and prioritization has been an	

											important part of the other priority initiatives.	
1.2	Conservation Opportunities	*Farmland Conservation – 4,000 total acres* *Forest Conservation – 300 total acres* *Wetland Conservation – 20 total acres*	CCCD, Ag Preserve Board, County, local watershed groups	All areas with emphasis on prioritized catchments	On-going with inherent tie to Action 5.1	Potentially extend Eco Invest. Partners (EIP) P3 in Cecil County (Elk and North East watersheds) into Chester County. Transfer of Development Rights (TDR) Programs Carbon credits program for private forests (provides incentives for forest conservation that also provides nutrient and sediment reductions)	Ag Preserve. Board, Cecil Land Trust, Brandywine Conservancy, local TSPs	Ag Preserve. Board			**2024** Outreach and engagement continues; an additional 161 acres were preserved during the current year. **2023** Continuous outreach with existing preserved farms. Additional farms preserved as appropriate and landowner receptive. **2022** Continuous outreach with existing preserved farms. Additional farms preserved as appropriate and landowner receptive.	
1.3	Low Volume (LV) / Dirt & Gravel Road Opportunities	*Driving Surface + Raising the Roadbed – 2,000 new linear feet*	CCCD, local municipalities	All areas	On-going with inherent tie to Action 5.1	Continue popular local program	CCCD			Capital Cost: ~$30,000	**2024** No DGLVR implementation realized during 2024, but additional funding may assist advancing new opportunities. **2023** No DGLVR implementation in 2023. Current DGLVR projects are not in the Chesapeake Basin. Outreach within the watershed continues to municipalities through partner promotion and through two newsletters. **2022** No DGLVR implementation in 2022; outreach conducted to individuals municipalities through two newsletters and one-on-one outreach.	

Phase 3 Watershed Implementation Plan (WIP) Progress and Milestones 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.

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 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).

Annual Progress to Date = This field will be used for annual reporting on priority initiatives. This is a description of the action(s) your county took toward achieving the priority initiative. Examples include education and outreach, programmatic changes, etc. For numeric priority initiatives your county can retrieve those numbers directly from *FieldDoc* or put in the column "See *FieldDoc*."

Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Chester County

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 # Green Yellow Red	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	Reason for Change to Action Item
							Technical	Financial	Technical	Financial		
2.1	**Plain sect farmers outreach and engagement**	**No specific target, success will be measured by implementation rates of BMPs on plain sect farms** ***One farm-anchor project in 2022*** ***Game plan that includes Environmental Education (EE) Grant content details 1st qtr 2022***	**Chester County Conservation District (CCCD)**	**All areas with inherent tie to prioritized catchments**	**On-going with inherent tie to Action 2.3** **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)**	**Specific individual solely focused on plain sect community engagement and assistance (boots-on-the-ground)** **Organize teams (similar to PSU teams) to target 1 or 2 communities (reference BC efforts in Honeybrook area)** **"Bay Fisherman to Amish Country" endeavor (bring fisherman up from the Bay for field day)** **Macros training via Amish schools (Octoraro Watershed Association effort) and kits** **Funding for outreach individual is necessary to improve probability of finding the right individual***	**CCCD**	**EE Grant** **Envirothon (being used for kits)**	**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)**	**2024** Outreach visits and engagements continued through 2024. The "Bay Fisherman to Amish Country" event is still under consideration; but an alternative in partnership with CBF was organized for a custom boat experience (PA farmers to the Bay) during the 2024 calendar year. **2023** CCCD outreach visits continue. Twenty plain sect outreach visits have occurred since January 2023. These include visits solely for new outreach and do not include normal technical visits to Plain Sect Farms. The "Bay Fisherman to Amish Country" endeavor is planned to happen in early 2024 as a part of either the annual Producers Meeting or a joint meeting with the Octoraro Source Watershed Collaborative. Planning is underway. **2022** 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.	

											These outreach visits have consistent topics including planning and implementation needs on each farm, program availability, and resources available for farmers. Since 8/1/2022, 15 outreach visits have been held on Plain Sect operations. 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. An Aquatics Kit was created for use by educators through Envirothon funds.	
2.2	General ag-focused education and outreach	No specific target, success will be measured by implementation rates of BMPs across the ag sector *Game plan 1st qtr 2022*	CCCD, Chester County Water Resources Authority (CCWRA), Technical Service Providers (TSPs), Penn State Extension, NRCS, watershed groups	All areas with emphasis provided towards prioritized catchments	On-going, with inherent toe to Action 2.3 Game plan in late 2021 to early 2022	Digital and paper support materials (comparing compliance vs. stewardship) Series of publications outlining individual BMPs (build off CCCD initial efforts) One-on-one engagements with individual farmers. **Funding for outreach individual is necessary to improve probability of finding the right individual***	CCCD, CCWRA, Penn State Extension, TSPs, NRCS, Ag Preserve Board	EE Grant	Individual with a blend of technical knowledge, experience, and ability to successfully engage the ag. community	See Financial Need for Action 1.1 for proposed individual	**2024** General outreach continued via CCCD newsletters, mailings, and visits/engagements. **2023** General outreach conducted through newsletters, mailings, and standard CCCD farm visits. CCCD's Back 40 Newsletter is being organized and is set for publishing in early October. As of 11/20/2023, 70 farms have been visited in Upper Oxford Township. This completes the outreach effort for Upper Oxford Township. **2022** 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. 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.	
2.3	Catchment Targeting Initiative	Metrics inherently tied to other action items (needs will be established on a catchment-to-catchment basis)	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)	Prioritized catchments (TBD)	Late 2021 launch with inherent tie to Priority Initiative (P.I.) 1- Catchment Targeting Initiative (with funding: 4 catchments in 2021, 20 in 2022)	Partner with Catchment Targeting (CT) AT during catchment prioritization efforts to identify individual catchment needs, BMP probabilities, etc. specifically for the ag sector	Practice Keeper (PK)			See P.I. 1 for overall catchment targeting financial needs	**2024** Primary efforts and support have been focused within the Octorara watershed as it relates to the potential ARP and Source Water Collaborative project. **2023** EPA has begun the preliminary process of creating an Advanced Restoration Plan in one or two catchments above the Octoraro Reservoir. EPA is looking for input on catchment selection. We have asked EPA if they are able to provide some quantitative information about each potential catchment in Chester County. The Ag Team will be tasked with giving a qualitative evaluation of the ”human element” of each catchment to get a feel for openness to conservation the community is. One	

											catchment has been looked at in this manner so far. **2022** 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.	
2.4	Focused Ag BMP implementation	*Soil Conservation and WQ Plans – 26,210 total acres* *Nutrient Management Core N – 12,000 total acres* *Nutrient Management Core P – 8,000 total acres* *Barnyard Runoff Control – 20 new acres* *Prescribed Grazing – 1,350 total acres* *Manure Storage Facilities – 11,925 new AUs* *Precision Feeding – 4,000 Dairy Cow AUs*	CCCD, NRCS, TSPs	All areas with emphasis provided towards prioritized catchments	On-going with inherent tie to Action 2.3	Promote broad slate of BMP types across ag industry and based on individual farm conservation needs based on initial implementation scenario Future scenario adjustments based on rates of implementation realized and progress under BMP reconciliation efforts Assume increased realized and/or capture of unreported acres through catchment targeting 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) Partner with Riparian Buffer (RB) AT for potential buffer bonus or buffers implementation	Farm survey, CCCD Bay Implem. Plan, Penn State Extension, NRCS, TSPs, CCCD, Ag Preserve Board	REAP, CEG, EQIP, RCPP, Most Effective Basin Funding (MEBF), State Reimb. Program, PennVEST, PL566	Practice Keeper (PK) entry/ mgmt at CCCD Long-term verification processes	$110,000/yr – 2 persons (PK mgmt-individual dedicated to PK; verifications person/field) Capital Costs: ~$14.6 million	**2024** Implementation continued via all watersheds with an elevated focus in the Octorara via direct leveraged funding through CAP, RCPP, ACAP, and EQIP; along with collaboration with primary partners including the Alliance for the Chesapeake Bay that has leveraged a $500k NFWF grant for the implementation of 33 BMPs (including 10 Conservation and Nutrient Management Plans) **2023** BMP implementation has occurred throughout the Bay watersheds using a variety of available programs, including RCPP, ACAP, EQIP, and CAP Implementation Funding (PADEP). In total, 76 BMPs were installed within the Chesapeake Bay watershed in 2023. ACAP round 1 projects have been selected, and round 2 project selection is underway. 95 BMPs are planned for ACAP implementation in the Chesapeake Bay Watershed. **2022** BMP implementation has occurred throughout the Bay watersheds using a	

						Need to separate “inspections” from “verifications” and acquiring info/data from farmers					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. In addition, applications for other grant programs through NFWF have been submitted for further implementation in the watersheds. 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. Organizing has begun in anticipation of state ACAP funding with an emphasis on ensuring that CAP goals are addressed with this funding.	
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)	Continued specific individual at CCCD focused on mushroom industry (plans, assistance, and inspections) **Mushroom composting as a delineated and specific BMP would provide reductions***	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)	**2024** Outreach and verifications continued (including capture of previously implemented BMPs) under the mushroom ag resource conservationist position. **2023** The mushroom ag resource conservationist position is filled. In 2023 Seven MFEMPs have been reviewed. BMPs implemented on mushroom farms have been included in the totals for 2023 found in 2.4. **2022**	

											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.	
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	Partner with Data Management AT for reconciliation of BMP reporting numbers (primarily through catchment targeting) Current perception/ organization of BMP targets is a mix of uncaptured/ underreported BMPs and additional BMP implementation. Reconciliation in conjunction with catchment targeting will provide a pathway to delineate (and capture) underreported BMPs and needs for additional BMPs. **Transfer of BMPs from NRCS and other entities into local PK platform would streamline process***	CCCD, TSPs, NRCS, Ag. Preserv. Board, County DCIS (Dept. of Computer and Info. Services) PK		See Action 1.4 for technical needs	See Action 2.4 for financial needs	**2024** On-farm visits and engagements include capture of under-reported (including reverification) of ag-related BMPs into PK. Primary focus has been within Octorara watersheds as support for efforts tied to the proposed ARP and Source Water Collaborative. **2023** Increased reporting of BMPs into PK throughout the county has continued in 2023. **2022** 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.	

											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.	
2.7	Horse Farms Conservation	*Horse Pasture Management – 1,450 total acres*	CCCD, TSPs, NRCS	All horse farms with outreach driven by prioritized catchments	Coincides with Catchment Targeting Initiative and Action 2.3 (where horse farms are encountered)	A number of pastures may meet requirements but are not captured at this time. Individual farms may present other opportunities based on conservation needs. **Current definition of horse pasture management does not provide nutrient reductions***	CCCD, TSPs, NRCS, PA Horse Breeders Assoc. (PHBA)	Breeders Fund EQIP, etc.		$521,739 (capital cost only-assuming full implement. required)	**2024** Engagements and educational outreach efforts have more deliberately included a focus with equine operators (including manure management workshops). **2023** Staff continues to work with a number of equine producers with a focus on pasture management and erosion reduction. BMP implementation is planned for several of these operations using ACAP and EQIP funds. A manure management workshop is being planned for 2024 with emphasis on including equine operators. **2022** 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	Game plan late 2022 that determines method to capture farms and identifies	Delineate between PennDOT and local roads as distinct approaches required for each type of agency	Local engineers, TSPs, PennDOT, County Planning	Metropol. Planning Org. TIP, American Rescue Plan Act (ARCA)	DEP		**2024** One project was awarded for improvements that will reduce impacts from road run-off to a farm; additional opportunities will be noted	

					and spells out partners that need to be involved and arena(s) for coordination	Infrastructure improvements may be required to mitigate impacts from runoff		Local Relief Fund, PennVEST			as catchment assessments continue. **2023** C3AP non-ag sub-grants program includes preferences towards projects that reduce run-off damage to farms. **2022** In partnership with Upper Oxford Township, CCCD is seeking opportunities to reduce impact from roads onto farms and from farms onto roads. The newly developed non-ag sub-grants program includes preferences towards projects that reduce run-off damage to farms.	
2.9	Farmer's only Roundtable		Ideally minimum of five (5) local farmers	Active farmers located in the Chesapeake Bay Watershed (CBWS)	2022	Extension of previous focus activities providing an arena for farmers ONLY (no others) that report back thoughts, recommendations, etc. Provide topics/talking subjects (e.g. how to create "win-win" scenarios)	Local farmers				**2024** While this effort would be an ideal event, limited staff resources has led to incorporating desired objectives of a farmer's only roundtable with other on-going events (e.g. Producers Meeting, Winter Meetings, etc.). A Farmer's only Roundtable may be currently shelved, but the option for development may be revisited. **2023** This has not been planned yet. Ag team event planning is currently being focused on the Producers Meeting, rather that this kind of special event. The primary challenge is staff time, and this event will be considered for a future year. This concept was considered in lieu of our normal Producer's Meeting,	

											but we felt we needed an event this year where we are in the room. This will be considered for a future year. In-person events are just ramping back up post-COVID. **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	*Tillage Mgmnt High Residue – 11,000 total acres/yr* *Tillage Mgmnt Conservation – 8,000 total acres/yr* *Cover Crop Traditional – 6,000 total acres/yr* *Cover Crop with Fall Nutrients – 12,500 total acres/yr* *Commodity Cover Crops – 300 total acres/yr*	CCCD, TSPs, NRCS	All areas with emphasis provided towards prioritized catchments	Coincides with Catchment Targeting Initiative and Action 2.3	Future scenario adjustments based on rates of implementation realized and progress under BMP reconciliation efforts Assume increase on implementation through catchment targeting **Limited definition of cover crops and what counts as a reduction*** Potential gap between FSA reporting and CAST reported data Lock down and potentially expand transect survey process **Funding to launch incentives for adopting cover crops would remove barriers for certain farmers***	CCCD, Penn State Extension, NRCS, TSPs, transect survey, Penn State AEC/ farm survey	REAP, CEG, EQIP, RCPP, MEBF, PennVEST, PL566		Capital Cost: ~$1.4 million $20,000 for cover crops incentive program start-up	**2024** Resources improvements via standing funding streams (ACAP, CAP, EQIP, etc.) have been the primary focus with messaging to garner adoption of soil health practices. **2023** Promotion and encouragement of soil health BMPs is a part of outreach and engagements with farmers subject to ACAP funding opportunities. Additionally, promotion of NRCS funding programs with a focus on soil health has increased with new funding from the Inflation Reduction Act. **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	*NM N Rate – 5,000 acres* *NM N Placement – 4,000 acres* *NM N Timing – 4,000 acres* *NM P Rate – 5,000 acres* *NM P Placement – 4,000 acres* *NM P Timing – 4,000 acres*		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	**2024** Additional MMPs have been developed and implemented during the past year. **2023** Continuation of outreach visits has resulted in additional manure management plans being recorded. 13 new MMPs were developed within the watershed in 2023. **2022** 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	*Manure Transport out of Chester County – 1,000 DT/yr*	Farmers, haulers, CCCD, TSPs	All areas	On-going	Act 38 reporting	TSPs, NRCS, CCCD			Capital Cost: ~$20,000	**2024** Currently rely on Act 38 reporting results for determinations or assessments of manure transport activities. **2023** This has not been done yet. Primary challenge is staff time. **2022** This has not been done yet. Primary challenge is staff time.	

Phase 3 Watershed Implementation Plan (WIP) Progress and Milestones 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.

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 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).

Annual Progress to Date = This field will be used for annual reporting on priority initiatives. This is a description of the action(s) your county took toward achieving the priority initiative. Examples include education and outreach, programmatic changes, etc. For numeric priority initiatives your county can retrieve those numbers directly from *FieldDoc* or put in the column "See *FieldDoc*."

Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Chester County

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 # Green Yellow Red	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 (2023)	Reason for Change to Action Item
3.1	Buffer Opportunities and Targeting Tool(s)	See P.I. 5 (Data management) for targeting tool metrics	Riparian Buffer (RB) Action Team (AT), Data Management (DM) Action Team (AT), Catchment Targeting (CT) Action Team (AT), County Planning (CCPC), Chester County Water Resources Authority (CCWRA)	All areas with emphasis provided towards prioritized catchments	On-going with inherent tie to Priority Initiative (P.I.) 5	Potentially extend Lancaster County tools (developed by Chesapeake Conservancy) into Chester County (Octoraro already included in LC tool) Assume BMP reconciliation can be achieved through targeting tool Field verification required through Catchment Targeting Initiative as efforts progress through individual catchments	Technical Chesapeake Conservancy, County, CCPC, Brandywine Conservancy, Stroud, Alliance for the Chesapeake Bay (ACB), Chesapeake Bay Foundation (CBF), Technical Service Providers (TSPs), Chester County Conservation District (CCCD), Lancaster County Conservation District (LCCD), CCWRA, County DCIS (Dept. of Computer and Info. Services)	Financial NFWF, Growing Greener (GG)	Technical	Financial See DM AT (P.I. 5) targeting tool action item for more information	2024 **Primary focus remains within the Octorara watershed due to the ARP development and Source Water Collaborative efforts for opportunities identification.** 2023 OWA performs monthly stream monitoring in the Octoraro watershed. Local partners have a keen eye on potential opportunities for buffers, as they frequently view the land from the stream and keep a close eye on stream conditions. Octoraro Source Water Collaborative also has a monitoring work group, partnering with several organizations, which provides the OSWC with helpful information it needs to know where buffers might be needed. 2022 Met with Chesapeake Conservancy to discuss CWMT platform to capture BMP instances and potential BMP opportunities; Chester County analysis in progress.	

Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Chester County

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 # Green Yellow Red	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 (2023)	Reason for Change to Action Item
3.2	Ag Riparian Zone	*Forest Buffer – 300 new acres* *Forest Buffer with exclusion fencing – 300 new acres* *Forest Buffer Narrow with exclusion fencing – 200 new acres* *Grass Buffer – 200 new acres* *Grass Buffer with exclusion fencing – 110 new acres* *Grass Buffer Narrow with exclusion fencing – 80 new acres*	CCCD, TSPs, NRCS, watershed groups, Brandywine Conservancy, Stroud, ACB, CBF, Environ. Advisory Committees (EACs), Oxford Reg. Planning Comm., municipalities, MWS, CCPP, farmers	All areas with emphasis provided towards prioritized catchments (as catchments analyzed)	On-going with inherent tie to P.I. 1 (catchment targeting)	Farmer resistance or buy-in Proposed implementation numbers need reconciled as general perception is proposed BMP rates are more than available or capable Buffers with exclusion fencing are exclusive to riparian corridors (and applied to pasture land uses); Buffers (no exclusion fencing) are not exclusive to riparian corridors and applied to crop, hay, turfgrass, and similar land uses (can be applied to field borders and similar upland scenarios). **Separate coding or definitions reflecting these conditions would be ideal.***	CCCD, NRCS, TSPs, Stroud, ACB, CBF, watershed groups, Brandywine Conservancy	NFWF, GG, DCNR, CREP, Keystone, TreeVitalize, PACD, RCPP, EQIP, Most Effective Basin Funding (MEBF), Chesapeake Bay Trust (CBT)		Capital Cost: ~$7.5 million	**2023** See progress notes for Action 3.1. Implementation occurs where farmers are receptive and implementation is appropriate. Riparian forest buffers have been implemented through the Keystone 10 Million Trees Partnership. **2022** See progress notes for Action 3.1. Implementation occurs where farmers are receptive and implementation is appropriate. Riparian forest buffers have been implemented through the Keystone 10 Million Trees Partnership.	No changes have been made to this action item.

Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Chester County

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 # Green Yellow Red	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 (2023)	Reason for Change to Action Item
3.3	Urban/ Developed Areas Riparian Zone	*MS4 Riparian Forest Buffers – 20 new acres* *Non-MS4 Forest Buffers – 30 new acres*	Local municipalities, watershed groups, Brandywine Conservancy, Stroud, ACB, EACs, Oxford Reg. Planning Comm., CCCD, Octoraro Watershed Association (OWA)	All areas with emphasis provided towards prioritized catchments (as catchments analyzed)	On-going with inherent tie to P.I. 1 (catchment targeting)	Landowner resistance or buy-in Watershed organizations or other non-profits to assist with Keystone implementation for small projects	CCCD, local municipalities, Stroud, ACB, CBF, watershed groups, Brandywine Conservancy, local engineers/ consultants, CCPC	NFWF, GG, DCNR, Keystone, TreeVitalize, CBT		Capital Cost: ~$200,000	**2024** Currently anticipate development of more riparian area opportunities implementation with the next MS4 permit cycle. **2023** Implementation efforts pursued through Keystone 10 Million Trees in Chesapeake Bay Watershed: 4 acres implemented in Spring 2023 3 acres implemented in the Fall 2022 No TreeVitalize projects took place in the Chesapeake Bay Watershed in 2023. TreeVitalize is going through a rebranding right now. The new program name is Trees For Watersheds. **2022** Implementation efforts pursued through Keystone 10 Million Trees: 22 acres implemented in Spring 2022 17 acres planned for Fall 2022 TreeVitalize: 11 acres implemented in 2022 Grant opening for 2023 imminent	

Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Chester County

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 # Green Yellow Red	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 (2023)	Reason for Change to Action Item

Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Chester County

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 # Green Yellow Red	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 (2023)	Reason for Change to Action Item
3.4	"Buffer Bonus" Program	*Game plan by late 2021*	ACB, CBF, Stroud	All areas	Game plan for program development by late 2021	Expand or mimic existing initiatives into Chester County Complement other funding streams for implementation coinciding with other BMPs	ACB, CBF, Stroud, CCCD, TSPs, NRCS				**2024** This potential program will be revisited upon final goals and objectives of the potential ARP for the Octorara watershed. **2023** This has not been done yet. Farmers who are getting upland BMPs installed have resources to get trees planted in their riparian zone if they want. Funding for Ag BMPs is also not limited right now with ACAP entering the scene, so farmers interested in Ag BMPs don't want an additional hurdle to accessing funding. As a way to promote buffer installation, priority is given to farmers applying for ACAP that are willing to install a buffer. **2022** This has not been done yet. Primary challenge is staff time. Resources have mainly gone to Keystone 10 Million Trees Partnership Program.	
3.5	Focused Stream Corridor BMP implementation	*Urban Stream Restoration – 12,000 new LF*	Local municipalities, TSPs, watershed groups, EACs,	All areas with emphasis provided towards prioritized	On-going with inherent tie to P.I. 1	Potential regional projects for PRP reductions distributed amongst	CCCD, Trout Unlimited (TU), watershed groups, Brandywine	NFWF, GG, CBT, PennVEST, MEBF, private		Capital Cost: ~$13.9 million	**2024** One significant floodplain/stream restoration project awarded with assistance from CAP	

Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Chester County

	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 # Green Yellow Red	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 (2023)	Reason for Change to Action Item
		Non-urban Stream Restoration – 22,430 new LF *Wetland Creation – 15 new acres* *Wetland Restoration – 30 new acres*	CCCD, developers	catchments (as catchments analyzed)		multiple municipalities	Conservancy, local engineers/ consultants, Cecil Land Trust/EIP				funds during the 2024 calendar year. **2023** Toured Elk Creek floodplain restoration with RES and others. Ag Team, CCCD Board of Directors, and partners learned about this a potential option for some farmers. **2022** Aware of three "large" stream restoration projects in development. 3rd party entities (e.g. RES) exploring banking opportunities in the Bay watershed.	

Phase 3 Watershed Implementation Plan (WIP) Progress and Milestones 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.

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 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).

Annual Progress to Date = This field will be used for annual reporting on priority initiatives. This is a description of the action(s) your county took toward achieving the priority initiative. Examples include education and outreach, programmatic changes, etc. For numeric priority initiatives your county can retrieve those numbers directly from *FieldDoc* or put in the column "See *FieldDoc*."

Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Chester County

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 # Green Yellow Red	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 (2023) *add new 2023 progress above the existing 2021 and 2022 progress. Date each entry	Reason for Change to Action Item (2023-2024 milestone period)
4.1	Basin Retrofits Pilot Project		Chester County Conservation District (CCCD), Chester County Water Resources Authority (CCWRA)	Where basin and landowner receptiveness coincide	Late 2021 launch	Establish retrofits program that can be mimicked across the watershed A basin called out in an MS4 PRP could serve as the pilot	Local engineers/ consultants, CCWRA, Chester County Parks and Preserve. HOA Open Space GIS layer	NFWF, Growing Greener (GG) (assuming spring 2022 availability)		**2024** Basin Retrofits Project to serve as a pilot/model underway. **2023** One Basin Retrofit project is set to be implemented in late 2023 using CAP funding. **2022** Applied for funding from NFWF Small Watersheds Grant and were turned down. Looking to fund these projects another way. Municipal partners have been identified, sites have been selected, and project development is underway.	

4.2	Minimum Control Measure (MCM) 3 (IDD&E) Compliance Assistance	*Advanced IDD&E Control – 3,000 acres treated*	CCWRA, local municipalities, Environmental Advisory Committees (EACs)	MS4 regulated areas	Ongoing	Identify needs and assistance channels for compliant MS4 programs (specifically MCM #3 for Illicit Discharge Detection & Elimination (IDD&E) and education/outreach channels)	DEP, local engineers/ consultants, EPA		IDD&E public works training, mock inspections		**2024** Do not anticipate much movement with this action item until the new MS4 permit draft is released. **2023** Upper Oxford and East Nottingham have approved PRP's and filed MS4 Annual Reports for the fiscal year ending June 30. Penn's PRP was approved May 1, 2023. Neither Honey Brook Borough, Honey Brook Township, nor Oxford Borough have permits or approved PRP's. The primary reason for these delays is lack of clarity and insufficient responsiveness from overtaxed DEP staff. Elk, Lower Oxford and West Nottingham have waivers that in theory have been extended to March 15, 2025. East Nottingham has notification system in place for Illicit discharges. Upper Oxford has its PRP on its website. Oxford Borough has a stormwater management page on its website. Neither Elk, Lower Oxford, not West Nottingham have stormwater management pages, nor any IDD&E reporting structures in place.	

											Penn Township has a stormwater management page, but no specific IDD&E structure. **2022** The vast majority of C3 municipalities (Chester County municipalities located in the Chesapeake Basin) have either not had their first MS4 permits approved or have received waivers, hence have not produced annual reports from which these data can be tracked.	
4.3	MS4 Circuit Rider	*Circuit Rider hired/secured (one full time staff equivalent)*	CCWRA, Environ. Advisory Committees (EACs), local municipalities, Oxford Reg. Planning Comm.	MS4 muni.	Ongoing once funding secured (ideally launch spring 2022)	PCSM BMPs inventory and verification processes If parameters for capture of underreported BMPs are known, process can commence at a limited version through catchment targeting under P.I. 1 and Action 4.5 Assist with coordinating and outreach efforts for next MS4 permit cycle in 2023	Local engineers/ consultants, County DCIS (Dept. of Computer and Info. Services) Env. Finance Center (EFC)	NFWF	Centralized database platform Qualified individual that is familiar with MS4 program and Chester County	$75,000/yr: capture BMPs, build inventory and/or verify USGS inventory and conduct long-term verification processes	**2024** Efforts continued to provide support as capable and requested by individual municipalities. The primary beneficiary has been Oxford Borough with development and implementation of a GI Plan. **2023** Efforts mostly focused on distribution of needed activities amongst various existing entities and resources. There is a need to strengthening the capacity of this portion of the County in order to implement the C3AP municipal targets. A circuit rider in addition to DEP's clear completion of the 2018-2023 MS4 permit review process is essential to achieving our goals. Additionally, CCCD and CCWRA do not have the staffing capacity to take on all of the C3AP goals at once.	

											This particular goal will have to put off at least to Spring of 2024. **2022** Efforts mostly focused on distribution of needed activities amongst various existing entities and resources. There is a need to strengthening the capacity of this portion of the County in order to implement the C3AP municipal targets. A circuit rider in addition to DEP's clear completion of the 2018-2023 MS4 permit review process is essential to achieving our goals. Additionally, CCCD and CCWRA do not have the staffing capacity to take on all of the C3AP goals at once. This particular goal will have to put off at least to Spring of 2023.	
4.4	Existing BMPs Needs	*Database of implemented stormwater BMPs by 2025*	CCCD, CCWRA, local municipalities, EACs, County DCIS, County Planning (CCPC)	All areas	Ongoing, but follows initial circuit rider and BMP reporting reconciliation efforts	Potential HOA assistance entity Initiate with MS4 municipalities with intent to follow-up with non-MS4s (first step is BMPs dated to 2003) Result of BMP inventory generation, BMP reporting reconciliation, and initial verifications for the identification of BMPs requiring maintenance, rehabilitation, and similar.	County, CCPC, local engineers/ consultants, local maintenance contractors	NFWF, GG	Inventory of individual BMP needs (maint. needed, etc.) Potential HOA assistance entity MS4 GIS files	TBD (result of inventory and reconciliation processes) See Action 4.3 for Circuit Rider information	**2024** Do not anticipate a large-scale effort or revisioning of inventories for reporting BMPs until the new MS4 permit draft is released. **2023** Additional progress has been made in collecting information on proposed BMP's in municipal PRP's. A comprehensive inventory of all existing BMPs in need of repairs or maintenance is still needed, and will likely only be achieved in coordination with action item 4.3. **2022** Some progress has been made in collecting	

											information on proposed BMP's in municipal PRP's. A comprehensive inventory of all existing BMPs in need of repairs or maintenance is still needed, and will likely only be achieved in coordination with action item 4.3.	
4.5	Catchment Targeting Initiative	See Priority Initiative 1 for targets	Ag Action Team (AT), Data Management (DM) Action Team (AT), Catchment Targeting (CT) Action Team (AT), Muni Action Team (AT), watershed groups, local municipalities, Brandywine Conservancy, CCCD, CCWRA, EACs, CCPC	Prioritized Catchments (TBD)	Mid 2021 Launch with inherent tie to P.I. 1 (catchment targeting)	Partner with Catchment Targeting AT during catchment prioritization efforts to identify individual catchment needs, BMP probabilities, etc.			Centralized database platform (see P.I. 5)	See P.I. 1 for more information	**2024** The natural and ag sector within the Octorara watershed remains the primary focus; but assistance and focus also exists with Oxford Borough with the development and implementation of their GI Plan. **2023** EPA has begun the preliminary process of creating an Advanced Restoration Plan in one or two catchments above the Octoraro Reservoir. EPA is looking for input on catchment selection. We have asked EPA if they are able to provide some quantitative information about each potential catchment in Chester County. The Ag Team will be tasked with giving a qualitative evaluation of the "human element" of each catchment to get a feel for openness to conservation the community is. One catchment has been looked at in this manner so far. **2022** Primary focus is currently in the Upper Oxford area. Intent is to flesh out details of the process (e.g. what does a partnership look like	

											between multiple entities including local municipalities) for coordinating efforts.	
4.6	BMP Reporting Reconciliation		Muni AT, Data Mgmt AT, Catchment Targeting AT	All areas (Catchment targeting analyses will result in 2 data tables: 1) conservation needs/opps., and 2) existing BMPs for reconciliation	Launch late 2021 with inherent tie to Action 4.5 (limited activities until reporting platform is known or the parameters at a minimum)	Partner with Data Management AT for reconciliation of BMP reporting numbers (primarily through catchment targeting) Receive back organized data USGS has requested for Ch. 102/land development BMPs; may require Data Mgmt. AT to re-organize data and information All performance targets assume significant level of uncaptured BMPs in numbers. **Knowing parameters/ attributes that need captured for ultimate reporting would be ideal.***	Practice Keeper (PK) County Dept. of Computer and Info. Services (DCIS) EFC		Centralized database platform Circuit Rider MS4 reporting platform for Ch. 102/ PCSM BMPs	See Action 4.3 for more information	**2024** Do not anticipate efforts continuing with this action until the new draft MS4 Permit is released. **2023** A comprehensive inventory of all existing BMPs in need of repairs or maintenance is still needed, and will likely only be achieved in coordination with action item 4.3. A separate funding source with a multi-year timeline to accommodate different counties for municipal BMP Reconciliation would help boost this action item. **2022** Efforts have mostly been centered around development of uniform data needs for collection and reporting.	
4.7	Existing Plans Alignment	*Game plan by late 2021*	Local municipalities, EACs, CCWRA, CCPC, CCCD	All areas	Ongoing with inherent tie to Action 4.5	Ensure efforts do not conflict and/or align with other efforts (e.g. county Act 167 plan) Game plan and coordination with Catchment Targeting AT (P.I. 1) for complete list of existing plans that need to be encompassed by the process	CCWRA, Brandywine Conservancy Oxford regional plans inventory completed with NFWF funding		Potentially new GIS layers for certain plans or information		**2024** Cursory plan cross-reference review conducted and no conflicting goals or focus areas identified. **2023** Municipalities with PRPs continue to communicate with each other, Brandywine Conservancy, CCCD, CCPC, and the public (to varying degrees) in order to meet their pollutant reduction goals and to meet the goals of the C3AP. No concrete game plan document has been created to date. **2022**	

											Municipalities with PRPs have been communicating with each other, Brandywine Conservancy, CCCD, CCPC, and the public (to varying degrees) in order to meet their pollutant reduction goals and to meet the goals of the C3AP. No concrete game plan document has been created to date.	
4.8	PennDOT PRP Reductions		EACs, CCWRA, CCCD, local municipalities, Environ. Finance Center (EFC)	PennDOT MS4 areas	Ongoing with inherent tie to Action 4.5	Collaborative and joint project opportunities	Local engineers/ consultants, PennDOT				**2024** Potential PennDOT projects as it relates to their PRP stull under development and consideration. **2023** PennDOT's MS4 permit is still in review – it includes all projects statewide and has been delayed because of issues with their previous vendor in the Delaware Bay. RES has since taken the contract for that piece, so their PRP is going to be submitted in November, 2023 to start the review. An educational site visit to the completed RES project on Elk Creek took place in the summer of 2023 to open up a discussion about how this type of restoration works. Community members were able to ask specific questions about the science of the project which led to productive discussions. **2022** PennDOT PRP is currently under public comment. It includes two projects in Chester County in the CBW, each partnering with a municipality on stream restorations on Big Elk	

											Creek. The project in East Nottingham is currently going through waiver review by the Waterways and Wetlands Program. At least two municipalities in Big Elk are in negotiation about meeting their Big Elk PRP obligations through that project. Some local residents have raised concerns about the science behind the projected sediment/nutrient reductions being estimated for this project.	
4.9	Joint PRP Projects		Local municipalities, EACs, EFC, local watershed groups, Oxford Reg. Planning Comm.	MS4 regulated areas	Ongoing (differing PRP cycles amongst MS4s)	Foster collaborative arena for multi-municipal projects providing regional benefits through cost-effective BMP implementation. Currently assuming this may be more applicable during the 2023-2027 permit cycle).	Local engineers/ consultants, Brandywine Conservancy MS4 PRPs EFC	NFWF, GG, CBT, PennVEST, American Rescue Plan Act (ARPA) Local Relief Fund, local municipal.			**2024** Do not anticipate additional collaboration efforts until the new draft MS4 permit is released with updated PRP requirements. **2023** Efforts currently centered around promoting joint projects. A number of PRPs have yet to be finalized and/or approved. Jamie Eberl at Central Office is RES's contact about the "credit sharing" piece and the understanding is that they have always encouraged collaboration and, although it is case by case, they have not denied any request to partner between municipalities in the same HUC 12. We have received feedback from municipalities that there has been a lack of clarity from DEP SERO over the conditions allowing municipalities to share	

											reduction credits within a watershed. **2022** Efforts currently centered around promoting joint projects. A number of PRPs have yet to be finalized and/or approved. We have received feedback from municipalities that there has been a lack of clarity from DEP SERO over the conditions allowing municipalities to share reduction credits within a watershed.	
4.10	Stormwater BMP Implementation	*Rate Reduction SWP Standards – 3,000 new acres treated* *Treatment SWP Standards – 89 new acres treated* *Wet Ponds and Wetlands – 50 new acres treated* *Infiltration Practices – 64 new acres treated* *Bioretention – 58new acres treated* *Bioswales – 25 new acres treated* *Vegetated Open Channels – 30 new acres treated* *Filtering Practices – 25 new acres treated* *Impervious Surface Reduction – 4 acres*	Local municipalities, developers, CCCD, CCWRA, EACs, Oxford Reg. Comm., CCPC	All areas with emphasis provided towards prioritized catchments	Ongoing (timing tied to catchment analyses funding and Actions 4.5 and 4.6)	MS4 PRP projects to be reported via annual reports Significant uncaptured and/or underreported BMPs are assumed in this category and difficult to project. Assume significant progress achieved through BMP reporting reconciliation occurs for revisions to BMP implementation scenario in 2023 to better reflect rates. BMP implementation values include projects outlined in PRPs (where available) Landowner resistance or buy-in	Local engineers/ designers, DEP, Stroud, CCWRA, Brandywine Conservancy, Penn State, EFC County DCIS data	Developers, local municipal., GG, NFWF, PennVEST, CBT		Capital Cost: ~$TBD (after reconciliation and BMP rates revisions) Current assumptions are roughly 50%-70% of BMP values are already in place and uncaptured for reporting.	**2024** Additional BMPs have been implemented, but efforts to update and expand inventories are not expected until the new MS4 permit draft is released. **2023** Implementation is occurring, but data/info capture processes still under development (see Catchment Targeting Priority Initiative). A non-ag sub-grants program is on-going for non-ag BMP implementation (use of CAP implementation funds). This program was used for 2023 implementation funds, and may be used for 2024 funds depending on how the projects that apply rank against ag applications. We received 2 applications for the Non-Ag Subgrant for 2023. The 2024 non-ag sub-grant has been announced. Progress here depends on achieving 4.1, 4.3-4.5, 4.8, 4.9. **2022**	

											Implementation is occurring, but data/info capture processes still under development (see Catchment Targeting Priority Initiative). A non-ag sub-grants program was developed for non-ag BMP implementation (use of CAP implementation funds). This program will be used for 2023 implementation funds. We received 2 applications for the Non-Ag Subgrant for 2023. Progress here depends on achieving 4.1, 4.3-4.5, 4.8, 4.9.	
4.11	Urban Landscape	*Conservation Landscaping – 100 total acres* *Urban Forest Planting – 20 new acres* *MS4 Tree Canopy – 10 new acres* *Urban Nutrient Management – 2,000 acres*	CCCD, CCWRA, EACs, local municipalities, Brandywine Conservancy	All areas with emphasis provided towards prioritized catchments	Ongoing with inherent tie to Action 4.5	**Urban nutrient management is tied to fertilizer legislation at the state level.*** Landowner resistance or buy-in	ACB, CBF, DCNR, CCPC, CCWRA, Stroud, Brandywine Conservancy County DCIS	DCNR, Keystone, NFWF, GG, CBT, local municipal.		Capital Cost: ~$45,000	**2024** Implementation is occurring via multiple partners (including with non-CAP funds (e.g. NFWF)). **2023** Implementation is occurring, but data/info capture processes still under development (see Catchment Targeting Priority Initiative). A non-ag sub-grants program was developed for non-ag BMP implementation (use of CAP implementation funds). Progress here depends on achieving 4.1, 4.3-4.5, 4.8, 4.9. **2022** Implementation is occurring, but data/info capture processes still under development (see Catchment Targeting Priority Initiative). A non-ag sub-grants program was developed for non-ag BMP implementation (use of CAP implementation funds).	

											Progress here depends on achieving 4.1, 4.3-4.5, 4.8, 4.9.	
4.12	Septic Systems	*Conventional Septic Denitrification – 3,000 systems* *Septic System Pumping – 6,000 systems*	Local municipalities, CCWRA	All areas outside public sewage areas	On-going, with primary info capture and analysis in 2022 with developed game plan	Use County GIS/ Health Dept. information for septic systems tracking and convert to reportable data (capture of existing systems) Initial analysis reveals approximately 17,700 septic systems (currently assuming 50% compliant systems until further analysis in completed)	County DCIS, County Health Dept., local municipalities, CCPC		GIS support		**2024** Pumping is occurring and recorded via county health department, but upward reporting processes still need to be finalized. **2023** Applicable data and information reside with the County Health Dept. Efforts underway on defining processes to appropriately report the information. **2022** Applicable data and information reside with the County Health Dept. Efforts underway on defining processes to appropriately report the information.	

Phase 3 Watershed Implementation Plan (WIP) Progress and Milestones 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.

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 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).

Annual Progress to Date = This field will be used for annual reporting on priority initiatives. This is a description of the action(s) your county took toward achieving the priority initiative. Examples include education and outreach, programmatic changes, etc. For numeric priority initiatives your county can retrieve those numbers directly from *FieldDoc* or put in the column "See *FieldDoc*."

Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Chester County

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 # Green Yellow Red	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	Reason for Change to Action Item
5.1	Centralized GIS-based database/ platform and targeting tool	*Game plan 4th qtr. 2021*	Chester County Conservation District (CCCD), Octoraro Watershed Association (OWA), County, Chester County Water Resources Authority (CCWRA)	All areas (catchments)	Ongoing; game plan by late 2021	Engage Chesapeake Conservancy to potentially expand Lancaster County's platform (CWMT) into Chester County (Octoraro watershed already included in platform) to provide centralized data management platform for Catchment Management Database (CMD) inventory, opportunities targeting, and BMP reconciliation	County DCIS (Dept. of Computer and Info. Services), OWA, Chesapeake Conservancy, Brandywine Conservancy, watershed groups, local engineers/ consultants, CCWRA			$25,000 - $40,000 (depends on extent existing platform requires modifications and/or needs to expand into Chester County) $TBD for long-term platform management	**2024** Octorara related ARP and Source Water Collaborative efforts are on-going and anticipated to serve as the primary model for any centralized database or platform that may be expanded upon. **2023** It was determined that the database kept by OWA and the OSWC Monitoring Work Group is sufficient at this time, and work with Chesapeake Conservancy to expand the CWMT platform into Chester County has not progressed. **2022** Met with Chesapeake Conservancy to discuss expanding CWMT platform into Chester County. Analysis of Chester County is currently progressing for a variety of BMPs. Will focus on buffers first.	
5.2	Reporting QA/QC		CCCD, NRCS, County, local municipalities, OWA, local watershed groups	All areas	Ongoing	Develop and monitor flowchart representing different BMP/data reporting processes to help ensure all new BMPs, captured BMPs, etc. are reported through the right mechanisms	Practice Keeper (PK), FieldDoc, County DCIS			Inherent ties to PK manager (Action 2.4) and Circuit Rider (Action 4.3)	**2024** Data capture and reporting processes for PK data entry organized and underway. Additional reporting processes for urban/suburban BMPs will be visited upon release of the next MS4 permit. **2023** CCCD has ramped up reporting of planning and BMP information into PK for	

Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Chester County

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 # Green Yellow Red	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	Reason for Change to Action Item
											ag BMPs through increased collection of plans from landowners and consultants. Non-ag sectors (urban/suburban and natural sectors) still are under development. Since 2022, CCCD has collected plan copies for 88 operations that have been entered into PK NRCS continues to add practices 390 and 391 when planning exclusion fencing. **2022** CCCD has ramped up reporting of planning and BMP information into PK for ag BMPs through increased collection of plans from landowners and consultants. Non-ag sectors (urban/suburban and natural sectors) still are under development. CCCD has collected plan copies for 36 operations and they are in the process of being entered into PK. NRCS has begun adding practices 390 and 391 when planning exclusion fencing.	
5.3	Catchment Targeting Initiative and BMP reconciliation	Tied to P.I. 1 metrics	CCCD, OWA, County, local municipalities, local watershed groups, Environ. Advisory Committees	All areas (catchments)	Ongoing; tied to platform development and Priority Initiative 1 (Catchment Targeting)	Ensure centralized platform appropriately captures and displays individual catchment needs, captured unreported BMPs, etc. and aligns	County DCIS, County Planning (CCPC)				**2024** Collaborative efforts underway in the Octorara watershed that will determine future targeting and BMP capture processes. **2023**	

Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Chester County

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 # Green Yellow Red	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	Reason for Change to Action Item
			(EACs), Oxford Reg. Planning Comm., DEP, Chester County Water Resources Authority (CCWRA)			with reporting processes Identify other parameters, information, data, etc. appropriate for capture and display in centralized platform					See Catchment Targeting Priority Initiative action items. **2022** See Catchment Targeting Priority Initiative action items.	

Phase 3 Watershed Implementation Plan (WIP) Progress and Milestones 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.

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 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).

Annual Progress to Date = This field will be used for annual reporting on priority initiatives. This is a description of the action(s) your county took toward achieving the priority initiative. Examples include education and outreach, programmatic changes, etc. For numeric priority initiatives your county can retrieve those numbers directly from *FieldDoc* or put in the column "See *FieldDoc*."