

Template 1. 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				
							Technical	Source	Financial	Source	Technical	Suggested Source	Financial	Suggested Source
Priority Initiative 1: Agricultural Compliance														
1.1	Implement Agricultural Compliance and Enforcement Strategy.		DEP, SCC, CDs	Chesapeake Bay	December 2022	Cultural, Economic, Training, Staffing (see attached summary)								
1.1.1	Phase 1: Inspections throughout the Chesapeake Bay Watershed, with an emphasis on meeting state planning requirements on non-CAFO operations. Costs include planning assistance, compliance assurance, and enforcement).	50 inspections will be performed per CD Bay Technician; 100 inspections will be performed per DEP Regional Office Water Quality Specialist per year. (Inspect 10% of the agricultural operations/acreage annually)	DEP, CDs	Chesapeake Bay	Ongoing		Annually – See Workload Analysis for further detail	DEP, CDs		CBRAP, Chesapeake Bay Abatement Fund (State)	Annually – See Workload Analysis for further detail			CBRAP, Chesapeake Bay Abatement Fund (State)
1.1.2	Phase 2: Inspections throughout the Chesapeake Bay Watershed, with an emphasis on meeting both state planning and implementation requirements on non-CAFO operations, (costs do not include technical assistance)		DEP, SCC, CDs, NRCS, Private Consultants	Chesapeake Bay	Ongoing		Annually (not including Nutrient Management) – See Workload Analysis for further detail	DEP, CDs		CBRAP, Chesapeake Bay Abatement Fund (State)	Annually (not including Nutrient Management) – See Workload Analysis for further detail	DEP, CDs		CBRAP, Chesapeake Bay Abatement Fund (State)
1.1.2.a		Initiate pilot program to test proposed plan implementation inspection processes for inclusion in program guidance	DEP, SCC, CDs	Pilot county(ies)	December 2019			DEP, CDs		CBRAP, Chesapeake Bay Abatement Fund (State)		DEP, CDs		CBRAP, Chesapeake Bay Abatement Fund (State)
1.1.2.b		Develop SOP detailing the processes for inspection of non-CAFO farms within the Chesapeake Bay Watershed to assess	DEP, CDs	Chesapeake Bay	Ongoing		Included in 1.1.2	DEP, CDs		CBRAP, Chesapeake Bay Abatement Fund (State)	Included in 1.1.2	DEP, CDs		CBRAP, Chesapeake Bay Abatement Fund (State)

1.2.1		Proper runoff controls on 3,912 acres of feed/barnyard areas on permitted CAFO farms	DEP, SCC, CDs, Certified Third Parties (via PACS)	Chesapeake Bay	December 2025		TA covered in 5.2 BMP costs –				TA 5.2 BMP costs –			
1.2.2		Proper runoff controls on ??? acres of feed/barnyard areas on non-permitted farms	DEP, SCC, CDs, Certified Third Parties (via PACS)	Chesapeake Bay	December 2025		TA covered in 5.2 BMP costs –				TA 5.2 BMP costs –			
1.3	NPDES Concentrated Animal Feeding Operation (CAFO) Program Delegation													
1.3.1	Continue to permit CAFOs in Southcentral Regional Office (this includes WQM Permit review for land application of sewage sludge and AWMS)	Permit 100% of all CAFOs (350+ operations in Chesapeake Bay Watershed)	DEP	Statewide Program	Ongoing		See Workload Analysis for further detail	DEP		EPA 106, Clean Water Fund (State)	Annually – See Workload Analysis	DEP		EPA 106, Clean Water Fund (State)
1.3.2	Continue to inspect NPDES Permitted Concentrated Animal Feeding Operations (CAFOs), as per the Compliance Monitoring Strategy	Inspect 20% of all permitted CAFO operations annually (~125 operations)	DEP	Statewide Program	Ongoing		See Workload Analysis for further detail	DEP		EPA 106, CBRAP, Clean Water Fund	Annually – See Workload Analysis	DEP		EPA 106, CBRAP, Clean Water Fund
1.4	Complaint follow up for CAFO and non-CAFO facilities		DEP, SCC, CDs	Statewide	Ongoing		Annually – 0.5 FTEs See Workload Analysis for further detail	DEP		CBRAP, Chesapeake Bay Abatement Fund (State), Nutrient Management Fund (State), Clean Water Fund	Annually – See Workload Analysis	DEP		CBRAP, Chesapeake Bay Abatement Fund (State), Clean Water Fund
1.5	Improve existing P-Index tool	Incorporate revisions to the proposed revised P-index based on the results of the pilot testing process.	Penn State, SCC, NRCS, DEP, PDA	Statewide	July 2019			Penn State Extension, SCC		NRCS CIG		Penn State Extension, SCC		NRCS CIG
1.5.1		Obtain approval from the agencies to incorporate the new P-index tool into future nutrient management planning efforts using an established phase in strategy	SCC, DEP, Penn State, , NRCS	Statewide	December 2019									
1.6	Initiate implementation of Pennsylvania's Agriculture Conservation Stewardship (PACS) Program		PDA, SCC, DEP, CDs, EPA, Certified Commercial Nutrient Management Specialists	Statewide	June 2019		Staff Costs – CDs – 1 FTE DEP – 0.2 FTE (EPM/EGM);	PDA, DEP, SCC, CDs			Staff Costs – CDs – 1 FTE DEP – 0.2 FTE (EPM/EGM)	PDA, DEP, SCC, CDs		

							PDA/SCC – 0.3 FTE (Management)				PDA/SCC – 0.3 FTE (Management)			
1.6.1	Perform a “table top” exercise involving third party verifiers, conservation districts, and agency staff to test out the functionality of the draft program processes.		PDA, SCC, DEP, CDs, EPA, Certified Commercial Nutrient Management Specialists		July, 2018		See 1.6				See 1.6			
1.6.2		Finalize draft program guidance, application, and on-farm assessment forms.	PDA, SCC, DEP, CDs, EPA, Certified Commercial Nutrient Management Specialists		November 2018		See 1.6				See 1.6			
1.6.3	Pilot the program in select counties to initiate program implementation and to assess if any additional revisions are needed to the program.		Lancaster, Adams, Franklin Counties		December 2018		See 1.6				See 1.6			
1.6.4	Work with program workgroup to finalize the program criteria, using the input from the pilot project.		PDA, SCC, DEP, CDs, EPA, Certified Commercial Nutrient Management Specialists		March 2019		See 1.6				See 1.6			
1.6.5	Train third party private sector verifiers and county conservation district staff to authorize their involvement in the PACS program.		DEP		June 2019		See 1.6				See 1.6			
1.6.6	Release program state-wide		PDA, SCC, DEP, CDs, EPA, Certified Commercial Nutrient Management Specialists		July 2019		See 1.6				See 1.6			
1.7	Work with third parties, integrators and co-ops to identify other methods to support and assess compliance with regulations without use of regulatory entities	Assess/increase implementation of agricultural plans and BMPs using program developed by Turkey Hill, Alliance for Chesapeake Bay, and MD/VA Cooperative	Certified Third Parties, Integrators and Cooperatives, DEP	Chesapeake Bay – Animal Producers	December 2025									

Priority Initiative 2: Performances of Practices for Improvement of Soil Health: Residue Management

2.1	Increase use of conservation tillage practices throughout the Bay Watershed.	306,196 acres of lands used for production of corn silage, small grains, and double crops would utilize conservation tillage practices.	PDA, SCC, CDs, CCAs, Private Consultants, Penn State Extension, No Till Alliance, Farmland Preservation, Local Farmland		December 2025	Annual assessments of cover crop implementation and reporting are challenging and costly; 2017	? FTEs, See Workload Analysis for further detail	CDs, Third Party consultants (CCAs, etc.)		Not a practice that is typically cost-shared	See Workload Analysis			
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			Trusts/Conservancies, PA Farm Bureau			report showed 359,280 acres reported using conservation tillage practices. Maintain existing implementation levels.							
2.1	Increase use of no-till practices throughout the Bay Watershed.	805,778 acres of lands used for production of crops would utilize no-till practices	PDA, SCC, CDs, CCAs, Private Consultants, Penn State Extension, No Till Alliance, Farmland Preservation, Local Farmland Trusts/Conservancies, PA Farm Bureau		December 2025	Annual assessments of cover crop implementation and reporting are challenging and costly; 2017 report showed 595,262 acres in no-till. Increase implementation by 210,516 acres.	? FTEs, See Workload Analysis for further detail	CDs, NRCS, Third Party consultants (CCAs, etc.),		CBRAP via Bay Special Project funds, NRCS CSP, REAP	See Workload Analysis		
Priority Initiative 3: Performances of Practices for Improvement of Soil Health: Cover Crops													
3.1	Increase implementation of cover crop throughout the Bay Watershed					Annual assessments of cover crop implementation and reporting are challenging							
3.1.1		547,695 acres of lands receiving fall manure would have traditional, non-harvested cover crop	PDA, SCC, CDs, CCAs, Private Consultants, Penn State Extension, No Till Alliance, Farmland Preservation, Local Farmland Trusts/Conservancies, PA Farm Bureau		December 2025	Traditional cover crop with fall manure applied is a new BMP. 2017 report showed 0 acres reported. Reporting using Transect Survey needs to be accepted to report lands with fall applied manure/nutrients	See Workload Analysis for further detail	CDs, NRCS, Third Party consultants (CCAs, etc.)		NRCS CSP, CBRAP Bay Special Project Funding, REAP. Cover crop is typically not a practice that receives significant cost-share.	See Workload Analysis for further detail	CDs, NRCS, Third Party consultants (CCAs, etc.)	NRCS CSP, CBRAP Bay Special Project Funding, REAP.
3.1.2		161,601 acres of lands would have no fall nutrients and a non-harvested cover crop	PDA, SCC, CDs, CCAs, Private Consultants, Penn State Extension, No Till Alliance, Farmland Preservation, Local Farmland Trusts/Conservancies, PA Farm Bureau			2017 report showed 117,633 acres of traditional cover crop. This would be an increase in 43,969 acres.	See Workload Analysis for further detail	CDs, NRCS, Third Party consultants (CCAs, etc.)		NRCS CSP, CBRAP Bay Special Project Funding, REAP. Cover crop is typically not a practice that receives significant cost-share.	See Workload Analysis for further detail	CDs, NRCS, Third Party consultants (CCAs, etc.)	NRCS CSP, CBRAP Bay Special Project Funding, REAP.

3.1.3		124,106 acres would have no fall nutrients applied and spring harvested cover crop	PDA, SCC, CDs, CCAs, Private Consultants, Penn State Extension, No Till Alliance, Farmland Preservation, Local Farmland Trusts/Conservancies, PA Farm Bureau			2017 report showed 124,106 acres. This would be a maintenance of the existing implementation level.	See Workload Analysis for further detail	CDs, NRCS, Third Party consultants (CCAs, etc.)		NRCS CSP, CBRAP Bay Special Project Funding, REAP. Cover crop is typically not a practice that receives significant cost-share.	See Workload Analysis for further detail	CDs, NRCS, Third Party consultants (CCAs, etc.)		NRCS CSP, CBRAP Bay Special Project Funding, REAP.
Priority Initiative 4: Performance Practices for Improvement of Soil Health: Prescribed Grazing														
4.1	Increase implementation of pasture management	180,201 acres of land used for pasture would follow NRCS Prescribed Grazing Plan or Resource Improvement Practice.	NRCS, Penn State Extension, Private Consultants, CDs			Challenges include CBP definition of Prescribed Grazing and non-alignment with PA State regulatory requirements under Chapter 91 Manure Management and Chapter 102 Ag E&S. 2017 report showed 31,612 acres. This would be an increase of 148,589 acres.	See Workload Analysis	CDs, NRCS, Third Party consultants (CCAs, etc.)		NRCS CSP, CBRAP Bay Special Project Funding, REAP. Pasture Management /Prescribed Grazing is typically not a practice that receives significant cost-share.	See Workload Analysis	CDs, NRCS, Third Party consultants (CCAs, etc.)		NRCS CSP, CBRAP Bay Special Project Funding, REAP.
Priority Initiative 5: Performance Practices for Improvement of Nutrient and Manure Management: Enhanced Nutrient Management on non-manured acres and Implementation of Animal Waste Management Systems (AWMS)														
5.1	Enhanced Nutrient Management		4R Nutrient Stewardship Alliance, PACS, CCAs		December 2025									
5.1.1		64,640 acres with no manure applied would be managed based on a nitrogen and phosphorus based nutrient management plan.	4R Nutrient Stewardship Alliance, PACS, CCAs		December 2025	Voluntary program. 2017 report shows 0 acres implementing this practice. Obstacles include lack of reporting voluntary practice if it is not cost-shared. Existing central database used by CDs and DEP (but not currently open to certified and qualified	See Workload Analysis for further detail	CDs, NRCS, Third Party consultants (CCAs, etc.)		NRCS CSP, REAP	See Workload Analysis for further detail	CDs, NRCS, Third Party consultants (CCAs, etc.)		NRCS CSP, REAP.

						consultants) has the ability to track and report these practices.							
5.1.2		64,640 acres with manure applied would be managed with nutrient management plans to meet nitrogen and phosphorus requirements as well as supplemental practices based on rate, timing, and placement for nitrogen and phosphorus	4R Nutrient Stewardship Alliance, PACs, CCAs		December 2025	Voluntary Program 2017 report shows 0 acres implementing this practice. Obstacles include aligning the tracking of manure applied fields that also meet supplemental practices. Existing central database used by CDs and DEP (but not currently open to certified and qualified consultants) has the ability to track and report these practices.	See Workload Analysis for further detail	CDs, NRCS, Third Party consultants (CCAs, etc.)		NRCS CSP, REAP	See Workload Analysis for further detail	CDs, NRCS, Third Party consultants (CCAs, etc.)	NRCS CSP, REAP.
5.1	Implementation of Animal Waste Management Systems												
5.1.1		Attainment of 90% of swine and poultry operations with adequate manure storage capacity	NRCS, Private Consultants, Swine and Poultry Integrators		December 2025	Need to increase funding and the amount of licensed P.E's and those with job approval authority in order to meet PA regulatory requirements for liquid storages. Need to increase number of qualified engineers for solid storages.	See Workload Analysis for further detail	CDs, NRCS, Third Party consultants		NRCS EQIP, Chesapeake Bay Special Projects, PennVEST, REAP	See Workload Analysis for further detail	CDs, NRCS, Third Party consultants	NRCS EQIP, Chesapeake Bay Special Projects, PennVEST, REAP.
5.1.2		Attainment of 75% of all other animal types with adequate manure storage capacity	NRCS, CDs, Private Consultants		December 2025	Need to increase funding and the amount of licensed P.E's and	See Workload Analysis for further detail	CDs, NRCS, Third Party consultants		NRCS EQIP, Chesapeake Bay Special Projects,	See Workload Analysis for further detail	CDs, NRCS, Third Party	NRCS EQIP, Chesapeake Bay Special Projects,

						those with job approval authority in order to meet PA regulatory requirements for liquid storages. Need to increase number of qualified engineers for solid storages.					PennVEST, REAP		consultants		PennVEST, REAP.
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Priority Initiative 6: Performance Practices for Improvement of Nutrient and Manure Management: Dairy Precision Feeding

6.1	Implementation of Dairy Precision Feeding	Assess and report implementation of dairy precision feeding for 175,000 Animal Units (approximately 152,000 milking cows)	PDA, Dairy Co-ops, PACS Program, Dairy Nutritionists, PA Dairyman's Assoc., CDs, NRCS		December 2025	Voluntary program. 2017 report showed 833 Animal Units (approximately 724 milking cows). Need to significantly increase reporting of use of Dairy Precision Feeding.		PDA, Dairy Co-ops, PACS Program, Dairy Nutritionists			NRCS EQIP/CSP				
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Priority Initiative 7: Performance Practices for Improvement of Nutrient and Manure Management: Development of Integrated System for Excess Manure

7.1	Investigate the incorporation of alternative manure treatment technologies and other potential strategies to address areas of excess manure nutrient generation.	Identify various strategies to minimize nutrient imbalances in areas of excess manure nutrient generation, including the incorporation of manure treatment technologies as they are determined to be feasible.	PDA, SCC, DEP Nutrient Trading Program, NRCS	Counties that are identified to have excess manure generated for crop need	December 2025	Capital investment and cost effectiveness is of concern.	Nutrient Trading Program								
7.1.1	Identify areas (counties) of excess manure nutrient generation in relation to crops grown in the county.	This work has been done as part of Phase 6 model development and Phase 3 WIP development	EPA CBP		July 2018	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete

Priority Initiative 8: Performance Practices for Improvement of Riparian Ecosystems: Enhanced Development of Forested and Grassed Buffers

8.1	Implement grassed buffers	Attainment of approximately 34,000 acres of land adjacent to streams for establishment of grassed buffers at least 35 feet in width	NRCS, DEP, CDs	Chesapeake Bay	December 2025	2017 report showed 14,600 acres implemented. Not many existing funding sources for grassed buffers. Need better tracking	See Workload Analysis	CDs, NRCS, Third Party consultants (CCAs, etc.)		NRCS CSP, CBRAP Bay Special Project Funding, REAP. Pasture Management /Prescribed Grazing is typically not	See Workload Analysis	CDs, NRCS, Third Party consultants (CCAs, etc.)		NRCS CSP, CBRAP Bay Special Project Funding, REAP.
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						and reporting (via remote sensing?)				a practice that receives significant cost-share.				
Priority Initiative 9: Performance Practices for Improvement of Riparian Ecosystems: Stream Restoration														
9.1	Complete the Fishing Creek Watershed NFWF project, to include stream fencing and restoration projects	NFWF funded project led by PDA and local entities in Lancaster County	PDA											
9.1.1	Learn from the project and replicate in other watersheds throughout the watershed		PDA, DEP, Lancaster County Clean Water Partners											
9.2	Continue to implement stream restoration projects throughout the Chesapeake Bay Watershed		DEP, CDs, Watershed Organizations,	Obstacles include permitting requirements (both Chapter 105 and federal ACOE requirements)				CDs, Watershed Organizations, PACD TAG engineers (GG funded)		Growing Greener, 319 funding,				Growing Greener, 319 funding,
9.2.1		Identify areas that would benefit from Legacy Sediment Removal and Ecosystem Restoration and implement practice at those locations	DEP, CDs, Watershed Organizations,	Obstacles include permitting (both Chapter 105 and ACOE requirements) and capital investments for design and implementation.										
Priority Initiative 10: Additional Recommendations														
10.2	Financial and tax incentives for landowner participation in changing or preserving land use		Municipalities, Farmland Preservation, SCC REAP Program		December 2025									
10.3	Reporting and confidentiality					PA RTKL								
10.4	Increased technical assistance in design and implementation of agriculture BMPs					Demand has to be there for private industry to expand work force								
10.5	Advance Soil Health Initiatives					Consistent message from all entities is needed								
10.6	Innovative regulatory incentives for attainment of priority agricultural BMP implementation initiatives					Institute consumer-driven incentives;								

						offsetting programs								
10.7	Reevaluations of existing funding sources and their uses													
10.8	Enhanced Nutrient Management Planning for Biosolids and Food Processing Residuals (P-Based Planning)													
10.9	Better tracking and reporting of BMP implementation					Collection of information remains challenging, due to privacy and confidentiality as well as cultural unwillingness to share information with government agencies								

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

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

1. Inputs – These are both existing and needed resources, public and private, to implement the identified priority initiative. These include both technical and financial resources, such as personnel, supplies, equipment and funding.
2. Process – what is each partner able to do where and by when. These are the action items listed under each priority initiative.
3. Outputs and outcomes – both short and long-term. These are the priority initiatives identified by each county. The performance targets are the intermediate indicators that will measure progress.
4. Implementation challenges – any potential issues or roadblocks to implementation that could impede outputs and outcomes

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

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

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

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

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

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

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

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

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