Phase 3 Watershed Implementation Plan (WIP) State Programmatic Recommendations Template – Cumberland County

Action #	Description	Performance Target(s)	Expected Timeline	Potential Implementation Challenges	Potential Recommendations on Improvement	Resources Needed			
						Technical	Suggested Source	Financial	Suggested Source
Programmatic Initiative: Recommendations for State Programmatic Changes									
1.1	Retain funding and technical support for the Chesapeake Bay Office to spearhead implementation of the County-recommended programmatic changes and support County-led initiatives.	Continued operation of Chesapeake Bay Office and DEP Regional Support Teams through Phase 3 WIP Implementation	2020-2025	Costs associated with staffing, meeting, planning, and supporting implementation efforts. Convincing regulatory/political agencies of the need/benefit for sound integrated planning/implementation so that an appropriate budget is allocated. Having consistent attendance by the same State/County staff due to complexity/specialized needs of integrating water issues/programs.	Expand the CBO team to be more interdisciplinary, direct involvement by Department of Agriculture (co-lead with Chesapeake Bay Office) so that messaging is more effective with the agricultural community and to foster enhanced collaboration Private sector experience, plan implementation project management experience Support for non-governmental organizations who are already at capacity and need support on expansion. With the WIP 3 philosophy of local plans/effort to meet State requirements, this action is necessary to integrate programs at the State level and make local efforts possible.	More dedicated staff to assist coordination and implementation of projects and funding opportunities	Dedicated DEP WIP Implementation staff to lead integrated efforts. Staff from State Departments (Ag, DCNR, PennDOT, Fish and Boat, etc.) to participate in logistics meetings. County staff dedicated for participation.	At least 6 dedicated staff at DEP and 1 at each County. Participation by other State departments $18M per year	DEP/Dept of Ag/DCNR general funding.
1.2	While three models continue to be utilized for Bay and other State regulatory water quality goals, complete a CAST/Model My Watershed/FieldDoc water quality credit prediction analysis	Develop BMP reduction values that can be reported by MMW so that local WQ improvements can be calculated, and municipalities have a better understanding of the value of ag BMP WQ improvements in their landscape Integrate MMW spreadsheet watershed model with mapping module so that site specific reductions can be calculated on the fly, or work with FieldDoc Planning Module User confidence that no matter the tool, BMP credits are consistently applied across programs	2021	MMW/FieldDoc coding capacity and funding, municipality education on benefits, ag land management information, CAST compatibility with data sets	Act 167 plan development cost could be greatly reduced if existing Act 167 Plans & Flow Chart Tool were used as a model. Savings of plan preparation could then be directed to municipal staff to implement the plan, including tracking and reporting of BMPs. Include a section related to “burst storms” or updated storm intensity curves (climate change)	Scenario development and MMW improvement recommendations	Private sector (consulting CAP Coordinators), DEP (MS4, TMDL, Bay modeling staff)	$10,000 per year	DEP block grant

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1.3	Continue to support improvements and training programs for FieldDoc and Practice Keeper	Maintain a standardized centralized data collection and reporting system Since two systems are currently used, continue to explore one consolidated system option and its interaction with CAST	2021-2025	Will need to address privacy concerns; may need changes to Right to Farm Act. Will need to educate MS4s and nonMS4s on technical workflow and practical importance of the initiative.	Security clearances for data input group so that spatial recognition of data is available – aggregated data is not helpful for CAP implementation when we want to leverage local successes.	State Ag staff/ Conservation Districts/ County/ municipal planners /software experts	DEP/Dept. of Ag/ Municipalities/County staff	Software costs/staff costs	DEP/Dept of Ag general funding.
1.4	Provide data transparency for practitioners who use Practice Keeper	Add DEP data inputs to Practice Keeper so that, spatially, Conservation District staff can see the plans and BMPs that are in the system above and beyond those that they input in-house	2021	Coding issues, concern over data privacy	Data in Practice Keeper should be utilized for than reporting to DEP. Conservation District staff should be able to use it for program management so that BMPs are timely re-verified and farms that are compliant/on-schedule aren't revisited prematurely, freeing up time for staff to provide support to the farms that need it.	Coding updates Data recommendations	Practice Keeper consultant DEP staff	N/A	N/A
1.5	Institute a bi-annual remote sensing program for BMP verification	Fly counties on odd years and process data on even years to verify installation of BMPs Utilize existing BMP location data to verify those BMPs and ID BMPs that should be visited (indications of O&M issues)	2021	Funding, staff for sample of field verification, see if MS4s would be willing to cost share if we can demonstrate that we can reduce their BMP inspection burden with this method Long-term commitment of landowners without county enforcement	Utilize counties to pilot BMP verification hurdles; refer to Cumberland County and Centre County 2021 Block Grant request that includes Chesapeake Conservancy funding/methodology for select BMP cataloguing. If aerial flights completed for other programs conform to pre-determined standards, cost savings will be realized while data sets continue to be updated periodically.	GIS processing methods	USDA, non-governmental organizations	$20-40/ac flight costs (e.g. 711,680 ac in Centre Co = $21.4 M per flight) → explore cost/precision of satellite imagery $100,000 per year per county for BMP cataloguing	State agencies budgets/grant awards who utilize aerial photography data sets DEP block grant
1.6	Develop a method/ model/template to capture and report non-manure nutrient management	A method developed to encourage, perform, capture, and report the 4R program	2022	Will require close coordination and cooperation between regulatory agencies, private fertilizer companies, and farmers to achieve a statewide model. Requesting fertilizer companies to participate in a program that could potentially reduce sales.	Dept of Ag/DEP/farmers to coordinate at State level with the fertilizer industry; State or Bay-wide system needed for consistency. Added pollutant reductions reported from work already being done. Coordinate with ag consultants who perform this work, so they are the individuals reporting it instead of the farmer.	State ag/ farming/ fertilizer industry experts	DEP/willing farmers/ fertilizer companies	Tracking/ reporting expenses not offset by increased production for farmer. Will need to pilot in order to determine an appropriate budget per average crop farm.	DEP/Dept of Ag general funding.

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~~**1.7**~~	~~Implement a documentation program for commercial and homeowner nutrient applications in developed lands~~ New law approved during 2022 Pennsylvania legislative session.	~~Support fertilizer legislation – where legislation requires reporting, be the data clearinghouse~~	~~TBD~~	~~Education of responsible parties, receiving timely information, training on reporting system~~	~~Pair reporting with another generally used reporting mechanism to State Government~~	~~Landowner education~~	~~DEP staff~~	~~Funding for reporting mechanism~~	~~Refer to other states with similar program for funding example~~
1.8	Utilize Bay Model to establish assigned MS4 Permit baseloads/ reduction requirements/BMP credits to eliminate the need for permittee calculations, justifications, and rationale	Permit assignment issued directly to permittees based on Bay Model so all Chesapeake Bay efforts are based on uniform criteria Identify and improve data sets that limit the CAST model to run at local scales	2022	Current MS4 permit provides municipal level data but requires costly calculations to determine local scale efforts that meet calculated goals. Various DEP/State programs attempt to manage/administer programs at differing scale which isolates these programs into "silos" rather that working at the same scale in order to overlap/stack efficiencies of all programs (watershed scale, State Water Plan/Act 167, county scale, Phase 3 WIP, municipal/partial municipal scale, MS4).	Utilize the resource developed for tracking/ improving/validating water quality for the Bay (CAST). Interpolate for the municipal level if need be for planning and crediting purposes so that municipal money being spent on mapping, calculating, designing projects for PRPs can be utilized for BMP installment.	Existing CAST resources	EPA/DEP	No more than existing.	EPA/DEP/ municipalities
1.9	Countywide WQ Credit Offset Pilot	Demonstrate measurable success of a pilot project area where MS4s and nonMS4s can collaborate on sediment and nutrient goals	2021-2022	PADEP/EPA capacity to develop approach with County partners, a comprehensive understanding of the implications of potentially diverting BMPs to more upstream areas rather than constrained urban areas	Recognition of the value of BMPs located at the source of the pollution rather than attempting to reduce pollution after the discharge occurred, opportunity for collaboration among sectors for cost effective solutions Variables to consider: ● # of Farms/Forest preserved within the Corridors of Opportunity (COO) ● Miles of riparian buffer created within COOs. ● # of Ag. BMPs established within COOs. ● Miles of Stream stabilization and restoration within COOs. ● Monitoring Quarterly Progress ● # SWM facilities maintained within municipal park systems ● Acres of Preserved Open Space and Environmentally Sensitive Areas	Engineering/MS 4 permit requirement coordination Project opportunity ideas For implementation, if the pilot works, 1 FT MS4 Coordinator, 1 PT ag Coordinator Project design and construction	HRG (CAP coordinator) Municipal engineers, farmland preservation orgs Rural/suburban township staff Municipal engineers, consultants	Assume $100,000 worth of salary/benefit of the team that would develop the approach	DEP/EPA

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1.10	Enforce Act 167	All municipal SWM Ordinances consistent with County Stormwater Management Plan and being enforced.	2024	DEP staffing; Act 167 consistent criteria definition.; Act 167 funding	Act 167 plan development cost could be greatly reduced if existing Act 167 Plans & Flow Chart Tool were used as a model. Savings of plan preparation could then be directed to municipal staff to implement the plan, including tracking and reporting of BMPs. Include a section related to "burst storms" or updated storm intensity curves (climate change)	4 Act 167 enforcement staff to oversee plan development in remaining +20 counties in Bay watershed where Act 167 plans don't currently exist 2 Act 167 enforcement staff to oversee counties where plans are approved	DEP DEP	$400,000 per year $200,000 per year	DEP general fund DEP general fund
1.11	Create/establish incentives (positive – economic/water quality; negative – non-compliance penalties) for all stakeholders to comply with State law	Funding to implement BMPs and funding for regulatory agencies to meet responsibilities under established laws /regulations	2020-2025	Limited public funds; this includes county Storm Water Management (SWM) Plans and subsequent municipal SWM ordinances, which will result in development that addresses water quality.	Give municipalities in compliance with Act 167 credit/incentives toward MS4 Permit requirements. All municipalities that have land use authority should also have MS4 Permit requirements to address the impacts of that land use authority. Continue with Phase 2 Bay Technician Inspection work to encourage agricultural landowner compliance	PA needs to adequately staff State agencies to carry out program responsibilities	DEP	Restore DEP budget to previous levels (see FY 2002-2003) and utilize anticipated efficiencies savings to fully staff departments that directly contribute to Bay efforts	State Budget

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)