

**Phase 3 Watershed Implementation Plan (WIP) State Programmatic Recommendations Template –
Blair, Cambria, Dauphin, Fulton, Huntingdon, Juniata, Mifflin, Northumberland, Perry, Snyder, and Union 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.	Expand the CBO team to be more interdisciplinary, direct involvement by Department of Agriculture, so that messaging is more effective with the agricultural community Support for non-governmental organizations who are already at capacity and need support on expansion.	More dedicated staff to assist coordination and implementation of projects and funding opportunities		At least 6 dedicated staff at DEP and 1 at each County. Participation by other State departments	
1.2	Fund Regional Technical Assistance Positions to work with a group of counties	Fund “circuit rider” technical assistance, engineer positions to support CAP implementation goals	2022-2024	Lack of technical assistance is a challenge and funding positions in every county will be a challenge with limited space and funding. Look to fund circuit rider positions to support large county groupings.	Fund “Circuit Riders” for engineering, technical assistance and other implementation support positions. Partner with state universities with ag engineering, surveying, CAD and or GIS departments to develop work force and connect prospective employees with public and private employment opportunities	Multi-year regional Engineering Contract		\$5,000,000	NFWF INSR
Department of Environmental Protection									
1.4	Act 167	DEP increase enforcement of Act 167. All municipal SWM Ordinances consistent with County Stormwater Management Plan and being enforced. DEP provide additional funding to support the implementation of Act 167 plans along with new funding to develop Act 167 plans.	2024	DEP staffing; Act 167 consistent criteria definition.; Act 167 funding is currently inadequate and needs to be increased to support funding for plan development and implementation.	Act 167 plan development cost could be greatly reduced if existing Act 167 Plans & Flow Chart Tool were used as a model.	4 Act 167 enforcement staff - plan development 2 Act 167 enforcement staff - approved plans	DEP	\$5,000,000	ACT 167 Block Grant Fund to support new and implementation

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1.5	Model My Watershed (MMW) & MS4 Program Permit Based Loads	Work with Model My Watershed to ensure reduction values and efficiencies are similar or predictable between MMW, FieldDoc and CAST. Consider using Model My Watershed to ensure consistency in the 2023 Permit (or future permits) for MS4 Municipalities. Use MMW to assign permit baseloads, reduction requirements, and BMP credits to create consistency statewide. This will begin to make a connection between CAP related goals and MS4s.	2022	Currently results vary between MMW and FieldDoc/CAST. In addition, there is a disconnect between MS4 regulations and CAP goals that can create confusion. To begin aligning goals, systems used by various programs need to align to produce similar and predictable outputs. 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”.	Improve MMW to produce similar outputs to FieldDoc so that CAP projects completed by MS4s result in similar sediment reduction goals, and correlating nitrogen and phosphorus reductions.			\$500,000 for improvement to MMW and FieldDoc	DEP
1.6	MS4 Program Expansion of Designated Implementation Area	Demonstrate measurable success of a pilot project area where MS4-regulated areas and non-regulated areas can benefit from achieving sediment and nutrient goals. Currently the guidelines indicate a 1-mile radius around the U.S. Census urbanized area is the expanded area to work in. Continue to consider proposals from municipalities that are developing creative ways to address Pollutant Reduction Plan implementation, especially on agricultural lands that benefit urban land downstream.	2023-2024	PADEP/EPA technical 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 urban and rural sectors for cost effective solutions. Impairments can be a result of upstream pollution or storm velocities, so the watershed should be considered rather than the arbitrary urbanized area.	Engineering/MS 4 permit requirement coordination 1 FT MS4 Coordinator, 1 PT ag Coordinator	HRG (CAP coordinator) Municipal staff Municipal engineers, consultants		
1.7	Act 38 Program	Update Act 38 Program to require Ag E&S or Conservation Plans to be entered into PracticeKeeper on an annual basis to close reporting timing “gaps” and improve reporting precision. Nutrient management plans are already part of this process.	2022	Additional time for County Conservation District staff to enter plans in PK that they collect through their outreach to farmers.	Require plans be entered into PK to improve reporting. DEP should provide staff hours to assist with Act 38 plan reporting.	200-hour staff hours to support PK Reporting	DEP	See 1.12 for funding needs	

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1.8	Improve Wellhead Protection Statewide	Pennsylvania develops a more robust statewide recommendation to protect wellheads while incorporating WIP goals where feasible.	2024	Current standards are set by local jurisdictions and can range in effectiveness. There is no dedicated funding for BMP implementation or land acquisition where groundwater protection would benefit.	DEP compiles a GIS application that maps all of the wellhead protection areas across the state. That information is shared with CAP coordinators so that precision agriculture education and outreach, and dedicated funding, can be focused in these areas. Provided dedicated funding for groundwater monitoring to recognize the resulting improvements in nitrogen over following decades.	Additional Staff time, mapping, precision ag education/technical resources, groundwater monitoring equipment and maintenance	DEP			
1.9	DEP Staff Support in development of Source Water Protection Plans where feasible	Work closely with DEP regional staff to develop Source Water Protection Plans where feasible. Recommended to have additional funding available to support the development of Source Water Protection Plans. Recommended to have money for Source Water Protection Plan implementation.	2022	Lack of funding currently available to develop Source Water Protection Plans.	DEP compiles a GIS application that maps all of the wellhead protection areas across the state. That information is shared with CAP coordinators so that precision agriculture education and outreach, and dedicated funding, can be focused in these areas. Provided dedicated funding for groundwater monitoring to recognize the resulting improvements in nitrogen over following decades. Funding available for implementation of Source Water Protection Plans	DEP Staff	DEP Regional Offices	\$5,000,000 to assist with plan development and implementation	DEP	
1.10	Nutrient Trading Program	Pennsylvania improve education and outreach of nutrient trading program to include more participants. Look to incentivize new partners willing to participate in the program. Accurately document credits that are traded out of the Chesapeake Bay Watershed to represent reductions for the county trading credits.	2022-2024	Many of the wastewater and non-point source (farms) facilities within the Chesapeake Bay Watershed actively trade credits outside of the Watershed. Make sure to accurately document these trading credits and credit is given to counties trading away credits. More education is needed on the perks of the program.	Work with EPA/water pollution control facilities to document when credits are traded, how much is traded, and how to accurately count those reductions toward CAP goals. Look for ways to incentivize more BMP implementation through the program guidelines including a connection to MS4 and a reduction in stormwater fees for farmers. Work with generators who are selling credits outside the Bay watershed to function as a credit for the WIP goals. Another concept would be to create a tiered system of credits based on geographic location (River basin) where the credits are generated.					
1.11	PA One Stop	PA One Stop offers the ability to educate farmers on how to write and develop their own plan. Current PA One Stop classes do not offer all modern farming techniques and practices. Work with PA One Stop to update program to current practices.	2023	PA One Stop developed private plans are not reported in the model. Work with PA One Stop to require those who attend the class and develop a plan report this plan to PA One Stop for reporting in CAST.	Update PA One Stop Class to include current practices and operational standards. Work with PA One Stop to require reporting of privately developed Ag Plans.	Additional PA One Stop Staff to make training improvements	PA One Stop	\$500,000 to provide improved training and make program changes	PDA/DEP	

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1.12	Capital RC&D	Revise current Capital RC&D cover crop and tillage reporting to be more robust and up to date. Due to current methods, there is a two-year reporting cycle with the Capital RC&D Transect Survey and Model update. There is an expectation that the Capital RC&D transect survey is significantly underrepresenting no-till and cover crops that are reported.	2022	Farmer meetings resulted in a general consensus that more that 60-70% of farmers are no-tilling with a significant portion cover cropping in addition. Numbers reported to CAST significantly underrepresent consensus by the ag community. Numbers submitted by Capital RC&D are either not accepted in their entirety or Capital RC&D needs to produce more robust and realistic numbers.	Work with Capital RC&D and EPA to ensure numbers are not lost in translation. Work with EPA to update numbers on a more timely basis. Overall look to match consensus in the ag community that more than 60-70% of fields are operated under full no-till. State incentive program/FSA crop insurance information could be connected to cover crop implementation on an annual basis. No-till equipment is a capital improvement for producers, so assurance with the producer that they continue to use the equipment on a rotating basis (5-years) should serve to reverify that no-till is being implemented. Research feasibility that aerial photography or other remote sensing options are available to accurately capture cover crop usage.	Additional staff for Capital RC&D	Capital RC&D	\$1,500,000 to complete more robust reporting and begin utilizing aerial remote sensing information	DEP
1.13	Provide internship Program to County Conservation Districts to support with PracticeKeeper data entry	Provide 1-2 interns per county Conservation District for the summer of 2022 to support data entry into PracticeKeeper.	2022	Conservation Districts need enough time to hire and support interns in summer of 2022. Conservation District staff do not have time to train interns. Funding available to support interns.	Recommended that DEP provide a 1–2-week intro training to all Conservation District interns to free up staff time. District employees can then support interns once trained. Must be a paid internship. Year 1 – desktop work – PK data entry, GIS mapping, plan administrative reviews Year 2 – begin field inspections with professional staff, BMP verification field work, entry level plan development	40 interns	PACD/ Conservation Districts	\$400,000	DEP
1.14	Establish Pre-application permit meetings with CAP counties on monthly basis	Work with DEP Chesapeake Bay Office and Regional Offices to establish pre-application meetings for Chapter 105 and NPDES permits related to manure storage to ensure projects are permitted in a timely manner	Ongoing	Permit review time can take months to years for some projects, with stream restoration projects taking the longest. We need to ensure projects are permitted quickly to accelerate nutrient reductions and result in predictable construction schedules.	Establish a standing monthly day and time that a region of CAP counties can attend a pre-application meeting.	DEP South Central and North Central Office Staff	DEP		
1.15	Increase funding for Act 537 program to support plan development	Increase funding to the Act 537 programs to support additional plan updates or development	2023	Current lack of funding prevents local governments from developing Act 537 programs, especially for special study areas.	Increase funding to program to support the development of new or updated Act 537 plans.	Additional staff to support the Act 537 program	DEP	\$5,000,000 to support updated plans or new plans	DEP

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Funding									
1.16	Relax the Prevailing Wage requirement when private landowners invest their own money in water quality projects between now and 2025	Relax the requirement of prevailing wage from grant programs from now to 2025 when private landowners invest their own money to bring the cost of projects down and increase the willingness of landowners to implement projects.	2022-2025	Increased construction material costs along with required prevailing wage is turning landowners away from implementation, especially while it is expected that landowners have a share of the cost. Stakeholder meetings have recommended that without the requirement of prevailing wage, more landowners would be willing to implement projects because of lowered overall construction costs.	It is recommended to remove the requirement of prevailing wage from grant programs to reduce the overall cost of a project where landowners invest in the project, and for a finite period of time (2025 or the prevailing Chesapeake Bay Agreement timeline). Landowners do not want to complete a project with prevailing wage, because non-cost shared cost on the farmer drastically increases due to wages associated with prevailing wage. More projects would be fundable without prevailing wage. The trigger for the relaxation of the Prevailing Wage requirement should be based upon a percentage of the total cost of the project up to \$10,000 or 10%.				
1.17	Allow Regional Entities to Administer Grant Funding	Change state and federal grant programs to allow award recipient to be outside of county government with a release form signed by county government. This will remove the burden of grant administration from county government. The following funding sources are potential impactors (Chesapeake Bay Block Grant, Growing Greener, NFWF, RCPP)	2022-2025	Current grant programs are primarily designed to support county government. With limited staffing capacity at county government grant administration is becoming a burden and county government cannot take on additional funding due to administration concerns.	Allow regional entities to manage grant programs working very closely with implementation counties. Common organizations can be Tri-County Regional Planning Commission, Southern Allegheny Planning Commission, non-profit organizations, and private entities. These organizations are already established to handle grant administration and remove the burden from recipient county government organizations.				
1.18	Expansion of MS4 Grant Funding	Create a new “block grant” fund to solely support MS4 implementation. Currently MS4 municipalities are competing with other priority sectors and participants for MS4 Funding. To support the MS4 community develop a specific pot only eligible to MS4 communities.	2023	Securing funding for pot of money solely for MS4 communities. With increasing usage of local stormwater fees to fund stormwater infrastructure, this makes a great opportunity to create match sources to fund water quality projects and for communities to utilize their fees for infrastructure operation and maintenance.	Recommended to expand environmental stewardship funding to separate pot of money specifically for MS4 communities to fund PRP projects.	Staff support to administer program	DEP	\$15,000,000 to support project implementation	DEP Environmental Stewardship Fund
1.19	Real estate tax Incentives statewide for BMP Implementation	Support legislative action that would credit landowners with a tax credit for the implementation of long term BMP implementation.	2023	Legislative will to pass an incentive program for landowners to provide tax incentives. Setting program rules for tax incentives.	Review REAP tax credit program for addition of real estate tax credits for BMPs that remove land from production (buffers, grassed waterways). This would function as an alternative to the CREP program, which has fallen out of favor with farmers.				

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1.20	Conservation Excellence Grant	Ensure the Conservation Excellence Grant program is available for Tier 3 & 4 counties to fund project implementation. Conservation Districts need block grant and CEG funding to leverage relationships with farmers and have the ability to engage more landowners.	2022	Most funding is dedicated toward Tier 1 & 2 counties. It is crucial that Tier 3 & 4 counties have the same opportunities for funding. With Conservation District funding remaining flat for +10 years, it is crucial to have readily available funds to promote education, outreach and accelerate work.	It is recommended that each district receive a minimum of \$500,000 dollars each year to administer for agricultural projects.	Staff to support CEG Administration	Conservation District	\$20,000,000 to support additional staff and project implementation	SCC/PDA
1.21	REAP Program	Work with REAP Program to remove the funding for vertical tillage equipment. Work with REAP to promote more incentives for true no-till equipment.	2022	Some farmers are using vertical tillage for operational purposes. Educate farmers on the impact of vertical tillage (seed bed preparation on the short-term versus compaction and erosion on the long-term). Vertical tillage is being reported as conservation tillage and does not receive as much credit as no-till.	It is recommended that no-till preparation and seeding equipment is more incentivized than vertical tillage equipment through the REAP program.	Program revision	SCC staff		
1.22	Support new and innovative ways to fund Countywide Action Plan Implementation	Support Senate Bill 525 – expanded Growing Greener Program Support Senate Bill 465 – Agriculture Conservation Assistance Program	2022	Support new and innovative ways to fund Countywide Action Plan Implementation. Legislative will to pass additional funding options have failed to pass in recent sessions and a need for sustainable, long-term funding is critical for WIP implementation success.					

Pennsylvania Department of Agriculture and State Conservation Commission

1.23	Cover Crop Incentive Program – Statewide Funding	Pennsylvania Department of Agriculture and State Conservation Commission administer a statewide program to fund a Cover Crop Incentive Program. Provide block grant funding to each County Conservation District to allow each district to establish parameters based on growing season, species types and plant by dates. Funding must be provided long term and have limited statewide regulation to allow for differences in farming techniques by county. Currently, the farming community assumes that 30-40% of crop acres receive cover crops each year.	2022-2025	<p>Many farmers across Pennsylvania are harvesting cover crops for forage. Current commodity cover crop BMP efficiencies do not accurately credit nitrogen and phosphorus reductions associated with the practice. In addition, many cover crop programs do not allow for harvest in the spring.</p> <p>Cover crop program must pay for incentives to both existing farmers who have been implementing cover crops and new farmers.</p> <p>Establishing planted by dates can be challenging with changing climate and increased precipitation years, especially for multispecies cover crops. Dates and multispecies requirements must be flexible based on climate and precipitation during the growing season.</p>	Local farm outreach meetings provided recommendations to increase cover crop through incentivizing payments similar to Maryland’s program. A statewide program would be inadequate due to differences in farming season length and types by county across Pennsylvania. It is recommended Pa providing funding to Conservation Districts to establish cover programs with county specific rules on date of planting, species type and other requirements that fit county farming standards.	County Conservation District staff to administer program	Conservation District	\$15,000,000 annual	PDA, SCC, DEP, FDA
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1.24	Dirt and Gravel Roads Program	Expand Dirt and Gravel Roads program to include private farm roads/lanes as part of funding program, look to cost share with forested and agricultural landowners. Ensure funding exists for low volume roads. More funding is dedicated to Dirt and Gravel Roads opposed to Low Volume Roads.	2023	Stakeholder meetings have identified farm lanes as a major source of sediment and runoff from farming operations. With limited income many of these farmers are unable to fund lane improvement projects.	Dirt and Gravel Roads is a proven grant program that landowners are willing to work with. It is recommended to expand this to including severely impaired farm lanes and roads that are a leading source of sediment runoff. It is recommended to administer a portion of cost share with farmers.	Administration Support	SCC/ Conservation Districts	\$10,000,000 per year	Money from outside of transportation funds to bolster the overall budget
1.25	Work with Integrators and Producers to Communicate WIP Goals	PDA and SCC convene bi-annual meeting with integrators to communicate the goals of the Phase 3 WIP and how integrators can help to achieve agricultural related implementation goals including reporting their producers' activities and helping to advance additional activities on agricultural land. Also, it is encouraged to recommend that integrators require agricultural compliance plans and BMPs, in addition to sharing success stories of how integrators can help fund and implement BMPs that promote agricultural sustainability and water quality improvements.	2022-2024	Integrators are directly linked to producers throughout the agricultural industry. It is important to educate integrators to get them to understand the issues surrounding water quality and the importance of agriculture's involvement is conservation practice implementation. Convincing integrators to, at a minimum, require agriculture compliance of operations may be a challenge. The total number of integrators across the state of Pennsylvania can be challenging to coordinate, and they function regionally. Many farmers who work directly with integrators do not report practices implemented to either NRCS or County Conservation District. Integrators must work with farmers and County Conservation Districts to report BMPs implemented.	The following is a list of potential integrators to meet with: Bell and Evans, The Hershey Company, Empire Kosher, Country View, Kramer's, Pilgrims Pride, Purdue, DFA, Ritchey, Galliker Dairy Company, Farmers Assuring Responsible Management (FARM), Maryland Virginia Dairy, Turkey Hill, Organic Markets, Land O'Lakes, Dairy Farmers of America, Maryland and Virginia Milk Producers Cooperative, BJE Poultry, Chick to Chicken, Tyson, Purdue, Eggs for Vaccines, Smithfield Hatfield, Swift, etc. Local farm outreach/meetings have identified integrators and producers as one of the best methods to communicate with farmers. Due to the number of integrators and geographic locations they serve, it is recommended that state agencies convene these businesses to communicate consistent messaging, share why some integrators are pushing conservation, and needed results.	Staff Support time	PDA/SCC/ DEP/NRCS		
1.26	Farmland Preservation Program	Update Farmland Preservation Program to require NRCS Conservation Plan to be entered in PracticeKeeper on an annual or bi-annual basis to close reporting "gaps" and improve reporting. Increase farmland preservation program funding to increase number of farms preserved per year. Current waiting lists are growing larger in each county.	2022	Additional time for county conservation district staff to enter plans in PK. Sharing of NRCS data and plans can be challenging. Funding currently available to support farm preservation is inadequate. Must increase to support number of farmers wanting to enter preservation.	Require plans be entered into PK to improve reporting. Potential for DEP to provide staff hours to help enter NRCS plans into PracticeKeeper. Increase funding allotment per year to increase rate of preserving farms. Supply additional staff support to counties.	Farmland preservation program staff	Conservation Districts	Increase budget per year by \$10,000,000 to support additional staff and more preserved farms	PDA

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1.27	Organic Farms	Work with organic farming industry to educate them on the importance of no-till and come up with innovative ways to reduce tillage for weed control.	2022	With increased organic markets additional tillage is required to manage weeds.	PDA and SCC work with organic farmers to reduce tillage and return to no-till farming in a method that is consistent with organic standards.	Staff Support time	PDA/SCC/DEP/NRCS		
Chesapeake Bay Model - CAST									
1.28	Commodity Cover Crops	Commodity cover crops receive little to no credit for nutrient reductions. Modified credit is needed to achieve pollution reduction goals.	2023	Receiving credit approval by EPA's Chesapeake Bay Program and Workgroups.	Recommended to classify all cover crops that receive nutrients and are harvested as cover crops will fall nutrients. Many farmers are harvesting cover crops for forage and seeing an increased benefit from harvesting cover crops opposed to burning them down in the spring. Increased reduction efficiency value are necessary.	Staff support from DEP to assist with CAST changes	DEP		
1.29	Dirt and Gravel Roads	No nutrient reductions are associated with dirt and gravel road implementation. Additional studies are needed to prove nutrient reductions are occurring	2023	Receiving credit approval by EPA's Chesapeake Bay Program and Workgroups.	Recommended to work with dirt and gravel road program to conduct studies to prove nutrient reductions are occurring with road improvement projects.	Staff support from DEP to assist with CAST changes	DEP		
1.30	Acid Mine Drainage in Stream Benefits	Work with AMD impaired stream segments to monitor pre-treatment and post-treatment to identify the nutrient uptake benefits from improving a degraded stream by AMD to a healthy stream segment that can process nutrients.	2025	Receiving credit approval by EPA's Chesapeake Bay Program and Workgroups. Producing water quality monitoring that is acceptable and identifies clear improvements. Time associated with monitoring improvements.	Recommended DEP Bureau of Mining work with USGS/SRBC and other DEP Bureaus to monitor a heavily impaired stream segment pre and post treatment.	Staff support from DEP to assist with CAST changes	DEP		
1.31	Combined Sewer Overflow Systems	Current CAST reported loads from CSO systems do not accurately capture estimated volumes/loads from CSO systems. Work with CSO permittees to report system performance estimates to inform load estimates and work to reduce finger pointing to other sectors. Continue to improve accuracy of wastewater reporting numbers with significant and non-significant facilities.	2022	Increased storm events are frequently producing overflow stormflows systems cannot handle leading to combined sewage discharges. It appears these discharges are not accurately captured in CAST by smaller CSO permittees in the Pennsylvania portion of the Watershed. By not accurately capturing CSO facilities finger pointing can be contributed to other sectors. It is important to accurately establish crediting to appropriately address the issue.	Use estimated discharges from CSO permittee annual reports. Support CSO management programs with additional funding, similar to suggested MS4 program implementation support grants, thereby preventing further nutrient loads to streams.	Staff support from DEP to assist with CAST changes	DEP		
1.32	Barnyard Runoff Controls	A few counties are listed as 100% implementation of all barnyard runoff controls. Counties have identified this number as inaccurate and needs revision.	2022	Juniata and Mifflin Counties are not accurately represented in CAST in respect to barnyard runoff controls.	Work with EPA and CAST representatives to fix the issue in Juniata and Mifflin Counties.	Staff support from DEP to assist with CAST changes	DEP		

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Reporting and Verification									
1.33	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	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. EPA acceptance of remote sensing approach is challenging. EPA has shown in the past they are reluctant to immediately accept new approach ideas.	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.	GIS processing methods		\$100,000 per year per county for BMP cataloguing	
1.34	Develop a method/model/template to capture and report non-manure nutrient management plans	Develop a method to encourage, perform, capture, and report the 4R nutrient management practices along with nutrient management plans for farmland acres receiving fertilizer.	2022	Will require close coordination and cooperation between regulatory agencies, private fertilizer companies, and farmers to achieve a statewide model.	Dept of Ag/DEP/farmers to coordinate at State level with the fertilizer industry; State or Bay-wide system needed for consistency. Coordinate with ag consultants	State ag/farming/fertilizer industry experts		Reporting expenses not offset by increased production	
1.35	Implement a reporting program for commercial and homeowner nutrient applications	Support fertilizer legislation – where legislation requires reporting, be the data clearinghouse	TBD – based upon passage of legislation	Education of responsible parties, receiving timely information, training on reporting system	Pair reporting with another generally used reporting mechanism to State Government	Landowner education		\$1,000,000 for reporting mechanism	Refer to other states with similar program
1.36	PracticeKeeper	Expand PracticeKeeper to include in field GIS Spatial abilities to map projects in the Field using GPS coordinates to simplify reporting process Continue to expand PK to allow additional 3 rd party planners have access to enter manure management and AG E&S plans Ensure Conservation District is able to see all data enter by Private sector and DEP	2021-2025	Will need to address privacy concerns; may need changes to Right to Farm Act. Coding Issues, and seat license for private Ag planners.	Work with outside organizations to develop a GIS system that can connect with PK Data in Practice Keeper should be utilized for more than reporting to DEP. CD 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	State Ag staff/CD's/County/municipal planners/software experts		\$1,500,000 Software costs/staff costs	DEP/PDA/SCC

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1.37	FieldDoc	Ensure FieldDoc displays transparent progress to “live” track the progress each county is making toward achieving their goals Ensure each county has a FieldDoc Profile established in a timely manner	2022	Multiple systems working together to communicate progress.	Recommended to continue updating FieldDoc to be a transparent program that displays data “live”			\$1,500,000 Software costs/staff costs	DEP
1.38	Manure Haulers and Brokers – Manure Transport Reporting	Recommended to require all manure brokers and haulers to report on an annual basis the amount manure transported to and from a county.	2022	Requiring all haulers and brokers to submit data timely and on an annual basis.	Recommended DEP gather this information and report this to CAST on an annual basis	Additional Staff to work with haulers and brokers	DEP	\$1,000,000 Software costs/staff costs	DEP/PDA/SCC
Department of Conservation and Natural Resources									
1.39	Buffer Incentive Programs	DCNR revise buffer programs to include 5-10 year maintenance agreements to take the lift off of implementing landowners. Look to incentivize landowners up to \$5K per acre of buffer installed. Must include volunteers or staff to help implement buffers. Buffer incentive programs should allow landowners to flash graze with livestock when feasible around buffer plantings.	2022-2025	Finding willing landowners to implement buffers is a challenge. In order for buffers to be more palatable they must include maintenance, incentives, and support for planting. Education and time associated with each buffer is a challenge. Maintenance of buffers is challenging. Flash grazing with livestock can assist with helping to maintain buffers over time.	It is recommended that DCNR contract with a maintenance organization to provide full buffer maintenance across the state of PA. It is recommended to develop a similar program to the Alliance for the Chesapeake Bay in order to “sell” more buffers. Program changes to allow flash grazing in buffers to maintain vegetation.	Additional Staff to work landowners on buffer implementation	DCNR, DEP, PDA, SCC, NRCS	\$25,000,000 to assist with implementation and maintenance	DCNR, DEP, PDA, SCC, NRCS
PennDOT									
1.40	Reduce mowing of rights-of-way and roadside ditches	PennDOT work with mowing contracts to reduce the number of times per year of mowing roadside ditches and rights-of-way, especially targeting environmentally sensitive areas.	2022	Higher weeds visually look “messy,” however environmental benefits will help with nutrient and sediment reductions.	Recommended to cut mowing back to 1-2 times per year while maintaining soil health and noxious weeds.	Review operation and maintenance procedures for reduced mowing and invasives control	PennDOT		
1.41	Plant seed and erosion control matting immediately after grading and berm maintenance occurs	PennDOT requires crews to perform seed spreading or other vegetative establishment efforts when berms are graded or cut back. This effort exposes loose soil and creates runoff issues in the absence of matting, straw, and seeding.	2022	Ensure accurate E&S CAST model credit is documented with maintenance efforts.	Also work with municipalities to educate them on the importance of properly managed roadways, rights-of-way and other environmental sensitive areas.	Review operation and maintenance procedures for reduced mowing and invasives control	PennDOT		

**Phase 3 Watershed Implementation Plan (WIP) State Programmatic Recommendations Template –
Blair, Cambria, Dauphin, Fulton, Huntingdon, Juniata, Mifflin, Northumberland, Perry, Snyder, and Union County**

Action #	Description	Performance Target(s)	Expected Timeline	Potential Implementation Challenges	Potential Recommendations on Improvement	Resources Needed			
						Technical	Suggested Source	Financial	Suggested Source
Pennsylvania State Game Commission									
1.42	Pennsylvania Game Commission – Rented/Farmed Acres	PA Game Commission work with farmers to require conservation practices be included with farming operations (no-till, cover crops, filter strips, vegetative strips, buffers, etc.) PA Game Commission require farmers and/or game commission to document Conservation and Nutrient Management compliance – work with County Conservation District	2022	Many of the Game Commission-owned acres are rented out and may switch hands each year. Game Commission needs to require plan compliance and documentation each year. Bird habitat farming is becoming more popular and does not have conservation plans.	Game Commission develop a conservation plan for all farming acres that PA Game Commission implements/farms. PA Game Commission work with county conservation districts to ensure farmers renting ground are in compliance and documenting acres annually. Work with game commission officers located in Harrisburg and work with local Game Commission land managers for Union and Snyder.	Staff to support implementation and ensure compliance	PA Game Commission	\$1,500,000 to support implementation on game lands	PA Game Commission
National Resource Conservation Service (NRCS)									
1.43	Fund NRCS Regional Resource Conservation and Development (RC&D) Coordinators	Provide funding to support NRCS Regional RC&D Coordinators to support BMP Implementation across regional groupings	2023	Challenge to convince NRCS to provide additional funding to RC&D Program	Provide 2 – regional RC&D Coordinators per grouping of 3-4 County Coordinators. DEP/SCC/PDA work with NRCS to provide funding to support RC&D coordinators.	RC&D Coordinators	NRCS	\$5,000,000 to support regional RC&D Program	NRCS
1.44	Flexibility for farmers utilizing NRCS programs for implementation	The guidelines set for in NRCS programs including but not limited to CREP, REAP, Conservation Planning, RCPP, etc. are constraining on implementation.	2023-2024	The need for more flexible funding and program guidelines. NRCS does not always work with local stormwater ordinances in advance. Many times, this will fall to the Conservation District and can be time consuming. Recommendations: to encourage NRCS to comply more with local ordinances.	It is recommended that NRCS, EPA, and USGS advance the findings of the “Coordinating NRCS and EPA Agricultural Conservation Funding Programs in the Chesapeake Bay Watershed” report (January 8, 2021). The mission of the group should be to allow more flexibility to improve the willingness of landowners to utilize public funding.	Utilize local partners to continue a 365-degree review of program optimization needs	NRCS, EPA, USGS		
1.45	NRCS shared data	Coordinate the needs of NRCS, Pennsylvania’s Right to Know L, and Federal Article 1619 to improve the possibility of more shared information between agencies and their designated assigns. In order to effectively implement projects, NRCS data must be shared with on the ground implementors in coordination.	2022-2024	Right to Know law and Article 1619 present challenges with sharing data and true conservation/water quality program management. Privacy concerns with farmers information persist. Current data sharing is inadequate for WIP success.	Recommended to make changes to Right to Know and current standards of sharing information with NRCS data. Review Federal Article 1619 and draft recommendations that result in protection of data, and access to those with security clearances.	Legal review, practitioners’ input, data compatibility technical review, legislative review/support			

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 through outreach, assistance or funding, and who will be responsible for delivering the identified programs or practices.

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

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

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

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

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