

Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Template – BLAIR, CAMBRIA, FULTON AND HUNTINGDON COUNTY (SOUTHERN ALLEGHENIES)														
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							Technical	Source	Financial	Source	Technical	Suggested Source	Financial	Suggested Source
Priority Initiative 1: County Programmatic Initiatives: Blair, Cambria, Fulton, and Huntingdon														
1.1A	Implement County Comprehensive Plan policies and actions	<div>Ensure that growth activities address existing water quality impairments through stormwater BMP implementation already required by local ordinance</div> <div>Protect natural resources, protect wetlands through use of zoning ordinances</div> <div>Promote the inclusion of recreational opportunities counties have to offer, look to build local economies off tourism</div>	<div>Planning Commissions, growth boundary municipalities, Southern Alleghenies Bicycle and Pedestrian Plan, ACT 167 Plans, Huntingdon County Heritage Plan, Fulton County Heritage Plan, Convention and Visitors Bureau, Chamber of Commerce,</div> <div>Cambria County Conservation and Recreation Authority, Southern Alleghenies Greenways and Open Space Network Plan</div>	<div>Blair Countywide</div> <div>Cambria County – Chesapeake Bay Portion only</div> <div>Fulton Countywide</div> <div>Huntingdon Countywide</div>	ongoing	Educating municipalities, Updating local plans and ordinances, Growth areas not consistent with Census Urbanized Areas	Education, outreach	Planning Commission			4 – FTE Clean Water Coordinator for Planning Commission	Planning Commission	\$520,000 per year	DEP

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1.1B	Advance local comprehensive planning efforts  Implement existing Source Water Protection Plan	An annual review of the document and setting 1 goal, Partner with NRCS regarding source water protection and the 2018 Farm Bill  Work with identified partners to support implementation of source water protection plans mirrored with CAP goals.	Multi-township  Altoona Water Authority, McConnellsburg Borough, Huntingdon Borough  Fulton County Heritage Plan	Multi-township	1-2 years	Reinforcing the municipal role in coordinating with the water authorities to perform education and outreach.								

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						Potential	Resources <u>Available</u>	Resources <u>Needed</u>
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1.1C	Evaluate areas to establish riparian buffers to stabilize stream banks and limit encroachment	Utilize Chesapeake Conservancy data set to identify buffer gap project opportunities	Municipalities, Conservation District, CBF, Pheasants Forever, National Trout Unlimited, Prince Gallitzin State Park, WPC, PA Foundation of Watersheds, Watershed Organizations, Fulton County ACT 167 Plan, Fulton County Heritage Plan, DCNR	Blair Countywide	ongoing	Adopting ordinances, may require a pilot project in a willing municipality to demonstrate success.		Can apply for Landscape Scale Restoration (LSR) Grant Program – US Forest Service	Utilize PFBC Incentive Program to pay landowners for fishing access	PFBC	4 – FTE Clean Water Coordinator for Planning Commission	Planning Commission	\$520,000 per year	DEP
		Cambria County – Chesapeake Bay Portion only		Lack of technical assistance to support implementation goals for forest buffers.		4 – FTE Clean Water Coordinator for Conservation District					Conservation District	\$520,000 per year	DEP	
		Fulton Countywide		Buffer funding programs must include 5-10-year minimum maintenance plan, incentive money for landowners, along with volunteers to establish the buffer.		Buffer Funding Incentive Program					TBD	\$2,000,000 - \$4K per acre incentive payment and maintenance	TBD	
		Utilize Public Fishing Easement agreements as a way to conserve buffers		Huntingdon Countywide										

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1.2	Implement County Hazard Mitigation Plan	<p>Improve flood prone areas with BMPs that also enhance water quality (B) (F) (H)</p> <p>Retrofit existing flood prone areas with new culverts, ditches, etc. (B) (F) (H)</p> <p>Report and verify projects that are implemented for Floodplain management, but can address nutrients and sediment (B) (F) (H)</p> <p>Identify all public lands with flood hazards, Create a land bank (B)</p> <p>Look to develop and adopt ordinance to protect floodplain management (F)</p>	County Planning Commission, municipalities, MPO’s Unified Planning Work Program, Southern Alleghenies Comprehensive Plan, County Redevelopment Authorities	<p>Blair Countywide</p> <p>Cambria – plan under development for 2021</p> <p>Fulton Countywide</p> <p>Huntingdon Countywide</p>	2023-2025	<p>Funding, land for BMPs, funding for engineering feasibility studies</p> <p>Enforcement and compliance of stormwater ordinances</p>					1 – FTE Clean Water Coordinator for Planning Commission	Planning Commission	\$130,000 per year	DEP

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1.3	Update/draft Act 167 Plans	Look to modify existing stormwater ordinances and ACT 167 Plans where feasible or create new model stormwater ordinance or ACT 167 plans that would require/incentivize additional protections for streams	Municipal engineers, Municipalities, Southern Allegheny Comprehensive Plan, Juniata River Watershed Act 167, Bobs Creek and Dunning Creek, Beaverdam Branch 167	Blair Countywide	2022 – discuss interest to pursue and funding opportunities	Should local involvement exist, funding for Plan update  Additional stormwater engineering resources at county level (C)	Institutional knowledge	Municipal engineers – assume 6 for well-rounded local background			Act 167 Plan Development	Consultant	\$350,000 per county → \$1.1 Million total	DEP
		Cambria Chesapeake Bay Portion		Fulton Countywide							Huntingdon Countywide	4 – FTE Clean Water Coordinator for Planning Commission	Planning Commission	\$520,000 per year
		Encourage municipal officials to enact stormwater management ordinances consistent with ACT 167 and ACT 102 (F) (H) (C)												
		Implement Fulton County Act 167 Plan												

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1.4	Utilize Existing TMDLs to leverage the need for water quality improvements:	Leverage TMDLs to help educate local citizens on the need for water quality improvements	Beaverdam - Conservation District and City of Altoona,	Cambria County: Chest Creek and Clearfield Creek	Ongoing	Financial and Technical assistance to develop 319 or ARP plans for TMDL watersheds					3 – FTE Clean Water Coordinator for Planning Commission	Planning Commission	\$130,000 per year	DEP
	Chest Creek TMDL and Clearfield Creek TMDL  Beaverdam Branch – looking to update reasoning for TMDL	Explore the potential feasibility of developing 319 WIPS or Alternative Restoration Plans for TMDL watersheds	Little Trough – Conservation District, NRCS	Beaverdam branch  Little Trough Creek – AG, tough to work with landowners		Willingness of local volunteers to support in implementation of 319 plans.  Lack of existing watershed organizations					3 – FTE Clean Water Coordinator for Conservation District	Conservation District	\$130,000 per year	DEP
1.5	Juniata River Watershed Management Plan  Look to identify a rapid delisting watershed as part of the plan.	WPC applied for DCNR C2P2 grant to update the Juniata River Watershed Management Plan. CAP can help leverage funding for the Juniata River Watershed Management Plan.  Work with the Chesapeake Conservancy to rapidly delist a watershed within the Juniata River Watershed Plan.	Western Pennsylvania Conservancy, Chesapeake Conservancy	Juniata River Watershed (Blair, Fulton, Huntingdon, Juniata, Mifflin, Perry)	2021 – Conservancy Exploring options 2022 – outreach 2023 implementation	Our goal is basically to update the existing plan with work that has been done since the original plan, do some more in-depth GIS analysis, and get public and municipal input into what they see are the issues in the watershed. I think the GIS analysis will be a big part of the process. We're planning on using the new 1-meter resolution data set, incorporating some of the buffer gap analysis work from Chesapeake Conservancy, etc.			Huntingdon County AG BMPs \$442,305	Growing Greener	1 – FTE Clean Water Coordinator for Planning Commission  1 – FTE Clean Water Coordinator for Conservation District	Planning Commission  Conservation District	\$130,000 per year  \$130,000 per year  WPC applied for \$37,785 with \$37,286 match  Rapid Delisting Approach Budget \$2,000,000	DEP  DEP  DCNR  TBD

1.6	<p>Implement County Farmland Preservation Program with farmland preservation program incentives enhancement</p> <p>Preservation of agriculture lands, boosting local agriculture economy, Purchase of Agricultural Easements (PACE)</p>	<p>Total preservation Blair County 56 farms and 8,400 acres – Current staff/funding can do 1-2 farms per year, additional funding can complete up to 4. 12-15 are on a backlog list</p> <p>Total preservation Cambria County 19 farms and 3,296 acres currently Add 1-2 farmers each year – about 150 acres per farm, receive 8-10 applications per year on average</p> <p>Total preservation Fulton County 2 farms and 240 acres. add 1-2 farms each year (20 farms in waiting)</p> <p>Total preservation Huntingdon County 11 farms and 1,392 acres – Currently 1 farm every 2-3 years, 2 Farms total, Could do 2 farms per year with additional funding</p>	<p>Agricultural Land Preservation, NRCS, Conservation District, County Farm Bureau, PSU Extension, Huntingdon County Heritage Plan, Fulton County Heritage Plan, SCC Ombudsman, Southern Alleghenies RC&amp;D Council</p>	<p>Blair County Ag Land</p> <p>Cambria County Ag Land</p> <p>Fulton County Ag Land</p> <p>Huntingdon County Ag Land</p>	<p>2022-2023 – explore incentive opportunities</p> <p>Ongoing</p>	<p>Funding to support additional BMP implementation</p> <p>Technical assistance to coordinate preservation plans with funding and technical assistance</p> <p>Preserved farms are required to have an NRCS Conservation Plan, work with farmers to ensure Conservation Plan is reported in PracticeKeeper. Recommend to make this a program requirement statewide.</p> <p>Sharing NRCS data is challenging, must comply with 1619 form.</p> <p>Lack of funding to preserve farms each year. Many farmers stop applying because of limited funding and competitive process. Additional staff time would be needed to significantly increase the number of farms per year and continue to inspect the farms annually.</p>	<p>Priority recommendations, easement revision recommendations, supplemental BMP funding research</p>	<p>Ag Land Preservation Board</p>				<p>4 – FTE Clean Water Coordinator for Conservation District</p>	<p>Conservation District</p>	<p>\$520,000 per year</p> <p>\$1.2 Million per year to preserve 4 (150 acre) farms per year (Blair)</p> <p>Fulton County - \$1,000,000 for 250 acres per year</p> <p>Huntingdon – 1 additional staff person to run AG Preservation, \$500,000 per year in funding to fund 2 farms per year.</p>	<p>DEP</p> <p>PDA</p>
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1.7	Establish funding/staff support to assist the Agricultural community  496 farms in Blair County (2017 Census)  557 farms in Cambria County (2017 Census)  545 farms in Fulton County (2017 Census)  714 farms in Huntingdon County (2017 Census)	Approximately 75 farms have their plans in Blair County, goal is to complete 200 by 2025. (B)  Approximately 5 farms have their plans reported in Cambria County, goal is to complete/report 100 by 2025. (C)  Approximately 100 farms have their plans in Fulton County, goal is to complete 200 by 2025. Preparing to enter phase 2 of inspections. (F)  Approximately 100 farms have their plans in Huntingdon County, goal is to complete 200 by 2025. (H)	Agricultural Land Preservation, NRCS, Conservation District, County Farm Bureau, PSU Extension, Private Ag Consultants	Blair County Ag Land  Cambria County Ag Land  Fulton County Ag Land  Huntingdon County Ag Land	2022-2025	Limited compliance activities by DEP.  Lack of Technical assistance to support the farming community.  Private sector Ag plans are not required to be shared with District staff.  All counties will work with ACT 38, Preserved farms and organic farms to report AG E&S and NRCS Conservation Plans. These operations are required to have them, but no requirement to report the plans. It is recommended state agencies make changes to ACT 38 and Persevered Farm programs to require PracticeKeeper reporting.	38 Inspections performed per year (B)  75 Inspections performed per year, NRCS 20 plans per year (F)  12 Inspections performed per year (H) - Could do 50 inspections per year with additional funding  Field verification, troubleshooting  Site visits and plan review	Blair County Chesapeake Bay Tech  1.5 FTE Fulton County Chesapeake Bay Tech (cut in half for phase 2)  Huntingdon County Chesapeake Bay Tech  District, USDA NRCS, Private Consultants, PSU Extension			21 – additional Ag Planners to provide technical assistance and ag planning (Blair 6, Cambria 3, Huntingdon 6, Fulton 6,)  11 – FTE Design, Permit construction Services (Blair 3, Cambria 2, Huntingdon 3, Fulton 3,)  4 – FTE Clean Water Coordinator for Conservation District	District/NRCS/Private Sector Farm Visits  Private Sector/District  Conservation District	\$2,730,000 per year  \$1,540,000 per year  \$520,000 per year  \$65,000 for Chesapeake Bay Technician (increasing current capacity)	DEP/NRCS/SCC/PDA  DEP/NRCS/SCC/PDA  DEP/NRCS/SCC/PDA  Huntingdon County



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1.8A	Continue to address and support existing Acid Mine Drainage treatment systems and streams impaired by Acid Mine Drainage	Continue to provide funding to both active and passive treatment systems that are reducing the impacts of AMD impairments. If funding recedes water quality could degrade. (B,C,H)	PA DEP Bureau of Mining, Conservation District, watershed groups, TU, Altoona Water Authority, NRCS, Stream Restoration INC. Office of Surface Mining,	Shaw Run – Blair County  Glen White Run – Blair County  Chest Creek – Cambria County  Miller Run – Huntingdon, in stream dosing  Shoups Run – Huntingdon (delisted) still needs maintenance  Hartman Run – Huntingdon		Need to support legislation regarding the RECLAIM Act to support funding of new treatment systems.  Lack of technical assistance to support restoration efforts	Coordination of restoration   Monitoring	PL 566 Program with NRCS & Altoona Water Authority  Conservation District					\$100,000 (25% monitoring assistance and 75% for maintenance) Maintenance Funds per year (Blair)  \$25,000 for maintenance and monitoring (Huntingdon)	DEP Bureau of Mining, Abandoned Mine Reclamation Program

1.8B	Identify new funding to support the implementation of Acid Mine Drainage treatment systems	Opportunities still exist to address AMD runoff into local streams. New passive and active treatment systems are needed to support water quality improvements. Work with DEP and other identified partners to find funding to support the implementation of new treatment systems	PA DEP Bureau of Mining, Conservation District, watershed groups, TU, Altoona Water Authority, NRCS	<p>Dudley discharge (H) – DEP lead (Great Trough Creek &amp; Shoups Run)</p> <p>Pantee Run – AMD impaired (needs watershed plan)(c)</p> <p>Sugar Run (B) – Needs AMD system</p> <p>Kittaning Run – Water Authority Property (B)</p> <p>Clearfield Creek – Cambria County</p> <p>West Branch of Susquehanna Could use additional work (C)</p> <p>Bakerton is currently designed for use but is not being used by active mine site (B)</p> <p>Sankerton (B) needs additional help.</p> <p>Hartman Run (H) – Huntingdon</p>	2022-2025	<p>Need to support legislation regarding the RECLAIM Act to support funding of new treatment systems.</p> <p>Lack of technical assistance to support restoration efforts</p> <p>Landowner in Hartman Run would need to paid for land in order to install systems</p>						Coordination of restoration	PL 566 Program with NRCS	<p>\$5,000,000 Total for restoration to Kittaning Run and Sugar Run</p> <p>\$10,000,000 for Dudley Discharge</p> <p>\$300,000 for Hartman Run</p>	DEP Bureau of Mining, Abandoned Mine Reclamation Program
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1.9A	Partner with Penn State Altoona, Mount Aloysius (B), Juniata College (H) and Saint Francis University (C) to support implementation of the CAP.	Juniata College Tree Advisory Committee includes multidisciplinary team of students and faculty, could help to administer other BMPS  Saint Francis University  Penn State Altoona  Develop a program with university students to support PracticeKeeper reporting for summer of 2022.	Juniata College, Saint Francis University, Penn State Altoona, Mount Aloysius	319 Priority Watershed  Riparian properties  Preserved farms  Priority Corridor Watersheds -	2022-2025	Continued undergraduate/graduate engagement as students graduate through program, implementation funding  Lack of technical assistance professionals to mentor students and develop workforce development.  Lack of competitive paying job opportunities that ensure long term sustainable for recently graduated students	Outreach boots on the ground	Penn State Altoona, Mount Aloysius (B), Juniata College (H) and Saint Francis University (C)			18 – Student Internships to Support CAP Implementation (5 -Blair, 3 – Cambria, 5 – Fulton, 5 – Huntingdon)	Penn State Altoona (B), Juniata College (H) and Saint Francis University (C), or students who live locally and attend other universities	\$180,000	TBD
1.9B	Quantify Land/BMPs Managed by Penn State Altoona, Juniata College and Saint Francis University	Work with Penn State Altoona, Juniata College and Saint Francis University to ensure that water quality improvements that they manage are captured in CAST/FieldDoc	Penn State Altoona (B), Juniata College (H) and Saint Francis University (C)	Penn State Altoona owned Lands in Blair County  Juniata College owned Lands in Huntingdon County  Saint Francis University owned Lands in Cambria County	2022	Getting maximum credits for experimental BMPs	Institutional knowledge	University staff, 1 County staff person, HRG (CAP coordinator)			3 – FTE Clean Water Coordinator for Planning Commission  3 – FTE Clean Water Coordinator for Conservation District	Planning Commission  Conservation District	\$390,000 per year  \$390,000 per year	DEP  DEP

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1.10A	Create a regional water quality communication plan, leveraging existing documents and covering topics including: Southern Allegheny Comprehensive Plan, Hazard Mitigation Plans, Cold Water Conservation Plans, 319 Watershed Plans, Greenways and Open Space Plans	Develop regional messages and audience; execute plan and distribute messaging through staff and partners	Multi-partner, Southern Allegheny Planning Commission as lead entity building upon environmental aspects?	Blair Countywide  Cambria Chesapeake Bay Portion  Fulton Countywide  Huntingdon Countywide	2022 – plan developm ent	Simplifying the resources that are available, focusing on farmers and other landowners					Website development and continued maintenance	Consultant	\$60,000 per year	Administrative budget tag-along to project-related grant award
					2023 – plan implemen tation						2 – FTE Marketing and Outreach Coordinator	Planning Commission/ Conservation District	\$260,000 per year	NFWF

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1.10B	Agricultural Communication Strategy	Develop a plan to complete one on one farm visits outside the regulatory framework.	CD, County Farm Bureau, Integrators, Ag Land Preservation, PSU Extension, NRCS, Ombudsman	Blair Countywide	2022-2025	One on one farm outreach is the best way to communicate with farmers in addition to reporting practices.					21 – additional Ag Planners to provide technical assistance and ag planning	District/NRCS/ Private Sector Farm Visits	\$2,730,000 per year	DEP/NRCS/ SCC/PDA	
		Cambria Chesapeake Bay Portion													
		Fulton Countywide		Funding to support the technical assistance required to complete one on one farm outreach		4 – FTE Marketing and Outreach Coordinator					Conservation District	\$520,000 per year	NFWF		
		Huntingdon Countywide		Outreach to integrators is a challenge due to the number of integrators and multiple country boundaries they serve. It is recommended DEP/PDA/SCC communicate with integrators on a frequent basis to reduce mixed messages.		4 – FTE Clean Water Coordinator for Conservation District					Conservation District	\$520,000 per year	DEP		
		Utilize Farm Bureau Newsletter for announcements			Districts can be viewed as regulatory agencies can be tough for some farmers to be willing to work with the district										

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1.11	Countywide WQ Credit Offset Pilot	Demonstrate success of a pilot project area where MS4-regulated areas and non-regulated areas can benefit from achieving sediment and nutrient goals	Anitis Township, Logan Township, Altoona City, Allegheny Township, Duncansville Borough, Blair Township, Hollidaysburg Borough, Frankstown Township, ISC, Planning Commission	Blair County MS4 Municipalities	2022-2023	Municipal capacity to implement plans (technical, financial)  DEP acceptance of approach, permit compliance coordination among sectors, farmers in compliance with state and federal regulations				Existing NFWS INSR Grant (B)	1 – FTE Clean Water Coordinator for Planning Commission	Planning Commission	\$130,000 per year	DEP
											1 – FTE Clean Water Coordinator for Conservation District	Conservation District	\$130,000 per year	DEP
1.12	Keep High Quality Water High Quality – Protect Headwater Watersheds	Work to preserve and protect high quality and exceptional value streams with preservation and conservation initiatives. The goal is to prevent further degradation to healthy stream segments.	Conservation District, Planning Commission, Watershed organizations, trout unlimited.	Blair, Cambria, Fulton and Huntingdon County HQ and EQ watersheds.	2022	Funding is not typically available to preserve high quality watersheds. Most funding is dedicated to impaired watersheds. Ensure funding is available to support implementation in HQ and EQ watersheds.  Ensure funding for Tier 3 &4 counties is available.				ARC Funding	1 – FTE Clean Water Coordinator for Planning Commission	Planning Commission	\$130,000 per year	DEP
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Priority Initiative 2: Reporting and Tracking – Blair, Cambria, Fulton and Huntingdon														
2.1	Existing BMP cataloguing (quantity and location) for select BMPs, expanding on general recommendations provided in QAPP	Expand use of existing buffer layer with urban hydrology layer	Lead - Chesapeake Conservancy	Blair Countywide	2022 – cataloguing	EPA acceptance of the approach, further refine guidance in QAPP so that counties can accomplish this or so that the state can take the burden off of counties, utilize the approach to catalogue existing BMPs and do on the ground verification where required for reporting purposes, this is an accelerated BMP catch up approach while we continue to provide support to farmers on planning and BMP installs, reduce the amount of interruption of government entities to compliant farm operations	Precision Conservation Tools	Chesapeake Conservancy	N/A	N/A	Further GIS and data processing/method refinement	Chesapeake Conservancy	\$46,000 (2022 only) per county →\$184,000	EPA/NRCS
	BMPs = forest buffers, urban forest buffers, grass buffers, urban grass buffers, wet ponds and wetlands, fencing, cover crop and tillage management	R&D into distinguishing ag, pasture, and turf covers from grassed buffers	Stakeholder peer review – PSU Altoona, Juniata College, Saint Francis University, USGS, County Farm Bureau, PDA, EPA, NRCS	Cambria Chesapeake Bay Portion	2023 – Practice Keeper batch upload processing and field views		General methodology outline	QAPP			21 – additional Ag Planners to provide technical assistance and ag planning (Blair 6, Cambria 3, Huntingdon 6, Fulton 6,)	District/NRCS/ Private Sector Farm Visits	\$2,730,000 per year	DEP/NRCS/ EPA/PDA/SCC
		Manual digitizing where leaf-off <1 ft resolution imagery is available	County Conservation Districts	Fulton Countywide			BMP field backcheck	Varies by BMP, but likely 1 CD staff person, 1 CBF staff person, 1 PSU Extension staff person			17 – Student Internships to Support CAP Implementation (Blair 5, Cambria 2, Huntingdon 5, Fulton 5)	Local University Student or local student attending nearby university etc.	\$170,000	TBD
		Back check with staff field views where required		Huntingdon Countywide										
	Add data to Practice Keeper or another batch upload option													



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2.2	Identify future ag/urban project opportunities using automated means	BMP opportunity analysis – ag conservation, land retirement, alternative crop, forest conservation, stream restoration	Lead - Chesapeake Conservancy	Blair Countywide	2022 – cataloging	Different data set scales/precision	Precision Conservation Tools	Chesapeake Conservancy	N/A	N/A	Further GIS and data processing/method refinement	Chesapeake Conservancy	\$46,000 (2022 only) per county →\$184,000	EPA/NRCS
		Back check with staff field views	Stakeholder peer review – PSU Altoona, Juniata College, Saint Francis University, USGS, County Farm Bureau, PDA, EPA, NRCS, MS4 Municipalities in Blair County	Cambria Chesapeake Bay Portion	2023 – batch upload processing and field views	Willingness of landowners to implement BMPs	Batch upload processing	DEP/SRBC			17 – Student Internships to Support CAP Implementation (Blair 5, Cambria 2, Huntingdon 5, Fulton 5)	Local University Student or local student attending nearby university etc.	\$170,000	TBD
		Batch upload to FieldDoc to calculate credit opportunity	County Conservation District	Fulton Countywide	2024 – 2025 – implementation focus		BMP field backcheck							

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2.3	Improve continuous data collection on urban structural and non-structural practices	Add urban stormwater BMPs to FieldDoc or reported to DEP so that as land use data sets are updated, there are accompanying BMPs  Work with municipalities that are implementing stormwater management ordinances for less than an acre stormwater management to report practices	Municipal engineers, Chesapeake Conservancy, Municipalities, Planning Commission,	Blair Countywide  Cambria Chesapeake Bay Portion  Fulton Countywide  Huntingdon Countywide	2022	Currently municipalities are not collecting BMP data because it is not required in Non-MS4 communities. Must incentivize communities to report, no existing system in place  Lack of technical assistance to report and verify practices to DEP	Reporting platform	FieldDoc			7 – Municipal Engineers (Blair-2, Cambria-1, Fulton-2, Huntingdon-2)  11 – FTE Design, Permit construction Services (Blair-3, Cambria-2, Fulton-3, Huntingdon-3)	Municipalities, Planning Commission, COG  Private Sector/ District/ Planning Commission	\$980,000 per year  \$1,430,000	TBD  DEP/NRCS/ SCC/PDA
2.4	Implement a documentation program for commercial and homeowner nutrient applications in developed lands	Support fertilizer legislation – where legislation requires reporting, be the data clearinghouse	PSU Extension	Blair Countywide  Cambria Chesapeake Bay Portion  Fulton Countywide  Huntingdon Countywide	2022	Education of responsible parties, receiving timely information, training on reporting system, will need direction from State on what's expected and any reporting system that's developed	TBD	TBD	TBD	TBD	TBD)	TBD	TBD	TBD

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2.5	Improve Agricultural BMP reporting utilizing PracticeKeeper, Capital RC&D Transect Survey, PSU Survey, Manure Transport Reporting and Remote Sensing	<p>Increase reporting of agriculture plans into PracticeKeeper, provide incentives/requir ements to private sector Ag planners to report.</p> <p>Work with Capital RC&amp;D to improve current transect survey routes to be more inclusive</p> <p>Work with PSU to produce better response rates to the PSU survey for each county</p> <p>Work with PDA/DEP/SCC to improve manure transport reporting</p>	DEP, Conservation District, NRCS, PDA, NRCS, County Farm Bureau, Capital RC&D, Chesapeake Conservancy, PSU Survey, Manure Brokers,	<p>Blair Countywide</p> <p>Cambria Chesapeake Bay Portion</p> <p>Fulton Countywide</p> <p>Huntingdon Countywide</p>	2022-2025	<p>Private sector ag planners do not have access to PracticeKeeper. Ag planners do not have time to report into PK.</p> <p>Current Capital RC&amp;D routes are not all inclusive and could be improved.</p> <p>Current response rates are low and miss a large demographic of County farmers.</p> <p>Manure brokers are not required to report data annually. Data is not inclusive. Consider a regulatory change.</p> <p>Farmers willingness to share data with PK due to right to know</p>					17 – Summer interns for reporting and verification (Blair 5, Cambria 2, Huntingdon 5, Fulton 5)	Juniata College, Saint Francis University, PSU Altoona	<p>\$170,000 – paid internship</p> <p>\$100,000 Rate Per Plan pot of funding to support private sector Ag Plan entry</p>	<p>DEP/PDA/SCC</p> <p>DEP/PDA/SCC</p>

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2.6	Standardized Reporting for Dairy Precision Feeding	<p>Counties would like to utilize the dairy precision feeding BMP. However, current reporting guidelines do not allow for clear reporting standards on feed reduction amounts, how to report, and who is qualified to report. Changes to reporting would result in the following Dairy Precision Feeding BMP Implementation:</p> <p>5,000 dairy cow animal units (B)</p> <p>1,000 dairy cow animal units (C)</p> <p>5,000 dairy cow animal units (F)</p> <p>6,500 dairy cow animal units (H)</p>	Chesapeake Bay Program, Penn State Extension, Dairy co-ops	Blair Countywide  Cambria Countywide  Fulton Countywide  Huntingdon Countywide	2022	It is recommended that MUN be an acceptable standard for reporting dairy precision feeding. Guidelines need to be posted on acceptable MUN rates and work with dairy integrators to receive MUN data to report to DEP.	N/A	N/A	N/A	N/A	Reporting protocol	Chesapeake Bay Program, Penn State Extension, Dairy co-ops	N/A	N/A

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2.7	Water, Sewer and Wastewater Treatment Plant	<p>Work with Water, Sewer and Waste Treatment facilities to accurately document plant upgrades.</p> <p>Upcoming plant upgrades: Brown and Union Township, Saltillo (H)</p> <p>Altoona Digester, Tipton/Plane and Nine/Mill Run, Petersburg Borough</p> <p>McConnellsburg composts biosolids (F)</p>	<p>DEP</p> <p>Brown and Union Township, Saltillo (H),</p> <p>Altoona Digester (B), Tipton/Plane and Nine/Mill Run, Petersburg Borough</p> <p>McConnellsburg Borough</p>	CSO and Waste Treatment Facilities	Ongoing	<p>Need DEP to work with waste facilities to accurately document plant upgrades. Need reductions to be accurately captured in CAST.</p> <p>Work with DEP to determine how composting helps to reduce nitrogen and phosphorus. Accurately document</p>					<p>1 – FTE Clean Water Coordinator for Planning Commission</p> <p>1 – FTE Clean Water Coordinator for Conservation District</p>	<p>Planning Commission</p> <p>Conservation District</p>	<p>\$130,000 per year</p> <p>\$130,000 per year</p>	<p>DEP</p> <p>DEP</p>

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Priority Initiative 3B: Achieve New Pollutant Reductions Blair County														
3.1B	Implement Plum Creek and Sugar Run Watershed Assessment, Restoration and Preservation Plan	Implement federal, state and local programs that support the establishment of riparian buffers in the headwaters.  Look to support the implementation of streambank fencing, no-till planting and cover crops.  Implement appropriate AMD restoration practices to address AMD issues	BCCD, JK Chapter of TU, PAFBC, AG land preservation program	Plum Creek and Sugar Run Watershed	Ongoing	Technical assistance to support implementation and landowner outreach.  Lack of funding to support implementation of projects.			JK Chapter of TU has funding available for AG Practices and Stream Restoration – needs project leads	JK Chapter of TU	1 – FTE Clean Water Coordinator for Conservation District	Conservation District	\$130,000 per year	DEP
3.2B	Trout Unlimited Non-point source Technical Assistance Program	8 proposals were submitted for streambank and in-stream practices in Blair County Waterways  Currently in the process of being implemented	JK Chapter TU, BCCD,	Gillans Run Nature Works Park	2021 – Gillans Run  2022 Implementation of additional projects	Permitting process is underway, hoping to have permits by spring of 2022.  Work with South Central Office on Permitting Meeting  Current funding minimum of \$25,000 for prevailing wage can drastically increase price	Trout Unlimited	Grant	Partial funding through District		Tu Technical Assistance	Grant is expiring need to identify new funding	\$50,000 in design	DEP and some match with District

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3.3.Ba	Implement Blair County National Fish and Wildlife Foundation – Innovative Nutrient and Sediment Reductions (INSR)	Expand partners to accelerate the installation of eight stream bank restoration and riparian buffer projects in the MS4 regulated regions	Blair County Conservation District, PA Intergovernm ental Stormwater Committee (ISC), ISC Engineers, John Kennedy Local Trout Unlimited, Tri-Run Watershed Association, Little Juniata Watershed association, PA DCNR, Maple Hollow Townhouses Homeowners association, Master Gardeners	Beaverdam, Frankstown Watershed is primary focus, Little Juniata Watershed is a secondary priority	2021-2023	ISC has no capacity to scale up. Identifying additional partners to support with implementation.	Engineers	Intergovernm ental Stormwater Committee	\$41,000	DCNR Multi-Functional Buffer Grant	2 – Municipal Engineers	Municipalities, Planning Commission, COG	\$280,000 per year	TBD
		8,885ft stream restoration 4-acre riparian buffer planting	MS4 Regulated Area	Expand geographic scale of implementation outside of defined urbanized area.		Staff Time to support efforts	Conservation District	\$78,000	Growing Greener for Green Infrastructure	3 – FTE Design, Permit construction Services	Private Sector/ PCCD	\$420,000	DEP/NRCS/ SCC/PDA	
				Outreach to Non-MS4 communities		Volunteer Buffer Plantings, and other work	St. Francis University, Little Juniata River Association, Trout Unlimited – Pa Cold Water Heritage Program, Tri Run Watershed Association, DCNR,	\$200,500	ISC Engineering	2 – stream biologists	PCCD/other?	\$280,000 per year	DEP/DCNR/ EPA	
								\$146,000	DCED Grant	6 – additional Ag Planners to provide technical assistance and ag planning	District/NRCS/ Private Sector Farm Visits	\$780,000 per year	DEP/NRCS/ SCC/PDA	
								\$4,000	CBF 10 Million Trees	3 – FTE Design, Permit construction Services	Private Sector/ PCCD	\$420,000 per year	DEP/NRCS/ SCC/PDA	



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3.3Bb	Implement Blair County National Fish and Wildlife Foundation – Innovative Nutrient and Sediment Reductions (INSR)  Strengthen the partnership with Blair County Municipalities by scaling up Dirt and Gravel/Low Volume Road Program	Develop cost share program to fund Green Infrastructure and riparian buffer practices  Target stormwater practice implementation upstream of D&G Roads  Offer cost shared program to reduce sediment pollution from unpaved roads and culvert outlets in the AG sector – 10 projects total  Implement Stormwater Practices in Tyrone Township and Borough	Blair County Conservation District, Blair County Municipalities, NRCS, Tyrone Township and Tyrone Borough, Blair County Farm Bureau	Non-MS4 communities of Beaverdam, Watershed	2021 - 2023	Will work with NRCS staff to identify farms needing road/culvert repair; however, NRCS staff is limited and working beyond their scope is difficult	Volunteer Time	Blair County’s Dirt and Gravel Low Volume Road Program  TU Chapter, Little Juniata River Association, Tri-Run Watershed Association, Alliance for the Chesapeake Bay, County Farm Bureau	\$93,000  \$80,000  \$10,000	Blair County’s Dirt and Gravel Low Volume Road Program  Municipal Public Works  Riparian Buffer Funds Trout Unlimited	2 – Municipal Engineers  3 – FTE Design, Permit construction Services  2 – stream biologists  6 – additional Ag Planners to provide technical assistance and ag planning  3 – FTE Design, Permit construction Services	Municipalities, Planning Commission, COG  Private Sector/ PCCD  PCCD/other?  District/NRCS/ Private Sector Farm Visits  Private Sector/ PCCD	\$280,000 per year  \$420,000  \$280,000 per year  \$780,000 per year  \$420,000 per year	TBD  DEP/NRCS/ SCC/PDA  DEP/DCNR/ EPA  DEP/NRCS/ SCC/PDA  DEP/NRCS/ SCC/PDA

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3.3Bc	Implement Blair County National Fish and Wildlife Foundation – Innovative Nutrient and Sediment Reductions (INSR)	Accelerate the adoption of regenerative agriculture practices on farms in Blair County and establish a Regional Soul Health Hub in partnership with Pa Soil Health Coalition  Conduct 5 farmers workshops  Utilize multi-county grazing group to further promote the use of prescribed grazing	Blair County Conservation District, Blair County Municipalities, NRCS, PA Soil Health Coalition, Project Grass, PAGLC, PA No-Till Alliance,	Beaverdam, Frankstown Watershed is primary focus, Little Juniata Watershed is a secondary priority	2021 - 2023	NRCS Staff is limited  The principal gap that limits our capacity to scale up is the lack of funding and farmer understanding of the need to adopt regenerative ag related practices	Plan Writers	Nutrient Management Program and DEP's Chesapeake Bay Program		Nutrient Management Program and DEP's Chesapeake Bay Program	2 – Municipal Engineers  3 – FTE Design, Permit construction Services  2 – stream biologists  6 – additional Ag Planners to provide technical assistance and ag planning  3 – FTE Design, Permit construction Services	Municipalities, Planning Commission, COG  Private Sector/ PCCD  PCCD/other?  District/NRCS/ Private Sector Farm Visits  Private Sector/ PCCD	\$280,000 per year  \$420,000  \$280,000 per year  \$780,000 per year  \$420,000 per year	TBD  DEP/NRCS/ SCC/PDA  DEP/DCNR/ EPA  DEP/NRCS/ SCC/PDA  DEP/NRCS/ SCC/PDA
3.4B	Exploring opportunities to develop a plan for Spencer Run	Need to conduct a watershed assessment for Spencer Run. Funding already established  Already conducted a flood assessment	JK Chapter of TU, Army Core of Engineers	Spencer Run Watershed	2022 complete watershed assessment	Lack of staffing with quick grant turnaround	Technical assistance	Conservation District		DCED Keystone Communities	6 – additional Ag Planners to provide technical assistance and ag planning	District/NRCS/ Private Sector Farm Visits	\$780,000 per year	DEP/NRCS/ SCC/PDA

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3.5B	Altoona Water Authority Regional Digester	Altoona Water Authority is currently in the process of building a new regional digester to handle biosolids and manure from regional facilities within 50 miles. The facility will process nutrients and produce a low concentration Class A waste that will be land applied.	Altoona Water Authority, Regional waste producers who transport to digester,	Altoona, PA  Glen White Run Watershed – Biosolid Application	2022	There is potential the digester will be processing manure generated outside of the Chesapeake Bay Watershed. These nutrients will be contributed to Blair County loads.		Altoona Water Authority	\$36 million	Altoona Water Authority				

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Priority Initiative 3C: Achieve New Pollutant Reductions Cambria County														
3.1Ca	Implement the 2020 Cambria County Conservation District Strategic Plan	<p>Increase the number of stream restoration BMPS installed, submit grants once a year to implement AMD and AG impaired waters (2 miles of AMD stream by 2025, Glendale Lake streambank stabilization)</p> <p>Conduct 10 comprehensive farm evaluations for BMPs (assume 60 acres per farm – 600 acres of new potential planning), Funding by 2025</p> <p>Assist 5 farmers per year with soil conservation and nutrient management plans (portion of 10,000 acres of new soil conservation and water quality plan goal)</p>	CCPC, Municipalities, CCCD, DEP BAMR, PDA, DEP, Cambria County Redevelopment Authority, DCNR, NRCS, Prince Gallitzin State Park, SCC, PACD, EPCAMR, WPC, Americorps, Benscreek Canoe Club, PAFBC, PSU Extension, Clearfield Creek Watershed Association, Chest Creek Watershed Association	Cambria Countywide	Ongoing	Lack of funding and technical assistance to support restoration initiatives, landowner issues					1 – Municipal Engineers	Municipalities, Planning Commission, COG	\$140,000 per year	TBD
											2 – FTE Design, Permit construction Services	Private Sector/ CCCD	\$280,000	DEP/NRCS/ SCC/PDA
											1 – stream biologists	CCCD/other?	\$140,000 per year	DEP/DCNR/ EPA
											3 – additional Ag Planners to provide technical assistance and ag planning	District/NRCS/ Private Sector Farm Visits	\$390,000 per year	DEP/NRCS/ SCC/PDA
											2 – FTE Design, Permit construction Services	Private Sector/ PCCD	\$280,000 per year	DEP/NRCS/ SCC/PDA
											1 – FTE Clean Water Coordinator for Planning Commission	Planning Commission	\$130,000 per year	DEP
											1 – FTE Clean Water Coordinator for Conservation District	Conservation District	\$130,000 per year	DEP

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3.1Cb	Implement the 2020 Cambria County Conservation District Strategic Plan	Develop MOUs with muni's on E&S, meet with 12 muni's a year  Meet with 15 muni's in 3 years to promote stormwater management planning  Meet with county agencies to promote stormwater planning and ACT 167 requirements  Have at least 1 demonstration project by 2022 to showcase stormwater BMPs  Achieve addition of 2 staff to district employees by 2025  Increase 1 FTE for program support, environmental education and accounting	CCPC, Municipalities, CCCD, DEP BAMR, PDA, DEP, Cambria County Redevelopment Authority, DCNR, NRCS, Prince Gallitzin State Park, SCC, PACD, WPCAMR, WPC, Americorps, Benscreek Canoe Club, PAFBC, PSU Extension	Cambria Countywide	Ongoing	Lack of funding and technical assistance to support restoration initiatives					1 – Municipal Engineers  2 – FTE Design, Permit construction Services  1 – stream biologists  3 – additional Ag Planners to provide technical assistance and ag planning  2 – FTE Design, Permit construction Services  1 – FTE Clean Water Coordinator for Planning Commission  1 – FTE Clean Water Coordinator for Conservation District	Municipalities, Planning Commission, COG  Private Sector/ PCCD  PCCD/other?  District/NRCS/ Private Sector Farm Visits  Private Sector/ PCCD  Planning Commission  Conservation District	\$140,000 per year  \$280,000  \$140,000 per year  \$390,000 per year  \$280,000 per year  \$130,000 per year  \$130,000 per year	TBD  DEP/NRCS/ SCC/PDA  DEP/DCNR/ EPA  DEP/NRCS/ SCC/PDA  DEP/NRCS/ SCC/PDA  DEP  DEP

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3.2C	Implement Brubaker Run Cold Water Conservation Plan	Address remaining AMD and AML issues through restoration efforts	CCPC, Municipalities, CCCD, PAFBC  Work with municipal officials, business owners, residents and PennDOT for stormwater BMPs	Brubaker Run Watershed	Ongoing	Lack of technical assistance to support with implementation of restoration initiatives					1 – FTE Clean Water Coordinator for Planning Commission	Planning Commission	\$130,000 per year	DEP
		Culvert replacement projects  Opportunities for stream restoration near Hastings  Work with farmers to educate them on erosion and sediment control  Continue to fund Dirt and Gravel road projects				Lack of funding to support restoration efforts  Need to secure AMD/AML funding					1 – FTE Clean Water Coordinator for Conservation District	Conservation District	\$130,000 per year	DEP

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Priority Initiative 3F: Achieve New Pollutant Reductions Fulton County														
3.1F	Develop a plan for Big Cove Creek	Conservation District received a Growing Greener grant to develop a Plan for Big Cove Creek. Ensure the goals of this WIP align with CAP goals. Use the plans to leverage funding.  Mainly AG Implementation, some urban implementation, and forest management.	FCCD, Center for Watershed Protection	Big Cove Creek  Upper portion of Big Cove Creek is primary focus for impaired restoration efforts	2022 Plan Developm ent  2023 Secure funding  2024 begin implemen tation	District is focusing many of the AG activities and stream restoration in this watershed.  Ensure the Plan allows the CD to utilize 319 funding to support implementation.  Consider utilizing rapid delisting approach to identify most cost-effective landowners to pursue			Plan Writing Dollars	Growing Greener Grant			Implement Projects with 319 Funding	319 Program
3.2F	Exploring opportunities to develop a plan for Cove Run Watershed	Look to secure funding to write a develop either a 319 WIP, Alternative Restoration Plan or Cold-Water Conservation Plan to support implementation goals of the Phase 3 WIP.	FCCD, NRCS,	Cove Run Watershed	2022 – secure funding for plan developm ent  2023 – begin plan writing	Securing funding to support the development of an additional watershed plan.  Might be able to move forward with some implementation projects with out plan development.					Rapid Delisting approach	Chesapeake Conservancy	\$150,000 for plan development	Growing Greener



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Priority Initiative 3H: Achieve New Pollutant Reductions Huntingdon County														
3.1H	Implement the Miller Run Cold Water Heritage Conservation Plan	Continue semiannual water quality monitoring	Shoups Run Watershed Association, HCCD, PA Game Commission	Miller Run Watershed	Ongoing	Lack of technical assistance to support with implementation of restoration initiatives					1 – FTE Clean Water Coordinator for Planning Commission	Planning Commission	\$130,000 per year	DEP
		Lack of funding to support restoration efforts				1 – FTE Clean Water Coordinator for Conservation District					Conservation District	\$130,000 per year	DEP	
		If existing AMD system fail water quality will return to hazardous levels												
		Miller Run has been delisted, but macros still need improvement.												
		Work with Juniata College to perform additional monitoring efforts.												
3.2H	Implement Standing Stone Creek Coldwater Conservation Plan	Plan is currently under development and set to be finished in September of 2021	HCCD	Standing Stone Creek Watershed	9/2021 completion	Lack of technical assistance to support with implementation of restoration initiatives					1 – FTE Clean Water Coordinator for Planning Commission	Planning Commission	\$130,000 per year	DEP
		This plan is an opportunity to help implement CAP Initiatives			Ongoing implementation	Lack of funding to support restoration efforts					1 – FTE Clean Water Coordinator for Conservation District	Conservation District	\$130,000 per year	DEP

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3.3H	Juniata University Urban Tree Initiative	Juniata College has established a “Tree Care Plan” along with a tree advisory committee to further implementation of trees on campus.	Juniata College, Tree Advisory Committee, Huntingdon borough tree commission and service	Juniata College	Ongoing	Partner with Huntingdon borough tree commission and borough to implement projects. If the tree commission has more funding, they could implement more projects.	Volunteer services	Juniata College			1 – FTE Clean Water Coordinator for Planning Commission	Planning Commission	\$130,000 per year	DEP
		Partner with Huntingdon Borough Tree Commission									1 – FTE Clean Water Coordinator for Conservation District	Conservation District	\$130,000 per year  \$50,000 to support Huntingdon Borough Tree Commission	DEP  TBD
3.4H	Explore options for developing a watershed restoration plan at Great Trough Creek, Dudley Discharge, Fort Run, Warriors Run	A desire to implement plans at Great Trough Creek, Dudley Discharge, Fort Run, Warriors Run.	SRBC, Chesapeake Conservancy, Conservation District,	Great Trough Creek, Dudley Discharge, Fort Run, Warriors Run, Sadler Creek		Funds are available to address Great Trough Creek; however, funds are in general services and there is a legal battle transferring these funds to Bureau of Mining. This must be accomplished before a plan can be developed					1 – FTE Clean Water Coordinator for Planning Commission	Planning Commission	\$130,000 per year	DEP
		DEP developing a plan on Great Trough Creek to address the Dudley Run Discharge									1 – FTE Clean Water Coordinator for Conservation District	Conservation District	\$130,000 per year	DEP

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3.5H	Shoups Run 319 WIP	<p>BAMR is currently in the design phases of an abandoned mine land reclamation project in the Great Trough Creek watershed approximately 4 miles south of Dudley.</p> <p>Streambank stabilization projects and dirt and gravel road BMP's using high calcium limestone have been identified as possible solutions to the acidic deposition problem</p> <p>Plans to construct a wastewater treatment facility for the remaining populated areas of Dudley, Coalmont, and Carbon Township have been completed, funding has been secured, and construction has begun.</p>	BAMR, Conservation District	Great Trough Creek and Dudley Discharge, Shoups Run	Ongoing	DEP must be successful with the implantation of the Dudley Discharge AMD site.					1 – FTE Clean Water Coordinator for Conservation District	Conservation District	\$130,000 per year	DEP

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Priority Initiative 4: Achieve New Pollutant Reductions Blair, Cambria, Fulton, Huntingdon														
4.1	Rapid Delisting Catchment Strategy through the Precision Conservation Partnership	Rapid delisting will identify priority areas and BMPs	Chesapeake Conservancy and partners	Plum Creek and Tributary to Piney Creek (B)  Duclos Run – Chest Creek watershed (ag impaired due to sediment, former potato production, now corn/bean with cover crop and no-till) (C)  Cove Run and Big Cove Creek (F)  Warriors Mark Run and North Branch of the Little Aughwick Creek (H)	2021-2024	Reinvigorating landowner interest, design/permit/construction schedules,	Program management and GIS  Landowner outreach	Chesapeake Conservancy  Partnership stakeholders	\$500,000	NFWF Grant				

4.2(B)	Help farmers and operators to be in compliance with state and federal requirements: Conservation and Nutrient Management Plans	<p>Soil and Water Quality Conservation Plans (AG E&amp;S) 25,000 new acres</p> <p>Nutrient Management (Manure Management) 25,000 new acres of Core N and 15,000 new acres of Core P</p> <p>Work with ACT 38 operators (8), Preserved Farms (56), enter existing plans that were inspected but not reported to PK and certified organics to document plans already required</p>	4R Alliance, BCCD, Blair County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, Precision Agriculture, Agway, PSU Extension	Blair County Ag Land	2022-2025	<p>Lack of DEP inspections.</p> <p>Reporting and verification of AG Plans, NRCS plans expire and do not get reverified, private plans are never entered.</p> <p>Lack of Technical assistance to support agriculture planning and implementation, one on one farm outreach is best way to capture existing plans.</p> <p>Act 38 and Preserved Farms not required to enter plans in PK, Recommendations to require programs to enter plans into PK</p> <p>State agencies must work with integrators to ensure they are requiring compliance by farmers. Some integrators require compliance, but not all, great way to communicate with farmers as well.</p>					<p>6 – additional Ag Planners to work with farmers to meet 4R standards</p> <p>Private Sector Ag Planners – farmers more willing to work with them opposed to district</p>	District/NRCS/ Private Sector Farm Visits  TBD	\$780,000 per year	DEP/NRCS/ SCC/PDA
4.2(C)	See 4.2B	<p>Soil and Water Quality Conservation Plans (AG E&amp;S) 10,000 new acres</p> <p>Nutrient Management</p>	4R Alliance, CCCD, Cambria County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits,	Cambria County Ag Land – Chesapeake Bay Portion	2022-2025	<p>See 4.2 B</p> <p>Rented ground changing hands every year, hard to keep plans up to date each year.</p>	50 inspections completed per year for last 3-years (150 total)	CCCD			3 – additional Ag Planners to work with farmers to meet 4R standards	District/NRCS/ Private Sector Farm Visits	\$390,000 per year	DEP/NRCS/ SCC/PDA

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		(Manure Management) 15,000 new acres of Core N and 5,500 new acres of Core P  Work with ACT 38 operators (1 currently), Preserved Farms (20), and certified organics to document plans already required	Growmark Farm Service, PSU Extension			PA One Stop Needs Revised to include the most modern farming practices. Some farmers are using this program to develop their own plans.								
4.2(F)	See 4.2B	Soil and Water Quality Conservation Plans (AG E&S) 15,500 new acres  Nutrient Management (Manure Management) 24,500 new acres of Core N and 18,500 new acres of Core P  Work with ACT 38 operators (12), Preserved Farms (240 acres), and certified organics to document plans already required	4R Alliance, FCCD, Fulton County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, PSU Extension	Fulton County Ag Land	2022-2025	See 4.2B  Better information sharing with NRCS.  Chesapeake Bay Inspections are the best way to capture and document Plan Compliance  Prefer additional District staff over a consultant to conduct one on one farm outreach	75 inspections performed per year; 17 plans developed per year  NRCS can develop and update about 20 plans per years.	FCCD  NRCS			6 – additional Ag Planners to work with farmers to meet 4R standards	District/NRCS/ Private Sector Farm Visits	\$780,000 per year	DEP/NRCS/ SCC/PDA

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4.2(H)	See 4.2B	<p>Soil and Water Quality Conservation Plans (AG E&amp;S) 30,000 new acres</p> <p>Nutrient Management (Manure Management) 25,000 new acres of Core N and 15,000 new acres of Core P</p> <p>Work with ACT 38 operators (24), Preserved Farms (11), and certified organics to document plans already required</p>	4R Alliance, HCCD, Huntingdon County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, R&R Engineering,	Huntingdon County Ag Land	2022-2025	See 4.2B	12 Inspections completed per year for a total of about 50 completed over the last 4 years	HCCD			<p>Cost share support for equipment (Spreaders)</p> <p>6 – additional Ag Planners to work with farmers to meet 4R standards</p>	<p>Private Consultant/ District/ NRCS</p> <p>District/NRCS/ Private Sector Farm Visits</p>	<p>\$100,000 cost share budget per year (maintenance, staff support and cost)</p> <p>\$780,000 per year</p>	<p>DEP</p> <p>DEP/NRCS/ SCC/PDA</p>



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4.3	Advanced Nutrient Management (4R) Practice Education and Implementation	<p>Transition manure management plans to nutrient management plans and incentivize implementation Increase existing 4R practice (N Rate, Timing and Placement by 5,000 acres per year) (B)</p> <p>(N/P Rate, Timing and Placement by 1,000 acres per year) (C)</p> <p>(N Rate by 500 acres, N Timing by 6,000 acres, N Placement by 6,000 acres and P Placement/rate/timing by 4,000 acres) (F)</p> <p>(N Rate by 4,000, P Rate by 8,000, N/P, Timing and Placement by 8,000 acres per year) (H)</p>	4R Alliance, CD, County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, Precision Agriculture, Agway, PSU Extension	<p>Blair County Ag Land</p> <p>Cambria County AG Land – Chesapeake Bay Watershed</p> <p>Fulton County Ag Land</p> <p>Huntingdon County AG Land</p>	2022-2025	<p>Landowner interest, BMP verification (annual)</p> <p>Lack of Technical assistance to support agriculture planning and implementation</p> <p>Additional funding to support soil testing. Soil testing is key to meeting the recommendations of supplemental BMPs.</p> <p>Machine dependent for most farming operations</p> <p>Cost of fertilizer is self-regulating farmers to use less fertilizer; therefore, lower rates</p>	Educational support	CBF/4R Alliance			<p>21 – additional Ag Planners to provide technical assistance and ag planning (Blair 6, Cambria 3, Huntingdon 6, Fulton 6,)</p> <p>Cost share support for equipment – precision AG Spreader (C)</p> <p>Cost share support for equipment (Spreaders)(H)</p>	<p>District/NRCS/Private Sector Farm Visits</p> <p>Cambria Conservation District</p> <p>Private Consultant/District/ NRCS</p>	<p>\$2,730,000 per year</p> <p>\$250,000 cost share budget per year</p> <p>\$100,000 cost share budget per year (maintenance, staff support and cost)</p>	<p>DEP/NRCS/SCC/PDA</p> <p>DEP</p> <p>DEP</p>

4.4	Implement Practice to improve soil health and sustainability (Tillage Management and Cover Crops)	<p>Determine feasibility of having a county/state cost share program to enhance adoption of the annual practice, pay incentive payment per acre</p> <p>Implement tillage management and cover crops on an annual rate of 19,000 acres High Residue, 12,000 acres Conservation Tillage, 5,200 acres Low Residue, 8,500 acres of cover crops and 12,500 acres of cover crops with fall nutrients (B)</p> <p>8,000 acres HR, 6,500 acres CT, 3,000 acres LR, 6,300 acres of CC and 1,000 acres of CC with fall nutrients (C)</p> <p>10,000 acres HR, 7,700 acres CT, 5,000 acres LR, 7,700 acres of CC and 8,700 acres of CC with fall nutrients (F)</p> <p>20,000 acres HR, 10,000 acres CT, 4,000 acres LR, 8,000 acres of CC and 10,000 acres of CC with fall nutrients (H)</p>	CD, County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, Precision Agriculture, Agway, PSU Extension	<p>Blair County Ag Land</p> <p>Cambria County AG Land – Chesapeake Bay Watershed</p> <p>Fulton County Ag Land</p> <p>Huntingdon County AG Land</p>	2022-2023	<p>Current verification methods do not accurately capture implemented amounts - work with Capital RC&amp;D and DEP to improve transect survey routes and data collection methodology</p> <p>Lack of technical assistance and farm planners to work with farmers to transition to High Residue Tillage</p> <p>Farmers are harvesting cover crops for animals, need accurate crediting for commodity cover crops</p> <p>Existing Cover Crop Programs have strict plant by date that does not work with changing weather patterns and wetter years</p> <p>Organic farmers are using tillage to manage weeds and vertical tillage is becoming more popular among farmers, younger generation is “trying” tillage for experience. Potato farmers use tillage as part of their operational plans</p>	<p>Transect survey</p> <p>2 – No till drills for rent</p> <p>1 – No till drill for rent</p>	<p>Capital RC&amp;D</p> <p>Cambria County District</p> <p>Fulton County District</p>	<p>EQIP – pays \$50 per acre for single species, \$60 per acre for 3 species</p>	NRCS	<p>21 – additional Ag Planners to provide technical assistance and ag planning (Blair 6, Cambria 3, Huntingdon 6, Fulton 6,)</p> <p>Cost share support for equipment – No-till Drill, must include additional staff to support rentals, plus storage and a vehicle</p>	<p>District/NRCS/Private Sector Farm Visits</p> <p>Fulton County Conservation District</p> <p>Huntingdon County Conservation District</p>	<p>\$2,730,000 per year</p> <p>\$250,000 per conservation district (\$500,000 total)</p>	<p>DEP/NRCS/SCC/PDA</p> <p>DEP</p>
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4.5B	Implement more pasture management BMPs	Prescribed grazing – 80 acres  Forest buffers on fenced pasture corridor – 35 acres  Grass buffers on fenced pasture corridor – 35 acres	BCCD, Blair County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, Precision Agriculture, Agway, PSU Extension	Blair County Ag landowners who raise horses, dairy, beef and other pasture grazing animals	2022-2025	Landowner education, BMP funding for non-buffer work, plan updates, data gathering  Lack of Technical assistance to support agriculture planning and implementation	Landowner education	NRCS	CBF grant	ARC Funding	6 – additional Ag Planners to provide technical assistance and ag planning	District/NRCS/Private Sector Farm Visits	\$780,000 per year	DEP/NRCS/SCC/PDA
4.5C	Implement more pasture management BMPs	Prescribed grazing – 125 acres  Pasture Alternative Watering – 250 acres  Forest buffers on fenced pasture corridor – 10 acres  Grass buffers on fenced pasture corridor – 12 acres	CCCD, Cambria County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, Growmark Farm Service, PSU Extension	Cambria County Ag landowners who raise horses, dairy, beef and other pasture grazing animals – Chesapeake Bay Portion	2022-2025	See 4.5B  Old NRCS plans need to be updated to comply with prescribed grazing definition – difficult to get landowner buy-in – fund alternative watering and fencing; most pastures are streamside	Landowner education	NRCS	CBF grant	ARC Funding	3 – additional Ag Planners to provide technical assistance and ag planning	District/NRCS/Private Sector Farm Visits	\$390,000 per year	DEP/NRCS/SCC/PDA
4.5F	Implement more pasture management BMPs	Prescribed grazing – 100 acres  Forest buffers on fenced pasture corridor – 5 acres  Grass buffers on fenced pasture corridor – 5 acres	FCDD, Fulton County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, PSU Extension	Fulton County Ag landowners who raise horses, dairy, beef and other pasture grazing animals	2022-2025	See 4.5B  Increasing construction costs are cancelling NRCS contracts	Landowner education	NRCS	CBF grant	ARC Funding	6 – additional Ag Planners to provide technical assistance and ag planning	District/NRCS/Private Sector Farm Visits	\$780,000 per year	DEP/NRCS/SCC/PDA

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4.5H	Implement more pasture management BMPs	Prescribed grazing – 4,600 acres  Forest buffers on fenced pasture corridor – 25 acres  Grass buffers on fenced pasture corridor – 25 acres	HCCD, Huntingdon County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, R&R Engineering,	Huntingdon County Ag landowners who raise horses, dairy, beef and other pasture grazing animals	2022-2025	See 4.5B	Landowner education	NRCS	CBF grant	ARC Funding	6 – additional Ag Planners to provide technical assistance and ag planning	District/NRCS/ Private Sector Farm Visits	\$780,000 per year	DEP/NRCS/ SCC/PDA
4.6(B)	Riparian buffer and re-forestation BMPs	350 riparian forest buffer acres – new buffer; Need to recredit additional acres lost since 2010  85 riparian grass buffer acres – new buffer; Need to recredit additional acres lost since 2010  15 acres – urban forest buffer  2 acres – urban tree canopy  40 acres – urban forest planting	BCCD, Blair County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, Precision Agriculture, Agway, PSU Extension	Blair County Ag Land	2022-2025	Landowner partnerships, landowner education, volunteer acceptance of buffer plantings, buffer maintenance guide for farmers, routine site visits to confirm buffers are thriving, invasive species removal during establishment  Lack of technical assistance to conduct landowner outreach, implementation, and maintenance of proposed projects	Materials  Mapping	BCCD (in-kind, annual tree sale efforts), CBF  Chesapeake Conservancy	Budget available to be determined  Utilize PFBC incentive program to pay landowners for fishing access	CBF, NFWF, NFWFS, NRCS - CREP	3 – FTE Municipal/ Environmental Planners and Technical Assistance	CBF/BCCD/ Chesapeake Conservancy/ Planning Department	\$390,000 per year	DCNR, NFWF, PACD, TreeVitalize, DEP, Coldwater Heritage Partnership Implementation Grants, Landscape Scale Restoration (LSR) Grant Program – US Forest Service

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4.6(C)	Riparian buffer and re-forestation BMPs	174 riparian forest buffer acres  113 riparian grass buffer acres  56 acres – Agriculture Tree Planting  10 acres – urban forest buffer  5 acres – urban tree canopy  2 acre – Urban Forest Planting  50 acres – Forest Harvesting Practices	CCCD, Cambria County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, Growmark Farm Service, PSU Extension	Cambria County Ag Land – Chesapeake Bay Portion	2022-2025	See 4.6B  Funding program must include a 5-10-year maintenance program to establish buffers along with incentive program similar to \$4K per acre payment	Materials       Mapping	CCCD (in-kind, annual tree sale efforts), CBF  Chesapeake Conservancy	Budget available to be determined	CBF, NFWF, NFWS, NRCS - CREP	2 – FTE Municipal/ Environmental Planners and Technical Assistance	CBF/CCCD/ Chesapeake Conservancy/ Planning Department	\$260,000 per year	DCNR, NFWF, PACD, TreeVitalize, DEP, Coldwater Heritage Partnership Implementation Grants, Landscape Scale Restoration (LSR) Grant Program – US Forest Service

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4.6(F)	Riparian buffer and re-forestation BMPs	305 riparian forest buffer acres  45 riparian grass buffer acres  23 acres – Agriculture Tree Planting  40 acres – urban forest buffer  10 acres – urban tree canopy  1 acre – Urban Forest Planting  150 acres – Forest Harvesting Practices	FCCD, Fulton County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, PSU Extension	Fulton County Ag Land	2022-2025	See 4.6B  Buffer plantings are becoming more expensive must increase dollars per acre provided	Materials    Mapping	PCCD (in-kind, annual tree sale efforts), CBF  Chesapeake Conservancy	Budget available to be determined	CBF, NFWF, NFWS, NRCS - CREP	3 – FTE Municipal/ Environmental Planners and Technical Assistance	CBF/PCCD/ Chesapeake Conservancy/ Planning Department	\$390,000 per year	DCNR, NFWF, PACD, TreeVitalize, DEP, Coldwater Heritage Partnership Implementation Grants, Landscape Scale Restoration (LSR) Grant Program – US Forest Service

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							Technical	Source	Financial	Source	Technical	Suggested Source	Financial	Suggested Source
4.6(H)	Riparian buffer and re-forestation BMPs	414 riparian forest buffer acres  65 riparian grass buffer acres  24 acres – Agriculture Tree Planting  40 acres – urban forest buffer  30 acres – urban tree canopy  10 acres – Urban Forest Planting  850 acres – Forest Harvesting Practices	HCCD, Huntingdon County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, R&R Engineering, Huntingdon Borough Tree Commission, Juniata River Blueprint Community, Juniata College, Mount Union Borough	Huntingdon County Ag Land	2022-2025	See 4.6B	Materials       Mapping	PCCD (in-kind, annual tree sale efforts), CBF      Chesapeake Conservancy	Budget available to be determined	CBF, NFWF, NFWS, NRCS - CREP	3 – FTE Municipal/ Environmental Planners and Technical Assistance	CBF/PCCD/ Chesapeake Conservancy/ Planning Department	\$390,000 per year	DCNR, NFWF, PACD, TreeVitalize, DEP, Coldwater Heritage Partnership Implementation Grants, Landscape Scale Restoration (LSR) Grant Program – US Forest Service



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							Technical	Source	Financial	Source	Technical	Suggested Source	Financial	Suggested Source
4.7	Wetland restoration implementation on marginal production ag land	26 acres of Wetland Restoration (B)	Conservation District, County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, Precision Agriculture, Agway, PSU Extension, Watershed Organizations	Blair County Ag Land	2022 – 2025	Willing landowner; appropriate siting, design, and construction for successful restoration result  Lack of technical assistance for landowner outreach and agriculture planning to identify potential site locations	Landowner outreach	Conservation District and NRCS staff person			Preliminary design	USFWS	Assume \$1,000,000 for land acquisition, Assume \$400,000 project budget	Seek a co-benefits funding source
		28 acres of Wetland Restoration (C)		Cambria County Ag Land – Chesapeake Bay Portion							21 – additional Ag Planners to provide technical assistance and ag planning (Blair 6, Cambria 3, Huntingdon 6, Fulton 6,)	District/NRCS/ Private Sector Farm Visits	\$2,730,000 per year	DEP/NRCS/ EPA/PDA/SCC
		18 acres of Wetland Restoration (F)  14 acres of Wetland Restoration (H)		Fulton County Ag Land  Huntingdon County Ag Land							11 – FTE Design, Permit construction Services (Blair-3, Cambria-2, Fulton-3, Huntingdon-3)	Private Sector/ District/ Planning Commission	\$1,430,000	DEP/NRCS/ SCC/PDA

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							Technical	Source	Financial	Source	Technical	Suggested Source	Financial	Suggested Source
4.8	Stream Restoration (Urban and Agriculture)	31,240 (~6 mile) Linear feet Urban Stream Restoration, 3,000 Linear feet Ag Stream Restoration (B)  8,400 Linear feet Urban Stream Restoration, 4,000 Linear feet Ag Stream Restoration (C)  3,000 Linear feet Urban Stream Restoration, 10,000 Linear feet Ag Stream Restoration (F)  3,000 Linear feet Urban Stream Restoration, 4,000 Linear feet Ag Stream Restoration (H)	CBF, Chesapeake Conservancy, TU National, PFBC Stream Restoration Team, NRCS, Conservation District, Planning Commission, Municipalities, ISC, Watershed Organizations, Trust for Tomorrow, WPC, TU JK Chapter,	Blair Countywide and Priority HUCs  Cambria Countywide and Priority HUCs – Chesapeake Bay Portion  Fulton Countywide and Priority HUCs  Huntingdon Countywide and Priority HUCs	2022 – 2025	Design/permit/construction cycle seems to work in two-year increments, there is an assumption that eroded/degraded streams exist based upon 403(d) listing – should that not be the case in the field, adjust quantitative goal down and ensure buffers are in place  Lack of funding to cover engineering design	Design/GP-1 permit	Trout Unlimited, Municipalities			Design, permit, construction services  7 – Municipal Engineers (Blair-2, Cambria-1, Fulton-2, Huntingdon-2)  11 – FTE Design, Permit construction Services (Blair-3, Cambria-2, Fulton-3, Huntingdon-3)  5 – stream biologists (Blair-2, Cambria-1, Fulton-1, Huntingdon-1)	Private sector, USFWS, TU  Municipalities, Planning Commission, COG  Private Sector/ PCCD  PCCD/other?	Assume \$450/LF - \$20.54 M  Assume \$50/LF - \$1.05M  \$980,000 per year  \$1,430,000 per year  \$700,000 per year	Growing Greener, NFWF, DEP, DCNR  TBD  DEP/NRCS/ SCC/PDA  DEP/DCNR/ EPA

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							Technical	Source	Financial	Source	Technical	Suggested Source	Financial	Suggested Source
4.9	Implement more barnyard runoff control/loafing lot management	30 acres of barnyard runoff controls (B) Work with GIS department to identify barnyards within 150 feet of stream for prioritizing	Conservation District, County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, Precision Agriculture, Agway, PSU Extension	Blair County Ag Land	2022 – 2025	Landowner buy-in and project development/funding	Engineering Support	NRCS			21 – additional Ag Planners to provide technical assistance and ag planning (Blair 6, Cambria 3, Huntingdon 6, Fulton 6,)	District/NRCS/ Private Sector Farm Visits	\$2,730,000 per year	DEP/NRCS/ SCC/PDA
		5 acres of barnyard runoff controls, 100 acres of agricultural drainage management (C)		Cambria County Ag Land – Chesapeake Bay Portion		Lack of Technical assistance to support agriculture planning and implementation					11 – FTE Design, Permit construction Services (Blair 3, Cambria 2, Huntingdon 3, Fulton 3,)	Private Sector/ District	\$1,540,000 per year	DEP/NRCS/ SCC/PDA
		10 acres of barnyard runoff controls, 29 acres of agricultural drainage management (F)		Fulton County Ag Land		Lack of funding to cover engineering design								
		40 acres of barnyard runoff controls, 30 acres of agricultural drainage management (H)		Huntingdon County Ag Land		Increasing construction costs are cancelling NRCS contracts								



4.12	Urban Stormwater Management Non-Regulated Communities	<p>Runoff Reduction Performance Standard – 47(F), 13(H) Acres treated</p> <p>Stormwater Treatment Performance Standard – 3(H) acres treated</p> <p>Wet Ponds and Wetlands – 138(B), 90(C), 75(F) Acres treated</p> <p>Advanced Grey Infrastructure – 2,600(B) Acres treated</p> <p>Bioretention – 5 (B) acres treated</p> <p>Vegetated Open Channels – 492 (B) acres treated</p> <p>Infiltration Practices – 2 (B) acres treated</p> <p>Filtering Practices – 5 (B) Acres treated</p> <p>Dry Detention Ponds – 172 (B) Acres treated</p> <p>Dry Extended Detention Ponds – 39 (B) Acres treated</p>	Planning Commission, ISC, Municipalities	<p>Blair County Developed areas</p> <p>Cambria County Developed areas – Chesapeake Bay Portion</p> <p>Fulton County Developed areas</p> <p>Huntingdon County Developed areas</p>	2022-2025	<p>Coordination/training for municipal staff, FieldDoc batch opportunity, non-MS4 engagement (what’s in it for them?), difficulty obtaining past information (MS4s typically have databases from 2003-present)</p> <p>Implement existing ordinances at local municipal level</p> <p>Catalogue existing BMPs that fit into this category and newly built ones</p>	Reporting platform	FieldDoc			<p>Municipal data input</p> <p>7 – Municipal Engineers (Blair 2, Cambria 1, Huntingdon 2, Fulton 2)</p>	1 staff person per developing municipality	<p>Assume \$5000 per municipality per year and 20 municipalities → \$100,000 per year</p> <p>\$980,000 per year</p>	<p>Municipal general fund or stormwater fees</p> <p>TBD</p>
4.13	MS4-related Chesapeake Bay Pollutant Reduction Plan Implementation	PRP Plan implementation by end of current permit term	Antis Township, Logan Township, Altoona City,	Blair County MS4 Municipalities	2022-2023	Municipal capacity to implement plans (technical, financial)	Municipal engineer design/permit, construction readiness	Municipalities, public works departments	Each Muni is contributing percentage cost to help fund projects,	Municipal budgets (taxes, stormwater fees, grants)	2 – Municipal Engineers	Municipalities, Planning Commission, COG	\$280,000 per year	TBD

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							Technical	Source	Financial	Source	Technical	Suggested Source	Financial	Suggested Source
		Bioretention – 77 acres treated  Dry Ponds – 3 acres treated  Stream Restoration – 17,940 (part of total stream restoration goal)	Allegheny Township, Duncansville Borough, Blair Township, Hollidaysburg Borough, Frankstown Township, ISC, Planning Commission, Engineering Consultants			Develop a grant funding source just for MS4 communities so they are not competing against all stakeholders. Need larger sources of funding.  Land available to implement projects.  Expanded flexibility to work outside of designated areas			stormwater fees do exist		1 – FTE Clean Water Coordinator for Planning Commission	DEP	\$130,000 per year  Block Grant just for MS4 communities not to compete in other grant programs with competing interests	DEP  TBD
4.14	Conservation Landscaping/Turf to Meadow Conversion	Promote new program and enable one large tract landowners' participation  140 new acres of Conservation Landscaping (B)  50 new acres of Conservation Landscaping (C)  60 new acres of Conservation Landscaping (F)  50 new acres of Conservation Landscaping (H)	DCNR, Chesapeake Conservancy, municipalities CBF, Conservation District, Planning Commission, ISC, Watershed Organizations	Blair County Developed areas  Cambria County Developed areas – Chesapeake Bay Portion  Fulton County Developed areas  Huntingdon County Developed areas	2022 - 2025	Landowner education and acceptance  Existing mowing ordinances or weed ordinances may be a challenge in some communities	Planting plan assistance	Alliance for the Bay (in-kind)			11 – FTE Municipal/Environmental Technical Assistance (Blair-3, Cambria-2, Fulton-3, Huntingdon-3)	Private Sector/District/Planning Commission	\$1,430,000  \$2,500 per acre meadow → \$750,000 budget for all	DEP/NRCS/SCC/PDA  DCNR

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Action #	Description	Performance Target(s)	Partners	Geographic Location	Expected Timeline	Potential Implementation Challenges or Recommendations	Resources Available				Resources Needed			
							Technical	Source	Financial	Source	Technical	Suggested Source	Financial	Suggested Source
4.15	Impervious surface reduction project	Identify a flood prone area that could be converted to a park or open space 5 – acres (B)	Planning Commission, eligible municipalities	Blair County	2022-2025	Lack of local interest, property purchase/donation	Mapping	Planning Commission	Available budget to be determined	Municipal PRP Implementation Budget	Design, permit, construction	Private sector	\$\$\$\$ - TBD	DCNR, FEMA BRIC
4.16	Continue dirt and gravel road program for each county Conservation District	21 miles overall restored through past projects and future projects (B)	Blair County Conservation District	Blair Countywide	Ongoing	Continue D&G Road program funding	Education, technical assistance, project oversight	Conservation District, Center for Dirt & Gravel Road Studies, SCC	\$1.6 million since 1997	Blair County Conservation District	4 – FTE Clean Water Coordinator for Conservation District	Conservation District	\$520,000 per year	DEP/PDA/ SCC
		21 miles overall restored through past projects and future projects (C)	Cambria County Conservation District	Cambria Chesapeake Bay Portion		Cambria – increase DGLVR education opportunities by 5% over 5 years		NFWF Grant	\$1.75 million since 1997	Cambria County Conservation District				
		26 miles overall restored through past projects and future projects (F)	Fulton County Conservation District	Fulton Countywide		Education of municipalities can be challenging, need more involvement from all muni's	Blair County Using NFWF Grant for private farm lane implementation		\$2.0 million since 1997	Fulton County Conservation District				
		88 miles overall restored through past projects and future projects (H)	Huntingdon County Conservation District	Huntingdon Countywide		Expand Dirt and Gravel Road practices to include farm lanes			\$4.0 million since 1997	Huntingdon County Conservation District				
4.17	Work with PennDOT and local municipalities to reduce frequency of mowing road ditches and along roadways	Educate local municipal leaders and PennDOT on the importance of keeping higher vegetation along roadways to prevent erosion and increase nutrient uptake.	Local Municipalities, DEP and PennDOT	Blair Countywide	2023	PennDOT's and Municipal willingness to cut back on mowing programs. DEP Chesapeake Bay Program will need to assist in the education of PennDOT.					4 – FTE Clean Water Coordinator for Conservation District	Conservation District	\$520,000 per year	DEP/PDA/ SCC
				Cambria Chesapeake Bay Portion  Fulton Countywide  Huntingdon Countywide							4 – FTE Clean Water Coordinator for Planning Commission	Planning Commission	\$520,000 per year	DEP



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4.18	Support current legislation for a fertilizer bill.	Legislation will support the implementation of:  Urban Nutrient Management – 2,000 acres. (B)  Urban Nutrient Management – 1,400 acres. (C)  Urban Nutrient Management – 1,000 acres. (F)  Urban Nutrient Management – 2,000 acres. (H)	Conservation District, Planning Commission, ISC, Municipalities	Blair County Developed areas  Cambria County Developed areas – Chesapeake Bay Portion  Fulton County Developed areas  Huntingdon County Developed areas	2022 Pass Fertilizer Legislation  2023 Begin Implementation	Fertilizer Legislation has failed to pass congress in the last two years.					4 – FTE Clean Water Coordinator for Planning Commission	Planning Commission	\$520,000 per year	DEP
4.19	Private Funding & Grant Administration	Identify some private funding sources that may be able to supplement public funding sources/existing sources utilized for stakeholders, continue to work with partners to facilitate additional funding	Existing project implementer networks	Countywide	2022-2023	Need to expand network, educational aspect of less common funders, logistics of utilizing unproven funding sources (or lesser known)  Grant administration is a challenge due to limited staff and time-consuming nature of grant reporting and administration	Financial services	HRG (CAP coordinator)			4 – FTE Conservation District Grant Manager  4 – FTE Planning Commission Grant Manager	Conservation District  Planning Commission	\$520,000  \$520,000	TBD  TBD

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Priority Initiative 5: Research, Education, and Training: Blair, Cambria, Fulton and Huntingdon County														
5.1A	Incorporate existing water quality monitoring data into Chesapeake Data Explorer/ Chesapeake Monitoring Cooperative	Successful data input/acceptance by ALLARM program by end of 2021	ALLARM, Local watershed groups, Pa Foundation of Watersheds, BCCD, Altoona Water Authority, Ridge and Valley Stream Keepers, Stroud, Clearfield Creek Watershed Association, Juniata College	Blair Countywide	2022-2023	Data precision, QAQC, opportunity to educate landowners about local stream health and what they can do about it	Data QAQC and training	ALLARM			4 – FTE Clean Water Coordinator for Conservation District	Conservation District	\$520,000 per year	DEP/PDA/ SCC
		Cambria Chesapeake Bay Portion				Data input	Monitoring groups							
		Fulton Countywide		Explore ways to present local data working with Juniata College		Monitoring support	Conservation District (H)							
		Work with Foundation of PA Watersheds to establish their data into CMC		Huntingdon Countywide							4 – FTE Clean Water Coordinator for Planning Commission	Planning Commission	\$520,000 per year	DEP
		Work with BCCD and Altoona Water Authority to report data												
		Work with water and sewer authorities that monitor to include data in the Chesapeake Bay Model												

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5.1B	Initiate additional water quality monitoring sites that promote long-term trend evaluation at key locations	Location identification, financial and volunteer budget analysis, and initial landowner communication by end of 2021  CAST-21 acknowledgment of our data  Map existing monitoring locations  Expand monitoring based on Corridors of Opportunity area monitoring gaps  Have DEP Re-assess Spring Run Fulton County	ALLARM, Keystone Water Resources Center, Local University, Altoona Water Authority	Blair Countywide  Cambria Chesapeake Bay Portion  Fulton Countywide  Huntingdon Countywide – (Fort Run)	2023-2024	Land access, expanded volunteer need, equipment/materials budget, Consistent data collection, QAQC continuation  Explore ways to present local data working with Juniata College					Sample Collection for new sites identified through CAP implementation	ALLARM volunteer	\$40,000 EQUIPMENT	Initiate additional water quality monitoring sites that promote long-term trend evaluation at key locations in Perry County
5.2	Create new and enhance existing local watershed associations for short-term success and long-term sustainability	Develop new or reestablish existing watershed associations to support with CAP implementation. Watershed organizations can support with outreach, engagement, new project identification and implementation	ALLARM, Keystone Water Resources Center, Local University, Tri-Run Watershed Association (Enhance), Little Juniata River Watershed Association, JK TU Chapter	Blair Countywide  Cambria Chesapeake Bay Portion  Fulton Countywide  Huntingdon Countywide	Ongoing	Willing volunteers and leaders to establish and run watershed organizations to be successful and support with implementation	Social media shares  Project development support	County – department to be determined  CAP Coordinator (HRG)			4 – FTE Clean Water Coordinator for Conservation District  4 – FTE Clean Water Coordinator for Planning Commission	Conservation District  Planning Commission	\$520,000 per year  \$520,000 per year	DEP/PDA/ SCC  DEP

### 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.

**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).

### GLOSSARY

**ACT 167 Plan.** The Pennsylvania Stormwater Management Act of 1978, or Act 167, required that each county must prepare and adopt a watershed stormwater management plan for each watershed located in the county as designated by DEP, in consultation with the municipalities located within each watershed.

**Ag E & S – Agricultural Erosion and Sedimentation Plan.** Agricultural Erosion and Sedimentation plans document best management practices on crop and pasture fields to mitigate erosion and protect soil health. Any landowner that disturbs the soil (including no tillage) more than 5,000 square feet (~ 1/10 acre) must have a written Agricultural Erosion & Sediment Control Plan according to Pennsylvania State law, Chapter 102.

**ALLARM – Alliance for Aquatic Resource Monitoring.** ALLARM is a program of Dickinson College that enhances local action for the protection and restoration of waterways by empowering communities with scientific knowledge and tools.

**AMD – Acid Mine Drainage.** Outflow of acidic water from metal mines or coal mines.

**BMP – Best Management Practice.** Best management practices describe a type of water pollution control. Using agricultural BMPs can help to prevent or minimize the effects of nonpoint source pollution.

**BRIC – Building Resilient and Infrastructure and Communities.** The Building Resilient Infrastructure and Communities (BRIC) program is a new FEMA pre-disaster hazard mitigation program that replaces the existing Pre-Disaster Mitigation (PDM) program.

**CAST - Chesapeake Assessment Scenario Tool.** CAST is a web-based nitrogen, phosphorus and sediment load estimator tool that streamlines environmental planning.

**CBF – Chesapeake Bay Foundation.** The Chesapeake Bay Foundation is a non-profit organization devoted to the restoration and protection of the Chesapeake Bay in the United States.

**CCCD – Centre County Conservation District.** The Centre County Conservation District serves as the primary local source of assistance to all individuals and organizations who benefit from the county’s natural resources that we collectively strive to sustain and improve.

**CCPC – Centre County Planning Commission.** The Centre County Planning Commission makes recommendations and decisions to maintain and enhance the high quality of life for all residents, in accordance with the Pennsylvania Municipalities Planning Code, and other laws and regulations of the Commonwealth of Pennsylvania and the County of Centre.

**CHMP – County Hazard Mitigation Plan.** The Centre County Hazard Mitigation Plan was developed for the purpose of providing a blueprint for reducing property damage and saving lives from the effects of future natural and human-caused disasters in Centre County; Qualifying the County for pre-disaster and post-disaster grant funding; Complying with state and federal legislative requirements related to local hazard mitigation planning; Demonstrating a firm local commitment to hazard mitigation principles; and Improving community resiliency following a disaster event.

**COO - Corridors of Opportunity.** Analysis completed comparing the County Comprehensive Plan goals to potential for co-benefits for local water quality. Since there are elevated nitrogen levels throughout Centre County, the analysis helped focus the planning team on particular HUC12 watersheds for the most global benefit. Once the HUC12 watersheds are identified, the next step is to identify regulatory compliant (or in progress) farms, their neighbors, and preserved farms for targeted outreach and specific BMP installation options.

**CRS – Community Rating System.** Community Rating System is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum National Flood Insurance Plan requirements.

**DCNR – Department of Conservation and Natural Resources.** DCNR is responsible for maintaining and preserving state parks and forests; providing information on the state's natural resources; and working with communities to benefit local recreation and natural areas.

**DEP – Department of Environmental Protection.** The Department of Environmental Protection's mission is to protect Pennsylvania's air, land and water from pollution and to provide for the health and safety of its citizens through a cleaner environment.

**EPA – Environmental Protection Agency.** The Environmental Protection Agency is a United States federal government agency whose mission is to protect human and environmental health.

**FEMA – Federal Emergency Management Agency.** FEMA supports citizens and emergency personnel to build, sustain, and improve the nation's capability to prepare for, protect against, respond to, recover from, and mitigate all hazards.

**FieldDoc – FieldDoc** is a protected, online database that uses geographic information to generate baseline nutrient and sediment loading information and calculate load reductions for planned BMPs.

**GIS – Geographic Information System.** GIS is a computer system that analyzes and displays geographically referenced information.

**HUC12 – Watershed.** A local sub-watershed level delineation that captures tributary systems draining into the larger Chesapeake Bay watershed.

**Legacy Sediment.** Soil that was eroded from upland areas after the arrival of early settlers and over the centuries of intensive land uses, such as agriculture.

**MMP – Manure Management Plan.** Manure management plans document how a landowner plans to capture, store, treat, and utilize animal manures in an environmentally sustainable manner. Every landowner that has livestock or spreads manure on their property must have a written Manure Management Plan according to Pennsylvania State law, Chapter 91.

**MS4 – Municipal Separate Storm Sewer System.** A separate storm sewer system is a collection of structures, including retention basins, ditches, roadside inlets and underground pipes, designed to gather stormwater from built-up areas and discharge it, without treatment, into local streams and rivers.

**NFWF – National Fish and Wildlife Foundation.** NFWF works towards sustaining, restoring, and enhancing the nation's fish, wildlife, plants and habitats for current and future generations through innovative public and private partnerships, and by investing financial resources and intellectual capital into science-based programs designed to address conservation priorities and achieve measurable outcomes.

**NMP – Act 38 Nutrient Management Plan.** Nutrient management plans are required under Pennsylvania State law Act 38 which applies to operations with more than 2,000 pounds live animal weight per acre of pasture and crop fields.

**NRCS – Natural Resource Conservation Service.** NRCS's programs help farmers reduce soil erosion, enhance water supplies, improve water quality, increase wildlife habitat, and reduce damages caused by floods and other natural disasters.

**PACD – Pennsylvania Association of Conservation Districts.** Provides support for Pennsylvania’s conservation districts.

**PEMA – Pennsylvania Emergency Management Agency.** PEMA is tasked with the response to, preparedness for, recovery from, and the mitigation or prevention of disasters and other emergencies.

**PracticeKeeper.** PracticeKeeper is a protected, online database Used for reporting conservation plans, BMPs, E&S plans, nutrient management plans, watershed plans, complaints, DEP inspection reports and data exports to DEP.

**QAPP – Quality Assurance Project Plan.** A QA Project Plan documents the technical and quality aspects of a project, including project management, implementation and assessment. It specifies responsibilities, monitoring objectives, sampling design, sample collection methods, analytical methods, quality control, data management and data validation activities. It is required by EPA prior to any monitoring or data collection.

**QAQC – Quality Assurance Quality Control.** QA/QC is the combination of quality assurance, the process or set of processes used to measure and assure the quality of a product, and quality control, the process of ensuring products and services meet consumer expectations.

**4R Nutrient Stewardship – Precision Conservation.** Right fertilizer source at the Right rate, at the Right time and in the Right place for optimal crop management.

**SRBC – Susquehanna River Basin Commission.** SRBC’s mission is to enhance public welfare through comprehensive planning, water supply allocation, and management of the water resources of the Susquehanna River Basin.

**SWM – Stormwater Management.** Stormwater management is the effort to reduce runoff of rainwater or melted snow into streets, lawns and other sites and the improvement of water quality.

**SWP – Source Water Protection.** Source Water Protection is a planning process conducted by local water utilities, as well as regional or national government agencies, to protect drinking water sources from overuse and contamination.

**UAJA – University Area Joint Authority.** University Area Joint Authority (UAJA) is the municipal authority providing Wastewater Treatment, or Water Recycling services, to much of State College and the Centre Region.

**USGS – United States Geological Survey.** USGS provides science about the natural hazards that threaten lives and livelihoods; the water, energy, minerals, and other natural resources we rely on; the health of our ecosystems and environment; and the impacts of climate and land-use change.

**Water Quality Credit Offset Pilot.** For nitrogen, and potentially other pollutants, BMPs are more effective and cheaper to build in the agricultural landscape than the developed landscape. The goal of this pilot is to further explore the 1-mile radius beyond the MS4 Pollutant Reduction Plan planning area, and larger radii, where ag BMPs can be sited for MS4 credit under certain conditions.

**WIP – Watershed Implementation Plan.** Watershed Implementation Plans (WIPs) are the roadmap for how the Bay jurisdictions (including Pennsylvania), in partnership with federal and local governments, will achieve the Chesapeake Bay TMDL allocations.

**WWTP – Wastewater Treatment Plant.** Wastewater treatment plants process contaminants from wastewater or sewage and convert it into an effluent that can be returned to the water cycle with acceptable impact on the environment or reused for various purposes.