

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

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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
Priority Initiative 1: County Programmatic Initiatives														
1.1	Develop a Perry County Integrated Water Plan	Develop an integrated water plan to address water quality concerns in Perry County. Utilize existing plans that incorporate water quality goals to define more precise goals and leverage resources.	PCPC, Multi-partners, County Comprehensive Plan, Hazard Mitigation Plan, Perry County Greenways, Parks, Recreation and Open Space Plan, Act 167, Act 537 Plans, Source Water Protection, existing TMDLs	Countywide	2022	Connect County plans in meaningful ways to meet local water quality goals	Existing Perry County Water Supply Plan, Comprehensive Plan	PCPC, PCCD	TBD – Will require a substantial revision		1 – FTE Clean Water Coordinator for Planning Commission 1 – FTE Clean Water Coordinator for Conservation District Plan development	Planning Commission Conservation District Consultant	\$130,000 per year \$130,000 per year \$150,000	DEP DEP DEP

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1.2A	Implement County Comprehensive Plan policies and actions	Encourage that growth activities address existing water quality impairments through stormwater BMP implementation already required by local ordinance	County Commissioner s, Perry County Planning Commission, Municipal Governing Bodies, Municipal Planning Commissions, Municipal Zoning Officers, Perry County Greenways, Parks, Recreation and Open Space Plan	All 30 Perry County Municipalities	Ongoing	Educating municipalities, updating local plans and ordinances, growth areas not consistent with Census urbanized areas Venue space for in-person meetings. Limited staffing. Municipal Officials have a tendency to chart their own direction. Outdated Municipal plans and lack of action attending to water quality.	Outreach and Education	Planning Commission staff	\$62,100 (A portion of the budget)	Perry County Planning Budget	2 – Municipal Engineers	Municipalities, Planning Commission,	\$280,000 per year	DEP			
		Annual review of municipal comprehensive plans for action items providing water quality benefits		Prioritize public spaces			Plan Preparation encouraging buy-in with the Perry County Comprehensive Plan (One size-fit-all approach)		All 30 municipalities are eligible		Funding Available: Three level options (Level 1 \$2,400, Level 2 \$1,200, and Level 3 \$600) Each fee is an annual contract.		1 – municipal planner		Planning Commission, Municipality, etc.	\$130,000 per year	DEP
		Annual solicitation of municipal interest in the Local Planning Assistance (LPA) Program					Ordinances preparation				1 – FTE Clean Water Coordinator for Planning Commission		Planning Commission		\$130,000 per year	DEP	
		Encourage the adoption of stream buffering and natural resource protection ordinances 3,000 acres of forest conserved					Field work and project identification				1 – Administrative Assistant		Planning Commission		\$75,000 per year	DEP	

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1.2B	Prepare an updated Comprehensive Plan	Develop Basic Studies component Solicit municipal projects (action items) Develop the Plan (Framing our Future) Develop the Action Plan (Picture in Motion)	Multi-partner effort County Board of Commissioners, PCPC, all interested municipalities, PCCD, PC EMA, etc.	Perry County and Multi-Municipal	2021 and ongoing	Encouraging 100% buy-in from municipal governing bodies to adopt the county plan for their own use. Local control/increased enforcement may be a barrier.	Current County Comprehensive Plan; Municipal Comprehensive Plans; 2020 US Census figures; community surveys	PCPC	PCPC Budget; Potentially supplemented by PA DCED through a MAP Program Grant	US Census Data	1 – FTE Clean Water Coordinator for Planning Commission 9 community surveys to be conducted, and draft reports prepared for municipal projects	Planning Commission Consultant	\$130,000 per year \$150,000 for updated comprehensive plan	PA Rural Water, DEP Funding DEP
1.2C	Implement the Source Water Protection Plans	Help ensure the groundwater and surface water resources of the county are protected from overuse or degradation. Work with municipal authorities to educate on benefit of Source Water Protection Plan – work with DEP on development of Plans where needed. Installation of cautionary signage	Bloomfield Borough Council, New Bloomfield Water Authority, Blain Borough, Millerstown Borough, Newport Borough?, Liverpool Borough	Bloomfield Borough Blain Borough Millerstown Borough Other interested municipalities	Ongoing	Overcoming lost farm revenue where BMPs take up crop land and pastureland. Educating local farmers on the municipal well recharging areas. The ability to provide real value in exchange for anticipated land production loss in areas where manure application should be reduced.	Coordination of meetings and continued education.	Perry County Planning Commission	Bloomfield Borough	Bloomfield Borough Budget (Level 2 participation \$1,200 annually)	1 – FTE Clean Water Coordinator for Planning Commission Manure application offset expenses to reduce manure application to certain well influencing areas.	Planning Commission DEP/PDA	\$130,000 per year \$ TBD for new Source Water Protection Plans	PA Rural Water, DEP Funding USDA/FSA/NRWA Source Water Protection Program

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1.2D	Evaluate areas to establish riparian buffers to stabilize stream banks and limit encroachment	Identify landowners willing to participate and work with the following partners to identify (5) buffer opportunities – 41 forested riparian buffer acres (portion of Action 3.6)	Municipalities, Conservation District, PCPC, NRCS, CBF, watershed groups, Central Pennsylvania Conservancy	Countywide Prioritize public land: Lynn Sheaffer Dum Memorial Park, Millerstown Park, Wagner Park, Alta Nage Park, Little Buffalo State Park, Marysville Lions Club	5-10 years	Adopting ordinances, may require a pilot project in a willing municipality to demonstrate success. Lack of technical assistance to support implementation goals for forest buffers. Buffer funding programs must include 5-10-year minimum maintenance plan, incentive money for landowners, along with volunteers to establish the buffer.	Landowner outreach; on the ground riparian project execution GIS	Tri County Regional Planning Commission – Ongoing, PCCD Tri County Regional Planning	Portion of County Planning Budget	TCRPC	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 Expand Buffer Bonus Program to provide \$10,000 per acre of buffer installed to include 5-year maintenance contract → \$410,000 total	DEP DEP Funding Options: CFA Watershed Restoration and Protection Program PA Fish and Boat Commission CBF, Alliance for the Bay DCNR, Growing Greener, NFWF

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1.3	County Sewage Plan – prepare an updated Act 537 Plan	One-time adoption of ordinance with enforcement, inspection, and tank pumping. Prepare grants, develop basic studies component, develop the action plan	Interested municipalities, Board of Commissioners, PCPC	Municipalities Howe – Township recently introduced pumping schedule	2023: 1 st year is plan development 2024: 2 nd year is implementation	Landowner education will be needed to promote proper on-lot septic system maintenance. Encouraging 100% buy-in from municipal governing bodies to adopt the county plan for their own use. Funding limitations and enforcement of Act 537.	Current County Sewage Plan; Municipal Act 537 Plans; 2020 US Census figures, Pumping Schedules	PCPC	PCPC Budget; Potentially supplemented by PA DCED through a MAP Program Grant	Municipal act 537 direction for municipalities to implement on-lot sewage management programs	Inventory of latest municipal sewage facilities 1 – FTE Clean Water Coordinator for Planning Commission	Consultant, PCPC PCPC	\$125,000 \$130,000 per year	DEP, Municipal budgets and on-lot sewage permit fees DEP

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1.4	Implement County Hazard Mitigation Plan	<p>Improve flood prone areas with BMPs that also enhance water quality</p> <p>Encourage municipal officials to enact stormwater management ordinances consistent with Act167 and Act102</p> <p>Maintain current capital improvement list – update on annual basis</p>	County Planning Commission, municipalities, Perry County EMA (Floodplain Administrator)	29 of 30 Municipalities, only exclusion is Landisburg Borough (no floodplain is mapped)	2023 - 2025	<p>Funding, land for BMPs, site constraints for enlarging culverts/raising bridges.</p> <p>Enforcement and compliance of stormwater ordinances.</p>	Existing digital floodplain mapping	FEMA, TCRPC, PCPC and Perry County GIS	None/Not applicable		<p>1 – FTE Clean Water Coordinator for Planning Commission</p> <p>Additional detailed flood mapping where there are no immediately available base flood elevations established</p>	<p>PCPC</p> <p>Initially PEMA and/or FEMA through PEMA request</p>	<p>\$130,000 per year</p> <p>\$100,000</p> <p>\$186,000 project implementation, obligated 10% of the project cost</p>	<p>DEP</p> <p>FEMA and PEMA - Requests have been made to PEMA for areas in Carroll Township and Rye Township to be considered for mapping improvements</p> <p>PEMA/FEMA</p>
1.5	Act 167 Plan Development	<p>Phase 1: Prepare Grants, Inventory of waterway obstructions, look to incentivize ordinances to protect water quality</p> <p>Phase 2: Prepare Grants and Plan Preparation</p>	PCPC, all municipalities, Board of Commissioners, multi partner needs	Countywide	2021 - 2025	<p>Should local involvement exist, additional responsibility for enforcement.</p> <p>Find funding to develop a Countywide Act 167 Plan.</p> <p>Lack of DEP funding for plan update.</p>	Institutional knowledge	PCPC Budget, PCCD Budget			<p>1 – FTE Clean Water Coordinator for Planning Commission</p> <p>Consultant</p>	<p>Planning Commission</p> <p>PADEP Stormwater Program</p>	<p>\$130,000 per year</p> <p>\$150,000</p>	<p>DEP</p> <p>DEP</p>

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1.6*	Implement County Farmland Preservation Program with farmland preservation program incentives enhancement	Total farmland preservation (69 farms in program currently – approx. 9844 acres) 4 additional farms will be added by 2022 totaling 10,500 acres Look to fund 1-2 additional farms per year in preservation program. – 10,700 acres of farmland conservation	Lancaster Farmland Trust and Perry County Farmland Preservation Board, NRCS, Perry County Greenways, Parks, Recreation and Open Space Plan	Ag land use areas that fit farmland preservation criteria	2021-2022 – explore incentive opportunities	Time/technical assistance to coordinate preservation plans with funding and technical assistance Preserved farms are required to have an NRCS Conservation Plan, work with farmers to ensure Conservation Plan is reported in PracticeKeeper. Recommend making this a program requirement statewide. Sharing NRCS data is challenging.	Priority recommendations, easement revision recommendations, supplemental BMP funding research	Farmland Preservation Board, 1 PCPC staff			Farmland Preservation Staff Administrator 1 – FTE Clean Water Coordinator for Conservation District	1 PCCD staff person Conservation District	\$130,000 per year \$130,000 per year \$250,000 per farm funded, total of 8 farms → \$2M	American Farmland Trust, PDA DEP American Farmland Trust, PDA, SCC

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1.7*	<p>Establish funding and staff support to assist the Agricultural community & conduct one on one farm outreach visits</p> <p>759 farms exist in Perry County</p>	<p>Approximately 100 farms have their plans (Conservation/Ag E&S and/or nutrient/manure management plans) in Perry County, goal is to complete 200 by 2025.</p> <p>Work with private ag consultants to document plan reporting.</p> <p>Implementation challenges (continued): In order to communicate effectively with the farming community one on one farmer outreach must be conducted.</p> <p>The most effective way to capture and report BMPs is through one-on-one farm visits. Farmers do not participate in surveys or other methods.</p>	<p>PCCD, Contracted planners, Act 38 operators, preserved farms, Organic Farmers, Integrators</p>	<p>Countywide</p>	<p>2021-2025</p>	<p>Limited compliance activities by DEP.</p> <p>Lack of Technical assistance to support the farming community.</p> <p>Private sector Ag plans are not required to be shared with District staff.</p> <p>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 farmland preservation programs to require PracticeKeeper reporting.</p>	<p>Field verification, troubleshooting</p> <p>Site visits and plan review</p> <p>Inspections – 50 per year, 1 hour per plan for data entry, 3 hours per inspection (some operations much longer)</p>	<p>PCCD, USDA NRCS, Private Consultants</p> <p>Conservation District</p> <p>Chesapeake Bay Technicians</p>			<p>6 – additional Ag Planners to provide technical assistance and ag planning</p> <p>3 – FTE Design, Engineer, Permit</p> <p>3 – FTE Inspector Construction Services</p> <p>1 – FTE Clean Water Coordinator for Conservation District</p> <p>1 – Administrative Assistant</p>	<p>District/NRCS/Private Sector Farm Visits</p> <p>Private Sector/PCCD</p> <p>Private Sector/PCCD</p> <p>Conservation District</p> <p>Conservation District</p>	<p>\$780,000 per year</p> <p>\$420,000 per year</p> <p>\$315,000 per year</p> <p>\$130,000 per year</p> <p>\$75,000 per year</p>	<p>DEP/NRCS/SCC/PDA</p> <p>DEP/NRCS/SCC/PDA</p> <p>DEP/NRCS/SCC/PDA</p> <p>DEP</p> <p>DEP/NRCS/SCC/PDA</p>

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1.8	Juniata River Watershed Management Plan 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 funding options 2022 – outreach and planning 2023 – start implementation	Performance Target Continued: 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.			DCNR Grant	Western PA Conservancy	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 Project and Program Budget \$1M	DEP DEP DCNR Growing Greener/DCNR

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1.9A	Water quality communication plan, leveraging existing documents and covering topics including Comprehensive Plan, Hazard mitigation plan, Act 167, Greenways Plan, Perry County Water Supply Plan Utilize existing TMDLs as part of the messaging	Develop messages and audience; execute plan and distribute messaging through staff and partners Utilize the DPJM County Countywide Action Plan (arcgis.com) - ArcGIS website as a source of consistent communication	CBF, Chesapeake Conservancy, NRCS, PCCD, TCRPC, Private Sector Agriculture Farm Visits, municipalities, Farm Bureau	Countywide	2022 – 2025	Simplifying the resources that are available, targeting Perry County farmers and other landowners. Sharing staff resources across the 4-county region.	ArcGIS Hub Website 1 – lead county contact	Tri County Regional Planning Commission Conservation District and Planning Commission			Website development and continued maintenance 1 – FTE Marketing and Outreach Coordinator 1 – FTE Clean Water Coordinator for Planning Commission	Tri-County Regional Planning Commission Planning Commission Planning Commission	\$10,000 per year \$130,000 per year \$130,000 per year	Administrative budget tag-along to project-related grant award NFWF DEP

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1.9B	Agricultural Communication Strategy	<p>One on one farm outreach is the best way to communicate with farmers in addition to reporting practices. Work to develop a plan to complete one on one farm visits.</p> <p>Work to develop a communication plan to engage integrators.</p> <p>Attend private partner ag meetings to provide information.</p> <p>Utilize Farm Bureau Newsletter for announcements</p>	PCCD, County Farm Bureau, Integrators, County Farmland Preservation Board, PSU Extension, NRCS, CBF	Countywide	2022-2025	<p>Funding to support the technical assistance required to complete one on one farm outreach</p> <p>Outreach to integrators is a challenge due to the number of integrators and multiple county boundaries they serve. It is recommended DEP/PDA/SCC communicate with integrators on a frequent basis to reduce mixed messages.</p>			PCCD – portion of funding	PCCD	<p>6 – additional Ag Planners to provide technical assistance and ag planning</p> <p>1 – FTE Marketing and Outreach Coordinator</p> <p>1 – FTE Clean Water Coordinator for Conservation District</p>	<p>District/NRCS/Private Sector Farm Visits</p> <p>Planning Commission</p> <p>Conservation District</p>	<p>\$780,000 per year</p> <p>\$130,000 per year</p> <p>\$130,000 per year</p> <p>See 1.9A for website costs.</p> <p>Costs for meeting attendance and administration would be covered through other funding requests.</p>	<p>DEP/NRCS/SCC/PDA</p> <p>NFWF</p> <p>DEP</p>

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Priority Initiative 2: Reporting and Tracking														
2.1*	Existing BMP cataloguing (quantity and location) for select BMPs, expanding on general recommendations provided in QAPP BMPs = forest buffers, urban forest buffers, grass buffers, urban grass buffers, manure storages, grassed waterways, wet ponds and wetlands, fencing	Expand use of existing buffer layer with urban hydrology layer R&D into distinguishing ag, pasture, and turf covers from grassed buffers Manual digitizing where leaf-off <1 ft resolution imagery is available Back check with staff field views, where required Add data to Practice Keeper or another batch upload option (FieldDoc)	Local University or Students who live locally but attend nearby Universities, Chesapeake Conservancy, Stakeholder peer review - USGS, Farm Bureau, PDA, EPA	Countywide	2022 – cataloguing 2023 – Practice Keeper batch upload processing and field views	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 reporting catchup 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 General methodology outline BMP field backcheck	Chesapeake Conservancy QAPP Varies by BMP	N/A	N/A	Further GIS and data processing/method refinement 5 – Student Internships to Support CAP Implementation 6 – additional Ag Planners to provide technical assistance and verification support	Chesapeake Conservancy Local University Student or local student attending nearby university etc. District/NRCS/Private Sector Farm Visits	\$46,000 (2022 only) \$50,000 per year \$780,000 per year	EPA/DEP TBD PDA/SCC/NRCS/DEP

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2.4*	Implement a documentation program for commercial and homeowner nutrient applications in developed lands Support current legislation for fertilizer bill.	Support fertilizer legislation – where legislation requires reporting, be the data clearinghouse Legislation will support the implementation of Urban Nutrient Management – 1,200 acres	PSU Extension	Countywide	TBD	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 based on fertilizer legislation if passed	TBD based on fertilizer legislation if passed	TBD based on fertilizer legislation if passed	TBD based on fertilizer legislation if passed	1 – FTE Clean Water Coordinator for Planning Commission	Planning Commission	\$130,000 per year Urban Nutrient Management \$10 per acre → \$12,000	DEP DEP/PDA

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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>Enter agriculture plans into PracticeKeeper</p> <p>Work with Capital RC&D to improve current transect survey routes to be more inclusive</p> <p>Work with PSU to produce better response rate to the PSU survey for Perry County</p> <p>Work with PDA/DEP to improve manure transport reporting</p>	DEP, PCCD, NRCS, PDA, NRCS, Perry County Farm Bureau, Capital RC&D, Chesapeake Conservancy, PSU Survey, Manure Brokers	Countywide	2022-2025	<p>Private sector ag planners do not have access to PracticeKeeper. County Ag planners do not have time to report private sector plans into PK.</p> <p>Current Capital RC&D routes are not all inclusive and could be improved.</p> <p>Current response rates are low and miss a large demographic of Perry County farmers.</p> <p>Manure brokers are not required to report data annually. Data is not inclusive.</p>	Technical Support to enter plans into PK	Conservation District			5 – Summer interns for reporting and verification	Local University Student or local student attending nearby university etc.	\$50,000 – paid internships	DEP/PDA/SCC

See 3.5 for funding needs to improve cover crop reporting for capital RC&D

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2.6*	Ensure accurate reporting of Water, Sewer and Wastewater Treatment Plant nutrient loading and plant upgrades	Work with Water, Sewer and Waste Treatment facilities to accurately document plant upgrades to capture nutrient reductions.	Marysville Borough just applied for reduced rates. Newport is doing storm sewer separations Suez (private sewer/water utility)	CSO and Waste Treatment Facilities	2022-2025	Need DEP to work with waste facilities to accurately document plant upgrades. Need reductions to be accurately captured in CAST. Work with DEP to determine how composting helps to reduce nitrogen and phosphorus. Accurately document	Municipal Engineer	Larson Design			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 \$TBD Infrastructure Funding	DEP DEP DEP
Priority Initiative 3: Achieve New Pollutant Reductions														
3.1	Development of watershed plan for Baken Creek	Partner to include CAP Goals into the development of the watershed plan. Mimic the Chesapeake Conservancy Rapid Delisting approach for this watershed Add 2 instream monitors logging real time data (streamflow, turbidity, nitrate)	PCCD	Baken Creek Watershed	2021-2022 (plan developed) 2022-2031 (implementation begins)	Lack of technical assistance and funding to support with BMP implementation.	Engineering Tech		\$10,000 in stream monitoring	Section 319	1 – FTE Clean Water Coordinator for Conservation District	Conservation District	\$130,000 per year \$1,000,000 for implementation of Baken Creek Plan	DEP DEP

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3.2*	Help farmers and operators to be in compliance with state and federal requirements: Ag Compliance and Nutrient Management Plans	<p>Soil and Water Quality Conservation Plans (Ag E&S) 13,300 new acres</p> <p>Nutrient Management & Manure Management Plans 19,300 new acres of Core N and 15,300 new acres of Core P</p> <p>Work with Act 38 operators (33), Preserved Farms (69), and certified organic farms to document plans required as part of their respective programs</p> <p>Work with the submittal of Act 39 Nutrient Balance Sheets for documentation</p> <p>Implementation challenges (continued): Recommended for DEP to continue funding for Ag Plan development – CEG Program</p>	4R Alliance, PCCD, Perry County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, PA Sustainable Agriculture (PASA), ACT 38 farms, Preserved Farms, Integrators	Countywide Ag Land	2022-2025	<p>Lack of DEP inspections. 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, recommended 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>					6 – additional Ag Planners to work with farmers to develop required plans	District/NRCS/Private Sector Farm Visits	\$780,000 per year	DEP/NRCS/SCC/PDA
											Conservation Plans	\$15 per acre for a total cost of \$199,500	DEP/SCC/PDA/NRCS	
											Core N and Core P	\$15 per acre for a total cost of \$289,500	DEP/SCC/PDA/NRCS	

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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
3.3	Advanced Nutrient Management (4R) Practice Education and Implementation	Work with manure management and nutrient management plans to document and report 4R practices Increase existing 4R practice (N/P Rate, Timing and Placement by 1,800 acres)	4R Alliance, PCCD, Perry County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, PA Sustainable Agriculture (PASA)	Countywide Ag Land	2022-2025	<p>Landowner interest, BMP verification burden (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 result.</p>	Educational support	CBF/4R Alliance			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
													\$10 per acre of advanced nutrient management planning per type → total cost for all is \$108,000	DEP/PDA/SCC/NRCS

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3.4*	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 per acre of cover crop implemented.</p> <p>Implement tillage management and cover crops on an annual rate of 32,500 acres High Residue, 12,500 acres Conservation Tillage, 3,000 acres Low Residue, 17,000 acres of cover crops and 12,000 acres of cover crops with fall nutrients</p> <p>Implementation challenges (continued): Organic farmers are using tillage to manage weeds and vertical tillage is becoming more popular among farmers.</p>	<p>PCCD, Perry County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, PA Sustainable Agriculture (PASA)</p> <p>All partners need to be on the same page, following the same guidance.</p>	Countywide Ag Land	<p>2022 – investigation</p> <p>2023 – next steps</p>	<p>Capacity to manage the program, landowner interest</p> <p>Lack of technical assistance and farm planners to work with farmers to transition to High Residue Tillage</p> <p>Current verification methods do not accurately capture implemented amounts – work with Capital RC&D to improve Transect Survey Routes</p> <p>Farmers are harvesting cover crops for forage, need accurate efficiency 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>Transect survey</p> <p>4 - Existing No-Till farm equipment for Rent</p>	<p>Capital RC&D</p> <p>Conservation District</p>			<p>6 – additional Ag Planners to transition farmers to high residue</p> <p>CD District shared No-till Drill</p> <p>County PCCD – staff to administer the program</p> <p>Capital RC&D Transect Survey</p>	<p>District/NRCS/Private Sector Farm Visits</p> <p>PDA</p> <p>Cover Crop Incentive Program</p> <p>Improved data reporting</p>	<p>\$780,000 per year</p> <p>\$75,000 drill, with maintenance</p> <p>\$90 per acre traditional per year → \$1.53M for a 5-year total of \$7.7M (incentive payment, administration)</p> <p>\$50 per acre fall nutrients per year → \$600K for 5-year total of \$3M</p> <p>\$50,000</p>	<p>DEP/NRCS/SCC/PDA</p> <p>PDA</p> <p>PDA, SCC, Growing Greener, Pennsylvania Association of Conservation Districts (PACD)</p> <p>DEP</p>

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3.6*	Riparian buffer and re-forestation BMPs	<p>400 riparian forest buffer acres, (365) acres lost since 2017 need reverified</p> <p>500 riparian grass buffer acres – (40) acres lost since 2017 need reverified</p> <p>250 acres – Agriculture Tree Planting</p> <p>6 acres – urban forest buffer</p> <p>1 acre – urban tree canopy</p> <p>1 – acre of urban forest planting</p>	CBF, Chesapeake Conservancy, NRCS, PCCD, Private Sector Agriculture Farm Visits	Countywide	<p>2022 – line up landowners</p> <p>2023-2025 – implementation</p>	<p>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.</p> <p>Flash grazing must be allowed with buffer installation.</p> <p>Funding program must include a 5-10-year maintenance program to establish buffers along with incentive program \$4K minimum per acre payment.</p> <p>No extended lease or easement.</p>	Materials	PCCD (in-kind, annual tree sale efforts), CBF	Budget available to be determined	CBF, NFWF, NFWS, NRCS - CREP	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
							Mapping	Chesapeake Conservancy			3 – additional FTE environmental technician	Chesapeake Conservancy, CBF, etc.	\$390,000 per year	DEP/NRCS/SCC/PDA/DCNR
													Forest Buffer \$10,000 per acre → \$410K	DCNR, NFWF, PACD, TreeVitalize, DEP, Coldwater Heritage Partnership Implementation Grants, Landscape Scale Restoration (LSR) Grant Program – US Forest Service, Pennsylvania Habitat Stewardship Program, Alliance for the Bay, CBF, Chesapeake Conservancy
													Grass Buffer \$2,500 per acre → \$1.2M	
													Tree Canopy \$5,000 per acre → \$5K	
													Tree/Forest Planting \$10,000 per acre → \$2.5M	

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3.7	Wetland restoration implementation on marginal production ag land	<p>5 - acres of Wetland Restoration</p> <p>30 - Acres of Wetland Enhancement and Rehabilitation</p> <p>Identify 1 large property owner from University of Vermont restorable wetland layer to help identify where wetland restoration is feasible</p>	Chesapeake Conservancy, PCCD, NRCS, Private Sector Agriculture Farm Visits, CBF	Countywide	2022 – 2025	<p>Willing landowner; appropriate siting, design, and construction for successful restoration result</p> <p>Lack of technical assistance for landowner outreach and agriculture planning to identify potential site locations</p>	Landowner outreach	1 PCCD staff person			<p>3 – additional FTE environmental technician</p> <p>2 – stream biologist</p>	<p>Chesapeake Conservancy, CBF, etc.</p> <p>PAFBC, USGS, PCCD, etc.</p>	<p>\$390,000 per year</p> <p>\$280,000 per year</p> <p>Wetland Restoration \$30,000 per acre → \$1.1M</p>	<p>DEP/DCNR</p> <p>DEP/DCNR/PAFBC/USGS</p> <p>DEP/DCNR/USDA Conservation Reserve Program (CRP) or NRCS Wetlands Reserve Program (WRP)</p>
3.8	Stream Restoration (Urban and Agriculture)	<p>14,000 Linear feet (~3 mile) Urban Stream Restoration</p> <p>6,000 Linear feet Agriculture Stream Restoration</p>	CBF, Chesapeake Conservancy, TU National, PFBC Stream Restoration Team, PCCD, PCPC	Rapid delisting areas top priority & Countywide based on landowner interest	2022 – 2025	<p>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.</p> <p>Lack of funding to cover engineering design.</p>					<p>Design, permit, construction services</p> <p>2 – Municipal Engineers</p> <p>3 – FTE Design, Engineering, Permit</p> <p>2 – stream biologists</p>	<p>Private sector, USFWS, TU</p> <p>Municipalities, Planning Commission</p> <p>Private Sector/PCCD</p> <p>PAFBC, USGS, PCCD, etc.</p>	<p>Assume \$900/LF - \$13M</p> <p>Assume \$400/LF - \$2.4M</p> <p>\$280,000 per year</p> <p>\$420,000 per year</p> <p>\$280,000 per year</p>	<p>Growing Greener, NFWF, DEP, DCNR</p> <p>TBD</p> <p>DEP/NRCS/SCC/PDA</p> <p>DEP/DCNR/EPA</p>

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3.9	Implement more barnyard runoff control/loafing lot management	<p>60 acres of barnyard runoff controls</p> <p>500 acres of agricultural drainage management</p>	PCCD, Chesapeake Conservancy, NRCS, Perry County Farm Bureau	Countywide Farms	2022-2025	<p>Landowner buy-in and project development/funding.</p> <p>Lack of Technical assistance to support agriculture planning and implementation.</p> <p>Lack of funding to cover engineering design.</p> <p>Increasing construction costs are cancelling NRCS contracts.</p>					<p>6 – additional Ag Planners to provide technical assistance and ag planning</p> <p>3 – FTE Design, Engineer, Permit</p> <p>3 – FTE Inspector construction Services</p>	<p>District/NRCS/Private Sector Farm Visits</p> <p>Private Sector/PCCD</p> <p>Private Sector/PCCD</p>	<p>\$780,000 per year</p> <p>\$420,000 per year</p> <p>\$315,000 per year</p> <p>Barnyard Runoff Control \$175K per project, assume 1 acre per project \$6.8M in total</p> <p>Agriculture Stormwater Management \$10K per acre → \$5M</p>	<p>DEP/NRCS/SCC/PDA</p> <p>DEP/NRCS/SCC/PDA</p> <p>DEP/NRCS/SCC/PDA</p> <p>DEP/NRCS/SCC/PDA</p> <p>DEP/NRCS/SCC/PDA</p>

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3.10	Animal waste management BMP implementation for livestock	2,800 new AUs of livestock 1,600 new AUs of poultry	PCCD, SCC, CEG Program, County Farm Bureau	Livestock & Poultry farms	2022-2025	Time to get through planning, design, and construction; outreach to smaller farms that likely need the assistance; match cash value for small farms; readiness to plan/implement projects when outreach efforts yield willing landowners. Lack of funding to cover engineering design.	Project implementation	NRCS, PCCD, Private Ag Sector	Average NRCS Cost share is about \$75,000 per acre	NRCS	6 – additional Ag Planners to provide technical assistance and ag planning 3 – FTE Design, Engineer, Permit 3 – FTE Inspector construction Services	District/NRCS/Private Sector Farm Visits Private Sector/PCCD Private Sector/PCCD	\$780,000 per year \$420,000 per year \$315,000 per year Animal waste management system \$175,000 per project, assume 100 AUs per project \$7.7M in total	DEP/NRCS/SCC/PDA DEP/NRCS/SCC/PDA DEP/NRCS/SCC/PDA DEP/NRCS/SCC/PDA
3.11*	Manure Transport out of Perry County	Transport 750 dry tons per year out of Perry County	PCCD, NRCS, Perry County Farm Bureau, Manure Brokers	Countywide	2022-2025	Current reporting standards do not require manure broker and haulers to report manure transported. New regulations must be developed to require haulers and brokers to submit information to DEP.					1 – FTE Clean Water Coordinator for Conservation District	Conservation District	\$130,000 per year	DEP

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3.12*	MS4-related Chesapeake Bay Pollutant Reduction Plan Implementation	Plan implementation by end of current permit term Vegetated Open Channels – 29 acres treated Infiltration Basin – 5 acres treated Dry Extended Detention Basin – 43 acres Storm Drain Cleanout – 13,900 lbs of solid removed	Marysville Borough PCPC, Tri County Regional Planning Commission	Marysville Borough	2022-2023	Municipal capacity to implement plans (technical, financial). Flexibility to work outside of designated urbanized area.	Municipal engineer design/permit, construction readiness	Municipalities, public works departments	Unknown	Municipal budgets (taxes, stormwater fees, grants)	2 – Municipal Engineers 1 – municipal planner	Municipalities, Planning Commission, Planning Commission, Municipality, etc.	\$280,000 per year \$130,000 per year \$700,000	TBD DEP Marysville Borough, DEP grants

Marysville Borough has signed lease with Lions Club to implement Projects near the pond. (70% of requirement)

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3.13*	Urban Stormwater Management Non-Regulated Communities	Implement existing ordinances at local municipal level Catalogue existing BMPs that fit into this category and newly built ones Runoff Reduction Performance Standard – 82 acres treated Wet Ponds and Wetlands – 100 acres treated; 5 acres conserved Impervious surface reduction – 1 acre Advanced grey infrastructure IDDE – 130 acres treated Work with municipalities to document street sweeping activities – Goal TBD	PCPC, PCCD, developing municipalities, Tri County Regional Planning Commission, contracted engineer, water authority	Countywide	Ongoing 2022-2025	Coordination/training for municipal staff, FieldDoc batch upload opportunity, non-MS4 engagement (what’s in it for them?), difficulty obtaining past information (MS4s typically have databases from 2003-present; non-MS4s typically have no database)	Reporting platform	FieldDoc			5 Summer interns for reporting and verification 2 – Municipal Engineers 1 – municipal planner	Local University or local student attending nearby university etc. Municipalities, Planning Commission, Planning Commission, Municipality, etc.	\$50,000 – per year \$280,000 per year \$130,000 per year Stormwater BMP budget \$750,000 Wetland conservation → \$10,000	NRCS/PDA/DEP TBD DEP DEP

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3.14	Conservation Landscaping/Turf to Meadow Conversion	Promote new program and enable one large tract landowners' participation 80 new acres of Conservation Landscaping	TCRPC, PCCD, Municipalities, Chesapeake Conservancy, CBF, DCNR, Western Pennsylvania Conservancy	Developed areas in County municipalities	2022 - 2025	Landowner education and acceptance Existing mowing ordinances and weed ordinances can be a challenge to implementation	Planting plan assistance	Alliance for the Bay (in-kind)			1 – FTE Municipal Planner 3 – additional FTE environmental technician	Planning Commission Chesapeake Conservancy, CBF, etc.	\$130,000 per year \$130,000 per year \$2,500 per acre meadow → \$200,000 budget	DEP/DCNR DEP/DCNR/SCC/PDA/NRCS DCNR/USFW/NFWF/DEP
3.15*	Continue dirt and gravel road program	19 miles overall restored through past projects and future projects Continue to implement the program annually	PCCD	Countywide	2025	Continue D&G Road program funding Expand Dirt and Gravel Road Program to include farm and residential lanes	Education, technical assistance, project oversight	PCCD, Center for Dirt & Gravel Road Studies, SCC	\$2.4 Million since 1998	State Conservation Commission	1 – FTE Clean Water Coordinator for Conservation District	Conservation District	\$130,000 per year Dirt and Gravel Roads \$40 per foot → TBD	DEP/PDA/ SCC SCC
3.16*	Work with PennDOT and local municipalities to reduce frequency of mowing/spraying road ditches and along roadways	Educate local municipal leaders and work with PennDOT to address state owned roads on the importance of keeping higher vegetation along roadways to prevent erosion and increase nutrient uptake. Potential to use sustainable mowing for hay for ag use	Local Municipalities, DEP and PennDOT	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.					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	DEP DEP/PDA/ SCC

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3.17	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)			1 – FTE Conservation District Grant Manager	PCCD	\$130,000 per year	TBD
											1 – FTE Planning Commission Grant Manager	Planning Commission	\$130,000 per year	TBD
											2 – staff accountants	Planning Commission and District	\$140,000 per year	TBD
Priority Initiative 4: Research, Education, and Training														
4.1*	Develop new water quality monitoring data into Chesapeake Data Explorer/ Chesapeake Monitoring Cooperative database	Successful data input/acceptance by ALLARM and other environmental groups program by end of 2021. Map existing monitoring locations. Implement 25 new water quality monitoring stations.	ALLARM, Keystone Water Resources Center, Juniata College, Juniata County Watershed Association, Harrisburg University	Ag impaired streams and Countywide	2023	Data precision, QAQC, opportunity to educate landowners about local stream health and what they can do about it. Currently no groups doing water quality monitoring. Limited USGS monitoring (streamflow only).					Volunteers for Water quality monitoring New monitoring equipment 3 – additional FTE environmental technician 2 – stream biologist	Local environmental groups PCCD Chesapeake Conservancy, CBF, etc. PAFBC, USGS, PCCD, etc.	N/A \$125,000 – 25 new monitors \$130,000 per year \$280,000 per year	TBD ALLARM DEP/NRCS/DCNR/PDA DEP/DCNR/PAFBC/USGS

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4.2	Supporting watershed associations for short-term success and long-term sustainability aligning with their goals	Develop new or reestablish existing watershed associations to support with CAP implementation. Watershed organizations can support with outreach, engagement, new project identification and implementation.	Conservation District, Tri-County Regional Planning Commission	Countywide Shermans Creek Buffalo Creek	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)			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 \$5000 per organization to produce promotional materials (hats, shirts, stickers) for members → \$5,000 per year	DEP DEP/PDA/ SCC Enhance the capacity of local watershed associations for short-term success and long-term sustainability

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

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

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

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

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

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

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.

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.

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.

PCCD – Perry County Conservation District. The Perry 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.

PCPC – Perry County Planning Commission. The Perry 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 Perry.

CHMP – County Hazard Mitigation Plan. The Perry 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 Perry 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.

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.

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.

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.

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 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.