

Countywide Action Plan for Clean Water Luzerne County Overview

Plan Highlights

The Luzerne County Countywide Action Plan for Clean Water (Plan) establishes a blueprint to help stakeholders accomplish local clean water goals. This voluntary planning effort, led by the Luzerne Conservation District, gathered the input of local, state, and federal partners to identify priorities and initiatives to benefit water quality within Luzerne County. The initiatives and recommendations outlined within this Plan will benefit local communities while also assisting Pennsylvania in meeting its Chesapeake Bay cleanup goals. This Plan is designed to provide guidance for implementation of voluntary water quality improvements within the local watersheds without proposing additional regulatory or financial burdens on Luzerne County, municipalities, or local residents.

The Luzerne County Plan includes four (4) priority initiatives that outline dozens of tangible and quantifiable goals. These goals may be modified and evolve over time based upon the early successes of plan implementation and updates in local priorities. The Plan is designed to implement these initiatives by 2025 while also extending beyond to serve as a long-term tool to improve local water quality within Luzerne County.

This plan is an adaptive and dynamic document that combines best management practices, data management, programmatic changes, and implementation strategies for local water quality improvements. It will be updated on a regular basis to ensure that the outlined priorities are proving successful in achieving stakeholders' objectives for improved local water quality.

Plan implementation will not only strive to establish water quality improvement projects but will also strive to educate and engage the residents of Luzerne County, increase awareness of the value of local water resources, and update programmatic guidelines to allow for ease of project access and execution. The success of the Plan implementation process will largely be dependent upon the availability of needed funds, trained staff, and resources identified within the Plan, as well as the recommended programmatic changes/updates.

The Plan Steering Committee, which included representatives from the Luzerne Conservation District, Luzerne County, Larson Design Group, and PA DEP's Northeast Regional Office, also wishes to recognize the great ongoing work and successes that the many of the stakeholders within the county have already and will continue to achieve. The various sectors including agriculture, urban and developed stormwater management, watershed health, and wastewater management have made huge strides in improving local water quality; and the dedication of landowners and representatives of many non-profit and governmental entities will continue to improve both water quality and soil health throughout the county. Notably, the local wastewater management sector has continued to make huge strides and have greatly contributed to the nutrient reductions within the county's waterways and assisted in meeting the county's pollutant reduction goals.

Key Findings

The Luzerne County clean water planning process involved many local partners, including non-profits, institutions, and agencies who partnered to achieve a well-rounded plan which benefits water quality throughout the entire county. Luzerne County's considerable population was well represented by stakeholders with interest and expertise in four areas of focus which included Agriculture, Urban and Developed Stormwater, Wastewater, and Watershed Health. These focus groups are reflective of the priority initiative sectors included in the Plan.

During the development process, education and outreach was identified as a significant goal by stakeholders in all focus groups. The Luzerne Conservation District Board of Directors also emphasized the district's ongoing priority of providing technical assistance and encouraging voluntary compliance to address environmental concerns. This emphasis, along with Luzerne County Council's request that the plan not increase the regulatory or financial burden on the residents of the county, is reflected in the voluntary, assistance-oriented nature of this plan.

Another reoccurring concern voiced by stakeholders was the impacts and need for accurate assessment of Abandoned Mine Drainage (AMD) and Abandoned Mine Land (AML) throughout Luzerne County. AMD remediation and AML reclamation resonated as a definite countywide goal throughout the plan development process and will be a focus throughout the implementation of this plan.

Opportunities for Success

Development of this Plan included the identification of county-specific collaborations, priority areas, and resources needed for successful implementation of water quality improvement efforts, while also working to benefit and engage the residents of Luzerne County. Some key factors for success include:

- Collaboration within existing non-profits, institutes, local agencies, and partners
- AMD Coordination with existing groups, such as BAMR
- Coordination with other counties for soil health initiatives
- Collaboration with DAMA and WVSA on attaining further data and reporting knowledge
- Education/outreach for on-lot septic system maintenance and upgrades
- Technical support and resources for reporting and verification of new and existing BMPs

One of Luzerne County's greatest opportunities for success identified through the plan development process is the reporting of previously implemented BMPs within the county. For example, DEP has ~~been~~ determined that wastewater system upgrades and maintenance practices within the county have exceeded the nutrient reduction goals assigned to Luzerne County within the Countywide Action Plan Toolbox Dataset.

Although this is a voluntary plan and no additional practices are required to meet nutrient reduction goals, the planning partners are supporting this plan to continue improving local water quality within the county and provide ~~the~~ benefits to local communities.

Challenges to Implementation

The achievement of many plan initiatives is contingent on receiving additional resources including technical assistance, increased data, funding, and landowner/partner involvement. During the development of the Plan, there has been countywide collaboration on identifying previous accomplishments, areas that would benefit from assistance, and how to complete the identified goals in a measurable way.

The planning partners have identified as a major challenge the uncertainty of whether existing practices and prior efforts have been previously accounted for and received appropriate pollutant reduction credits in state or federal reporting programs. To address the absence of data sharing and non-recorded progress, the Plan includes proposed measures to account for unreported practices and to improve data management.

The target goals of reducing 231,000 lbs. of Nitrogen and 47,000 lbs. of Phosphorus loads entering local waterways are to be met by 2025. Due to the short timeframe of implementation, there are additional hurdles and challenges anticipated or known that include the following:

- BMP funding and resources for implementation
- Lack of developed for long-term BMP verification process and reporting resources
- Public adoption, engagement, and participation of efforts
- Attainability of expensive match criteria for high-cost projects.
- Timeframe for plan implementation to achieve necessary goals
- Enough resources to provide technical assistance, implementation, and reporting
- Education, outreach, and collaboration efforts to achieve adopted goals.



Luzerne County completion of The Lands at Hillside agricultural infrastructure and BMP upgrades

Plan Summary

The implementation of the Plan will center around four (4) priority initiatives: 1) Agriculture, 2) Urban and Developed Stormwater, 3) Wastewater, 4) Watershed Health. Luzerne County Stakeholder groups were established with the purpose of identifying specific efforts to achieve local goals within each Priority Initiative.

The Plan was developed with a focus on establishing a framework for a fluid plan that can be altered and adapted to respond to and reflect the local priorities while actively utilizing new opportunities and resources throughout the implementation timeline.

Priority Initiative 1: Agriculture

- Action 1.1: Nutrient Management Planning
 - Assist producers in obtaining nutrient management planning resources, including access to soil sampling, manure analysis, and agronomy assistance.
- Action 1.2: Reporting and Verification of Existing BMP's
 - Data collection and verification on operations with existing BMP's implemented.
- Action 1.3: Existing BMP Maintenance Program
 - Assist producers with education and resources to implement maintenance activities on existing BMP's to increase functionality.
- Action 1.4: Riparian Buffer and Stream Fencing
 - Implementation of stream fencing and riparian buffer on crop and pasture lands.
- Action 1.5: Manure to Mine Lands Program
 - Utilize excess manure to treat abandoned mine lands to improve available nutrients for vegetative cover.
- Action 1.6: Wetland Creation/Enhancement on Farmlands
 - Create and enhance wetlands on agricultural lands that are less productive or that are located within environmentally sensitive areas.
- Action 1.7: Soil Health Improvement
 - Implementation of soil health practices, including no-till planting, cover cropping, and the use of pollinator species on agricultural lands.
- Action 1.8: Barnyard Agricultural BMP Implementation
 - Continuation of LCD's & NRCS's efforts to stabilize animal feeding and animal walkways and to manage manure on existing operations.

Priority Initiative 2: Urban and Developed Stormwater

- Action 2.1: MS4 Community Partnership Projects
 - Develop partnership with MS4 Communities to assist with sediment and nutrient removal projects.
- Action 2.1a: Collect data on existing/planned PRPs from MS4's Permittees
 - Quantify completed and planned efforts and projects to meet the MS4 permit requirements.
- Action 2.2: Residential Stormwater Management Program
 - Development of an outreach, technical assistance, and cost-share program for implementing water quality improvement BMPs on residential and small commercial properties.
- Action 2.3: Nutrient and Fertilizer Planning for Turf Grass
 - Create an outreach program to encourage and provide guidance to property owners and local governments for the development and implementations of plans for improving nutrient/fertilizer use on turf grass areas.
- Action 2.4: Existing Stormwater BMP Retrofit and Maintenance Program
 - Upgrade and maintain existing basins and drainage systems to improve function.
- Action 2.5: Urban Green Space and Planting
 - Increase Green Space and continuing tree and shrub planting within urban settings.

Priority Initiative 3: Wastewater

- Action 3.1: Private Septic/Sewer Maintenance
 - Development of a program to provide education and incentives for maintenance of residential on-lot septic systems.
- Action 3.2: Reporting of On-Lot Septic BMP's
 - Continue and enhance tracking and accounting for on-lot septic system pumping by WW treatment facilities for proper nutrient reduction credits.

Priority Initiative 4: Watershed Health

- Action 4.1: AMD Treatment for Nutrient Reductions
 - Detailed evaluation of nutrient loads in AMD discharges and development of treatment plans.

- Action 4.2: Stream Restoration
 - Provide bank protection, instream habitat, and riparian buffers on streams in degraded sections of streams in rural and developed areas.
- Action 4.3: Riparian Buffer Development
 - Protect and plant trees along critical stream sections.
- Action 4.4: Farmland and Forestry Preservation
 - Quantify existing preserved open space to ensure proper nutrient reduction credits and preserve additional farmland and natural lands.
- Action 4.5: AML Reclamation Planning and AMD Restoration
 - Restore AML impacted areas, enhance existing and future AML reclamation projects to include additional conservation benefits, and treat AMD discharges to restore water quality.
 - Encourage the use of AMD sludge and biosolids for soil improvement, planting of warm season grasses, and use of forest reclamation approach for improved stormwater management and wildlife habitat.
- Action 4.6: Reporting and Verification of Existing BMP's
 - Collect data on and verify status and operation/maintenance needs of existing, recently completed, and in-progress BMP's.
- Action 4.7: Wetland Enhancement and River Shoreline Improvement
 - Improve and expand wetland habitat and beneficial aquatic plant habitat for improved water quality.

Programmatic Initiative: Recommendations for State Programmatic Changes

- Action 1.1: Change program standards for Chesapeake Bay Program Technician
 - Allow additional conservation districts to participate in the Chesapeake Bay Technician Program by restoring the ability for district boards to establish local priorities while achieving more water quality benefits within the Chesapeake Bay Watershed.
- Action 1.2: Access to DEP, EPA, DCNR, NRCS data on existing project locations and amounts.
 - This effort would improve coordination and assist in identifying areas that need work within the county and improve efficiency and understanding of what is already being recorded and to identify information gaps.

- Action 1.2a: Create a dashboard on Practice Keeper so entities can see other BMP entries from other agencies.
 - Allow all entities the ability to see existing projects and locations that were previously entered by another agency into the Practice Keeper Dashboard.

- Action 1.3: Increase the prevailing wage thresholds for conservation BMP projects, including DGLVR projects.
 - Prevailing wage requirements cause increased project costs and reduce the amount of already-limited funds available for conservation projects.
 - Increasing these thresholds for conservation projects would significantly increase the amount of BMPs implemented.

- Action 1.4: Education and outreach position for water quality efforts to public and municipalities.
 - State funds allocated to conservation districts to provide outreach and education to municipalities and the general public on suburban/urban water quality, stormwater management, and sustainable land use.

- Action 1.5: Dedicated staff from DEP or Conservation Districts to Verify and Report BMPs
 - Dedicated non-regulatory staff member at the district level or state level to verify and report BMPs implemented within the county into Practice Keeper.

- Action 1.6: Reduce Burdensome Requirements for Large Scale Grant Projects.
 - Revise the Growing Greener & DCNR Riparian Buffer grant requirements to remove the obstacle of expensive match criteria for high-cost projects.
 - This will allow for the implementation of more high priority conservation projects.
 - Remove long-term land agreement obligations for the DCNR Riparian Buffer grant program

- Action 1.7: New program to provide cost-share funding for implementation of Agricultural and Residential Stormwater BMPs
 - Gain support from all sectors and pass legislation to provide much needed funding. (e.g. support of PA Senate Bill 465)

- Action 1.8: Streamline Permitting Process for Conservation Related projects
 - Conservation specific permitting that is less rigid with faster turnaround time to approval

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

Green - action has been completed or is moving forward as planned Yellow - action has encountered minor obstacles Red - action has not been taken or has encountered a serious barrier

Action #	Description	Performance Target(s)	Responsible Party(ies) and Partnerships	Geographic Location	Expected Timeline	Potential Implementation Challenges or Recommendations	Resources Available			Resources Needed			Review Checklist Comments		
							Technical	Source	Financial	Source	Technical	Suggested Source		Financial	Suggested Source
Priority Initiative 1: Agriculture															
1.1	Nutrient Management Planning	Assist producers in obtaining nutrient management planning (including soil samples, manure analysis, and agronomy assistance). BMP's include Nutrient Management Core N, Core P, Timing, Placement, and Rate <u>20 operations per year</u>	LCD, NRCS, Consultant	Agricultural production lands	2022-2025	Funding and Producer Participation	Producers must hire consultants themselves or receiving a minimal amount of assistance through local agencies	NRCS, Consultants, LCD	EQIP	US Farm Bill	Contracted Source	Private Consultant willing to complete testing and recommendations for farmers in the county	Dedicated funding to assist in this program	Grants or State Agency funding \$15 per soil sample kit \$40 per manure testing kit \$45,000 per year	
1.2*	Reporting and Verification of Existing BMPs	Collect data and verify existing BMPs on operations <u>50 operations per year</u>	DEP, LCD, NRCS	County	2021-2025	Time Capacity, Data Entry, Release of Records, producer participation and resistance	BMPs and plans that were funded through agencies and grants are already known	SCC, PSU Extension, NRCS, LCD, DEP			Dedicated staff or contracted staff to compile existing data and complete outreach (e.g., producer survey, records)	LCD outreach staff member, Luzerne County CAP Coordinator	Dedicated and sustainable funding to this position	State funds \$80,000 per year for staffing	

											research) and data entry				
1.3	Existing BMP Maintenance Program	Assist producers with education and resources for maintenance of existing BMPs to keep them functioning <u>10 operations per year</u>	LCD, NRCS, PSU Extension	County	2022-2025	Funding and Producer participation	Technical specs of BMPs and guidance for BMP maintenance	NRCS, LCD, PSU Extension, Consultants , SCC			Compile existing BMP designs, O&M specs and guidance, and review with producers	NRCS, LCD (Ag Program. Staff and additional outreach staff member)	Dedicated and sustainable funding for staff time and funding to assist landowners with costly repairs/maintenance needs	State & Federal grant funds for O&M \$150,000 per year	
1.4*	Riparian Buffer and Stream Fencing	Implement Stream fencing and riparian buffer on crop and pasture lands <u>200 acres per year implemented and verified</u> BMP's include forested riparian buffer with exclusion fencing	LCD, NRCS, DEP	Streams located along crop and pasture lands, targeting impaired watersheds	2021-2025	Funding and Producer participation/willingness to enter into long-term agreements	Development of planting specs, coordinating projects with landowners	LCD, NRCS, DEP, Consultants , SCC	Existing grant programs	CBF K-10, DCNR, DEP Stream Bank Fencing Program, FSA CREP	Additional outreach to landowner & coordination/design of buffer projects	LCD Watershed Specialist, Ag Program Staff, & additional outreach staff member	Dedicated and sustainable funding source for district staff positions & implementation of buffer projects	State (DEP, PDA, Growing Greener, CBP block grant) and Federal Funding (EQIP) \$120 per tree (includes tree, planting, maintenance, and survivability warranty) \$4 linear foot for fencing \$250,000 per year	
1.5	Manure to Mine Lands Program	Evaluate availability of excess manure and potential opportunities to treat abandoned mine lands.	EPCAMR, LCD, Earth Conservancy, DEP BAMR	County	2022-2025	Farmer and Landowner Participation, extensive coordination effort, BAMR's modification of	Historic programs	NRCS, EPCAMR	N/A	N/A	Feasibility study, Develop/coordinate program	EPCAMR, LCD	Dedicated and sustainable funding source for staff position(s)	DEP BAMR funds, DCED Abandoned Mine Drainage and Treatment Program (AMDATP)	

		<u>1 Feasibility study</u>				existing reclamation practices, Availability of excess manure								\$50,000 for feasibility study	
1.6*	Wetland Creation/Enhancement on Farmlands	Create/enhance wetlands on agricultural lands that are less productive or within environmentally sensitive areas. <u>2 acres per year</u>	LCD, NRCS	County – key environmentally important areas	2022-2025	Landowner Participation, permitting hurdles	Design assistance	LCD, NRCS, Wildlife organizations (e.g. DU), DEP, ACOE	Grants	NFWF	Design assistance, landowner outreach, and project design/permitting	LCD Watershed Specialist, Ag Program Staff, & additional outreach staff member	Dedicated and sustainable funding source for district staff positions & implementation of projects	Local, State, Federal, and private funding \$100,000 per year	
1.7	Soil Health Improvement	Implement soil health practices, (including no-till planting, cover crops, use of pollinator species, etc.) on agricultural lands. <u>500 acres per year, increasing by 25% yearly</u>	LCD, NRCS	Countywide agricultural operations	2022-2025	Funding and Producer participation	Existing soil health technical guidance	NRCS, PSU Extension, LCD	Existing grant programs	NRCS, LCD (Soil Health GG Grant)	Additional outreach to landowners & coordination of projects	LCD Ag Program Staff & additional outreach staff member	Dedicated and sustainable funding source for district staff positions & implementation of projects	State & Federal grant funds \$150,000 per year	
1.8*	Barnyard Agricultural BMP Implementation	Continuation of LCD's & NRCS's efforts to stabilize animal feeding and travel areas and to manage manure on existing agricultural operations. <u>Complete 5 projects per year in addition to existing NRCS and County project implementations.</u>	LCD, NRCS	Countywide agricultural operations	2022-2025	Funding and Producer participation/financial capabilities, technical designer availability	Project coordination & design	LCD, NRCS, PACD	Existing grant programs	NRCS, DEP Growing Greener, DEP Section 319 Program	Additional outreach to landowner, coordination of projects, project design	LCD Ag Program Staff & PACD TAG Staff	Dedicated and sustainable funding source for district staff positions & implementation of projects	DEP Growing Greener Program, CB Program, PACD/NRCS Funding Agreements, EQIP \$800,000 per year	

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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.

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							Technical	Source	Financial	Source	Technical	Suggested Source		Financial
Priority Initiative 2: Urban and Developed Stormwater														
2.1	MS4 Community Partnership Projects	Partner with MS4 Communities to assist with sediment and nutrient removal projects. Target projects that MS4 communities are implementing that would increase nutrient reductions.	WVSA, DAMA, municipalities, LCD, County Planning	MS4 Communities	2021-2025	Cost of implementation and development of partnership.	Program Guidance, project design	DEP, Consultants	Cost of implementations	Municipal funds, other grant funds	Provide input and identify possible cooperative efforts for project implementation/enhancement	LCD Watershed Specialist & additional outreach staff member	Dedicated and sustainable funding source for district staff positions & implementation of projects	State & Federal grant funds \$40,000 per year for staffing
2.1a	Collect data on existing/planned PRPs from MS4s Permittees	Quantify completed and planned efforts and projects to meet MS4 Permit requirements.	WVSA, DAMA, municipalities, LCD, PennDOT	MS4 Communities	2021-2025	Staffing to collect and report existing pollution reduction plans.	Knowledge of existing MS4 permits	DEP, MS4 Coordinators	N/A	N/A	Dedicated staff to compile existing data and complete outreach to MS4 permittees and data entry	LCD outreach staff member	Dedicated and sustainable funding source for district staff position	State & Federal grant funds \$40,000 per year for staffing
2.2	Residential Stormwater Management Program	Develop an outreach, technical assistance, and cost-share program for implementing	LCD, PSU Extension, WVSA, DAMA	County	2022-2025	Lack of staffing, funding for materials; resistance to participation; maintaining BMPs	Existing example programs	Virginia Conservation Assistance Program	Cost of management	Private funds, state grant funding	Dedicated staff to develop and coordinate the program	LCD, PSU Extension	Dedicated and sustainable funding source for district staff positions &	DEP Growing Greener, DEP CBP, dedicated state funding \$100,000 per year

		water quality improvement BMPs on residential and small commercial properties. <u>75 residential properties per year</u>											implementation of outreach programs and projects		
2.3	Nutrient and Fertilizer Planning for Turf Grass	Create outreach program to encourage and provide guidance to property owners and local governments for the development of and implementation of plans and for improving nutrient/fertilizer use on turf grass. <u>2 programs per year</u>	LCD, PSU Extension	County Turf grass areas	2024	Reporting and Lack of participation	Guidance documents, outreach materials	PSU Extension	Funding for planning	Private funds	Dedicated staff to develop and coordinate the program, Example plans, outreach,	LCD, PSU Extension, Local governments , consultants	Dedicated and sustainable funding source for district staff positions & implementation of outreach programs	DEP Growing Greener, DEP CBP, dedicated state funding, Local Grants \$75,000 per year	
2.4	Existing Stormwater BMP retrofit and Maintenance Program	Upgrade and maintain existing basins, drainage systems to improve function <u>10 systems per year</u>	Municipalities, WVSA, DAMA, School Districts, landowners, Recreational properties	Existing sites within county	2022-2025	Funding; identifying suitable facilities	Example projects, Guidance documents, Development of planting specs, coordinating projects with landowners	LCD, WVSA, DAMA, consultants	Municipal/ authority funds	Local taxes/fees	Design assistance, landowner outreach, and project design/permitting, Site data collection;	LCD Watershed Specialist, Consultants	Dedicated and sustainable funding source for staff position(s)/ consultants and design/implementation funds	DEP Growing Greener, DCED Flood Mitigation Program DCED Watershed Restoration & Protection Program other state local grants/funds \$400,000	

2.5	Urban Green Space and Planting	Increase Green Space and continue to plant trees and shrubs within urban settings <u>35 acres per year</u>	Municipalities, Landowners, LCD, PSU Extension	Developed areas with minimal green space	2021-2025	Funding and Participation	Development of planting specs, coordinating projects with landowners	LCD, PSU Extension	Tree sapling source	CBF K10, DCNR C2P2 Program	Design assistance, landowner outreach, and project design	LCD, PSU Extension	Dedicated and sustainable funding source for staff position(s) and design/implementation funds	DEP Growing Greener, DCNR C2P2 Program, CBF K10 Program, other state local grants/funds \$200,000 per year	

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Priority Initiative 3: Wastewater															
3.1	Private Septic/Sewer Maintenance	Develop a program to provide education and incentives for maintenance of residential on-lot septic systems. <u>250 systems per year</u>	County Planning, SEOs	County private systems	2022-2025	Funding and Community Participation	Septic Professionals, Guidance Documents	DEP, PSU Extension	Maintenance funds	Private funds	Educational programs for maintenance activities, maintenance activities	District Outreach and education position, Contractor, septic pumper	Cost associated with development of program and public outreach, and maintenance	Penn VEST \$75,000 per year	
3.2	Reporting of On-Lot Septic BMPs	Continue and enhance tracking and accounting for on-lot septic system pumping by WW treatment facilities for proper pollutant reduction credits. <u>250 systems per year</u>	Wastewater Treatment Facilities, DEP	County	2022-2025	Need for standardized process for accurate accounting	Existing program for municipalities, pumping and maintenance	Septic Professionals, Municipalities	Pumping costs	Private funds	Formal tracking system	DEP	Costs associated with staffing for BMP reporting	State Funds \$40,000 per year for staffing	

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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).

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

Green - action has been completed or is moving forward as planned Yellow - action has encountered minor obstacles Red - action has not been taken or has encountered a serious barrier

Action #	Description	Performance Target(s)	Responsible Party(ies) and Partnerships	Geographic Location	Expected Timeline	Potential Implementation Challenges or Recommendations	Resources Available			Resources Needed			Review Checklist Comments	
							Technical	Source	Financial	Source	Technical	Suggested Source		Financial
Priority Initiative 4: Watershed Health														
4.1	AMD Treatment for Nutrient Reductions	Detailed evaluation of nutrient loads in AMD discharges and development of treatment plans. <u>Evaluate 3 sites per year</u>	EPCAMR, BAMR, LCD, Landowners	AMD treatment sites: Mehoopany Creek, Bowman Creek, Fishing Creek, Susquehanna River, Lackawanna River, Delaware River Basin, Nescopeck Creek, and Catawissa Creek Watersheds	2023-2025	High Cost, Landowner participation, complex treatment systems	Existing AMD treatment technologies	Various Organizations & Agencies	Funding for existing treatment reductions	DEP, 319 Grants	Chemical analysis of discharges and specific treatment designs, measured flow data	EPCAMR, universities, BAMR	Funding for research, design, & construction	State & federal grants, private endowments \$250,000 per year
4.2	Stream Restoration	Provide bank protection, instream habitat and riparian buffers on streams in degraded sections of streams in rural and developed areas.	LCD, municipalities, Trout Unlimited, watershed associations	County impaired streams Mehoopany Creek, Bowman Creek, Fishing Creek, Susquehanna River, Lackawanna	2022-2025	High cost/lack of matching funds, Lack of available land for stream restoration, landowner participation	Standard stream design guidance	LCD Watershed Specialist, PAF&BC, TU, PADEP, State, Rosgen	Existing grant programs (e.g. Growing Greener), Public lands in urban areas (parks, trails, etc.)	Local, county, state agencies	Project coordination, Design/permitting services	LCD Watershed Specialist, Consultants, Trout Unlimited	Dedicated and sustainable funding source for district staff position & funding for design, permitting, and implementati	Local grants, DEP Growing Greener Program, DEP Stream Improvement Program DCED Watershed Restoration and Protection

		<u>400 linear feet per year</u>		River, Delaware River Basin, Nescopeck Creek, and Catawissa Creek Watersheds								on of projects	Program (WRPP), DCED Flood Mitigation Program (FMP) \$2,500 per in stream structure \$1,000 per/ft of mudsill \$500,000 per year	
4.3	Riparian Buffer Development	Protect and plant trees along critical stream sections. <u>Implement and verify 200 acres per year</u>	LCD, watershed associations, Trout Unlimited	County impaired streams Mehoopany Creek, Bowman Creek, Fishing Creek, Susquehanna River, Lackawanna River, Delaware River Basin, Nescopeck Creek, and Catawissa Creek Watersheds	2022-2025	Landowner cooperation/williness to enter into long-term agreements (DCNR program), volunteers for planting, limited availability of certain tree species	Development of planting specs, coordinating projects with landowners, Standard guidance, education/outreach materials	LCD Watershed Specialist,	Existing Grant Programs	CBF K-10, DCNR PADEP CBO	Additional outreach to landowners and volunteers & coordination/design of buffer projects	LCD Watershed Specialist & additional outreach staff member	Dedicated and sustainable funding source for district staff positions & implementation of buffer projects	State (DEP, PDA, Growing Greener, CBP block grant), endowments, DCED Watershed Restoration and Protection Program (WRPP), DCED Flood Mitigation Program (FMP) \$250,000 per year
4.4	Farmland and Forestry Preservation	Quantify existing preserved open space to ensure	LCD, County Planning & Zoning Department,	County farm and forestlands	2021-2025	Having enough staffing resources to compile, verify, report data, and coordinate	Existing land trust and Farmland Preservation	DCNR, LCD, North Branch Land Trust,	Existing grant programs	DCNR C2P2, Farmland	Additional outreach to landowners and	LCD Ag. Pres. Program Coord. & Additional	Dedicated and sustainable funding	Farmland Preservation Program, USDA ACEP,

		proper pollutant reduction credits and Preserve additional farmland and natural lands. <u>Add 500 acres per year</u>	North Branch Land Trust			additional preservation efforts and Funding to purchase conservation easements	Program resources	Foresters, PA Dept. of Ag.		Pres. Program	coordination of data collection effort and future land preservation projects	outreach staff member and land trust staff members	source for staff positions & additional Funding to purchase additional conservation easements	private land donations, DCNR, PGC \$350,000 per year	
4.5	AML Reclamation Planning and AMD Restoration	Restoring AML impacted areas, enhancing existing and future AML reclamation projects to include additional conservation benefits (e.g., use of AMD sludge and biosolids for soil improvement, planting warm season grasses and use of Forest Reclamation Approach for improved SW mgmt. & wildlife habitat, etc.), and treating AMD discharges to restore water quality.	DEP BAMR, EPCAMR, Trout Unlimited, private landowners	Mining-impacted areas of the County Mehoopany Creek, Bowman Creek, Fishing Creek, Susquehanna River, Lackawanna River, Delaware River Basin, Nescopeck Creek, and Catawissa Creek Watersheds	2024+	High Cost, Landowner participation, complex treatment systems	Existing AMD treatment technologies and AML land reclamation standards	Various Organizations & Agencies	Funding for reclamation and restoration	DEP, 319 Grants, BAMR funds	Project coordination, Design/permitting services	LCD Watershed Specialist, EPCAMR Staff, BAMR Staff, TU Staff, Consultant	Funding for staff positions and to design, permit, implement projects	DCED Abandoned Mine Drainage Abatement and Treatment Program (AMDATP) DEP Growing Greener Program, Act 13 grant funds, 319 Funds \$250,000 per year	

		<u>Evaluate 3 projects per year</u>													
4.6*	Reporting and Verification of Existing BMPs	Collect data on and verify status (including operation & maintenance needs) of existing, recently completed, and in-progress BMPs <u>50 watershed projects per year</u>	LCD, partnering organizations, local governments, and state agencies (DEP, DCNR, PGC, & PFBC)	County	2021-2025	Having enough staffing resources to compile, verify, and report data	BMPs and plans that were funded through agencies and grants are already known	LCD, DEP	N/A	N/A	Dedicated staff or contracted staff to compile existing data and do outreach (e.g., partner survey, records research) and data entry	LCD outreach staff member, Luzerne County CAP Coordinator	Dedicated and sustainable funding to this position	State funds \$80,000 per year for staffing	
4.7	Wetland Enhancement & River Shoreline Improvement	Improve and expand wetland habitat and beneficial aquatic plant habitat for improved water quality <u>Complete 25 acres per year</u>	LCD, landowners, partnering organizations, and state agencies (DCNR, PGC, & PFBC)	County – key environmentally important areas	2021-2025	Landowner Participation, funding sources for implementation, permitting hurdles	Design assistance	LCD, Wildlife organizations (e.g. DU), U.S. F&WS	Current enhancement and improvement funding	NFWF	Design assistance, landowner outreach, and project design/permitting	LCD Watershed Specialist & additional outreach staff member	Dedicated and sustainable funding source for district staff positions & implementation of projects	Local, State, Federal, and private funding \$150,000 per year	

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).

Phase 3 Watershed Implementation Plan (WIP) Programmatic Recommendations Template

Action #	Description	Performance Target(s)	Expected Timeline	Potential Implementation Challenges	Potential Recommendations on Improvement	Resources Needed				Review Checklist Comments
						Technical	Suggested Source	Financial	Suggested Source	
Programmatic Recommendation 1:										
1.1* (AG 1.4, 1.6, 1.8)	Change program standards for Chesapeake Bay Program Technician	Allow additional conservation districts to participate in the CB Technician Program by restoring the ability for district boards to establish local priorities while achieving more water quality benefits within the CB Watershed.	2023	Potential unwillingness of DEP CBO to revise the program requirements	This program improvement could be accomplished by providing optional levels of participation by conservation districts to receive funding for CB Technicians that would include technical assistance and BMP project coordination without requiring farm inspections or other regulatory aspects of the program.	DEP CBO willingness to allow adjustment to existing program	DEP CBO	N/A	N/A	
1.2	Access to DEP, EPA, DCNR, NRCS data on existing project locations and amounts	This effort would improve coordination and assist in identifying areas that need work within the county and improve efficiency and understanding of what is already being recorded and where gaps exist	2022	Push back from regulatory agencies and release of information.	Remove barriers to sharing knowledge of current and existing projects to capture and plan for areas that still need assistance	Database creation	Agency coordination' LCD Additional outreach staff member	Dedicated and sustainable funding source for staff position	DEP CBO	
1.2a	Create a dashboard on Practice Keeper so different entities can see other BMP entries from other agencies.	Allow all entities the ability to see existing projects and locations that were previously entered by another agency into the Practice Keeper Dashboard.	2022	Release of information	Knowledge of current and existing projects to capture and plan for areas that still need assistance	Dashboard creation	DEP	N/A	N/A	
1.3	Increasing the prevailing wage thresholds for conservation BMP projects, including DGLVR projects.	Prevailing wage requirements cause increased project costs and reduce the amount of already-limited funds available for conservation projects. Increasing the thresholds for conservation projects would significantly increase the amount of BMPs implemented.	2023	Lack of political will to change the prevailing wage legislation, , opposition from labor unions	Address an increase to prevailing wage thresholds for conservation projects separate from the consideration of changes to the thresholds for other publicly funded bricks-and-mortar projects, as was done with certain public transportation projects when Act 89 of 2013 was passed.	Legislative expertise	DEP, PA General Assembly	N/A	N/A	
1.4	Education and outreach position for water quality efforts	State funds allocated to conservation districts to provide outreach and education to	2022	Identifying dedicated funds	DEP Grants Program could modify the current Environmental Education Grants or allocate CBO	Dedicated staff to develop/implement outreach program	LCD	Dedicated and sustainable	DEP	

	to public and municipalities.	municipalities and the general public on suburban/urban water quality, stormwater management, and sustainable land use			funds to provide dedicated funding to conservation districts for such a position.			funding source for staff position		
1.5* (WH 4.6, AG 1.2)	Dedicated non-regulatory staff from DEP or Conservation District to Verify and Report BMPs	Dedicated non-regulatory staff member at district level or state level to verify and report BMP's implemented within the county into Practice Keeper.	2022	Funding to implement position		Staffing	LCD or DEP	Dedicated and sustainable funding source for staff position	State Funds	
1.6	Reduce Burdensome Requirements for Large-scale State Grant Projects	Revise the Growing Greener & DCNR Riparian Buffer grant requirements to remove the obstacle of expensive match requirements for high-cost projects, which would allow for the implementation of more high priority conservation projects. Also remove long-term land agreement obligations on DCNR buffer grant program.	2022	Potential unwillingness of DEP and DCNR to revise the program requirements	These recommendations could be implemented by amending the grant program requirements to reduce or eliminate match requirements for high impact conservation projects or by retaining the match requirements but placing a cap on the amount required (e.g., 15% GG match required up to a maximum of \$20,000) and by removing the 25-year easement requirement for buffer grant projects.	DEP & DCNR willingness to allow adjustment to existing program	DEP & DCNR	N/A	N/A	
1.7* (AG 1.8)	New program to provide cost-share funding for implementation of Agricultural and Residential Stormwater BMPs	Gain support from all sectors and pass legislation to provide much needed funding. (e.g. support of PA Senate Bill 465)	2021	Finding additional funds within the state budget	Support from state environmental agencies	N/A	N/A	N/A	N/A	
1.8	Streamline Permitting Process for Conservation Related projects	Conservation specific permitting that is less rigid with faster turnaround time to approval	2021	Defining a Conservation related project and potential resistance for developers	Allowing for quicker permit review on conservation projects to increase implementation during funding timeframe, changes in DEP's current permitting structure. Model permit after BAMR permit.	Review period alterations	Review agencies and DEP	N/A	N/A	

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

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

1. **Inputs** – The statewide and/or federal policies, regulations, initiatives, programs, funding and resources that will help your county meet its goal.
2. **Process** – What are the changes that need to occur for the county to be successful in the process? These are the action items listed under each priority recommendation.
3. **Outputs and outcomes** – Both short and long-term. These are the programmatic recommendations identified by each county. Performance targets identify your county's needed change in order to meet your county goal.
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 Programmatic Recommendation: 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 “what, when and how” of the plan:

Description = What. This may include programs that address prevention, education, or changes to the current policy and regulation. A programmatic or policy effort will allow for the completion of action items listed in the Planning and Progress Template.

Performance Target = How. This is an extension of the Description above. The performance target details the programmatic change that will enable you to complete the action items identified in the Planning and Progress Template. This can be a further description of the challenge to implementation from the Planning and Progress Template.

Expected Timeline = When. Provide the needed completion date for the programmatic recommendation that will assist your county in meeting its goal. This should be a reasonable expectation, based on knowledge and experience, that will aid in tracking progress toward addressing the Priority Initiative.

Potential Implementation Challenges = This field will note challenges and issues that may delay program implementation (Description). Potential challenges may relate to your county Planning and Progress Template.

Potential Recommendations on Improvement = This field will note recommendations on how to change or improve the program (Description).

Resources Needed: Technical & Funding = This field will note technical and financial resources needed/outstanding to implement the program (Description).

COUNTY:
Luzerne

Detailed BMP Entry Form

see "Input Info" tab for more information regarding BMP entry

Sector	BMP Name	BMP Quantity	Measurement Unit	New or Total Acres	Notes:
Septic	Septic Denitrification-Conventional	50	number of systems	New Acres	Planned - Education and maintenance to individual systems
Septic	Septic Pumping	1000	number of systems	New Acres	2022-2025 - Septic System pumping, per year
Agriculture	Water Control Structures	10	acres	New Acres	Underground outlets
Agriculture	Soil Conservation and Water Quality Plans	24,400	acres	New Acres	2022-2025 - Conservation Plans (24,400 acre Toolbox Recommendation) 25000 acres state game lands
Agriculture	Nutrient Management Core N	10200	acres	Total Acres	2022-2025 - Nutrient Management Core N Manure Acres (20400 acre Toolbox Recommendation) per year
Agriculture	Nutrient Management Core P	3500	acres	Total Acres	2022-2025 - Nutrient Management Core P Manure Acres (7,000 acre Toolbox Recommendation) per year
Agriculture	Nutrient Management N Rate	2850	acres	Total Acres	2022-2025 Nutrient Management (5700 acre Toolbox Recommendation)
Agriculture	Nutrient Management P Rate	2850	acres	Total Acres	2022-2025 Nutrient Management (5700 acre Toolbox Recommendation)
Agriculture	Nutrient Management N Placement	3550	acres	Total Acres	2022-2025 Nutrient Management (7100 acre Toolbox Recommendation)
Agriculture	Nutrient Management P Placement	2850	acres	Total Acres	2022-2025 Nutrient Management (5700 acre Toolbox Recommendation)
Agriculture	Nutrient Management N Timing	3950	acres	Total Acres	2022-2025 Nutrient Management (7900 acre Toolbox Recommendation)
Agriculture	Nutrient Management P Timing	2850	acres	Total Acres	2022-2025 Nutrient Management (5700 acre Toolbox Recommendation)
Agriculture	Barnyard Runoff Control	21	acres	New Acres	2022-2025 - Barnyard Runoff Control (5 acre Toolbox Recommendation) Runoff controls, raingutters, and Waste Storage Facilities
Agriculture	Tillage Management-Continuous High Residue	13300	acres	New Acres	2022-2025 - High Residue Tillage (12,200 acre Toolbox Recommendation Per Year)per year
Agriculture	Tillage Management-Conservation	5000	acres	New Acres	2022-2025 - Conservatiopn Tillage (4,600 acre Toolbox Recommendation per year)per year
Agriculture	Cover Crop Traditional Wheat Late Other	3200	acres	New Acres	2022-2025 - Traditional Cover Crop (2,800 acre Toolbox Recommendation per year) per year
Agriculture	Cover Crop Commodity Normal	3600	acres	New Acres	2022-2025 Cover Crops with Fall Nutrients (7,600 acre Toolbox Recommendation per year)
Agriculture	Cover Crop Traditional Annual Ryegrass Normal Drilled	10	acres	Total Acres	10 acres implemented
Agriculture	Cover Crop Traditional Annual Ryegrass Normal Drilled	50	acres	New Acres	50 Acres Planned
Agriculture	Precision Intensive Rotational/Prescribed Grazing	600	acres	Total Acres	2022-2025 - Prescribed Grazing (1,300 acres Toolbox Recommendation), Forage Harvest Management
Agriculture	Precision Intensive Rotational/Prescribed Grazing	70	acres	New Acres	Prescribed Grazing
Agriculture	Forest Buffer	410	acres	Total Acres	Implemented Individual Tree/shrub plantings. 100 tree/per acre, CREP
Agriculture	Forest Buffer	600	acres	New Acres	2022-2025 - Forest Riparian Buffers (1,200 acre Toolbox Recommendation)
Agriculture	Grass Buffer	10	acres	New Acres	2022-2025 - Grass Riparian Buffers (755 acre Toolbox Recommendation)
Agriculture	Grass Buffer	50	acres	Total Acres	2 Grassed Waterways designed, 1 implemented.
Agriculture	Land Retirement to Ag Open Space	800	acres	Total Acres	2022-2025 - Farmland Conservation (800 acre Toolbox Recommendation), pollinator habitat CNMP-Written, brush mngmt, 7 Total Diversions Designed, 5 were implemented, Early Successional Habitat Development/Management, strip cropping, crop rotation, contour farming
Agriculture	Soil Conservation and Water Quality Plans	2550	acres	Total Acres	Planned CTA, CNMP, E&S Plans, subsurface drains
Agriculture	Soil Conservation and Water Quality Plans	1600	acres	New Acres	Tree/shrub establishment
Agriculture	Tree Planting	5	acres	New Acres	Over two farms, 12 watering facilities will be installed, water well
Agriculture	Off Stream Watering Without Fencing	105	acres	New Acres	
Developed	Dirt & Gravel Road Erosion & Sediment Control - Driving Surface Aggregate + Raising the Roadbed	25350	feet	Total Acres	Improved road base, surface material other erosion controls, implemented
Developed	Dirt & Gravel Road Erosion & Sediment Control - Driving Surface Aggregate + Raising the Roadbed	21600	feet	New Acres	Improved road base, surface material other erosion controls, planned
Developed	Tree Planting - Canopy	50	acres	New Acres	2022-2025 - MS4 Riparian Forest Buffers (50 acre Toolbox Recommendation)
Developed	Tree Planting - Canopy	25	acres	New Acres	2022-2025 - Non-MS4 Forest Buffers (75 acre Toolbox Recommendation)
Developed	Tree Planting - Canopy	3	acres	New Acres	2022-2025 - Urban Tree Canopy (3 acre Toolbox Recommendation)
Developed	Conservation Landscaping Practices	150	acres	New Acres	2022-2025 - Conservation Landscaping (275 acre Toolbox Recommendation)
Developed	Filter Strip Runoff Reduction	10	acres	New Acres	Planned Riparian/Bank restoration
Developed	Advanced Sweeping Technology - 1 pass/8 weeks	550.96	miles	New Acres	2022-2025 - Road sweeping per year
Developed	Stormwater Performance Standard-Stormwater Treatment	12498.28	acres	New Acres	Basin Retrofit drainage
Developed	Impervious Surface Reduction	20	acres	New Acres	2022-2025 - Impervious Surface Reduction (20 acre Toolbox Recommendation)
Developed	Nutrient Management Plan	3400	acres	New Acres	2022-2025 - Urban Nutrient Management (3,400 acre Toolbox Recommendation)
Animals	Animal Waste Management System	1000	animal units	New Acres	2022-2025 - Manure Storage Facilities (2,300 AU Toolbox Recommendation)
Manure	Manure Transport	145	dry tons	New Acres	2022-2025 - Manure Transport out of Luzerne County (290 Dry Ton Toolbox Recommendation) per year
Natural	Forest Harvesting Practices	750	acres	Total Acres	2022-2025 - Forest Conservation (4,200 acre Toolbox Recommendation) per year
Natural	Wetland Enhancement	100	acres	Total Acres	2022-2025 - Wetland Conservation (300 acre Toolbox Recommendation)
Natural	Non Urban Stream Restoration	1500	feet	New Acres	2022-2025 - Non-urban Stream Restoration (10,900 LF Toolbox Recommendation)
Natural	Wetland Rehabilitation	10	acres	New Acres	Streambank stabilization
Natural	Urban Stream Restoration	21795	feet	Total Acres	2022-2025 - Wetland Restoration (50 acre Toolbox Recommendation)
Natural		100			Stream Bank Restoration
Natural					AML