

Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Clearfield County

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 # Green Yellow Red	Description	Performance Target(s)	Responsible Party(ies) and Partnerships	Geographic Location	Expected Timeline	Potential Implementation Challenges or Recommendations	Resources Available		Resources Needed		Annual Progress to Date (2022) *add new 2022 progress above the existing 2021 progress. Date each entry
							Technical	Financial	Technical	Financial	
1.0*	Implement County Farmland Preservation Program with farmland preservation program incentives enhancement	Increase the financial and technical capabilities of the County Farmland Preservation Program  Other Preservation Grants applied for 50-100 acre/year goal	Conservation District, Clearfield County Commissioners , County Planning, Farmland Preservation Board	Bay Portion of Clearfield County	2021 - 2025+	County budget restrictions inhibit additional funding for Farmland Preservation Program Continue to pursue budget funding/ other grants	Tech assistance and administration- Farmland Preservation Board, County Planning, Conservation District	\$3000- Clean and Green Penalties	Additional Staff Person in County Planning to handle workload	\$100,000/year for additional staff  \$10,000+ for Easement purchase and closure costs	2022 – Clearfield County Commissioners signed and approved the allocation of \$5,000 toward the purchase of and easement, Clearfield CCD verbally agreed to match county contributed funds – no applications have been received yet.
1.1*	Chesapeake Bay Technical Inspection/ Plan Data Gathering	Continue implementing Chesapeake Bay Technician contract to provide 38 farm compliance inspections per year, and report additional BMPs	Conservation District	Bay Portion of Clearfield County	2021 – 2025+	Challenge: Time constraints to complete additional BMP reporting under current contract. Recommendation: Increased funding for additional workload and mileage to report and reverify BMPs. Staff turnover	Tech assistance and planning – 1 Chesapeake Bay Technician with ¾ funding	\$72,150 County/ State	Additional Staff Person to handle BMP reporting/trackin g/reverification. Staff (see 3.0)	\$72,150	2022 – Clearfield CCD Technicians have increased the amount of BMP identified during CBP and Act 38 inspections and reported into PracticeKeeper
1.2*	Nutrient Management/ Manure Management Delegation Agreement	Continue implementing Nutrient Management/Manure Management program to provide Act 38 and MMP planning, review, inspections, and technical assistance (2000 acres/year average)	Conservation District	Bay Portion of Clearfield County	2021 – 2025+	VAO plan enrolment into Act 38 program is declining. Staff turnover	Technical assistance and planning  1 Technician with ¼ funding	\$24,050 County/ State	N/A	Implementation Funding  \$100,000+ per plan for BMPs	2022 –Clearfield CCD Techs have continued to verify MMP and NMP acres in PK. These numbers are not being reflected accurately in CAST.  2022- 6,606 acres written and reviewed  22,414 acres verified/written total to date

1.3*	Continue Development of Agricultural Plans	Continue planning assistance for CB inspection farms and Act 38 planning for project farms (Act 38 and MMP plans (3200 acres annually) Ag E&S Plans (3800 acres annually)  NOTE: Over 25,000 acres already verified in PK	Conservation District	Bay Portion of Clearfield County	2021 – 2025+	Challenge: Time constraints for current technician Staff turnover	Technical assistance and planning Technician funded through CBP and NM/MMP agreements	None	Seasonal Technician based on need Staff (see 3.0)	\$6,000 for seasonal technician Staff (see 3.0)	2022 – Clearfield CCD techs have continued planning assistance for farms in the county 2022- 6,606 acres NM 2022- 5,912 acres CP  NM – 22,414 acres total CP – Approx 15,478 acres total
1.4	Develop and implement no-till verification from CD district rental program	Develop a verification component of acres planted with rental equipment (Report 1000 High residue tillage acres and 300 acres of cover crop annually, as well as Core NM Practices	Conservation District	Bay Portion of Clearfield County	2021	Challenge EPA/DEP acceptance of approach and verified data and time to field verify reported acres  Survey will be added to no-till equipment invoices to collect annual NM and Tillage data. 10% discount on bill	Technical assistance and administration  Technician funded through CBP and NM/MMP agreements	N/A	PK reporting procedure for no-till and cover crop implementation  Seasonal Technician based on need Staff (see 3.0)	\$6,000 for seasonal technician Staff (see 3.0)	2022 – Clearfield CCD successfully established a certification program as part of our no-till program, but PA DEP and EPA do not have a reporting mechanism for verified no-till, cover crop, or low disturbance tillage acres
1.5	Continue to implement and Increase capacity of no-till program	Sustain and increase annual no-till acreages planted with rental equipment and provide additional rental equipment to meet demand (1000 + High residue tillage acres and 300 + acres of cover crop annually)	Conservation District	Bay Portion of Clearfield County	2021 – 2025+	Maintenance and repair costs inhibit purchase of new equipment. Weather and time constraints of staff and farmer time. Storage of more equipment.	2 – 1006NT NT Drills 1 – 706NT NT Drill 1 – 1755 NT Corn Planter	Rental Fees	More/update equipment  Approximately \$30,000/5-10 years)  On site storage needed	\$5,000/ year for maintenance  \$30,000 every 5 years	2022 – 2021 No-till acres No-till – 1,296.9 acres Cover Crop – 380 acres
1.6	Increase amount of Chlorophyll testing and PSNT testing on corn acres	Increase adoption for supplemental NM BMPs on farms by increasing Chlorophyll and PSNT testing on corn acres (2,800 acres of N Rate, N Placement, N Timing annually)	Conservation District	Bay Portion of Clearfield County	2021 – 2025+	Time constraints of current technician and farmer participation.	Technical assistance and administration	\$25 / Farm Tested	Seasonal Technician based on need Staff (see 3.0)	\$6,000	2022 – Clearfield CCD provided outreach through newspaper articles and in person efforts reminders about our local program, but participation remained low. Possibly because of commodity prices.
1.7	Develop new Watershed Restoration Plans	Develop new plans for watersheds not already covered by a plan	Conservation District, Watershed	Countywide (where new	2021 – 2025+	Time and financial resources are limited	Technical assistance and project oversight	None	Engineering/ Planning	\$100,000/plan	2022 – Developing 1 new 319 WIP for Morgan Run WS; QAPP being

		<p>which leads to increased BMP installations</p> <p>-Over 20 more plans needed</p> <p>-1 plan / 2 year goal</p>	<p>organizations, WPC, TU</p>	<p>plans are needed)</p>							<p>developed and sampling to commence in early 2023</p>
1.8	<p>Update existing watershed restoration plans as needed</p>	<p>Update plans to re-evaluate restoration targets, document pollution reduction progress, and plan new BMP installations</p> <p>-20 plans needed</p> <p>-1 plan / 2 year goal</p>	<p>Conservation District, Watershed organizations, WPC, TU</p>	<p>Countywide</p>	<p>2021 – 2025+</p>	<p>Time and financial resources are limited</p>	<p>Technical assistance and project oversight</p>	<p>None</p>	<p>Engineering/ Planning</p>	<p>\$100,000/plan</p> <p>Over 20 more plans needed</p>	<p>2022 – In June of 2022 EPA approved the update of 2 WIPs for Little Anderson Creek and Montgomery Creek developed by our District with assistance from Trout Unlimited and Hedin Environmental</p>
1.9	<p>Update and Implement County Hazard Mitigation Plan</p>	<p>An updated plan will address flooding and identify flooding threats. Ideally the plan will identify project areas for hazard mitigation grants</p> <p>-Advocate for update based on CAP goals. (Stream Restoration, Culvert Replacements, Obstruction removals, and floodplain restoration.)</p>	<p>Clearfield County, EMA</p>	<p>Countywide</p>	<p>2021</p>	<p>Plans need to identify more specific projects to reduce hazards, including removal of dams, culverts, and other obstructions</p>	<p>Planning office technical assistance</p>	<p>None</p>	<p>Additional planning staff in County planning office</p>	<p>\$100,000 annually for staff</p>	<p>2022 - The Clearfield County 2022 Hazard Mitigation Plan is in the process of being adopted by the local municipalities. Approval Letters and Adoption Resolutions for the following communities in Clearfield County, Pennsylvania have been received.</p> <ul style="list-style-type: none"> <li>• Decatur Township</li> <li>• Girard Township</li> <li>• Goshen Township</li> <li>• Lawrence Township</li> <li>• Morris Township</li> <li>• Sandy Township</li> <li>• Boggs Township</li> <li>• Curwensville Township</li> </ul> <p>Clearfield County Conservation was initially involved in the development of the plan but the plan was adopted without relevant information being included that would help CAP efforts</p>

1.10	Update County Comprehensive Plan	An updated plan will provide policy support for stormwater reduction efforts and achieve CAP initiatives. Advocate for update based on CAP needs	Clearfield County	Countywide	2025+	Lack of financial and political support	Planning office technical assistance	None	Additional planning staff in County planning office and engineering/consulting	\$100,000 annually for staff	2022 – Clearfield County and Elk County were recently awarded \$50,000 to jointly work together in updating both counties' comprehensive plans. Next steps will be to release an RFP to determine project costs and required match. It is anticipated the update would start in 2022 with final plan adoption in 2023.
1.12*	Develop Countywide Act 167 Plan	A developed countywide 167 plan will result in municipal ordinances that reduce stormwater runoff. Advocate for update based on CAP needs	DEP, Clearfield County, Municipalities	Countywide Urban Townships, Clearfield Borough, Lawrence, Curwensville	2025+	Municipalities lack financial and staff resources to enforce plan.  Customizable ordinances that are easier to enforce and use.	DEP Tech guidance  Planning office tech assistance	None	Engineering assistance, Consulting	\$500,000 for plan development	2022 – No Action Taken
1.13	Support PA AML campaign	Support will lead to financial resources to implement AMD BMPs such as: <ul style="list-style-type: none"> <li>- Passive Treatment System construction and maintenance</li> <li>- AML reclamation that may include forest or riparian buffer restoration</li> </ul> Wetland creation/restoration as part of treatment layout	Conservation District, County Commissioners, and watershed associations	Countywide/Statewide	2021 – 2025+	N/A	Technical Assistance	None	None	None	2022 – CD Watershed Specialist joined the PA AML Campaign and participates in their weekly call

1.14*	Conservation Priority Plan for County	<p>Create a Conservation Priority Plan for County that identifies critical conservation areas for restoration and protection. Development of this plan will guide the implementation of the CAP</p> <p>Performance target: Development of GIS database overlays that can easily be accessed and analyzed for priority project area locations and which agencies could partner together.</p>	Conservation District, PFBC, TU, DCNR, WPC	Bay Portion of Clearfield County	2021 – 2025+	<p>Work with partners to identify critical conservation areas based on biologic, recreational, and pollution potential factors</p> <p>Develop priority list of streams for Clearfield County in which wild trout population could improve through habitat work</p> <p>Consider high angler use streams during the process</p> <p>Include existing and future watershed restoration plans (see 3.36 – 3.63)</p>	Data from all organizations to be consolidated and technical assistance	None	Access to other organization data	Staff time	2022 – Action not taken
2.0*	Initiate additional water quality monitoring sites that promote long-term trend evaluation at key locations in Clearfield County	<p>Creation of multiple new monitoring sites that will provide long term improvements from BMP implementation</p> <p>Monitor 1 watershed per year</p>	USGS, SRBC, Watershed Organizations, DEP, Conservation District	Bay Portion of Clearfield County	2025+	Coordination with multiple organizations, long term funding, acceptance of volunteer collected data. Wishlist of data points is needed for partner involvement. Water quality data has limits and it time intensive to collect	Tech Assistance	DEP	Coordination between all partners and agencies	\$12,225 Annually	2022 – Action not taken
2.1*	Establish baseline of current practices for comparison with future implementation	<p>Develop an approach to find and report previously unreported BMPs</p> <ul style="list-style-type: none"> <li>- Increase reported BMPs</li> </ul>	Conservation District, DEP	Bay Portion of Clearfield County	2025+	Time consuming, Privacy restrictions, difficult to identify previously implemented projects	District Knowledge	None	GIS Models or analysis to ID BMPS	Unknown	2022 – CAP BMP Verification Funds provided Clearfield CCD with funds necessary to complete remote sensing and field verification of existing BMPs within Clearfield County.
2.2*	Identify future ag/urban project opportunities using	Utilize GIS to identify opportunity areas for BMPs using erosion	Conservation District	Bay Portion of Clearfield County	2021 – 2025+	Current GIS software limitations, up to date elevation and arial imagery	Tech GIS Support assistance	None	New GIS Software. Updated	\$15,000	2022 – CAP BMP Verification Funds provided Clearfield CCD

	GIS Technologies	prediction models, wetland restoration models, and SPARROW Restoration areas - Increased BMP placement efficiency ID opportunity areas annually				Partner with other partners and Universities			Elevation and Arial Imagery New computer with faster processing speeds.		with funds necessary to complete GIS analysis of BMP opportunity areas within the county to focus efforts on coming years. More work is still needed but 83 new potential project sites were identified.
2.3	Increase reporting of Nutrient management BMPs through Chlorophyll testing and PSNT testing on corn acres	Report supplemental NM BMPs based on data collected from testing visits. (2,800 acres of N Rate, N Placement, N Timing annually)	Conservation District	Bay Portion of Clearfield County	2021 – 2025+	Time constraints of current technician and farmer buy in. Acceptance of approach by EPA and DEP.	Tech assistance and administration	\$10 / Farm Tested	Seasonal Technician based on need Staff (see 3.0)	\$6,000	2022 – Clearfield CCD increased reporting of NM BMPs through program surveys and phone interviews
2.4*	Document water quality improvements and biological improvements downstream of BMP project sites	Documentation of water quality improvements that lead to delisting of waterways on Impaired Waters list. Utilization of citizen science to collect relevant data that will be accepted.  Based on number of projects per year. Approximately 1-2	Conservation District, TU, Watershed groups, SRBC, DEP, WPC, PFBC	Bay Portion of Clearfield County	2021 – 2025+	Time and funding constraints, access to water quality equipment to perform surveys. Recommendation: Ensure DEP methodology for data collection is standard. Acceptance and including of volunteer collected data. Intensity of sampling and QA/QC will be challenging	Tech Assistance	NFWF	Water quality sample analysis and macroinvertebrate ID	Funding for sample analysis, and interpretation	2022 – No action was taken
3.0*	Project Management Staff	Hire 1-2 additional staff in order to oversee and perform project and grant management tasks including reporting and tracking BMP information. (induces recommendations from section above)	Conservation District	Countywide	2021-2025+	Stabile future funding to support position is necessary  Staff turnover would be extremely problematic	Clean Water Academy	None	1 on 1 trainings	1 @ \$50,000/year	2022 – No action was taken
3.1*	Develop and Implement Nutrient Management BMPs	Continue to write and review MMP and NMPs and enter associated data into PK. Provide cost share support	Conservation District, 4R Alliance, Private Consultants	Bay Portion of Clearfield County	2021-2025+	Time constraints of current technician and farmer participation.  More farm 4R stewardship education is needed.	Data gathering through Bay Tech visits  CD Technical Assistance	PA Ag Planning Reimbursement Program \$900,000  REAP	4R Education Support	NM Core N&P Manure and Fertilizer Plans \$305,448 annually	2022 – Clearfield CCD techs verified/wrote 6,606 acres of NM from Jan 2021 – 22

		<ul style="list-style-type: none"> <li>- NM Core N Manure and Fertilizer 26,100 acres</li> <li>- NM Core P Manure and Fertilizer 8,375 acres</li> <li>-NM Rate N 2800 acres</li> <li>-NM Rate P 2800 acres</li> <li>- NM Placement N 3600 acres</li> <li>NM Placement P 2800 acres</li> <li>- NM Timing N 4000 acres</li> <li>- NM Timing P 2800 acres</li> </ul>				<p>Need more efficient way to collect farm data annually</p> <p>Inflexibility of Act 38 program makes it difficult for volunteers to transition MMPs to NMPs and maintain the plan</p> <p>Terrain of fields in county inhibit effect field application of nutrients – More crops are run down by equipment during multiple passes. Farmer time is limited</p> <p>Cost share is needed to transition MMPs to Act 38</p>	<p>NRCS Technical Assistance</p> <p>WPC Technical and Planning Assistance</p> <p>Headwaters-Financial Administration and Project Management</p>	EQIP		<p>NM Supplemental BMPs: Rate N&amp;P, Placement N&amp;P Timing N&amp;P \$165,440 annually</p>	
3.2*	Implement BMPs in current Act 38 Plans	<p>Utilize funding to implement and install BMPs identified in Act 38 Plans</p> <p>Fund BMP installations of 1-2 Approved NMPs per year</p>	Conservation District, NRCS, WPC	Bay Portion of Clearfield County	2021-2025+	Need direct funding to support BMP installations and assist landowners in BMP implementation	<p>CD Technical Assistance</p> <p>NRCS Technical Assistance</p> <p>TU TAG</p> <p>WPC Tech assistance</p> <p>Headwaters-Financial Administration and Project Management</p>	REAP and EQIP	Staff (see 3.0)	Staff (see 3.0)	2022 – BMPs were implemented that were identifies in two Act 38 plans and reported into PK.
3.3	Develop and Implement Soil Conservation Plans	<p>Continue to write, update and review Ag E&amp;S Plans and enter associated data into PK. Provide cost share support. Continue NRCS Conservation Planning Support</p> <p>- Soil Conservation Plans 26,800 acres</p>	Conservation District, NRCS, Private Consultants	Bay Portion of Clearfield County	2021-2025+	Time constraints of current technician and farmer participation.	<p>CD Technical Assistance</p> <p>NRCS Technical Assistance</p> <p>TU TAG</p> <p>WPC Tech assistance</p> <p>Headwaters-Financial Administration</p>	<p>PA Ag Planning Reimbursement Program \$900,000</p> <p>REAP</p> <p>EQIP</p>	N/A	Soil Conservation Plan Development \$701,088	2022 – Clearfield CCD techs wrote and reviewed 5,912 acres of soil conservation plans in 2022 totaling 15,478 acres to date

							and Project Management				
3.4*	Low and no-till tillage BMPs	<p>Continue technical support and education to increase adoption of practices.</p> <p>Report current conservation tillage (2700 acres)</p> <p>Increase adoption and reporting of high residue tillage by (10,000 acres)</p> <p>Increase adoption and reporting of low disturbance manure incorporation (1700 acres)</p>	Conservation District, NRCS, Private Consultants	Bay Portion of Clearfield County	2021-2025+	Farmer participation and implementation of practices is challenging due to the soils and climate of Clearfield County.	<p>Data gathering through Bay Tech visits</p> <p>CD Technical Assistance</p> <p>NRCS Technical Assistance</p> <p>TU TAG</p> <p>Headwaters-Financial Administration and Project Management</p>	REAP and EQIP	Annual Transect survey or Remote Sensing Survey for Clearfield County	Low disturbance manure incorporation \$34,391 annually	2022 – Clearfield CCD provided technical assistance to reduced tillage producers and supported farms to increase acres. Reporting mechanisms for no-till, conservation tillage, and low disturbance manure injection remain poor and do not give an accurate representation of what is on the landscape.
3.5*	Cover Crops	<p>Continue technical support and education to increase adoption of practices. Provide cost share support for beginner cover crop users</p> <p>Increase adoption and reporting of traditional cover crop (2000 acres)</p> <p>Increase adoption and reporting of cover crop with fall nutrients. (5000 acres)</p>	Conservation District, NRCS	Bay Portion of Clearfield County	2021-2025+	Farmer participation and implementation of practices is challenging due to the climate of Clearfield County, and lack of time during harvest. Interseeding is also difficult due to the lack of specialized equipment and operating equipment on hilly terrain. In field verification and reporting is possible but requires funding for milage.	<p>Data gathering through Bay Tech visits</p> <p>CD Technical Assistance</p> <p>NRCS Technical Assistance</p> <p>TU TAG</p> <p>Headwaters-Financial Administration and Project Management</p>	REAP and EQIP	Annual Transect survey or Remote Sensing Survey for Clearfield County	<p>Planting Cover Crop \$604,080 annually</p> <p>Cover Crop Financial Assistance</p>	<p>2022 – Clearfield CCD successfully established a cover crop program to fund the increased adoption of cover crops within Clearfield County utilizing CAP funds – Reporting mechanisms remain poor for acres that were planted and increased.</p> <p>Funding plans have been discussed with NFWF about a central pa interseeder program - possible 2023 application</p>



		Increase adoption of early season interseeded cover crop (1000 acres)									
3.6	Plan and Install pasture management BMPs	<p>Continue work identifying pastures through CBP Inspections in need of BMP installations and obtain funding to install practices.</p> <p>Increase adoption and reporting of Prescribed Grazing/Rotational Grazing Systems (4000 acres)</p> <p>Increase adoption of horse pasture management and rotational grazing (1000 acres)</p>	Conservation District, NRCS	Bay Portion of Clearfield County	2021-2025+	<p>Farmer participation and implementation of prescribed grazing is challenging due to the infrastructure and increase management needed to maintain BMP</p> <p>NRCS 528 plan writing is slow and isn't keeping up with demand</p> <p>Horse owner participation is challenging due to the lack of knowledge about pasture BMPs</p> <p>Implementation of grazing practices of often difficult due to limited pasture acreage</p>	<p>Data gathering through Bay Tech visits</p> <p>CD Technical Assistance</p> <p>NRCS Technical Assistance</p> <p>TU TAG</p> <p>Project Grass Tech assistance</p> <p>Headwaters-Financial Administration and Project Management</p>	REAP, EQIP, and state grants	Need to create prescribed grazing planning offered through conservation districts with associated trainings and tools to write plans to meet standards	<p>Installation of prescribed grazing systems \$325,080</p> <p>Installation of horse pasture management BMPs \$359,830</p>	<p>2022 – Clearfield CCD utilized CAP funds to install pasture management BMPs</p> <p>Rotational Grazing – 1,490 acres</p> <p>Horse Pasture Management – unknown</p>
3.7*	Plan and Install Ag Riparian Buffer BMPs	<p>Identify agricultural land use and other areas in need of riparian buffers and install BMPs. Increase reporting of existing buffers</p> <p>Forested riparian buffers (285 acre goal)</p> <p>Forested riparian buffer with exclusion fencing (250 acre goal)</p> <p>Grass riparian buffer (285 acre goal)</p> <p>Grass riparian buffer with exclusion fencing (250 acre goal)</p>	Conservation District, NRCS, WPC, NC Conservancy, DCNR, Alliance for Chesapeake Bay	Bay Portion of Clearfield County	2021-2025+	<p>Farmer and landowner participation is challenging. Need for education</p> <p>Long term maintenance is not achievable without funding</p> <p>Need more flexibility in qualifying criteria for installing buffers. Buffer size should be proportional of runoff potential and stream size/watershed area.</p> <p>NC Conservancy and WPC NFWF funding allows for flexible buffer sizing</p> <p>Utilize prime prospect list for buffer sites - DCNR</p>	<p>Data gathering through Bay Tech visits</p> <p>CD Technical Assistance</p> <p>NRCS Technical Assistance</p> <p>TU TAG</p> <p>WPC Tech assistance</p> <p>Headwaters-Financial Administration and Project Management</p>	REAP, EQIP, DCNR Buffer Grants, CREP, Growing Greener, NFWF	Design and BMP outreach	<p>Forested Riparian Buffers (\$1,157,000)</p> <p>Forested Riparian Buffers with exclusion fence (\$1,804,000)</p> <p>Grass Riparian Buffers (\$256,257)</p> <p>Grass Riparian buffers with exclusion fencing (\$1,013,30030)</p>	<p>2022 – Clearfield CCD worked with partners to establish 38.85 acres of riparian forest buffer</p> <p>Riparian Buffers 38.85 acres planted and reported</p> <p>Off Stream Water System – 47 systems</p> <p>Grassed Waterways – 48.12 acres</p>

		<p>Off stream water system development - 100 acres</p> <p>GIS Analysis shows 110.39 acres of agricultural land use within 35ft of stream. and 385 acres within 100ft of stream. Total non-forested acres 1070 within 35ft of stream.</p>								<p>Off stream water system development (\$15,573) / farm</p> <p>Long Term Maintenance Funding</p>	
3.8	<p>Implement more barnyard runoff control/loafing lot management/ag stormwater management</p>	<p>Continue to identify, report, and implement barnyard runoff controls and loafing lot management</p> <p>Report/construct barnyard runoff control BMPs (3 acres)</p> <p>Construct an additional loafing lot management BMPs (3 acres)</p>	<p>Conservation District, NRCS</p>	<p>Bay Portion of Clearfield County</p>	<p>2021-2025+</p>	<p>Farmer participation, long term agreements are needed to enforce use of BMP</p>	<p>Data gathering through Bay Tech visits</p> <p>CD Technical Assistance</p> <p>NRCS Technical and Engineering Assistance</p> <p>PACD Engineering Assistance</p> <p>TU TAG WPC Tech assistance</p> <p>Headwaters-Financial Administration and Project Management</p>	<p>REAP, EQIP, and state grants</p>	<p>Additional Engineering Assistance</p>	<p>Barnyard Runoff Control (\$248,070)</p> <p>Loafing lot management (\$3,659,040)</p>	<p>2022 – Clearfield CCD utilized CAP funds to install barnyard runoff BMPs</p> <p>Roof Runoff Structure - 1997 feet</p>
3.9	<p>Animal waste management BMP implementation for livestock</p>	<p>Continue to identify, report, and implement manure storage BMPs</p> <p>Construct additional</p>	<p>Conservation District, NRCS</p>	<p>Bay Portion of Clearfield County</p>	<p>2021-2025+</p>	<p>Farmer participation, long term agreements are needed to enforce use of BMP</p>	<p>Data gathering through Bay Tech visits</p> <p>CD Technical Assistance</p>	<p>REAP, EQIP, and state grants</p>	<p>Additional Engineering assistance</p>	<p>Dairy and Beef Manure storage (\$1,707,530)</p>	<p>2022 – Clearfield CCD utilized grant funds to install 1 waste management system and have worked to plan 4</p>

		<p>Manure Storage Facility for dairy and beef operations (1900 AEUs)</p> <p>Construct Manure Storage structures for imported poultry manure (450 Poultry AEUs)</p> <p>Construct manure storage/composting facilities for small horse operations (3000 Horse AEUs)</p>					<p>NRCS Technical and Engineering Assistance</p> <p>PACD Engineering Assistance</p> <p>TU TAG</p> <p>WPC Tech assistance</p> <p>Headwaters-Financial Administration and Project Management</p>			<p>Imported Poultry Manure Storage (\$404,415)</p> <p>Horse Composting facility/manure storage (\$295,470)</p>	more for future grant applications
3.10	Accelerated implementation of grassed waterways on critical runoff areas in priority watersheds.	Implement 600 acres of grassed waterways on modeled erosive channels in agricultural lands reduced accelerated erosion.	Conservation District, NRCS	Bay Portion of Clearfield County	2021-2025+	Farmer participation and long term maintenance	<p>Data gathering through Bay Tech visits</p> <p>CD Technical Assistance</p> <p>NRCS Technical and Engineering Assistance</p> <p>PACD Engineering Assistance</p> <p>Headwaters-Financial Administration and Project Management</p>	REAP, EQIP, and state grants	Additional GIS Capabilities with updated LiDAR information	\$3,000,000	2022 – No action was taken due to lack of funds and staff time.
3.11	Agricultural Land Retirement	Utilize the CREP and EQIP program to convert non-productive agricultural land use to meadow, forest, or pollinator habitats and utilizing	Conservation District, FSA, NRCS	Bay Portion of Clearfield County	2021-2025+	Farmer participation is limited, long term noxious weed management is a problem.	<p>CD Technical Assistance</p> <p>NRCS Technical Assistance</p>	CREP, EQIP. PACD Education Grants	None	None	2022 – Pollinator habitats were installed on agricultural land in Clearfield County by NRCS but it is unclear of the details due to privacy policies.

		conservation easements (800 acres currently enrolled, 25-50 acres new enrolment annually)					WPC Land Conservation				
3.12	Installation of “infiltration practices” (infiltration basins, infiltration trenches)	Identify problematic urban watersheds runoff drainages. Install BMPs on private and public lots, government lands through new construction and potential retrofits  -225 acres treated	Conservation District, Municipalities, Watershed Organizations, Wildlife Conservation Organizations Homeowners/Landowners, Engineering Firms	Bay Portion of Clearfield County	2021 - 2025+	Infiltration trenches are non-invasive, versatile, and effective. Infiltration basins can be made into wetlands/aquatic habitat. long term maintenance  CDBG eligibility might not apply in project areas	Permitting guidance and tech assistance	CDBG Community Development Block Grants	Engineering/design	\$560,000 (BMP Installation)	2022- GIS analysis of installed BMPs associated with completed E&S permits estimates that runoff from approximately 1,304 acres of permitted land was treated with detention basins, infiltration basins, infiltration berms, infiltration trench, retention basin, and underground detention BMPs
3.13	Install permeable pavement	Municipal code adoption of permeable pavements. Cost effective, longer life span, solves urban SW issues. Implement through new construction and potential retrofits  -150 acres	CD, Municipalities, Landscapers, Watershed Organizations Homeowners/Landowners/Landscapers, Engineering Firms	Bay Portion of Clearfield County	2021 - 2025+	Cost-effective for homeowners. Different types of PP allow for urban uses on driveways, roads, sidewalks, parking lots, etc. long-term maintenance  Possibility of installations in local parks and walkways  CDBG eligibility might not apply in project areas	Permitting guidance and tech assistance	CDBG Community Development Block Grants	Engineering/design	\$6,000,000 (BMP Installation)	2022 – No permeable pavement was installed
3.14	Treat impervious developed land use with bio retention and rain gardens	Include in municipal code and/or promote landscaping aesthetic in problem areas, specifically those with nutrient loading problems. Promote installation on public lands/parks. Implement through new construction and potential retrofits  375 acres	CD, municipalities, watershed organizations, Homeowners/Landowners/Landscapers, Engineering Firms	Bay Portion of Clearfield County	2021 - 2025+	Homeowner participation, BMP sizing can be issue, long term maintenance  CDBG eligibility might not apply in project areas	Permitting guidance and tech assistance	CDBG Community Development Block Grants	Engineering/design	\$2,100,000 (BMP Installation)	2022- GIS analysis of installed BMPs associated with completed E&S permits estimates that runoff from approximately 64 acres of permitted land was treated with bio-retention rain gardens
3.15	Treat developed land use with wet ponds and wetlands	Identify areas on floodplains capable of wetland processes.	CD, municipalities, watershed	Bay Portion of Clearfield County	2021 - 2025+	Include in municipal code and/or promote landscaping aesthetic. BMP size and	Permitting guidance and tech assistance	CDBG Community	Engineering/design	\$420,000 (BMP Installation)	2022 – No wet ponds or wetlands were installed.

		Wetlands intercept urban runoff before reaching waterways. Implement through new construction and potential retrofits 150 acres treated	organizations, USFWS, Homeowners/Landowners, Engineering Firms			landowner participation limiting factors, long term maintenance  CDBG eligibility might not apply in project areas		Development Block Grants			
3.16	Convert urban turf grass to Conservation Landscape/Turf to Meadow Conversion	Identify unused turf, turf unnecessarily cut/treated lawns, pre-regulation turf, and implement CLP on them.  225 acres	CD, municipalities, watershed organizations, Homeowners/Landowners/Landscapers DCNR, WPC, PennDOT	Bay Portion of Clearfield County	Begin outreach in 2021 with potential future implementation 2025+	Landowner participation, and available land for BMP, long term maintenance Weed ordinances will prohibit adoption  Work with schools, churches, and universities to convert turf areas  Work with PennDOT to preserve conservation areas/landscaping in rights-of-way  Work with Clearfield Borough to install native plantings in public parks and walkways  CDBG eligibility might not apply in project areas	Tech assistance, and education	CDBG Community Development Block Grants  DCNR Lawn Conversion Program	Design	\$1,125,000 (BMP Installation)	2022 – No conversions were completed
3.17	Install urban riparian buffers on private and public lands	Install riparian buffers in urban opportunity areas identified through GIS analysis (100 acre goal)  GIS Analysis shows approximately 104 acres within 35ft of stream that are not forested.	Conservation District, County Planning, DCNR, Municipalities, WPC, Watershed Organizations	Bay Portion of Clearfield County	Begin outreach in 2021 with potential future implementation 2025+	Landowner and Homeowner participation/buy in.  Long term maintenance  Problems with neighbor cooperation  Work with Clearfield Borough to install native plantings and tree plantings in public parks and walkways  Concern with buffer “look”  CDBG eligibility might not apply in project areas	Tech assistance, education, design	Keystone 10 Million Trees Partnership, DCNR TreeVitalize, Tree Pennsylvania	None	\$560,000	2022 – No action taken
3.18	Increase Urban Tree Canopy	Implement free tree giveaway for urban residents approximately 900 trees (3 acres Urban Tree Canopy)	Conservation District, County Planning, American Water	Bay Portion of Clearfield County in SPARROW Urban Restoration Watershed	2022 – 2025+	Small lot size restrictions in urban land uses, municipal ordinances, homeowner participation, EPA/DEP acceptance of approach and data long term maintenance	Tech assistance, education	District Education Funding to help initiate program  DCNR	GIS technology to map tree locations and cross reference land use under canopy	\$3,600  District Admin Costs	2022 – Curwensville Lake Authority planted 107 trees on turf grass totaling 3.79 acres of urban tree canopy. Program development

		Utilize District tree sale to collect planting locations and data about land use, and report locations.  Work with future American Water programs to plant trees when customers switch to paperless billing				Recommendations: Create school educational project/activity where each participant plants a tree at their home with a GPS coordinate on turf land use. Could coincide with Earth Day/Arbor Day events  Work with Clearfield Borough to install tree plantings in public parks and walkways and over impervious surfaces  CDBG eligibility might not apply in project areas		TreeVitalize  Future American Water Funding			for the rest of the county is needed.
3.19	Curwensville Lake Tree Planting	Planting shade trees over turf land use (1 acre)  Conversion of turf land use to conservation landscaping (1+acres)  Permeable pavement installations (1.5 acres)  Shoreline Erosion Control Projects (500 ft+)	Curwensville Lake Authority, Friends of Curwensville Lake, Boy Scouts, Army Corps,	Curwensville Lake Recreation Area	2021-2025+	Limited Financial Resources, Army Corp permission	CLRA Long term maintenance  Boy Scouts troop will be used to install shade trees	CLRA Funds, DCNR funding	Engineering/design	Permeable Pavement (\$400,000)  Conservation landscaping (\$5,000)  Shoreline Protection (\$ ?)  Tree canopy installation (\$2,000)	2022 – Curwensville Lake Authority planted 107 trees on turf grass totaling 3.79 acres of urban tree canopy.
3.20	Increase Urban Forest Planting	Identify large contiguous landowners to accommodate sizing requirements for BMP and establish new urban forest plantings (170 acre goal)	Conservation District, County Planning, Municipalities, DCNR, WPC	Bay Portion of Clearfield County in SPARROW Urban Restoration Watershed	Begin outreach in 2021 with potential future implementation 2025+	Landowner participation, minimum size requirements for BMP, and available land for BMP, long term maintenance  No funding source available	Technical assistance	None	Design	\$850,000	2022 – No action taken
3.21	Runoff Reduction Performance Standard and Storm Water Treatment Performance	Rian Barrels capture/reuse  50 acres of roof runoff treated	Municipalities. Conservation District	Bay Portion of Clearfield County in SPARROW Urban	2025+	Landowner / Municipal buy in and long term maintenance  CDBG eligibility might not apply in project areas	Tech assistance	CDBG Community Development Block Grants	Engineering/Design	\$5000/20 rain barrel kits	2022 – No action taken

	Standard Implementation			Restoration Watershed							
3.22	Impervious surface reduction projects	Identify unused/flood prone impervious area and convert back to natural land use or park.  (10 acre goal)	County, Municipalities, DCNR	Bay Portion of Clearfield County in SPARROW Urban Restoration Watershed	Begin outreach in 2021 with potential future implementation 2025+	Landowner participation  Maintenance  CDBG eligibility might not apply in project areas	Technical assistance	CDBG Community Development Block Grants	Engineering/Design	\$600,000 (BMP Implementation)	2022 – No action taken
3.23*	Implement Urban Nutrient Management	Provide education to landowners and industries about nutrient management requirements for turf grass  (3000 acres of turf education) Reported through event signup	Conservation District, Penn State Extension Municipalities	Bay Portion of Clearfield County in SPARROW Urban Restoration Watershed	2022 – 2025+	Landowner participation, State fertilizer legislation needed	Education	None	Tech assistance	N/A	2022 – No action taken
3.24	Impervious Disconnection	Disconnect roof water from sewer and/or stormwater systems and direct to amended soils or vegetated flow paths. Increase reporting of current efforts. (100 acres)	Municipalities Landowners/ Homeowners Municipal Authorities	Bay Portion of Clearfield County in SPARROW Urban Restoration Watershed	2021 – 2025+	Disconnections are sometimes directed into storm sewers or nearby streams. More disconnections increase likelihood of damage to adjacent properties	Technical Assistance	None	Design technical assistance for retention and infiltration	\$21,780,000  2,722 – 1,600 sqft roofs  \$25/sqft	2022 - Impervious disconnection programs are being implemented within Clearfield Borough and Houtzdale Borough but there is poor record keeping and no detailed data about the size of area disconnected is collected, making it difficult to impossible to estimate the amount of area that has been disconnected or will be disconnected.
3.25	Septic and Wastewater Improvement and Developments	Areas of County without developed sewer systems are contributing nutrients to local waterways. Identifying and addressing malfunctioning on lot	Municipalities, Landowners, DEP	Bay Portion of Clearfield County  Start in Rockton, West Decatur, Chestnut	2021 – 2025+	Public opposition Financial Requirements  Limited State Funds for Act 537 Reimbursement Program for municipal costs 50%	Education	None	Consulting – Engineering  Analysis needs to be completed by partners and agencies to quantify the	\$20,000- \$100,000 for plan development + \$2,000,000/ system	2022 – No action taken

		septic systems in small communities will lead to nutrient reduction and water quality improvement.  Needs quantified by county planning, engineers, and DEP		Grove, Allport, Frenchville		Outdated 537 plans don't represent current conditions  Education is needed about private septic maintenance			scale and need of county.		
3.26*	Wetland Installation and restoration	Identify interested landowners/municipal areas/schools/businesses within areas of the restorable wetlands layer and install/restore wetlands  50 acre goal	Conservation District, County, USFWS Partners Program	Bay Portion of Clearfield County in areas with restorable wetlands	2025+	Landowner participation, permitting, site access and feasibility, funding	Permitting and Technical Assistance  NRCS Technical and Engineering Assistance  CD GIS mapping and planning	NRCS Funding  USFWS Funding  CREP	Engineering  Wetland mitigation opportunity mapping and planning is needed.	\$3,247/acre	2022 – No action taken
3.27*	Stream Restorations	Identify critical areas of streambank erosion and install BMPs to reduce and control erosion.  Urban Stream Restoration – 26,700ft Non-Urban Stream Restoration- 10,200ft	Conservation District, County, PAFBC, WPC, TU, Watershed organizations, NC Conservancy, USFWS Partners Program	Bay Portion of Clearfield County	2021 - 2025+	Landowner participation, permitting, site access and feasibility, funding  Need for visual assessments	Permitting and Technical Assistance NRCS/ PACD Engineering assistance  Permitting Assistance and Site Design, Construction Oversight  Visual habitat assessments  Headwaters-Financial Administration and Project Management	State and Non-profit grant funding NFWF Growing Greener	Engineering  Visual habitat assessments to determine needs	\$30-100/ft Estimated	2022 – - 1 project constructed by the CD and TU this fall (Little Trout Run) 145 feet non-urban - TU installed streambank restoration project on Little Laurel Run 500 feet non-urban - CD, Boggs Twp, and PFBC installed stream restoration on Simeling Run 150 feet of urban stream restoration - additional sites investigated for stabilization next year
3.28	Floodplain Restoration	Increase stream connectivity to floodplains to reduce flooding impacts and improve riparian habitat (Implement	Conservation District, WPC, TU, American Rivers, Municipalities,	Bay Portion of Clearfield County	2025+	Ideological issues, landscape/infrastructure limitations, landowner participation, Land use limitations, available tree canopy for wood additions, not good in urban environments  Zoning issues	Permitting and Technical Assistance  Headwaters-Financial	State and Non-profit grant funding	Engineering/planning/design GIS work  Priority mapping and listing needs	Unknown – Site specific	2022 – Trout Unlimited conducted large woody debris additions in Medix (500 feet), Gifford (4500 feet), Jack Dent (1138



		Wetland Restoration, Riparian Buffers, Stream Restoration. Woody Debris Additions)  Feet or acres of floodplain restored) unknown at this point	NC Conservancy, PFBC				Administration and Project Management		to be completed and quantified to assess scale and feasibility of implementation		feet), and Lick Runs (4000 feet)
3.29	Continue dirt and gravel road program	Continue to implement DRLVR Program to reduce and control erosion on dirt and low volume roads  DGLVR Erosion Control -Outlets 56,000ft of road treated  DGLVR Erosion Control -DSA + Raising Road Bed 1,000ft of road treated  DGLVR Erosion Control -DSA + Outlets 10,000ft of road treated	Conservation District, DCNR, PGC, PFBC	Bay Portion of Clearfield County	2021 – 2025+	Lack of township involvement, implementing BMPs in urban environments is difficult. Low Volume funds are limiting implementation of practices	Technical assistance and grant administration	Conservation District (\$500,000 annually)  DCNR (\$180,000)	Designated Engineering assistance, improved GIS resources	Additional money to accelerate practice implementation	2022 – 21 projects completed this year, lowering erosion potential to waterways on approximately 8.32 miles of road - Replaced the Pifer Road crossing on Fork Run in the Lick Run watershed with Dirt and Gravel funding opening up 2.8 miles of aquatic organism passage
3.30	Increase capacity of Dirt and Gravel Road Projects with additional funding	Using external funding to support increased installation of BMPs on DGLVR projects (Increase implementation of stream restoration, riparian buffers, stormwater control, etc..)	Conservation District, Municipalities, WPC, TU, PFBC	Bay Portion of Clearfield County	2021 – 2025+	Ability of municipalities to manage larger project sizes, landowner participation	Technical assistance and grant administration	DGLVR Funds	Engineering	Additional grant funds needed for off road BMP installations	2022 – No action was taken.
3.31*	Waterway Obstruction Removal	The removal of dams and impoundments, and replacement failing/ undersize culverts to restore streams channels, reconnect floodplains, improve flood retention, improve	American Rivers, Conservation District, TU, WPC, SRBC American Water, PAFBC, DEP, PennDOT, FEMA, PEMA,	Bay Portion of Clearfield County	2025+	Ideological barriers of dam removal, Financial requirements.	Permitting and Technical Assistance  Project identification – WPC	CHP - NAACC	Identification, planning, design, Engineering, permitting	Planning funds for identifying projects  Design and permitting funds	2022 – American Rivers is working on a feasibility study to remove the Shawville Dam on the West Branch Susquehanna River - Replaced the Pifer Road crossing on Fork Run in the Lick Run watershed

		aquatic organism passage, and improve recreation (Implementation of stream restoration, riparian buffers, wetland restoration)	USFWS Partners Program				Headwaters RC&D  Headwaters-Financial Administration and Project Management			Construction funds  Monitoring funds  \$50,000/culvert	with Dirt and Gravel funding opening up 2.8 miles of aquatic organism passage
<b>3.32*</b>	Farmland Conservation	Conserve Farmland in Clearfield County through implementation of Conservation Easements (900 acres)	Conservation District, Farmland Preservation, County Planning, WPC	Bay Portion of Clearfield County	2021 – 2025+	Current Clearfield Farmland Preservation Program is not funded in a way that makes easement purchases possible. Farmer cost requirement is too high. Lack of established Ag Security Areas in county also limits participation. Need to develop preservation priority areas in County	Soil Conservation, GIS work, application processing	\$80,000/year in Farmland Preservation allocation. (160 acres by 2025)  \$3,000/year technical assistance	Additional Staff to administer preservation program in County Planning	\$1,480,000 additional funds needed to purchase (740 additional acres)	The local Farmland Preservation Program has funding and support but farmers are reluctant to participate due to low development pressure
<b>3.33*</b>	Forest Conservation	Conserve Forest Land in Clearfield County through implementation of Conservation Easements (6800 acres)	Conservation District, Farmland Preservation, County Planning, WPC	Bay Portion of Clearfield County	2021 – 2025+	Landowner participation and lack of dedicated stable funding for conservation easement. Ideological problems also a barrier to adoption. Need to develop preservation priority areas in County	Soil Conservation, GIS work, application processing	Same as above	Same as above	\$6,800,000 (\$1000/Acre)	The local Farmland Preservation Program has funding and support but farmers are reluctant to participate due to low development pressure. This program also conserves forest land from development protection.
<b>3.34*</b>	Wetland Conservation	Conserve Wetlands in Clearfield County through implementation of Conservation Easements (340 acres)	NRCS (WRP) WPC Farmland Preservation (if wetlands are present on farm)	Bay Portion of Clearfield County	2021 – 2025+	Landowner participation and lack of dedicated stable funding for conservation easement. Ideological area also a barrier to adoption. Need to develop preservation priority areas in County	Soil Conservation, GIS work, application processing	Same as above assuming wetlands are on property	Same as above assuming wetlands are on property	\$340,000 (assuming \$1000/acre)	2022 – No action taken
<b>3.35*</b>	Recreational Access Developments	Installation of stabilized access points to waterways that improve recreational access and stabilize bank erosion.  1 per year	WPC, Conservation District, NC Conservancy	Bay Portion of Clearfield County	2021 – 2025+	Landowner participation.  Need for long term easement to ensure public access  Long term maintenance  Headwaters RC&D	WPC Tech assistance  Headwaters RC&D	Boating Facilities Grant Program  Canoe Access Development Fund	None	Continued grant support (\$8,000/site) minimum additional funds	2022 – Access point by Lumber City bridge on West Branch Susquehanna River constructed August 2022
<b>3.36*</b>	AML Reclamation	Reclamation of abandoned mine land through regrading,	DEP/BAMR, SRBC, WPC, Conservation	Bay Portion of Clearfield County	2021 – 2025+	Financial limitations because of project size. Landowner participation is mixed. Native species establishment is a priority	Design, permitting, oversight	DEP/BAMR are actively working on	Design, engineering, permitting (if we	24,000 acres of AML lands in need of	2022 – - BAMR is designing reclamation of the

		forestry, and revegetation	District, DCNR, PGC			for water quality and wildlife habitats. Long term maintenance is an issue		AML reclamation throughout the county	are doing a project on our own)	reclamation/reforestation (\$240,000,000)	Anderson South AML site 55 acres - SRBC and CD are working toward reclamation of the Russell/Whitaker AML site 22 acres - Western PA Conservancy working on Sutterlin Reclamation acres 5 acres
<b>3.37*</b>	Implement Upper West Branch Susquehanna Rivers Conservation Plan  Implement Upper West Branch Susquehanna QHUP	Restoration of the Upper West Branch Susquehanna River watershed	Clearfield CD, Cambria CD, Watershed Associations, TU, SRBC, DEP/BAMR, WPC	Upper West Branch Susquehanna River watershed	2025+	Older plan so cost estimates and priorities may need updated, landowner participation, funding availability, ongoing maintenance	Grant writing, project oversight	DEP has money to maintain Lancashire Treatment Plant  Otherwise: no other money in hand	Engineering, design, permitting, ongoing maintenance	\$10,300,000+ capital	2022 – No action taken
<b>3.38*</b>	Implement PFBC Susquehanna River Management Plan	Restore, enhance, and protect the aquatic resources of the Upper West Branch Susquehanna River watershed	PFBC, Clearfield CD, Cambria CD, Watershed Associations, TU, SRBC, DEP, WPC	Upper West Branch Susquehanna River watershed	2025+	Funding, manpower, need accurate cost estimates  Recommendations: follow PFBC lead	PFBC biologists	None	Partner cooperation to pursue grants	Unknown	2022 – No action taken
<b>3.39*</b>	Implement Chest Creek Assessment and Restoration Plan	Restoration of Chest Creek watershed	Clearfield CD, Cambria CD, Chest Creek Watershed Alliance, TU, SRBC, DEP, WPC, NC Conservancy	Chest Creek watershed	2025+	Funding, landowner participation, ongoing maintenance	Grant writing, project oversight	None	Engineering, design, permitting, ongoing maintenance	\$784,368+	2022 – No action taken
<b>3.40*</b>	Implement Spring Run and Snyder Run Coldwater Conservation Plan	Restoration of Spring and Snyder Run watersheds	Clearfield CD, Chest Creek Watershed Alliance, NC Conservancy, WPC	Spring and Snyder Run watersheds	2025+	Funding, landowner participation	Grant writing, project oversight	None	Engineering, design, permitting, ongoing maintenance	\$400,000+	2022 – No action taken
<b>3.41*</b>	Implement Rogues Harbor Run Coldwater Conservation Plan	Enhancement and protection of Rogues Harbor Run watershed	Clearfield CD, Cambria CD, Chest Creek Watershed	Rogues Harbor Run watershed	2025+	Funding, landowner participation	Grant writing, project oversight	None	Engineering assistance	\$200,000+	2022 – No action taken

			Alliance, NC Conservancy, WPC						Education/outreach		
3.42*	Implement Kratzer Run Assessment and Coldwater Conservation Plan	Restoration of Kratzer Run watershed	Clearfield CD, SRBC, WPC, DEP/BAMR, Anderson Creek Watershed Association, NC Conservancy	Kratzer Run watershed	2025+	Funding, landowner participation, ongoing maintenance  Clarify nutrient impairment from On-Site Treatment Systems (Septic Systems and similar decentralized systems) – is this listing still valid?	Grant writing, project oversight	<ul style="list-style-type: none"> <li>• Bilger 4.0 Construction Grant - \$300,000</li> <li>• Wildwood Design Grant - \$47,312</li> <li>• Russell Whitaker Land Rec –</li> </ul>	Engineering, design, permitting, ongoing maintenance, insight into impairment listing	\$2,000,000+	2022 – - Bilger 4.0 treatment constructed in 2021 - Wildwood AMD treatment design completed in 2022 - SRBC and CD are working on securing funding for Russell/Whitaker AML site
3.43*	Implement Anderson Creek WIP (including Little Anderson Creek WIP Update of 2020/2021)	Restoration of the Anderson Creek watershed (primarily the Little Anderson Creek subwatershed)	Clearfield CD, SRBC, WPC, DEP/BAMR, Anderson Creek Watershed Association, NC Conservancy	Anderson Creek watershed	2025+	Funding, landowner participation, ongoing maintenance	Grant writing, project oversight	None	Engineering, design, permitting, ongoing maintenance, BAMR AML reclamation design	\$11,000,000+	2022 – - Anderson Creek WIP update completed in 2022 listing 4 top priority AML reclamation and AMD restoration projects - #1 priority (Anderson South AML reclamation) design underway by BAMR - funding to construct #3 priority (KORB4 treatment construction) secured, project to start in 2023 - SRBC and CD investigating reclamation of Russell/Whitaker AML site - Bilger 4.0 treatment completed in 2021 - Wildwood treatment design completed in 2022
3.44*	Implement Hartshorn Run WIP	Restoration of the Hartshorn Run watershed	Clearfield CD, DEP	Hartshorn Run watershed	2025+	Funding, landowner participation, ongoing maintenance	Grant writing, project oversight	None	Engineering, design, permitting, ongoing maintenance	\$600,000+	2022 – No action taken; proximity of discharges to residential neighborhoods is a

											problem; landowner issues
3.45*	Implement Montgomery Creek WIP (including 2021 update)	Restoration of the Montgomery Creek watershed	Clearfield CD, DEP, Montgomery Creek Watershed Association, Clearfield Municipal Authority	Montgomery Creek watershed	2025+	Funding, landowner participation, ongoing maintenance	Grant writing, project oversight	MON71 enhancement funding - \$25,000	Engineering, design, permitting, ongoing maintenance	\$1,000,000+	2022 – - Montgomery Creek WIP update completed in 2022 listing 4 top priority AMD restoration projects - Phase 1 of MON 40 41 42 funded by 319; AMD collection to start in 2023
3.46*	Implement Lick Run Coldwater Conservation Plan	Restoration of Lick Run watershed	Clearfield CD, AMCTU, DCNR, PFBC	Lick Run watershed	2025+	Funding, annual cost for alkaline addition, ongoing maintenance	Grant writing, project oversight	None	Engineering, design, permitting, ongoing maintenance	\$1,100,000+	2022 – No action taken
3.47*	Implement Trout Run Watershed Acid Deposition Assessment and Restoration Plan	Restoration of the Trout Run watershed	Clearfield CD, AMCTU, Goshen Township Sportsmen, DCNR	Trout Run watershed (trib to West Branch)	2025+	Funding, annual cost for alkaline addition, ongoing maintenance	Grant writing, project oversight	None	Engineering, design, permitting, ongoing maintenance	\$1,100,000+	2022 – No action taken
3.48*	Implement Potts Run Coldwater Conservation Plan  Implement Potts Run AMD Restoration Plan  Implement Qualified Hydrologic Unit Plan for the Potts Run Watershed	Restoration of the Potts Run watershed	TU, Clearfield CD, DEP/BAMR, NC Conservancy	Potts Run watershed	2025+	Funding, landowner participation, ongoing maintenance	Grant writing, project oversight  Ongoing operation of Potts Run Treatment System	None	Engineering, design, permitting, ongoing maintenance	\$2,444,387+	2022 – - Potts Run passive treatment system constructed several years ago and is improving over 2 miles of stream; naturally reproducing brook trout documented all the way to the mouth of Potts Run - stabilization project installed near the mouth of the stream several years ago
3.49*	Implement the Morgan Run Watershed Mine Drainage Assessment and Restoration Plan  Implement Morgan Run 319 WIP (under development 2021)	Restoration of the Morgan Run watershed	Clearfield CD, DEP, PGC, TU	Morgan Run watershed	2025+	Funding, landowner participation, ongoing maintenance	Grant writing, project oversight	<ul style="list-style-type: none"> <li>• MR7 Construction funding - \$1,067,493</li> <li>• MRSGL Collection funding - \$151,142</li> <li>• WIP Development</li> </ul>	Engineering, design, permitting, ongoing maintenance	\$1,729,941	2022 – - New 319 WIP under development for Morgan Run - MRSGL98 AMD Collection installed; sampling and design to be started later this year

	Implement Qualified Hydrologic Unit Plan for Morgan Run watershed							Funding – \$29,579 Flushing Unit Replacement funding – \$21,417			- MR7 treatment system currently under construction
3.50*	Implement the Muddy Run Watershed AMD Restoration Plan	Restoration of the Muddy Run watershed	Clearfield CD, Clearfield Creek Watershed Association, SRBC, DEP/BAMR	Muddy Run watershed	2025+	Funding, landowner participation, ongoing maintenance	Grant writing, project oversight	None	Engineering, design, permitting, ongoing maintenance	\$17,530,000	2022 – No action taken
3.51*	Implement projects identified as priorities in the Clearfield Creek Assessment	Restoration of Clearfield Creek watershed	Clearfield Creek Watershed Association, Clearfield and Cambria CDs, SRBC, DEP/BAMR	Clearfield Creek watershed	2025+	Funding, landowner participation, ongoing maintenance	Grant writing, project oversight	None in Clfd Co - Current grants for Clearfield Creek are in Cambria Co	Engineering, design, permitting, ongoing maintenance	Extremely high cost – exact figure unknown at this point.	- Morgan, Potts, and Muddy Run restoration is a priority of the Clearfield Creek plan
3.52*	Implement recommendations of Acid Mine Drainage Assessment of Valley Forks Run study	Restoration of Valley Forks Run watershed	Clearfield CD, Clearfield Creek Watershed Association, SRBC, DEP/BAMR	Valley Forks Run watershed	2025+	Funding, landowner participation, ongoing maintenance	Grant writing, project oversight	None	Engineering, design, permitting, ongoing maintenance	\$958,584	2022 – No action taken
3.53*	Implement Hubler Run WIP	Restoration of Hubler Run watershed	Clearfield CD, DEP, Emigh Run Lakeside Watershed Association	Hubler Run watershed	2025	Funding, landowner participation, ongoing maintenance	Grant writing, project oversight	None	Ongoing O&M oversight, Engineering assistance	\$200,000+ capital for Hubler 4	2022 – - 3 passive treatment systems constructed in watershed and are improving water quality - watershed organization folded and systems are not being maintained regularly
3.54*	Implement Moravian Run Restoration Plan	Restoration of Moravian Run watershed	Clearfield CD, DEP, PGC	Moravian Run watershed	2025+	Funding, landowner participation, ongoing maintenance	Grant writing, project oversight	None	Engineering, design, permitting, ongoing maintenance	\$1,320,000+	2022 – No action taken
3.55*	Implement Deer Creek Watershed Implementation Plan	Restoration of Deer Creek watershed	Clearfield CD, Deer Creek Watershed Association	Deer Creek watershed	2025+	Funding, landowner participation, ongoing maintenance	Grant writing, project oversight	Deer Creek Construction - \$883,174	Engineering, design, permitting,	\$4,025,000	2022 – - Deer Creek Passive Treatment System constructed several years

									ongoing maintenance		ago; watershed now supports wild trout and improved water quality parameters all the way to the mouth
<b>3.56*</b>	Implement recommendations from Potter Run AMD Watershed Assessment	Restoration of Potter Run watershed	Clearfield CD, Watershed Associations, DEP/BAMR, SRBC	Potter Run watershed	2025+	Funding, landowner participation, ongoing maintenance	Grant writing, project oversight	None	Engineering, design, permitting, ongoing maintenance	Exact cost unknown at this point.	2022 – No action taken
<b>3.57*</b>	Implement recommendations from Rupley Run AMD Watershed Assessment	Restoration of Rupley Run watershed	Clearfield CD, Watershed Associations, DEP/BAMR, SRBC	Rupley Run watershed	2025+	Funding, landowner participation, ongoing maintenance	Grant writing, project oversight	None	Engineering, design, permitting, ongoing maintenance	Exact cost unknown at this point.	2022 – No action taken
<b>3.58*</b>	Implement Emigh Run Watershed Mine Drainage Assessment and Restoration Plan	Restoration of Emigh Run watershed	Clearfield CD, Emigh Run Lakeside Watershed Association,	Emigh Run watershed	2025+	Funding, landowner participation, ongoing maintenance	Grant writing, project oversight	None	Engineering, design, permitting, ongoing maintenance	\$2,660,650	2022- - several systems installed over a decade ago (ER Headwaters, ER13/14, ER 8) but the watershed assoc is no longer functional so work in the watershed has halted and systems aren't being maintained; Moshannon Creek Watershed Association working on taking over OM&R of these sites
<b>3.59*</b>	Implement Shimel Run Mine Drainage Assessment and Restoration Plan	Restoration of the Shimel Run watershed	Moshannon Creek Watershed Association, Clearfield and Centre CDs, SRBC, DEP/BAMR	Shimel Run watershed	2025+	Funding, landowner participation, ongoing maintenance	Grant writing, project oversight	None	Engineering, design, permitting, ongoing maintenance	\$340,000	2022 – No action taken
<b>3.60*</b>	Implement Moshannon Creek Headwaters Mine Drainage Assessment and Restoration Plan  Implement Moshannon Creek Phase II Mine	Restoration of Moshannon Creek watershed	Moshannon Creek Watershed Association, Clearfield CD, Centre CD, SRBC, DEP/BAMR, PGC, NC	Moshannon Creek watershed	2025+	Funding, landowner participation, ongoing maintenance  Few landowners willing to install AMD treatment systems	Grant writing, project oversight	CHP Reassessment - \$6800  CHP Reassessment Match - \$36,264	Engineering, design, permitting, ongoing maintenance	\$25,000,000+	2022- - Moshannon Creek Watershed Conservation Plan approved in 2021 - RLB2 passive treatment system under construction, to be completed in 2023

	<p>Drainage Assessment and Restoration Plan</p> <p>Implement Moshannon Creek Headwaters Coldwater Conservation Plan</p> <p>Implement recommendations from Moshannon Creek Reassessment Coldwater Conservation Plan (under development 2021)</p>		Conservancy, WPC					RLB2 Construction - \$249,500			<p>- further investigations into several headwaters discharges recommended in CHP plan underway</p> <p>- Moshannon Creek Watershed Assoc., CD, and Native Fish Coalition applied for funding to design treatment of the MCFORE discharge</p> <p>- Additional study funding secured by CD and TU in 2022 to find additional streams supporting wild trout in the watershed and survey crossing for AOP</p> <p>- Simeling Run habitat project completed in 2022</p>
3.61*	<p>Implement Sinnemahoning Creek Watershed Conservation Plan</p> <p>Implement Bennett Branch Sinnemahoning Creek QHUP</p>	Restoration of the Sinnemahoning Creek watershed	Clearfield CD, Elk CD, Cameron CD, Potter CD, McKean CD, DEP, BAMR, SRBC, WPC, Watershed Associations, TU, NC Conservancy. Headwaters RC&D	Sinnemahoning Creek watershed	2025+	Funding, landowner participation, ongoing maintenance,	Grant writing, project oversight	None	Engineering, design, permitting, ongoing maintenance	Unknown, not specified in plan but sounds extensive	<p>2022 – Bennett Branch Stabilization completed in 2020</p> <p>- additional sites in need of stabilization investigated for future projects</p>
3.62	Implement outstanding TU Technical Assistance Recommendations	Follow through with implementation of recommendations contained in outstanding TU Technical Assistance Reports generated through the TAG programs	Clearfield CD, Watershed Associations, TU, SRBC, DEP/BAMR, WPC	Countywide	2025+	TAG reports can cover AMD, habitat, biological and water quality monitoring, etc recommendations. The technical work has typically already been completed; they just need follow up implementation of recommendations provided.	<p>Technical assistance</p> <p>Grant writing and project oversight</p>	None	Engineering, design, permitting, ongoing maintenance	Exact cost unknown at this point.	2022 – No action taken
3.63	Acid Deposition Remediation	Restore watersheds impaired by acid deposition	Clearfield CCD, DCNR, St.	Countywide	2025+	Funding, landowner participation, ongoing maintenance. Site access can be difficult	Technical assistance	None	Engineering, design, permitting,	Exact cost unknown at this point.	2022 – CD working with PFBC and DCNR applied for



			Francis, PFBC, TU				Grant writing and project oversight		ongoing maintenance		Growing Greener funding to install limestone channels in the Laurel Run watershed
4.1	Local studies of agricultural BMPs to assess impacts to profitability	Complete more local research to define economic variables for the implementation of BMPs on Conservation District farm and partnering farms  Utilize CIG Funding to demonstrate and investigate the feasibility of new BMP technologies	Conservation District, County Farms, Penn State.	Bay Portion of Clearfield County	2022 – 2025+	Time constraints and Funding availability	Tech assistance  Research	None	University assistance with study trials and data analysis to assign economic values	Unknown	2022 – Clearfield CCD assessed the before and after conditions on farms with Act 38 plans, animal heavy use areas and manure storage BMPs. The analysis revealed the cost effectiveness of BMP implementation on farms in Clearfield County. More work is needed on other BMPs
4.2	4R Practice Education	Hold on farm 4R Education Events to build local knowledge of 4R practices and benefits (1 event per year)	Conservation District	Bay Portion of Clearfield County	2021 – 2025+	Farmer led trainings and field demonstrations	Tech, education, and admin support	None	4R Knowledge and Expertise	\$5,000/ Event	2022 – Clearfield CCD held a field day targeted at 4R practice implementation and education. 70 farmers were reached.
4.3	On Farm BMP showcase field days	Hold on farm BMP Field days to build local knowledge of BMP practices and benefits (1 event per year)	Conservation District	Bay Portion of Clearfield County	2021 – 2025+	Farmer led trainings and field demonstrations	Tech, education, and admin support	None	Technical Knowledge – Experts in Topic	\$5,000/ Event	2022 – No action taken
4.4	On Farm Soil Health field days	Hold on farm Soil Health Field days to build local knowledge of BMP practices and benefits - 1 event per year	Conservation District, Penn State Extension	Bay Portion of Clearfield County	2021 – 2025+	Farmer led trainings and field demonstrations	Tech, education, and admin support	None	Technical Knowledge – Experts in Topic	\$5,000/ Event	2022 – Clearfield CCD held a field day targeted at soil health implementation and education. 70 farmers were reached.
4.5	Farmer to farmer training and outreach events that increase success of no-till and cover crops	Hold on farmer-to-farmer training days to build local knowledge of success and failures of no-till and cover crop adoption - 1 event per year	Conservation District	Bay Portion of Clearfield County	2021 – 2025+	The approach will lead to increased adoption in the late adopter farms	Tech, education, and admin support	None	Technical Knowledge – Experts in Topic	\$5,000/ Event	2022 – Clearfield CCD held a field day targeted at soil health implementation and education. Local producers presented success of practice adoption. 70 farmers were reached.

4.6	Grazing Education	Hold education events to increase the knowledge of rotational grazing benefits that will increase the adoption of grazing management - 1 event per year	Conservation District Headwaters RC&D	Bay Portion of Clearfield County	2021 – 2025+	Farmer led trainings and field demonstrations	Tech, education, and admin support	None	Technical Knowledge – Experts in Topic	\$5,000/ Event	2022 – No action was taken
4.7	Increase the usage of nutrient monitoring technologies on farms	Increase the adoption of monitoring technologies to monitor crop nitrogen needs through the education events and technical assistance  Provide example service to farms and record adoption of practice - 1 event per year	Conservation District	Bay Portion of Clearfield County	2021 – 2025+	Targeted education about nutrient monitoring technologies will increase the adoption and help farmers make economical and environmental decisions about in-season nitrogen management	Tech, education, and admin support	None	Technical Knowledge – Experts in Topic	\$5,000/ Event	2022 – Clearfield CCD held a field day where local equipment dealers presented precision ag technologies and nutrient monitoring technologies for farms . 70 farmers were reached.
4.8	Legislative field days and education	Education of Legislators about conservation will increase support of programs and funding to enhance water quality improvements - 1 event per year	Conservation District, PACD, DEP	Countywide	2021 – 2025+	Project visit to demonstrate the effectiveness and need of installed BMPs	District Knowledge	None	None	\$5,000 / Event	2022 – Clearfield CCD attended the Clearfield County legislative day and provided education to local legislators about conservation funding issues.
4.9	Riparian Buffer Education	Hold education events to increase the knowledge of riparian buffer benefits that will increase the adoption of buffers on private land - 1 event per year	Conservation District, PACD, DEP, Penn State, WPC, Municipalities	Countywide	2021 – 2025+	Project visit to demonstrate the effectiveness and need of installed BMPs.  There is a critical need for education in Clearfield Borough about riparian areas and their impact on flood events	District Education  Municipal Education	None	Technical Knowledge – Experts in Topic	\$5,000 / Event	2022 – No action was taken
4.10	Land Conservation and Preservation Education	Hold educational events for municipalities and property owners to	Conservation District and WPC, Penn State Extension	Bay Portion of Clearfield County	2022 – 2025+	The improved education about how conservation easements affect local recreation, land value, and taxes will lead	Education	None	None	\$5,000 / Event	2022 – Clearfield CCD coordinated and held a local education event about the benefits of

		improve understanding and acceptance of conservation easements - 1 event per year	NC Conservancy			to the increased adoption and acceptance of easements in the County					farmland preservation and its impacts on the future of ag in Clearfield County.
4.11	Climate Change Education	Hold education events about how climate change is impacting natural resources and economies. - 1 event per year	Conservation District, Headwaters RC&D	Bay Portion of Clearfield County	2022 – 2025+	Education of climate issues and local impacts will spur adoption of climate resilient BMPs that improve water quality	Education	None	Technical Knowledge – Experts in Topic	\$5,000 / Event	2022 – No action was taken by our District however the PA Wilds Natural Resource Committee developed a Climate Change workgroup that is hosting a nearby educational event
4.12	Update economic benefits of AMD treatment	Knowing the economic benefit of AMD and AML reclamation is beneficial in showing the need for reclamation and the economic return realized in the local economy.  Develop education resource with information on economic return of AMD investment	Conservation District, TU, WCPAMR, EPCAMR,	Countywide and beyond	2022 – 2025+	Knowing the economic return from AMD/AML reclamation is needed to demonstrate the benefits of reclamation. We understand the environmental benefits but funders, companies, private citizens, and legislators are more responsive to economic return from a project.	Project oversight	None	Study and data analysis to assign economic values	Unknown	2022 – No action was taken
4.13	Public education events about urban stormwater practices	Hold education events for public on the importance of home stormwater practices to encourage adoption on private properties - 1 event per year	Conservation District, Commissioners municipalities, municipal authorities, Penn State Extension	Bay Portion of Clearfield County	2022 – 2025+	Holding regular meetings to build relationships with community and increase adoption and implementation of key urban BMPs.	Tech, education, and admin support	None	Technical Knowledge – Experts in Topic	\$5,000 / Event	2022 – No action was taken
4.14	Urban Nutrient Management Education	Conduct education of commercial landscape industry/golf course owners/homeowners regarding nutrient management - 1 event per year	Conservation District, Penn State Extension	Bay Portion of Clearfield County	2022 – 2025+	Education events about urban nutrient management will reduce the amount of nutrients applies to turf in urban environments	Tech, education, and admin support	None	Technical Knowledge – Experts in Topic	\$5,000 / Event	2022 – No action was taken

4.15	Education about stormwater issues and benefits of stormwater remediation	Hold education events to increase awareness and accelerate future implementation - 1 event per year	Conservation District, Penn State Extension	Bay Portion of Clearfield County	2021 – 2025+	Providing education to landowners, local governments and municipal officials will increase the awareness and adoption of stormwater remediating BMPs	Penn State resources, PACD resources	None	Technical Knowledge – Experts in Topic	\$5,000 / Event	2022 – No action was taken
4.16	Developer and Engineer Education Events	Hold education events for engineers and developers on the CAP goals and key stormwater BMPs to encourage incorporation into their projects - 1 event per year	Conservation District, Engineers, Developers, Landscapers, Architects, Commissioners municipalities, municipal authorities	Bay Portion of Clearfield County	2021 – 2025+	Holding regular meetings to build relationships with private development entities will increase adoption and implementation of key urban BMPs. Annual meeting will also provide updates for CAP reporting and progress	Tech, education, and admin support	None	Technical Knowledge – Experts in Topic	\$5,000 / Event	2022 – No action was taken
4.17	Promote Carbon Credit Program participation to increase no-till and cover crops	Increase the adoption and sustained implementation of no-till and cover crops by increasing farm participation in carbon credit programs - 1 event per year	Conservation District	Bay Portion of Clearfield County	2021 – 2025+	Education and technical outreach about current Carbon Markets and Companies participating in Carbon Crediting will lead to the adoption and long term sustainability of no-till and cover crops within the County.	Tech, education, and admin support	None	Technical Knowledge – Experts in Topic	\$5,000 / Event	2022 – No action was taken

### Phase 3 Watershed Implementation Plan (WIP) Progress and Milestones 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).

**Annual Progress to Date** = This field will be used for annual reporting on priority initiatives. This is a description of the action(s) your county took toward achieving the priority initiative. Examples include education and outreach, programmatic changes, etc. For numeric priority initiatives your county can retrieve those numbers directly from *FieldDoc* or put in the column “See *FieldDoc*.”