

Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update and Two-Year Milestones Report – Lebanon 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 (2021 + 2022+2023+2024+2025)  *add new 2025 progress above the existing 2021, 2022, 2023 progress. Date each entry	Reason for Change to Action Item (2025-2026 milestone period)	
							Technical	Financial	Technical	Financial			
<b>Priority Initiative 1: Agriculture</b>													
1.1	Reconcile ag-specific Bay model theoretical BMP implementation and loading numbers with on-the-ground and real conditions		Ag Action Team, Legacy Partners	Countywide	Beyond 2025	Populate Catchment Management Database (CMD) to prioritize BMP implementation locations	Local and state experts, agencies, and environmentally related entities  Catchment Management Database	GG 319 Funds			The USGS Swatara Creek Supergage water quality monitor continues to actively collect data. A corresponding StoryMap (or geonarrative) has been developed. Both sites are active to the public. <a href="https://geonarrative.usgs.gov/using-continuous-water-quality-to-guide-conservation-efforts/">https://geonarrative.usgs.gov/using-continuous-water-quality-to-guide-conservation-efforts/</a>  Ag BMPs previously identified continued to be actively installed.  (2024) The USGS Supergage water quality monitor is currently online and actively collecting data. StoryMap to highlight data for the public is in development.  Ag BMPs previously identified are actively being installed.  (2023) BMP verification spreadsheet has been created and supergage water quality monitoring station has recently been implemented to support collection of real-time data.  (2021-2022): Continuing to work on CMD data and working with partners, like USGS and the Quittapahilla Watershed Association, to get real time data to support modeled data.	(2025)	(2025) Timeline changed to reflect ongoing Supergage data collection and a robust Ag BMP implementation program
1.2	Expand implementation of cover crops (specific focus on alternative approaches that may count as reductions)	Cover Crop Traditional, cover Crop Traditional with Fall Nutrients, Cover Crop Commodity	Ag Action Team	Countywide	Beyond 2025	Limit definition of cover crops and what would count as a reduction	BMP Quick Reference Guide  Local experts and agencies	Approve additional cover crop definition to include a harvested cover crop receiving nutrients	Seeking out additional funding options for cover crop program	LCCD started an in-house cover crop program within the Hammer Creek watershed, with a future goal of expanding to all of Lebanon County.  (2024) The cover crop program is no longer being pursued by LCCD.  (2023) Seeking additional funding sources that allow harvested cover crop so program can continue being pursued. Contacting other counties to learn how their cover crop programs are funded.  (2022): Draft cover crop program was tabled by LCCD Board of directors due to cover crop definition restrictions.  (2021): Creating a cover crop incentive program by using examples from other counties to form our own county-specific	(2025)	(2025) Cover Crop program expanded by LCCD. Timeline changed.  (2024) NRCS program is used by the County to implement a cover crop program. No need for 2 programs in Lebanon County.	

1.3	Capture existing conservation plans and BMPs into PracticeKeeper		LCCD, Ag Action Team, NRCS, Ag consultants	Countywide	2021-2024	Potential time and resource limitations for plan entry	Local agencies, PracticeKeeper, CAP BMP Verification Technician , LandStudies	BMP Verificaiton Funds			<p>(2025) Agricultural Tech hired last year is now full-time status.</p> <p>Ag E&amp;S plans continue to be robust in the County and have increased to 19,830.89 acres. Practices have been verified and implemented in Practice Keeper. 2025 plans written funded by teh Ag Plan Reimbursement Program (APRP) through PACD:29. Total plans written under the APRP since the program's start in 2022: 96</p> <p>(2024) Hiring of a part-time Agricultural Tech allowing BMP verification to continue.</p> <p>Ag E&amp;S plans are robust in the County and have increased to 6,051 acres. Practices have been verified and implemented into Practice Keeper</p> <p>(2023): Sub-watershed master BMP lists created to assist BMP verification staff with inputting plans and verifying BMPs. LCCD developed and/or inputted 42 Ag E&amp;S Plans with associated BMPs encompassing over 3,000 acres into PracticeKeeper. 30 RI practices have been verified and inputted intoPractice Keeper.</p> <p>(2022): In 2022 BMP Verification Technician was hired and continues to input existing conservation plans and BMPs into PracticeKeeper</p>
1.4	Engage industrial and large ag operation farmers		Ag Action Team, Management Team, Steering Committee	Countywide	2023-2024	Finding Ag operators interested in participating on Action Team					<p>(2025) No change from 2024.</p> <p>(2024) There are no further Stakeholder events planned currently as the necessity has changed. Most large Agricultural operations are regulated under Act 38 to work with LCCD.</p> <p>LCCD maintains a good working relationship with County stakeholders.</p> <p>(2023) Intend to hold another Stakeholder Kick-off Event in 2024. The plan is to obtain additional industrial/large ag operators on our respective Action Teams.</p> <p>(2022): Continue compiling list of stakeholders with intent of holding another Stakeholder Kick-off Event in 2023. The plan is to obtain additional industrial/large ag operators on our respective Action Teams.</p> <p>(2021): Stakeholder Kick- off Event was held virtually; agricultural operators were invited but none attended</p>

1.5	Promote and assist implementation of Agricultural Compliance practices in priority areas	Soil Conservation and Water Quality Plans (57,000 total acres)  Core Nitrogen Nutrient Management (56,000 total acres)  Core Phosphorus Nutrient Management (17,000 total acres)  Barnyard Runoff Controls (112 new acres)	Ag Action Team, LCCD, NRCS, Penn State, farmers	Contiguous agriculture land use areas, with initial focus on red-coded catchment areas (or where current initiatives are underway)	imp. 2021–2025 (and beyond)	Farmer resistance or buy-in Resources to develop plans	LCCD, NRCS, Ag Consultants	Ag Reimbursement Program	Additional personnel, consultants for magnitude of required new or updated plans.	Total-Soil Conser./WQ Plans (94 acres/ avg farm @ \$1,200/plan; 606 farms): \$727,200	<p>(2025) Conservation plans developed under the NFWF SWG grant is completed.</p> <p>Continuing outreach though Ag BMP implementation.</p> <p>(2024) The goal has been met to develop 51 conservation plans with hired TSP, NFWF SWG grant is ending.</p> <p>Continuing outreach through Ag BMP Implementation.</p> <p>(2023) LCCD has successfully applied for and received a grant from National Fish and Wildlife Foundation (NFWF) Small Watershed Grant (SWG) to hire a TSP to develop 51 Conservation Plans. The project is currently underway with a target completion date set for the end of 2024. Additionally, LCCD has developed/inputted 42 Ag E&amp;S Plans encompassing over 3,000 acres and 30 RI practices into PracticeKeeper.</p> <p>(2022): Received NFWF Small Watershed grant to hire ag consultants to develop 7,624 acres of plans within the Little Swatara and Swatara Creek watersheds.</p> <p>(2021): LCCD verifies plans via Chesapeake Bay, Agricultural Land and Act 38 inspections. Operators contact LCCD throughout the year to request assistance for developing new/updated plans.</p>	
1.6	Promote and assist implementation of soil health practices in priority areas	High Residue Tillage Management (24,000 acres/year)  Conservation Tillage Management (13,000 acres/year)  Traditional Cover Crops (13,700 acres/year)  Traditional Cover Crops with Fall Nutrients (18,000 acres/year)  Commodity Cover Crops (3,000 acres/year)  Prescribed Grazing (6,000 total acres)	Ag Action Team, LCCD, NRCS, Penn State, farmers	Contiguous agriculture land use areas, with initial focus on red-coded catchment areas (or where current initiatives are underway)	Game plan by early 2021; imp. 2021–2025 (and beyond)	Farmer resistance or buy-in Resources to write plans.	LCCD, NRCS, Ag Consultants	EQIP, Ag Planning Reimbursement Program, CEG, REAP	Additional personnel, consultants for magnitude of required new or updated plans.	Long-term funding for inspections, etc. (TBD)	<p>(2025) The manure injection incentive program continues to progress. To date, 1,775.88 acres injected through the program implemented at LCCD.</p> <p>(2024) A manure injection incentive program was started and implemented at LCCD. To date, 1,250 acres injected through this program.</p> <p>(2023): Lebanon program documents continue to be utilized by interested ag producers</p> <p>2023 Prescribed grazing acres implemented. 15 acres this year</p> <p>(2022): Lebanon program documents were created and continue to be utilized by interested ag producers.</p> <p>(2021): Our CAP AG Action Team is working on focusing on our priority areas first and have developed a cost share program to fund soil health and other bmp projects. We also are working with NRCS and EQIP to get additional projects funded</p>	

1.7	Promote and assist implementation of expanded nutrient management practices in priority areas	Core Nitrogen Nutrient Management (6,000 acres) Core Phosphorus Nutrient Management (2,000 acres) Nutrient Management-Nitrogen Rate (10,000 acres) Nutrient Management-Phosphorus Rate (10,000 acres) Nutrient Management-Nitrogen Placement (12,000 acres) Nutrient Management-Phosphorus Placement (10,000 acres) Nutrient Management-Nitrogen Timing (13,000 acres) Nutrient Management-Phosphorus Timing (10,000 acres)	Ag Action Team, LCCD, NRCS, Penn State, farmers	Contiguous agriculture land use areas, with initial focus on red-coded catchment areas	2021 –2025 (and beyond)	Farmer resistance or buy-in	LCCD, NRCS, RoseTree Consulting, Ag consultants	EQIP, REAP, CEG	Additional personnel, consultants for magnitude of required new or updated plans	Total-Revised NM Plans or included with new plans in Ag 1.6 @ \$500/farm, 436 farms \$218,000	(2025) Manure injection incentive program continues to receive interested applicants. To date, 1,775.88 acres injected with 5 new applicants in 2025.  (2024): The Pre-sidedress Nitrate (PSNT) program is established. 2025 applicants using PSNT: Tested 4 farms, totaling 50 acres.  (2023): Initiated a manure injection incentive program to encourage agricultural producers to apply nutrients efficiently and effectively. To date, 11 producers have injected 1,415.28 acres using the program. LCCD is also part of the PA Manure Injection Partnership to provide input and stay updated with changes.  (2022): Various discussions with RoseTree and other partners to discuss partnering on these efforts with intent to find producers interested in obtaining and implementing Core NMPs.  (2021): The CAP Team is addressing resistance from farmers, like lack of interest in spending the money to implement through cost-share, we have been coming up with incentives and other promoting factors to address any other challenges that may arise. Working on financial resources for plans.	
1.8	Promote and assist implementation of improved animal unit practices in priority area	Manure Storage Facilities (118,000 New Animal Units (AU)) Dairy Cow Precision Feed Management (20,000 Dairy Cow Animal Units (AU)) Manure Transport out of Lebanon County (25,000 drytons/year)	Ag Action Team, LCCD, NRCS, Penn State, farmers, Penn State, farmers, manure haulers/ brokers, ag retail entities	Contiguous agriculture land use areas, with initial focus on red-coded catchment areas	Game plan by early 2021; imp. 2021 – 2025 (and beyond)	Farmer resistance or buy-in	Local experts and agencies	EQIP, REAP, CEG	Full BMP implementation dollars (~\$14.84 million, overall estimate until game plan fully in place)	(2025) Completed and installed 10- Board approved manure storages.  (2024): Completed and installed 17- Board approved manure storages.  (2023) Continuously assisting farmers with implementing projects and identifying funding options. Our most common project interest this year was manure storage facilities.  Manure storages installed: 6  Total planned to be completed by end of 2024: 13		

1.9	Promote and assist implementation of buffers in agricultural riparian zones in priority areas	Forest Buffer (3,100 new acres) Forest Buffer with Streamside Exclusion Fencing (962 new acres) Grass Buffer (1,900 new acres) Grass Buffer with Streamside Exclusion Fencing (550 new acres)	Ag Action Team, LCCD, NRCS, Penn State AEC, Alliance for the Bay, farmers	Contiguous agriculture land use areas, with initial focus on red-coded catchment areas	2021–2025 (and beyond)	Farmer resistance or buy-in Engagement with Penn State AEC for program development or other watersheds	Local experts and agencies, non-profit partners (ACB, etc.)	EQIP, REAP, CEG	Total-Forest Buffers (w/ or w/o fencing) @ \$4,000/acre = \$16.25 million Total-Grass Buffers (w/ or w/o fencing) @ \$2,000/acre = \$4.9 million	<p>(2025): 1 buffer project was completed on Ag land this year. 2 forested riparian buffers completed. 4 completed projects with streambank fencing, ~15,000 linear feet installed. LCCD is in the process of developing a planting establishment program.</p> <p>(2024): 3 buffer projects were completed on Ag land this year.</p> <p>LCCD is working with Penn State Extension Director to implement a forest buffer program</p> <p>(2023): There was little interest in buffer projects, specifically on Ag land this year. We'll continue working with our partners to implement more projects next year. We are also a partner in the Keystone 10 million Trees program to supply landowners with free seedlings and planting.</p> <p>Buffers in Riparian zones in agriculture completed projects in 2023: 2 completed in 2023.</p> <p>Total through 2024: 3 projects</p> <p>(2022): Various field visits with Penn State and Alliance for the Bay to riparian-interested ag producers. The goal is to find producers interested in implementing forest and/or grass buffers.</p> <p>(2021): The CAP Team is addressing resistance from farmers and coming up with incentives and other promoting factors to address any other challenges that may arise. Continuously assisting farmers with implementing projects and identifying funding options. There was not much interest in doing buffer projects specifically on Ag land this year. We have plans to work with</p>	
1.10	Engage the Conewago Initiative to align over- arching CAP goals with efforts		Penn State AEC, LCCD, CI partners	Conewago Watershed	Continuous	Achievement of significant BMP implementation through existing comprehensive effort				<p>(2025): Partnership continues as we attend joint field visits to interested producers.</p> <p>(2024): Partnership continues as we attend joint field visits to interested producers.</p> <p>(2023): Partnership continues as we attend joint field visits to interested producers.</p> <p>(2022): Partnership continues as we attend joint field visits to interested producers.</p> <p>(2021): In communication with the initiative but working on taking actions and partnering on projects.</p>	
1.11	Identify and foster ag- specific funding streams and opportunities to assist farmers with BMP implementation		Ag Action Team, LCCD	Countywide	Continuous	BMP packaging for funding multiple projects through single source assistance programs				<p>(2025): No change with Environmental Grant Coordinator position and role from 2024. Continuing to research, identify, and apply for additional funding resources.</p> <p>(2024): CAP Coordinator position expanded to include Environmental Grant Coordinator role in order to research, identify, and apply for additional funding resources.</p> <p>(2023): Working on implementing agricultural as well as watershed project BMPS in order to effectively work towards fostering additional funding resources</p> <p>(2022): Applied for NFWF Small Watershed and Most Effective Basin grants, secured CEG &amp; ACAP funding.</p> <p>(2021): Identified funding for Ag projects, such as CEG funding program and plan to use some of that funding for a Cover Crops Program</p>	

Priority Initiative 2: Stormwater (Developed Areas)												
<b>2.1</b>	Engage legacy partners (Stormwater Consortium, etc.) to ensure capture and support of initiatives as it relates to local water quality improvements		Stormwater Action Team, watershed groups, MS4 municipalities, non-profits	Countywide	Comm Plan developed by early 2021. Followed by initial imp.	Ensure efforts are not duplicated and focus on filling in gaps or providing collaboration arenas.  Project capture and reporting processes	FieldDoc			Resources for long-term verification processes (TBD)	(2025)  1- CAP-funded non-ag project (Syner Rd. Phase I) was completed.  Outreach packets sent to all Lebanon County municipalities to gauge interest in collaborating on environmental improvement projects.  Legacy partners continue to participate in our Watershed Action Team. Projects that are not CAP-funded and are done by MS4 permittees that are not a part of the Stormwater Consortium are not generally tracked by LCCD.  (2024):  Legacy partners continue to participate in our Watershed Action Team. Projects that are not CAP-funded and are done by MS4 permittees that are not a part of the Stormwater Consortium are not generally tracked by LCCD.  2 CAP-funded non-ag projects completed in 2023; A bioswale and vegetated swale at Spring Creek-Palmyra, and 834 LF of streambank restoration along the Quittapahilla Creek- Spruce St)  1 CAP-funded non-ag project completed in 2024. 900 LF of streambank restoration along Quittapahilla Creek-Syner Phase I. Additional phases to this project are currently in the planning and permitting process  (2023)  Legacy partners are active members of our Action Teams and Steering Committee. Our 3 funded watershed projects have been led by our members and completed. (Trout Unlimited & Steckbeck Engineering).  (2022):  Legacy partners are active members of our Action Teams and Steering Committee. Our 3 funded watershed projects have been led by our members (Trout Unlimited & Steckbeck	
<b>2.2</b>	Integrate other water resources initiatives (e.g. source water protection) into overall approaches		Stormwater Action Team, LCCWA, Lebanon County Stormwater Consortium, local agencies (LCPD, etc.)	Countywide	Game plan by late 2020 with initial imp.	Conflicting regulatory requirements	Local consultants/engineers, local and state agencies, SWP entities			(2025)  No change from 2024.  (2024):  Not a focus at this time for LCCD, no plan has been developed.  (2023):  The game plan has not yet been secured. Looking to reevaluate action time in next few months- if no plan has been developed then action item will be taken off the progress report.  (2022):  Involved in MS4 meetings to discuss regulatory requirements.  (2021):  Working on the conflicting regulatory requirements and creating a plan to take action in the	(2025)  Remove in 2026 if no progress is made.  (2024):  This action item to be taken off of progress report due to difficulty with conflicting regulatory requirements.	

2.3	Pursue regional stream and wetland restoration projects that provide additional benefits to multiple communities and MS4s	Urban Stream Restoration (6,000 new linear feet) Non-urban Stream Restoration (55,068 new linear feet) Wetland Restoration (125 acres)	Watershed groups, non-profits, MS4 Municipalities, LCCD Watersheds/catchments.	Countywide with initial focus on priority.	Late 202-2025 (and beyond)	Tight timeframe for significant BMP implementation Local landowner willingness to participate Incorporate floodplain restoration approaches into stream restorations.	Local consultants/engineers Non-profits (TU, etc.)	NFWF, GG, EPA, DCNR		Full BMP implementation dollars (~\$16.25 million)	(2025) 3 CAP-funded non-ag projects are currently in process. <b>First Project:</b> Syner Rd. Phase II. Continues with the next stretch of Quittapahilla Creek from Phase I. 700 linear feet of streambank restoration & stabilization. Completion date by the end of 2025  <b>Second Project:</b> Snitz 2-2,025 linear feet of streambank protection, 1.2 acres constructed wetland, & 1.58 acres riparian buffer of Elizabeth Run from, Cornwall Borough. Completion date by the end of 2025.  <b>Third Project:</b> Gingrich Run 1, currently in the permitting phase. 390 linear feet of streambank restoration & stabilization & concrete dam removal. Est. completion Spring 2026.  LCCD is continuing to participate in the Hammer Creek Partnership to implement stream and wetland restoration projects identified in the ARP.  No change with MS4 permittees regarding new permit requirements.  (2024): Quittapahilla Creek floodplain restoration project upstream of the 22nd St. bridge completed by the Stormwater Consortium.  MS4 permittees are hesitant to begin new projects due to uncertainty regarding current and new permit requirements. Regional approaches and wetland creation approaches have faced pushback.  All 3 CAP-funded projects below (Spring Creek, and Spruce St. and Syner Rd. I along the Quittie) have been completed.  (2023)	
2.4	Engage and collaborate with PSU Extension to coordinate efforts for protection of private wells		Stormwater Action Team, PSU Extension Countywide (non-public utility service areas)	2024	Collaborate with Source Water Protection (SWP) entities and efforts	PSU Extension, SWP entities				(2025) No change from 2024.  (2024): The Penn State Master Well Owner Network includes Lebanon County MWS participants, but LCCD has not engaged with them. No actions have been taken on this item.  (2023): Was not identified as an immediate priority so timeframe will be extended, will discuss the action item in a few months- if action item or plan has been established then the action item will be taken off the progress report  (2022): Was not identified as an immediate priority,  (2021): Have begun discussions, but no action has been taken yet	(2025) Remove action.  (2024): Will remove this action item next year if there is still no collaboration with PSU extension.	
2.5	Engage Lebanon County MS4 permittees for identification and support for known BMPs for implementation, funding streams, maintenance, and related needs		Stormwater Action Team, Stormwater Consortium, LCCWA, MS4 municipalities MS4 communities	Late 202-2025 (and beyond)	Ensure efforts are not duplicated and focus on filling in gaps or providing collaboration arenas. Municipal buy-in or resistance Long-term verification processes Lebanon County-specific funding program through	Local engineers, consultants, municipalities				(2025): The Consortium continues to have a representative on the Watershed Action Team. LCCD staff are active members of the Lebanon County Clean Water Alliance, which includes 19 MS4 municipalities.  (2024): The Consortium continues to have a representative on the Watershed Action Team. LCCD staff are active members of the Lebanon County Clean Water Alliance, which includes 19 MS4 municipalities.  MS4 permittees are hesitant to begin new projects due to uncertainty regarding current and new permit requirements.  (2023): Working with MS4/Stormwater Consortium to create game plan for identifying BMPs throughout County. Consortium continues to be very active member of CAP Action Team.  (2022): Working with MS4/Stormwater Consortium to create game plan for identifying BMPs throughout County.  (2021): We have engaged and plan to continue to work with them on projects in the future. The Stormwater Consortium has been very active with the CAP team and we are working on getting more engagement from other MS4 communities outside of the Consortium.		

2.6	Identify and foster potential alternative stormwater BMP implementation approaches (e.g. developer implemented regional stormwater facilities)		Stormwater Action Team, developers, private consultants/ engineers	Countywide	Game plan by early 2021 with initial imp	Buy-in may be a large hurdle  Buy-in or resistance from developers				(2025): No update. MS4 permittees are reluctant to stray from PRPs or include alternative approaches in plans.  (2024): No update. MS4 permittees are reluctant to stray from PRPs or include alternative approaches in plans.  (2023): Conversations have been held with MS4/Stormwater Consortium but game plan has not been identified at this time.  (2022): Has not been identified at this time  (2021): We have begun working on this, and have identified that buy-in will be a challenge and are working on overcoming that. There have been discussions in the previous months about how we could implement alternative approaches, however those conversations did hit a lull and will be picked back up in the coming weeks	
2.7	Promote and assist implementation of riparian zone, habitat, and tree canopy, and conservation practices in priority areas	MS4 Riparian Forest Buffers (69 new acres)  Non-MS4 Forest Buffers (50 new acres)  Conservation Landscaping (125 new acres)  Urban Forest Planting (125 new acres)  MS4 Urban Tree Canopy (12 new acres)  Farmland Conservation (2,000 total acres)  Wetland Conservation (125 total acres)	LCCD, non- profits, MS4/non-MS4 communities	Countywide with initial focus on MS4 communities and priority catchments	Late 202-2025 (and beyond)	Tight timeframe for significant BMP implementation  Long-term verification processes	Local consultants/ engineers  Municipalities LCPD Non-profits (ACB, etc.)		Potential: Full BMP implementation dollars (~\$825,000)	(2025): LCCD is continuing as a Keystone 10 Million Trees partner. Several municipalities and watershed organizations are also planting and tracking trees through the partnership- Potentially last year.  LCCD is in the process of developing a planting establishment program.  A Chesapeake Bay Trust G3 grant was awarded to LCCD for a lawn to meadow conversion project located on the Lebanon County Agricultural Center grounds.  A CAP-funded conservation landscaping project is currently being implemented at the John E. Wengert Memorial Park grounds, featuring native trees and plantings.  ~85 acres of row crop to hay conversion implemented.  (2024): LCCD is continuing as a Keystone 10 Million Trees partner. Several municipalities and watershed organizations are also planting and tracking trees through the partnership  (2023): We are continuously promoting and assisting with projects. We have helped groups apply to grant programs like Growing Greener and several NFWF grants to implement projects. We are	
2.8	Promote and assist implementation of urban/suburban sector controls for nutrient and sediment reductions	Advanced Grey Infrastructure for ID&E Control (4,000 acres treated)  Impervious Surface Reduction (15acres) Urban Nutrient Management (2,000 acres)	MS4 municipalities	Countywide with initial focus on MS4 communities and priority catchments	Late 202-2025 (and beyond)	Urban nutrient management is dependent on fertilizer legislation Tight timeframe for significant BMP implementation  Long-term verification processes	Local consultant/engineers  Municipalities		Anticipated: Full BMP Implementation dollars (~\$398,500)	(2025): No change. LCCD continues to remain committed to promoting and supporting projects that drive positive change. The Stormwater Consortium has taken the lead in implementing initiatives across the six municipalities it serves, and we continue to extend our support to additional counties, fostering broader collaboration and progress.  (2024): We remain committed to promoting and supporting projects that drive positive change. The Stormwater Consortium has taken the lead in implementing initiatives across the six municipalities it serves, and we continue to extend our support to additional counties, fostering broader collaboration and progress.  (2023): We are continuously promoting and assisting with projects. The Stormwater Consortium has spearheaded this in the 6 municipalities that it covers. We continue to assist other counties as well  (2021 & 2022): We are continuously promoting and offering assistance with projects. The Stormwater Consortium has spearheaded this in the 6 municipalities that it covers. As for the other municipalities in the county we have reached out to offer our assistance in any way needed. Street Sweeping is very popular in Lebanon City specifically.	

<p>2.9</p>	<p>Promote and assist implementation of stormwater control measures that incorporate Low Impact Development (LID) approaches</p>	<p>Wet Ponds and Wetlands (197 acres treated) Stormwater Performance Standards-Runoff Reduction (915 acres treated) Bioretention/Raingardens (24 acres treated) Bioswale (9 acres treated) Vegetated Open Channels (15 acres treated) Filtering Practices (8 acres treated)</p>	<p>MS4/non-MS4 communities</p>	<p>Countywide with initial focus on MS4 communities and priority catchments</p>	<p>Late 202-2025 (and beyond)</p>	<p>Tight timeframe for significant BMP implementation Long-term verification processes</p>		<p>Anticipated: Full BMP Implementation dollars (~\$1.8 million)</p>	<p>(2025): No change. LCCD continues to remain committed to promoting and supporting projects that drive positive change. The Stormwater Consortium has taken the lead in implementing initiatives across the six municipalities it serves, and we continue to extend our support to additional counties, fostering broader collaboration and progress  (2024): We remain committed to promoting and supporting projects that drive positive change. The Stormwater Consortium has taken the lead in implementing initiatives across the six municipalities it serves, and we continue to extend our support to additional counties, fostering broader collaboration and progress.  (2023): We are continuously promoting and assisting with projects. The Stormwater Consortium has spearheaded this in the 6 municipalities that it covers. We continue to assist other counties as well  (2021 &amp; 2022): We are continuously promoting and offering assistance with projects. The Stormwater Consortium has spearheaded this in the 6 municipalities that it covers. As for the other municipalities in the county we have reached out to offer our assistance in any way needed.</p>	
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Priority Initiative 3: Education & Outreach													
<b>3.1</b>	Identify alternative and creative messaging and outreach methods		Education & Outreach Action Team	Countywide and statewide	On-going	Overcome stagnant approaches and improve public buy-in					(2025): Local news articles, social media posts, and presence at community events have provided information about Ag cost share funding opportunities, CAP, and watershed education. The CAP and LCCD websites are currently being updated.  LCCD assisted in LCCWA's 3rd annual Arbor Day Celebration to raise community support for tree plantings.  LCCD participated in a tabling event for the Annual Convention of Municipal Officials of Lebanon County.  LCCD, as part of the Hammer Creek Watershed Partnership, hosted a Hammer Creek project site tour, which included government agencies and local legislators.  (2024): Local news articles, social media posts, and presence at community events have provided information about Ag cost share funding opportunities, CAP, and watershed education. The CAP and LCCD websites are currently being updated.  LCCD assisted in LCCWA's 2nd annual Arbor Day Celebration to raise community support for tree plantings and contributed to LCCWA's new StoryMap to highlight conservation in the county.  (2023): DEP Educational grant was applied for again and was not awarded so project and watershed signage have not yet been developed. Ongoing research for alternate funding sources.		(2025) Outreach efforts increased in 2025
<b>3.2</b>	Collaborate with the state to improve statewide branding and messaging	Education Action Team, PADEP	Countywide and statewide	On-going	Ensure messaging is uniform region to region	DEP/Water Words That Work tools and materials					(2025): We continue to leverage the Clean Waters, Healthy Communities materials and resources to craft a Lebanon-specific message and branding that resonates with our local community.  (2024): We continue to leverage the Clean Waters, Healthy Communities materials and resources to craft a Lebanon-specific message and branding that resonates with our local community.  (2023) We continue to use the Clean Waters, Healthy Communities materials and resources to help create our own Lebanon- tailored message and branding  (2021 & 2022): We used the Clean Waters, Healthy Communities materials and resources to help create our own Lebanon tailored message and branding		
<b>3.3</b>	Unify messaging and outreach methods across sectors	Education Action Team, PADEP, LCCWA,	Countywide	On-going	Amplify the common goals Statewide PSAs and outreach efforts	DEP/ Water Words that Work					(2025): We continue to use CAP action teams to strengthen and unify our message across all sectors.  (2024): We continue to use CAP action teams to strengthen and unify our message across all sectors.  (2023): Using CAP action teams to unify the message across the sectors  (2021 & 2022): We used the CAP action teams to unify the message across the sectors		

3.4	Support and build on existing education and outreach efforts while preserving the messaging, the central focus is Lebanon County	Education Action Team, LCCWA, municipalities, LCCD, non- profits, Stormwater Action Team	Countywide	On-going	Reduce loss of interest by the general public or stakeholders	Existing outreach materials				<p>(2025) LCCD continues to update outreach materials and revise the websites. In 2025 we maintained existing outreach and education programs, such as the rain barrel workshop, plant sale, tire collection, and STEM nights at local schools.</p> <p>LCCD participated in a tabling event for the Annual Convention of Municipal Officials of Lebanon County.</p> <p>LCCD, as part of the Hammer Creek Watershed Partnership, hosted a Hammer Creek project site tour, which included government agencies and local legislators.</p> <p>(2024): Continued updating existing outreach materials and revising LCCD and CAP websites. Maintaining existing outreach and education programs, such as rain barrel workshops (2023 &amp; 2024), ag field days (2023), and legislative roundtables (2023).</p> <p>Increasing presence at community events to discuss local resource protection and funding opportunities</p> <p>(2023): Distribute created brochures and applications, and continue to update materials as needed. Create new outreach and education materials to engage public through handouts and hands on experiences</p> <p>(2022): <del>Distribute created brochures and applications, and continue to update materials as needed</del></p>	
3.5	Provide oversight and guidance for CAP-specific media outreach approaches and methods (website, radio, etc.)	Education Action Team, CAP Management Team	Countywide	On-going	Ensure appropriate information is available.  DEP EE Grant for start-ups of outreach platforms	Lebanon Clean Water Action Team website				<p>(2025) Website design continues. All CAP-related information is housed on LCCD's website under the "Environmental Conservation Program" tab.</p> <p>(2024): Website redesign is continuing.</p> <p>The previous CAP website (<a href="http://www.lebanoncleanwateractionteam.com">www.lebanoncleanwateractionteam.com</a>) is no longer active. All CAP-related information is currently housed on LCCD's website under the "Countywide Action Plan" tab.</p> <p>(2023): Website redesign to address public feedback, seamless integration of meeting documentation, and strengthening partnerships with local radio hosts.</p> <p>(2022): CAP website updated frequently to include CAP Action Team agendas and meeting minutes so the public have easy access to information.</p> <p>(2021): Created website and social media and continue to update with more information and events that the team comes up with.</p>	

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<b>4.1</b>	Identify and expand water quality monitoring efforts to assist with prioritization of BMP implementation and measure long-term success		DM&M Action Team, PADEP, SRBC, watershed groups, LCPD, municipalities, local agencies	Countywide	On-going	Incompatible data/information Adequate amount of relevant water quality and macro data for decision points	GIS tools, WQ portal, USGS	\$105,300 from USGS ~\$280,000 from NRCS		\$327,240 for remaining WQ monitoring station expenses	(2025): Funding for FY26 was secured for the Swatara Creek Supergage. Two other NTN Supergages were installed in December 2023; one on Hammer Creek and one on Little Conewago Creek. Watershed groups and Penn State AEC continue to monitor in the Quittapahilla and Conewago watersheds. A plan is being developed to begin a countywide volunteer monitoring program.  (2024): Funding for FY25 was secured for the Swatara Supergage. Two other NTN Supergages were installed in December 2023; one on Hammer Creek and one on Little Conewago Creek. Watershed groups and Penn State AEC continue to monitor in the Quittapahilla and Conewago watersheds. A plan is being developed to begin a countywide volunteer monitoring program.  (2023): In partnership with USGS and NRCS, the Supergage water quality monitoring station was installed on the Swatara. Looking for funding after 2024 for the project to continue. The first LCCD Supergage field day was held and was a great success with other 30 attendees including Secretary Redding and local partners and organizations. The purpose of the field day was to educate the public as well as seek potential future funding  (2022): Established proposed WQ monitoring station location in Swatara Creek. Secured USGS & NRCS funding contributions, met with County Commissioners to explain importance of project, in-process of obtaining rest of funding needs.  (2021): Working with USGS and NRCS to put in more real time WQ stations in Lebanon County to compare to modelled data	
<b>4.2</b>	Build a Lebanon County-specific monitoring network	DM&M Action Team	Countywide (organized by watersheds)	Game plan by early 2021, imp. early 2021-2023	Potentially duplicate QWA monitoring efforts across other watersheds  Alignment of various platforms for data collection and reporting	Catchment Management Database  Local experts, consultants, etc.  SRBC, PADEP		Potential: Equipment and resources for data capture and analysis (TBD)	(2025) No change from 2024.  <b>(2024):</b> <b>A plan is being developed to begin a Countywide volunteer water monitoring program</b>  (2023) CMD database is still in- process  (2022): CMD database is still in-process. Met with County to discuss obtaining non-ag BMP information for comprehensive County database. It was recommended that we contact individual municipalities to see what information is currently available to input into our database. In the future, a game plan will be created for information that is existing but not identified. Ag information continues to be inputted to continue building comprehensive database.  (2021): Working on creating this network using CMD data and GIS. We will include a web map feature that will have the monitoring and project points on it specific for Lebanon County. We plan to ask organizations to continue to report their projects and progress back to us, as well as using volunteers to help with monitoring.			

4.3	Maintain an inventory of acceptable BMP verification processes for long- term monitoring efforts		DM&M Action Team, Municipalities, LCCD, state/ local agencies, Capital RC&D, Penn State AEC, local consultants/ engineers	Countywide	Ongoing	Resources for inputting and verifying all BMPs	Verification Processes Inventory BMP Quick Reference Guide		Potential: Funding for inspectors (TBD)	<p>(2025) A full-time Agricultural technician has completed the BMP verification.</p> <p>(2024): <b>2 DEP-Funded Summer interns verified stream BMP practices in two watersheds (Beck Creek and Bachman Run). Data will be compiled into a final report available for public review. This work completes stream BMP verification.</b></p> <p><b>2023 Summer Interns' data was compiled into the following 61-page final report.</b> <a href="https://www.quittiecreek.org/documents/2023_Interns/Final_Report_2023_Interns.pdf">https://www.quittiecreek.org/documents/2023_Interns/Final_Report_2023_Interns.pdf</a></p> <p>(2023): CMD database is still in- process, however, BMP verification efforts have increased through hiring two seasonal interns to verify practices in two watersheds.</p> <p>(2022): Met with County to discuss obtaining non-ag BMP information for comprehensive County database. It was recommended that we contact individual municipalities to see what information is currently available to input into our database. In the future, a game plan will be created for information that is existing but not identified. Ag information continues to be inputted to continue building comprehensive database.</p> <p>(2021): Have an inventory from DEP for CAP specific BMPs, will continue to find ways for long-term verification</p>	
4.4	Identify potential additional monitoring activities that may accompany existing monitoring activities to capture missing or needed information		Capital RC&D, watershed groups, Penn State, municipalities, local consultants/engineers	Countywide (initial focus on priority watersheds)	Full inventory by late 2020; imp. 2021-2024	Expansion of transect survey processes and data. SRBC data and information	Transect survey			<p>(2025) LCCD worked in coordination with USGS to obtain funding from NRCS for FY26 in order to continue Swatara Supergage operations. The Swatara Creek Supergage StoryMap (geonarrative) is available to the public at <a href="https://geonarrative.usgs.gov/using-continuous-water-quality-to-guide-conservation-efforts/">https://geonarrative.usgs.gov/using-continuous-water-quality-to-guide-conservation-efforts/</a></p> <p>(2024): <b>LCCD worked in coordination with USGS to obtain funding from NRCS for FY25 in order to continue Swatara Supergage operations</b></p> <p><b>Supplemental funding for the Supergage was awarded by Lebanon County Commissioners through the Marcellus Shale Grant.</b></p> <p><b>2 years of data collection by the Swatara Supergage will be utilized and incorporated into a StoryMap, which is scheduled to be available online in 2024/2025 timeframe.</b></p> <p>(2023): Working with USGS for the potential implementation of another water quality monitoring station and collecting data from the one installed on the Swatara Creek</p> <p>(2021 &amp; 2022): We have started working with USGS to provide additional monitoring stations for WQ data and also are working with local GIS department team to create a web</p>	
4.5	Establish FieldDoc use and access protocols (SOPs)		DM&M Action Team	Countywide	On-going	Ensure quality of information displayed and entered	FieldDoc/PADEP, LCCD, NRCS Local consultants, agencies, etc.			<p>(2025) 2024 projects have been inputted into FieldDoc. All past and current projects have been transferred into PracticeKeeper.</p> <p>(2024): 2023 projects have been inputted into FieldDoc.</p> <p>(2023): 2022 projects have been inputted into FieldDoc, waiting on 2023 project completion to be inputted as well</p> <p>(2022): FieldDoc access has been granted, completed non-ag projects have been inputted into FieldDoc. (2021): Plan to input data collected in excel spreadsheet into FieldDoc once access is</p>	

Priority Initiative 5: Coordination

5.1	Establish and maintain a coordination sub-committee focused on implementation of the QWA plan and local municipal PRPs/efforts		Watershed Action Team, QWA, MS4 Municipalities in Quittapahilla Watershed	Quittapahilla Watershed	Establish by early 2021, on-going efforts	Provide final approvals for QWA generated 319 plan	QWA, local consultants/engineers					<p>(2025): No change from 2024. The Watershed Action Team continues to bring together QWA and Consortium representatives. Non-Consortium municipalities are not typically engaged by LCCD.</p> <p>(2024): The Watershed Action Team continues to bring together QWA and Consortium representatives. Non-Consortium municipalities are not typically engaged by LCCD.</p> <p>(2023): Watershed Action Team includes MS4/PRP representative to discuss our local efforts and needs. Continues to be a successful Action Team.</p> <p>(2022): Watershed Action Team includes MS4/PRP representative to discuss our local efforts and needs.</p> <p>(2021): Sub-committee was not created; however, we did create a Watershed Action Team that will address this initiative</p>
5.2	Engage and support the Conewago initiative		Penn State AEC, CAP Management Team, Ag Action Team, farmers, non-profits	Conewago watershed	On-going	Ag focused effort for BMP and riparian buffer implementation	Penn State AEC, LCCD					<p>(2025): No change from 2024. LCCD staff attend meetings, conduct field visits, and participate in Penn State AEC's Conewago synoptic sampling.</p> <p>(2024): LCCD staff attend meetings, conduct field visits, and participate in Penn State AEC's Conewago synoptic sampling.</p> <p>(2023): LCCD ag staff attend Conewago meetings and conduct field visits to interested landowners.</p> <p>(2022): LCCD ag staff attend Conewago meetings and conduct field visits to interested landowners.</p> <p>(2021): This has been addressed and will continue to support the initiative as needed.</p>
5.3	Continually engage and update local legislators for CAP implementation support		Legislative & Policy Updates Action Team	Countywide	On-going							<p>(2025): LCCD to attend October tabling event at the Lebanon Municipal Officials Convention. The Hammer Creek Site Tour event was held in October instead of the roundtable in an effort to engage local legislators.</p> <p>(2024): LCCD to attend October tabling event at the Lebanon Municipal Officials Convention.</p> <p>Legislative Roundtable was not held this year. Will look to resume event next year</p> <p>(2023): Held Legislative Roundtable to discuss ACAP funding and CAP initiatives to increase awareness and encourage support from Legislators.</p> <p>(2022): Held Legislative Roundtable to discuss ACAP funding and CAP initiatives to increase awareness and encourage support from Legislators.</p> <p>(2021): Our team is in contact with the legislators regularly and continue to seek support</p>

5.4	Collaborate with Lancaster County for shared watersheds (Upper Hammer, Chiques, etc.)		Non-profits, local agencies, municipalities	Lancaster/Lebanon boundary region	On-going	Project collaboration may help both counties achieve goals and objectives					<p>(2025) No further updates from 2024.</p> <p>(2024): LCCD staff participate in the Hammer Creek Headwaters ARP partnership and the Conewago Initiative, and Chiques Watershed Alliance meetings as able. LCCD and Lancaster CCD coordinate the Lancaster-Lebanon Watershed Forum annually.</p> <p>(2023): LCCD ag staff attend Conewago meetings and conduct field visits to interested landowners.</p> <p>(2022): LCCD ag staff attend Conewago meetings and conduct field visits to interested landowners.</p> <p>(2021): Multiple projects were completed in the Hammer by both Lebanon and Lancaster county and we have continued to keep each other informed to make sure they are in collaboration with each other</p>	
5.5	Engage local/regional programs (e.g. Master Watershed Stewards) to coordinate efforts for long-term CAP implementation success		Education & Outreach Action Team	Countywide	Game plan by late 2020 followed by initial implementation	CAP-related goals and objectives may be achieved through existing programs and efforts					<p>(2025) No further updates from 2024.</p> <p>(2024): Engage with MWS program for monitoring, tree plantings, and rain barrel construction.</p> <p>(2023): Have engaged with Master Watershed Stewards for assistance and collaboration with the CAP projects and progress.</p> <p>(2021 &amp; 2022): Have engaged with Master Watershed Stewards for assistance and collaboration with the CAP projects and progress. They plan to offer their time to help with monitoring efforts</p>	
5.6	Assist with progressing efforts in the Swatara (with the Lower Little Swatara as a priority watershed)		Education & Outreach Action Team, CAP Management Team, Swatara Watershed Association, NRCS, LCCD	Swatara (and Lower Little Swatara)	2021-2024	Use NRCS plan as basis of approach and funding requests	NWQJ Watershed Assessment Plan, Catchment Management Database				<p>(2025) No further changes from 2024.</p> <p>(2024): NFWF Small Watershed Grant completed. All 51 Conservation plans successfully developed.</p> <p>(2023): Received funding for NFWF Small Watershed Grant to hire TSP to develop 51 conservation plans.  19 plans have been written with a total of 930 acres.</p> <p>(2022): Applied for NFWF MEB grant to construct two manure storages within Swatara Watershed. 2022: Received NFWF Small Watershed grant to hire ag consultants to develop 7,624 acres of plans within the Little Swatara and Swatara Creek watersheds.</p> <p>(2021): Have identified Lower Little Swatara as a priority watershed and are working with the SWA on projects. We have one project currently being implemented in the Swatara and a few more planned to be implemented in the coming months.</p>	