

**Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Sullivan County  
Agriculture Priority Initiative 1- Planning, Manure Management, and Fertilizer Application**

**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 # <b>Green</b> <b>Yellow</b> <b>Red</b>	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
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<b>1.1</b>	Develop Basic Manure Management Plans Core N	Develop 10,000 acres worth of plans for farmers.	SCCD Staff & Farmers	Black Creek and Lick Creek Watershed	2021-2025	New operations coming in and lack of cooperation.	Nutrient Management Planners	\$32,225	1 Nutrient Management Planner Position (Staff)	\$70,000	7/2022 Manure Management Plans have been completed, however none in Black Creek or Lick Creek Watersheds.
<b>1.2</b>	Develop Ag Erosion and Sedimentation Plans	Develop 10,000 acres of Ag E&S plans for farmers.	SCCD Staff & Farmers	Black Creek and Lick Creek Watershed	2021-2025	Landowners that do not farm getting Ag E&S plans completed.	Conservation Planners	\$32,225	1 Planner Position (Staff)	\$70,000	7/2022 Ag Erosion and Sedimentation Plans have been completed, however none in Black Creek or Lick Creek Watersheds.
<b>1.3</b>	Expanded Nutrient Management Planning focusing on 4R's especially focusing on legume and manure N availability and the reduction of N Fertilizer.	Develop 8,000 acres worth of nutrient management plans for farmers.	SCCD Staff & Farmers	Black Creek and Lick Creek Watershed	2021-2025	Convincing farmers that they are over-applying fertilizers.	Nutrient Management Planners	\$32,225	1 Nutrient Management Planner Position (Staff)	\$70,000	7/2022 Expanded Nutrient Management Planning have been completed, however none in Black Creek or Lick Creek Watersheds.
<b>1.4</b>	Barnyard Runoff Controls	Install .7 acres of barnyard runoff control BMPs.	NRCS, SCCD Staff, Farmers	Black Creek and Lick Creek Watershed	2022-2024	Lack of Experienced Staff	Engineering and Inspection	\$250,000	1 Engineer for design	\$50,000	7/2022 No barnyard runoff controls have been installed to date.
<b>1.5</b>	Manure Storage	Install 2 acres of manure storage BMPs.	NRCS, SCCD Staff & Farmers	Black Creek and Lick Creek Watershed	2022-2025	Lack of Experienced Staff	Engineering and Inspection	\$200,000	1 Engineer for design	\$200,000	7/2022 No manure storages have been installed to date.
<b>1.9</b>	Stabilization of Animal Walkways and Travel Lanes	Install .5 acre of walkway and travel lanes BMPs.	NRCS, SCCD Staff & Farmers	Black Creek and Lick Creek Watershed	2022-2024	None	Engineering and Inspection	\$150,000	1 Engineer	\$500,000	7/2022 No Stabilization of animal walkways and travel lanes have been installed to date.
<b>1.12</b>	Establish Funding/Staff support to the Agricultural Community	Write plans and continue installation of BMPs for planned implementation. Establish demo plots and plan field days.	MCCD, DEP and NRCS	Black Creek and Lick Creek Watershed	2021-2023	Limited funding available.	Staff	\$32,223	Establish 1 Full Bay Position	\$32,225 towards the position.	7/2022 Sullivan County Conservation District staff continue to write plans, asses BMPs for implementation in the Black Creek and Lick Creek Watersheds with a combination of programs including Phase II inspections and BMP verification. Currently, no demo or field days are planned.

<b>1.13</b>	Chesapeake Bay Inspection Program	Collect data and complete inspections.	SCCD Staff	Black Creek and Lick Creek Watershed	2021-2023	Limited time for staff.	SCCD Staff	\$30,225	1 Full Bay Position	\$32,225 towards full time technician	7/2022- SCCD has completed roughly 646 acres of inspections in the Black Creek and Lick Creek Watersheds.
<b>1.14</b>	Seek funding options for BMP Implementation	Utilize Growing Greener, REAP and EQUIP	SCCD and NRCS	Black Creek and Lick Creek Watershed	2021-2023	Limited funding is available.	SCCD Staff	N/A	N/A	\$100,000	7/2022- SCCD continues to look for funding to install BMPs in the Black Creek and Lick Creek Watersheds.

**Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Sullivan County  
Agriculture Priority Initiative 2- Soil Health and Cover Crops**

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<b>2.1</b>	Educate farmers on the importance of Soil Health.	Increase cover crops for agriculture and advanced education on the conservation of soil structure and nutrients through meetings and field days.	NRCS, SCCD Staff & Farmers	Black Creek and Lick Creek Watershed	2022-2024	Lack of interest among the farming community.	People with soil health and no-till knowledge	N/A	1 person with soil health and no-till knowledge	\$15,000/ Year	7/2022- The SCCD is continuing to provide education events to farmers and cover the topics of soil and water conservation as well as nutrient conservation.
<b>2.2</b>	Bay Inspections and Cover Crops	Increased cover crop usage to 2,500 acres and data collection from inspections	SCCD Staff & Farmers	Black Creek and Lick Creek Watershed	2021-2025	Landowner willingness to participate in cover crop program	Half Bay Technician Position	\$32,225	Full time Bay Technician Position	\$32,250 towards full time position	7/2022 The SCCD continues to conduct inspections in the watersheds of Lick Creek and Black Creek, as well as continue to get cover crop sign ups.
<b>2.3</b>	Planting legume cover crops to reduce N fertilizer applications	Reduce nitrogen fertilizer applications by implementing 500 acres of legume cover crops	NRCS, SCCD Staff & Farmers	Black Creek and Lick Creek Watershed	2021-2025	Lack of research on amounts of Nitrogen available from cover crops.	Staff with soil health and no-till knowledge	N/A	1 person with soil health and no-till knowledge	\$20,000	7/2022-No planting of legume cover crops has occurred.

**Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Montour County**  
**Agriculture Priority Initiative 3- Buffers**

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<b>3.1*</b>	Increase Buffers on streams and roadside ditches	Install 70 acres of buffers on farms, along streams, and near roadside ditches.	SCCD, DEP, NPC, NRCS, CREP, Pheasants forever	Black Creek and Lick Creek Watershed	2022-2024	Lack of landowner participation and cooperation due to loss of acreage.	Botanists Arborists Biologists	N/A	Botanists Arborists Biologists	\$30,000	<b>7/2022- No buffers along stream or roadside ditches have been installed to date.</b>
<b>3.2*</b>	Provide an incentives-based program for buffers	Develop an incentive program to increase willingness to install buffers.	DEP, PDA, FDA, SCCD	Black Creek and Lick Creek Watershed	2022-2024	Landowners' willingness because of lack of knowledge.	N/A	N/A	Program developer	\$150 / Acre	<b>7/2022- No buffer incentives have been created to date.</b>
<b>3.3*</b>	Utilize CREP Program for buffers and rental payments	Install buffers on farms with the use of the CREP program.	NRCS	Black Creek and Lick Creek Watershed	2022-2024	Landowners' trust in the CREP program and the loss of rented ground.	Biologist	N/A	Biologist	\$150/ Acre	<b>7/2022-No CREP funds have been used to create buffers in the county to date.</b>
<b>3.4 *</b>	Partnership with Private Sector for education and buffer establishment	Install buffers on farms through partnership work.	SCCD, PSU Extension	Black Creek and Lick Creek Watershed	2022-2024	Landowners' willingness to convert cropland to buffer.	Biologists Botanists and Arborists	N/A	Biologists Botanists and Arborists	\$10,000	<b>7/2022- No buffers have been installed through farm partnerships work to date.</b>
<b>3.5</b>	Educate landowners maintenance of buffers	Control invasive species in buffers with proper management practices.	NRCS, SCCD Staff, Private Sector	Black Creek and Lick Creek Watershed	2022-2024	Landowners' willingness to upkeep maintenance of buffers.	Invasive species knowledge and pesticide certification.	N/A	Education Resources and Community Outreach	\$5,000	<b>7/2022- To date no education events or education activities have occurred in relation to buffer maintenance.</b>
<b>3.6*</b>	Mandatory Buffer Ordinance	Install buffers as a result of a mandatory ordinance.	Townships, SCCD, County Planning, DEP	Countywide	2022-2024	Landowner acceptance due to loss of land.	County Planning and Zoning to adopt an ordinance.	None	Ordinance developer and enforcement	N/A	<b>7/2022- No work has been done to create a mandatory buffer ordinance.</b>
<b>3.7</b>	Grass hay strips along streams	Install 30 acres of hay buffers along streams on farms.	SCCD, NRCS	Black Creek and Lick Creek Watershed	2022-2024	Landowner willingness to install buffer.	Crop Consulting	None	Crop Consulting	N/A	<b>7/2022-Currently, no grass hay strips have been installed along streams.</b>
<b>3.8</b>	Streambank fencing	Limit access/ fence out 5 acres of the stream.	SCCD, NPC	Black Creek and Lick Creek Watershed	2022-2024	Landowner cooperation in fencing implementation.	Staff	N/A	Fence contractor	\$50,000	<b>7/2022 Out of the five acres of stream bank fencing to be installed, currently zero acres have been installed.</b>

**Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Montour County  
Agriculture Priority Initiative 4- Reporting and Tracking**

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<b>4.1</b>	Use Practice Keeper and Field Doc to track results	Track results for CAP with plans and maps	SCCD	Countywide	2021-2025	Unknown projects completed by landowners are difficult to track.	Staff to record plans and track results	N/A	Additional Staff to manage records	\$50,000	<b>7/2022</b> The Conservation District continues to use Practice Keeper to track a wide variety of conservation plans, BMPs, and inspections.
<b>4.2</b>	Track results to evaluate progress with load reductions	Reduce Nitrogen and phosphorus loading	SCCD	<b>Black Creek and Lick Creek Watershed</b>	2021-2025	Unknown projects completed by landowners are difficult to track.	Staff to track results	N/A	Additional staff to manage records	\$50,000	<b>7/2022</b> Tracking plans and inspections in those target watersheds
<b>4.3</b>	GIS Mapping for tracking project	Draw maps to show progress in each watershed	SCCD	Countywide	2021-2025	Access to GIS mapping software.	Staff with GIS experience	N/A	Staff to use GIS Software	\$5,000	<b>7/2022</b> Have not started in tracking projects and potential projects with GIS
<b>4.4</b>	Verify manure application records	Ensure farmers are following their plans	SCCD	Countywide	2021-2025	Will be very time-consuming.	Staff to complete inspections	N/A	Additional Staff	\$50,000	<b>7/2022</b> Through Phase 2 inspections manure application records have been have verified

**Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Montour County  
Agriculture Priority Initiative 5- Administer AgLand Preservation Program**

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5.1	Administer the Farmland Preservation Program	Protect 200 acres of farmland from development	Landowners, SCCD	Black Creek and Lick Creek Watershed	Ongoing	Limited funding	Staff	50,000	Staff	\$100,000 / year	7/2022 Currently the SCCD is encumbering 137.54 acres of preserved farmland.

**Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Montour County  
Partnerships Priority Initiative 1- Partners**

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1.1	Have Penn DOT involved in various practices	Implement additional cover crop services and practices such as street sweeping	Penn DOT	Countywide	2022-2025	Lack of willingness or time to participate in the implementation	Street Workers	N/A	Designers	N/A	7/2022 The Sullivan County Conservation District is working alongside PennDOT on one current stream project and coordinating with them on future projects.
1.2	Work with NRCS on their programs in the county	Implement programs such as EQIP and CREP	NRCS	Countywide	Present- 2025	Farmer's lack of trust in CREP	NRCS Workers	N/A	Additional Programs	N/A	7/2022 The Sullivan County Conservation District has landowners involved in CREP and EQIP but currently not directly involved
1.3	Work with the PA Game Commission in the county	Plant food plots and partner with farmers	PA Game Commission	Countywide	2022-2024	None	Game Commission Officers	N/A	More partnerships with them in the county	None	7/2022 Currently SCCD is not currently involved with the PA Game Commission in planting food plots.
1.4	Continue to work with PA Fish and Boat Commission in the county	Implement stream projects that include fish habitat structures	PA Fish and Boat, SCCD	Countywide	2022-2025	Lack of knowledge of their existing and additional projects	Project planning, project implementation	Varies	N/A	N/A	7/2022 The Sullivan County Conservation District has been working with PA Fish and Boat Commission on a couple potential projects, however nothing has been implemented.
1.5	Work with Trout Unlimited in the county	Enhance trout habitat in streams and waterways throughout the county.	Trout Unlimited, SCCD	Countywide	2022-2024	Lack of funding for habitat	Designers and TU Workers	Varies	N/A	N/A	7/2022 Currently the SCCD has not worked with TU regarding enhancing streams and waterways.
1.6	Continue to work with NPC	Continue working relationship with NPC which includes installing buffers, fish habitat, and tree plantings	NPC SCCD	Countywide	2022-2025	None	Buffer planting, fish habitat designers and implementers	N/A	None	None	7/2022 The SCCD has not yet partnered with NPC on any projects, though ideas for potentially future projects have come about due to discussions with NPC.
1.7	Have County Workers involved in implementation practices	Help implement, fund, organize and monitor implementation of CAP practices	Commissioners Zoning Planning Grounds Crew	Countywide	2022-2024	Lack of time or willingness to participate in implementation	Additional help to implement practices	N/A	Additional help to implement practices	N/A	7/2022 Sullivan County workers, mainly the Planning Department and the Commissioners Office, have been involved to some degree in the planning of potential projects.

1.8	Work with DCNR in the County	Improve forests and roadways through the forest on public land	DCNR, Game Commission, Fish and Boat Commission	State Forest	2022-2025	None	DCNR Foresters and Educators	N/A	N/A	N/A	7/2022- Currently, no projects are planned with DCNR.
1.9	Work with the county Ag-Land Preservation Program	Preserve farmland throughout the county	SCCD, County Ag-land Preservation	Countywide	2021-2025	Lack of funding	County Admin	Varies	None	\$100,000	7/2022- The Sullivan County Conservation District is currently working with the AG-Land Preservation Program in preserving farmland. Currently, the SCCD in encumbering 137.54 acres.
1.10	Continue to work with Chief Oil and Gas company in the county	Improve fish habitat throughout the county	SCCD, Chief Oil and Gas, Fish and Boat Commission	Countywide	2021-2025	None	None	Varies	None	None	7/2022- There have been projects done in the past with Chief Oil and Gas Company, none in the past year.



**Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Montour County  
Stormwater Priority Initiative 1- Road Runoff**

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1.1	Continue work on Dirt and Gravel Road Projects	Reduce road runoff and washouts on 10 miles of roadway	SCCD	Countywide	2021-2025	N/A	Engineers	Varies	Additional Staff and Workers	\$50,000/ year	7/2022 Currently, the SCCD has reduced road runoff through the DGLVR program on 3 miles of roads.

**Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Montour County  
Stormwater Priority Initiative 2- Stream Restoration**

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2.1	Continue to install fish habitat structures and reconnection of the floodplain where possible	Reduce erosion on 3000 linear feet of streambanks.	SCCD, PA Fish and Boat, DEP	Countywide	2022-2024	Enforcement and lack of knowledge of floodplain ordinances	Design, Installation and Staff	N/A	None	\$75,000/ Year	7/2022 No habitat structures have been installed to date, however many numerous potential project have been looked into for future projects. The Sullivan County Conservation District has partnered with the County Commissioners in development of the Stream Stabilization Program. This program evaluated roughly 40 sites for potential projects through this program. Numerous projects were identified as potential sites.
2.2	Continue to Monitor Macroinvertebrates	Track progress of stream health yearly using stream surveys and studies.	SCCD Staff, Mike Bilger	Countywide	2021-2022	Funding Source	Biologist with knowledge to ID Macroinvertebrates (Mike Bilger)	N/A	Biologist with knowledge to ID Macroinvertebrates (Mike Bilger)	\$10,000 / year	7/2022 The SCCD had collected macroinvertebrates twice as well as had Mike Bilger, formerly of DEP, conduct a study on Black Creek, Lick Creek and the Hoagland Branch.
2.3	Organize Community Fallen Tree Removal Program for trees that have fallen due to flooding	Reduce streambank erosion with tree removal (5,000 feet).	SCCD Staff	Countywide	2022	Limited funding sources, Limited Resources	Tree Removal	Townships, SCCD	Tree Removal Service in the Area	\$50,000	7/2022 Currently, the SCCD and in partnership with the Sullivan County Commissioners Office are in the process of reducing 400 ft of tree removal that has the potential to cause erosion.

**Phase 3 Watershed Implementation Plan (WIP) Annual Progress Update – Montour County  
Stormwater Priority Initiative 3- BMPs in Developed and Urban Areas**

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<b>3.1</b>	Educate landowners on buffers and fertilizer application rates on their lawns.	Install buffers and educate landowners on nitrogen rates.	SCCD	Countywide	2022-2024	Lack of public interest and knowledge	Agronomist, Biologist, Botanist	None	Agronomist, Biologist, Botanist	\$5,000 / Year	7/2022 The SCCD has held one education event that discussed the topic of the application of nitrogen.
<b>3.2</b>	Develop a strategy to make buffers visually attractive to landowners by using pollinator mixes and flowering trees and shrubs	Plan appealing and effective buffer design to attract public interest.	SCCD	Countywide	2022-2024	Lack of public interest in buffers	Buffer designs and education materials	None	Buffer designs and education materials	N/A	7/2022 No current strategy to gain more public interest in buffers exist.
<b>3.3*</b>	Develop an incentive-based buffer Program that pays for buffer establishment and maintenance	Develop incentives to attract the public to the implementation of buffers	SCCD/DEP	Countywide	2022-2024	Lack of buffer funding source	Staff	None	Develop incentive program developer	TBD	7/2022 No incentive based buffer program that pays for buffer maintenance currently exists.
<b>3.4</b>	Mandatory Stream Buffer Program	Develop an ordinance in the county	County Planning, SCCD, Municipalities	Countywide	2022-2024	Adoption of the ordinance and cooperation from landowners	Zoning Officer	None	Zoning officer	N/A	7/2022 An ordinance does not currently exist within the county to require stream buffers.
<b>3.5</b>	Plant Buffers	Install .5 acres of buffers in areas where they are needed	Private Sector	Countywide	2021-2023	Lack of need for buffers in Urban Areas	Agronomist, Biologist, Botanist	None	Planting, plans, and design developer	\$8,000/ year	7/2022 No buffers have currently been planted.
<b>3.6*</b>	Educate landowners on the impacts of stormwater on streams and methods to control stream water	Promote stormwater management practices on 1 acre.	SCCD, Municipalities	Countywide	2022-2024	Lack of meeting attendance and knowledge	Engineering, Hydrology	None	Nutrient/ lawn specialist, engineering, hydrology	N/A	7/2022 The Sullivan County Conservation District held two stormwater workshops that described the impacts of stormwater on streams and provided rain barrels to participants.
<b>3.7</b>	Promote stormwater infiltration basins for private residences	Install stormwater BMPs on 1 acre	SCCD, Municipalities	Countywide	2022-2024	Lack of opportunity due to small towns and low population	Engineering, Hydrology	None	Engineering, Hydrology	N/A	7/2022 To date no infiltration basins have been installed by the SCCD.