

2025 Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Report – JUNIATA COUNTY

Action #	Description	Performance Target(s)	Responsible Party(is) and Partnerships	Geographic Location	Expected Timeline	Potential Implementation Challenges or Recommendations	Resources Available		Resources Needed		Annual Progress to Date (2021 to 2025)	Reason for Change to Action Item (2024-2025 milestone period)
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Priority Initiative 1: County Programmatic Initiatives												
1.1A	Update/Revise Existing County Comprehensive Plan (2009)	Ensure that growth activities address existing water quality impairments through stormwater BMP implementation. Encourage municipalities to follow their existing ordinances. Include priorities of the completed CAP Plan.	JCPD, Municipal Officials, Juniata Clean Water Partnership	Countywide	2022 Plan Funding Secured – Begin Plan 2025 – Finalize Plan	Educating municipalities, updating local plans and ordinances, ensure municipalities understand how ordinances can affect the watershed. Ordinance enforcement is a challenge.	Education & Coordination		1 – FTE Clean Water Coordinator for Planning Commission	\$130,000 per year \$300,000 funding to support Comprehensive Plan Update \$2,000 per acre of forest easement \$900K total	2025: No funding is currently available to proceed to update the Comprehensive Plan. (2009) 2024: No funding is currently available to proceed to update the comprehensive Plan from 2009. 2023: No progress to date. 2022: Funding sources are being investigated by the County Commissioners. No movement at this time.	2025: Recommend removing from CAP due to lack of funding and progress for this action item.
1.1B	Advance local comprehensive planning efforts Implement the Source Water Protection Plan	Help ensure the groundwater and surface water resources of the county are protected from overuse or degradation. Work with municipal authorities to educate on benefit of Source Water Protection Plan – work with DEP on development of Plans where feasible.	Municipalities, Municipal Water Authorities, Mifflintown Municipal Authority	Countywide	2022 – Education	Juniata County has no local (Municipal) land use authority. Reinforcing the municipal role in coordinating with the water authorities to perform education and outreach and connecting landowners with water quality needs with available resources.		1 – FTE Clean Water Coordinator for Planning Commission Source Water Protection Plan development	\$130,000 per year \$100,000 for Plan	2025: No progress to date. 2024: No progress to date. 2023: No progress to date. 2022: Outside of one on one discussions, there hasn't been formal training. Municipalities have other priorities at the moment. Mifflintown Water Authority SWP Plan is the only one that JCCD is	2025: Recommend removing from CAP due to lack progress for this action item.	
1.1C*	Evaluate areas to establish riparian buffers to stabilize stream banks and limit encroachment	Identify landowners willing to participate and work with the following partners to identify (5) buffer opportunities: JCCD, CBF, PPL, DCNR, PFB, PSU Extension, Juniata Watershed Alliance. As stated in Juniata County Heritage Plan, look to increase buffer width where feasible and preserve existing buffers.	JCCD, CBF, PPL, DCNR, PFB, PSU Extension, Juniata Watershed Alliance	Countywide	Ongoing	Willing Landowners interested in implementation. "Selling" buffers is tough. Buffer funding programs must include 5-10-year minimum maintenance plan, incentive money for landowners, along with volunteers to establish the buffer. Tree availability has been an issue the last 2-years. Not enough inventory to plant desired species.	landowner outreach; on the ground riparian project execution CBF/PPL trees are free, as available	1 – FTE Clean Water Coordinator for Planning Commission 1 – Additional Watershed Specialist for Conservation District Expand Buffer Bonus Program to provide \$10,000 per acre of buffer installed to include 5-year maintenance contract \$1.1M total	\$130,000 per year \$130,000 per year Additional Riparian Buffers as part of NRCS Contracts. 2 will be installed in the next year and one grass buffer.	2025: JCCD is in discussion with multiple landowners regarding possible riparian buffer plantings. A planned riparian buffer planting is to take place in Summer 2026 on ~1.5 acres at Willow Run. 2024: JCCD Conducted CREP Riparian Buffer Tour Day (08/22/2024) - Have one potential landowner interested. CREP re-enrollment with Juniata County FSA is ongoing. 2023: JCCD has conducted workshops to promote riparian buffers and Live staking. These workshops have identified potential landowners for projects in 2024.		

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1.10	Look to revise existing Act 537 plans in Juniata County	Existing Act 537 plans range in age from 1968 – 2010. Look at the feasibility of updating plans or plan creation for municipalities for those who do not have a plan, look to incorporate new pumping guidelines.	Municipalities	Municipalities	2022 Municipal Meeting to discuss options	Landowner education will be needed to promote proper on-lot septic system maintenance. Municipal enforcement will also be needed. Juniata County has no local land use authority. Lack of timely DEP enforcement of the Act 537 Program			1 FTE Clean Water Coordinator for Planning Commission	\$130,000 per year \$1,000,000 funding to update Act 537 plan with willing municipalities	2025: No progress to date. 2024: No progress to date. 2023: No progress to date. 2022: No updated plans at this time. Look to hold a municipal meeting in the fall of 2022. Funding still remains an issue.	2025: Recommend removing from CAP due to lack progress for this action item.
1.2*	Act 167 Stormwater Management	Secure funding to develop new Municipal Act 167 plan for willing municipalities.	JCPD, JCCD, Municipal Officials	Interested Municipalities	2022 Municipal Meeting to discuss options	Should local involvement exist, funding for Plan update, Juniata County has no local (Municipal) land use authority Need for technical assistance to develop Act 167 Plan			Act 167 Plan Development 1 FTE Clean Water Coordinator for Planning Commission	\$1,000,000 \$130,000 per year	2025: There is currently no funding available to develop Act 167 for Juniata County. 2024: There is currently no funding available to develop Act 167 for Juniata County. 2023: No progress to date. 2022: The 2022/2023 state budget includes new funding to support the development of Act 167 plans. Juniata county currently has no Act 167 plan, but with new funding plans to explore opportunities to develop an Act 167 Plan. With Juniata County having no ordinances, JCCD is	2025: Recommend removing from CAP due to lack progress for this action item.
1.3	Implement County Hazard Mitigation Plan	Improve flood prone areas with BMPs that also enhance water quality. Refer to the 2020 Juniata County Hazard Mitigation Plan Update. Ensure all municipalities have updated their floodplain management ordinances.	County Planning Commission, Emergency Management agencies, municipalities	Countywide	2022 – prioritize projects identified in HMP for funding 2023 – work with PEMA to develop BRIC App for feasibility study	Funding, mitigation projects as submitted by Municipalities. Current Requirements by PEMA/FEMA are tough to receive funding – funding available only if hazard is identified by FEMA/PEMA and needs extremely project specific.	JCPD, JCEMS		Engineering Feasibility Study 1 FTE Clean Water Coordinator for Planning Commission Project Implementation	\$150,000 \$130,000 per year \$500,000	2025: The 2025 Plan update was completed in March and was adopted on March 11th, 2025 by the Commissioners. There was township participation in the update. 2024: Currently updating the 2025 Juniata County Hazard Mitigation Plan. 2023: No progress to date. 2022: The 2022 plan update was completed in June and has gone to the Commissioners for review. There was robust township participation in the update. With update in hand, funding will need to be secured to bring plan projects to shovel readiness for implementation	

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1.4*	Continue to Implement County Farmland Preservation Program.	Total farmland preservation (26 farms in program currently – approx. 3100 acres) Look to fund 1 additional farm per year in preservation program. – 3,000 acres of farmland conservation As stated in the Juniata Heritage Plan & Open Space Plan look to create Ag Preservation Zones Work to identify additional funding for Agriculture Conservation Easement program with goal to double acreage preserved.	JCALPB, JCCD, County Commissioners, Municipal Officials, Juniata County Heritage Plan, Juniata County Greenways and Open Space Plan	Agricultural Security Area farms that fit farmland preservation criteria	Ongoing	Preserved farms in Juniata Co. are inspected annually for Nutrient Management, Ag E&S, etc., and are kept in compliance with current regs as per easement conditions. Preserved farms are required to have an NRCS Conservation Plan, work with farmers to ensure Conservation Plan is reported in PracticeKeeper. Recommend making this a program requirement statewide. Lack of funds to preserve land. Landowner willingness decreases due to the reality of the limited funds, if they don't rank at the "top" of the list, over years they quit applying.	JCCD – 1 staff		JCALP Administrator Easement Purchases 1 – FTE Clean Water Coordinator for Conservation District	\$75,000/year \$160,000 state funding per year and \$15,000 from county per year total \$875,000 \$130,000 per year	2025: Two farm preservations are in progress, with estimated acreage of 138.99 acres. 2024: Two farms are planned to be preserved in 2024 & 2025 with an estimated Acreage of 128.76 acres. 2023: Two farms preserved in 2023. One easement is 108.5 acres, the other is 38.5 acres. The next application round will open in November 2023. 2022: There are about two farms, roughly 143 acres, are to be preserved. JCCD is waiting on the landowners to accept their offers and submit deposits. JCCD is securing encumbering funds and they are expected to close in summer of 2023. The application period is advertised in the local paper and online. The application period is every other year from December to the end of January. 13 applications came in for this round. JCCD was able to select 2. It is a popular program that doesn't need a lot of outreach to identify participants. Landowners who aren't selected receive a letter to reapply in future rounds.	
1.5*	Establish funding/staff support to assist the Agricultural community. 670 farms exist in Juniata County	Approximately 100 have their plans in Juniata County, goal is to complete 200 by 2025. Work with private ag consultants to document plan reporting. Implementation challenges (continued): In order to communicate effectively with the farming community one on one farmer outreach must be conducted. The most effective way to capture and report BMPs is through one-on-one farm visits. Farmers do not participate in surveys or other methods.	JCCD, ACT 38 operators, preserved farms, West Branch Association, certified organic farmers, Integrators, Private AG Consultants	Countywide	2022-2025	Limited compliance activities by DEP. Lack of Technical assistance to support the farming community Private sector Ag plans are not required to be shared with District staff. Work with ACT 38, Preserved farms and organic farms to report AG E&S and NRCS Conservation Plans. These operations are required to have plans, but no requirement to report the plans. It is recommended state agencies make changes to ACT 38 and Persevered Farm programs to require PracticeKeeper reporting.	Field verification, troubleshooting, plan writing for compliance following DEP compliance inspections.	CSP	6 – additional Ag Planners to provide technical assistance and ag planning 3 – FTE Design, Engineer, Permit 3 – FTE Inspector Construction Services 1 – FTE Clean Water Coordinator for Conservation District 1 – Administrative Assistant 1 – agronomist	\$780,000 per year \$420,000 per year \$315,000 per year \$130,000 per year \$75,000 per year \$130,000 per year	2025: See 1.9b below. 2024: The Foundation for Pennsylvania Watersheds finalized their Growing Greener grant agreement and set up contracts with HRG, Lancaster Farmland Trust, and Clearwater Conservancy for outreach and technical assistance. Work orders for ag I&Es, permits, and full designs are underway for the regional service area. 2023: FPW was awarded a Growing Greener grant for \$800,000 that will support 12 counties, including Juniata, with farm outreach, planning, permitting, and project design. Outreach is planned to begin in the fall. JCCD has hired a new District Manager, a Chapter 102/Ag E&S Tech, and a Chapter 102/DGLVR Tech to assist in this goal. 2022: The Foundation for Pennsylvania Watersheds (FPW) applied for a Growing Greener grant totaling \$1.6 million to support additional ag engineering needs along with increased farm visits. In 2021 Lancaster Farmland Trust completed 20 farm visits. In 2022 the Lancaster Farmland Trust completed an additional 10 farm visits.	

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1.6	Juniata River Watershed Management Plan Look to identify a rapid delisting watershed as part of the plan. Work with the Chesapeake Conservancy to rapidly delist a watershed within the Juniata River Watershed Plan.	WPC applied for DCNR C2P2 grant to update the Juniata River Watershed Management Plan. CAP can help leverage funding for the Juniata River Watershed Management Plan. Work with the Chesapeake Conservancy to rapidly delist a watershed within the Juniata River Watershed Plan.	Western Pennsylvania Chesapeake Conservancy	Juniata River Watershed (Blair, Fulton, Huntingdon, Juniata, Mifflin, Perry)	2021 – Conservancy Exploring options for funding 2022 – outreach 2023 implementation	Performance Target Continued: Our goal is basically to update the existing plan with work that has been done since the original plan, do some more in-depth GIS analysis, and get public and municipal input into what they see are the issues in the watershed. I think the GIS analysis will be a big part of the process. We're planning on using the new 1-meter resolution data set, incorporating some of the buffer gap analysis work from Chesapeake Conservancy, etc.	Applied for \$37,785 & 37,286 of match	1 – FTE Clean Water Coordinator for Planning Commission 1 – FTE Clean Water Coordinator for Conservation District	\$130,000 per year \$130,000 per year Rapid Delisting Approach Project and Program Budget \$1,000,000	2025: The Juniata River Forward: Building on 25 Years of Conservation, an update of the Juniata River Watershed Management Plan is now completed. Future plans include HRG potentially developing a StoryMap to highlight the update to the Plan in a user-friendly manner to give the public a snapshot of the plan contents. 2024: The draft of Juniata Forward: Building on 25 Years of Conservation, an update to the Juniata Watershed Management Plan, is complete and will be available for public comment starting October 1, 2024 and lasting for 30 days. Each municipality will be emailed with a link to the plan to provide comments. WPC will also put out a press release and social media posts to garner comments. Comments will be detailed in the final version of the plan. The final plan will be completed by the end of 2024. 2023: Update from WPC: Developed a public survey to garner input from constituents in the watershed. So far, 67 people have filled out the survey. Survey was advertised on social media by WPC and all members of the steering committee. A flyer was made with a QR code for advertising. WTAJ also featured a snippet on television and their website advertising the public	2025: The Juniata River Forward: Building on 25 Years of Conservation, an update of the Juniata River Watershed Management Plan is now completed. Future plans include HRG potentially developing a StoryMap to highlight the update to the Plan in a user-friendly manner to give the public a snapshot of the plan contents. 2024: The draft of Juniata Forward: Building on 25 Years of Conservation, an update to the Juniata Watershed Management Plan, is complete and will be available for public comment starting October 1, 2024 and lasting for 30 days. Each municipality will be emailed with a link to the plan to provide comments. WPC will also put out a press release and social media posts to garner comments. Comments will be detailed in the final version of the plan. The final plan will be completed by the end of 2024. 2023: Update from WPC: Developed a public survey to garner input from constituents in the watershed. So far, 67 people have filled out the survey. Survey was advertised on social media by WPC and all members of the steering committee. A flyer was made with a QR code for advertising. WTAJ also featured a snippet on television and their website advertising the public	

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1.7	Utilize Existing TMDLs to leverage the need for water quality improvement plans	Leverage TMDLs to help educate local citizens on the need for water quality improvements Explore the potential feasibility of developing 319 WIPs, Coldwater Conservation Plans or Alternative Restoration Plans for TMDL watersheds	JCCD, JCPC, WPC	Markee Creek, Hunters Creek, West Branch Mahantango, Warble Run, Cedar Spring Run Working in Little Lost Creek	Ongoing	Financial and Technical assistance to develop 319 or Alternative Restoration Plan plans for TMDL watersheds. Willingness of local volunteers to support implementation of 319 plans. Lack of existing watershed organizations and dwindling membership.			1 FTE Clean Water Coordinator for Planning Commission 1 FTE Clean Water Coordinator for Conservation District Additional staff for PFBC	\$130,000 per year \$130,000 per year \$1,000,000 \$500,000 for restoration plan development	2025: No progress to date. 2024: No progress to date. 2023: No progress to date. 2022: Cocolamus Creek is undergoing the development of an alternative restoration plan to address nutrients and sediment. The plan is set to be finished by the end of 2022.	2025: Recommend removing from CAP due to lack progress for this action item.
1.8	Juniata College, PSU, or other nearby institution Partnership - Implementation	Develop undergraduate and graduate students to support staff with implementation	Juniata College, PSU University or other nearby institution, Water4Ag	319 Priority Watershed Riparian properties Preserved farms Priority Corridor Watersheds - Markee Creek, Hunters Creek, West Branch Mahantango, Warble Run, Cedar Spring Run, Little Lost Creek	2022-2025	Continued undergraduate/graduate engagement as students graduate, distance for students to travel. Lack of technical assistance professionals to mentor students. Lack of competitive paying job opportunities that ensure long term sustainable for recently graduated students.			5 – Student Internships to Support CAP Implementation	\$50,000 per year	2025: JCCD hired Parker Damm as a summer intern in 2025. Parker is a current sophomore at Penn State Harrisburg pursuing a Wildlife and Fisheries Science degree. During his internship from May 2025 to August 2025, Parker assisted with all programs the Conservation District offers, including stream restoration projects supported through CAP/GG funding, erosion and sediment control permit organization, and ACAP projects. 2024: JCCD hired Sarah Hershey as a summer intern in 2024. Sarah is a current Agribusiness student at Delaware Valley University. Sarah assisted JCCD staff from May 2024 to August 2024 before continuing her undergraduate education at Delaware Valley University. Sarah learned about the programs the Conservation District offers including surveying stream restoration projects completed through CAP funding. 2023: JCCD hired Cora Musser as an intern from April to August of 2023. Cora is currently enrolled in PSU Monte Alto Campus and graduated from Juniata High School. 2022: No progress at this time.	

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1.9A	Work to develop a Juniata County Water quality communication plan, leveraging existing documents, Coldwater Conservation Plans, Comprehensive Plan, Heritage Plan, Hazard Mitigation Plan, and Greenways Plan Utilize existing TMDLs as part of the messaging	Develop messages and audience; execute plan and distribute messaging through staff and partners Utilize the DPJM County Countywide Action Plan (arcgis.com) - ARC GIS website as a source of consistent communication	CBF, Chesapeake Conservancy, NRCS, JCCD, JCPC, Private Sector Agriculture Farm Visits, Juniata Watershed Alliance, municipalities, Farm Bureau, Juniata College	Countywide	2022 – develop local content, timing, identify responsible staff	Simplifying the resources that are available Sharing staff resources across the 4-county region	Arc GIS Hub Website 1 – lead county contact		Website development and continued maintenance 1 – FTE Marketing and Outreach Coordinator 1 – FTE Clean Water Coordinator for Planning Commission	\$10,000 per year \$130,000 per year \$130,000 per year	2025: On April 9, 2025, the Juniata County Conservation District held their first annual Women in Agriculture event at the Juniata Valley Winery in Mifflintown, PA. The event hosted ninety-three (93) participants, including members of the public as well as agency representatives. Participants learned about Advocacy 101 from MeeCee Baker, Versant Strategies; Bio-Security & Backyard Flocks from Alina Corey, Maple Lawn Associates, LCC; Connections between Soil Health & Human Health from Melissa Erdman, Natural Resource Conservation Service; Springing into Native Plants from Josh Clark, HRG; and Funding Conservation Projects through Partnerships from Lori Glace, Juniata County Conservation District. Juniata High School FFA grew basil and assembled herb planter favors that each participant got to take home. Thank you to our corporate sponsors: Juniata Valley Bank (premier sponsor), HRG Inc., Hoobers Inc., Farm Credit, and Team Ag! Numerous social media posts have been made regarding water quality. JCCD has released the "Conservation Conversations" Newsletter and highlighted water quality improvements in the annual report. 2024: Numerous social media posts have been made regarding water quality. JCCD has released the "Conservation Conversations" Newsletter and highlighted water quality improvements in the annual report. The Delaware Creek stream restoration project at the Thompsonstown AMVETS was featured in the Juniata Sentinel. 2023: JCCD is very active with social media and is starting a quarterly newsletter title "Conservation Conversations" that will highlight water quality. JCCD utilizes its annual report for outreach as well. 2022: The DPJM Countywide Action Plan website listed in the Performance Targets has been updated to include information about implementation of the Countywide Action Plans. Additionally, a GIS tracking data base has been added to capture the location of potential projects.	

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1.9B	Agricultural Communication Strategy	<p>One on one farm outreach is the best way to communicate with farmers. Work to develop a plan to complete one on one farm visits.</p> <p>Work to develop a communication plan to engage integrators.</p> <p>Partner with pesticide meetings and other AG meetings to provide information.</p> <p>Utilize Farm Bureau Newsletter for announcements</p>	CD, County Farm Bureau, Integrators, Ag Land Preservation, PSU Extension, NRCS, 4R Alliance	Countywide	2022-2025	<p>Funding to support the technical assistance required to complete one on one farm outreach.</p> <p>Outreach to integrators is a challenge due to the number of integrators and multiple county boundaries they serve. It is recommended DEP/PDA/SCC communicate with integrators on a frequent basis to reduce mixed messages.</p>			<p>6 – additional Ag Planners to provide technical assistance and ag planning</p> <p>1 – FTE Marketing and Outreach Coordinator</p> <p>1 – FTE Clean Water Coordinator for Conservation District</p> <p>1 – agronomist</p>	<p>\$780,000 per year</p> <p>\$130,000 per year</p> <p>\$130,000 per year</p> <p>\$130,000 per year</p> <p>See 1.9A for website costs.</p> <p>Costs for meeting attendance and administration may be covered through other funding</p>	<p>2025: 40 General Conservation Farm visits were executed by LFT in 2025 in the Western portion of the County near East Waterford in the Tuscarora Watershed. These visits scoped out the BMP needs and Agricultural plans already developed for these operations and their willingness to work with local County Governments to implement BMPs.</p> <p>2024: 15 LFT farm visits are planned for the fall of 2024 to propose BMPs for farms and gather information for Inventory and Evaluations (I&Es)</p> <p>2023: 25 LFT farm visits are planned for the year, in addition to the FPW Growing Greener grant.</p> <p>2022: Farm visits have been utilized to conduct outreach to farmers about the Countywide Action Plan. In 2021 20 farm visits were conducted and in 2022 an additional 10 visits were completed. The Foundation for Pennsylvania Watersheds submitted a Growing Greener grant titled 12-County Investment to Catalyze Agricultural Project Readiness that would support rapid scaling up of farm visits within Juniata County. Scaling up of farm visits would allow for additional outreach to occur.</p>	
Priority Initiative 2: Reporting and Tracking												
2.1*	<p>Existing BMP cataloguing (quantity and location) for select BMPs, expanding on general recommendations provided in QAPP</p> <p>BMPs = forest buffers, urban forest buffers, grass buffers, urban grass buffers, manure storages, grassed waterways, wet ponds and wetlands, fencing</p>	<p>Expand use of existing buffer layer with urban hydrology layer</p> <p>R&D into distinguishing ag, pasture, and turf covers from grassed buffers</p> <p>Manual digitizing where leaf-off <1 ft resolution imagery is available</p> <p>Back check with staff field views where required</p> <p>Add data to Practice Keeper or another batch upload option (FieldDoc)</p>	<p>Juniata College, Chesapeake Conservancy, Stakeholder peer review - USGS, Farm Bureau, PDA, EPA</p>	Countywide	<p>2022 – cataloguing</p> <p>2023 – Practice Keeper batch upload processing and field views</p>	<p>EPA acceptance of the approach, further refine guidance in QAPP so that counties can accomplish this or so that the state can take the burden off of counties, utilize the approach to catalogue existing BMPs and do on the ground verification where required for reporting purposes, this is an accelerated BMP catch up approach while we continue to provide support to farmers on planning and BMP installs, reduce the amount of interruption of government entities to compliant farm operations</p>	<p>Precision Conservation Tools</p> <p>General methodology outline</p> <p>BMP field backcheck</p>	<p>N/A</p>	<p>Further GIS and data processing/method refinement</p> <p>2 staff people to follow up on BMP verification annually (staffers are a part of the identified 6 – ag planners identified elsewhere)</p> <p>5 – Student Internships to Support CAP Implementation</p>	<p>\$46,000 (2022 only)</p> <p>\$260,000 per year</p> <p>\$50,000 per year</p>	<p>2025: JCCD staff is still completing their training with BMP trackers like Practice Keeper. More time is needed.</p> <p>2024: JCCD Staff have been introduced to Practice Keeper and FieldDoc, however more time for training will need allotted prior to reporting BMPs through Practice Keeper.</p> <p>2023: No progress to date, but with new District staff brought in during the year, it will be explored how to integrate BMP verification into their roles and capacity.</p> <p>2022: In December of 2021, Juniata County was awarded \$30,000 to conduct Phase 1 of a multiphased BMP verification remote sensing effort. Juniata County elected to use all of the money on the remote sensing analysis focusing on five priority BMPs including: Barnyard Runoff Controls, Animal Waste Management Systems, Forest Buffers, Grassed Waterways, and Streambank Exclusion Fencing. Remote sensing data analysis performed by the Chesapeake Conservancy is being finalized in August of 2022 and results are provided in an online ARC Gis Portal. Qualified 3rd party staff will begin field verification efforts to verify the remotely</p>	

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											Identified practices. A BMP Verification Quick Guide is being developed by HRG to assist with field verification efforts. In April of 2022, the Foundation for Pennsylvania Watersheds applied for a NFWF Most Effective Basins grant to support Phase 2 of the BMP verification analysis in the MEB in Juniata County. Initial results from Phase 1 look excellent in providing opportunities to take credit for practices on the ground that are not currently reported.	

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2.2*	Identify future ag/urban project opportunities using automated means	BMP opportunity analysis – ag conservation, land retirement, alternative crop, forest conservation, stream restoration Back check with staff field views Batch upload to FieldDoc to calculate credit opportunity	Lead – Chesapeake Conservancy Stakeholder peer review – Juniata College, USGS, Farm Bureau, PDA, Municipal Engineers, municipalities	Countywide	2022 – cataloguing 2023 – batch upload processing and field views 2024 – 2025 – implementation focus	Different data set scales/precision, processing time	Precision Conservation Tools	N/A	Further GIS and data processing/method refinement	\$46,000 (2022 only)	2025: No progress to date. 2024: No progress to date.	2025: As a part of the Chesapeake Conservancy's Cooperative Agreement with the Chesapeake Bay Program, the CIC has been working to adapt the USDA Agricultural Conservation Planning Framework (ACPF) toolbox and produce its related GIS conservation practice opportunity outputs for the entire watershed. The toolbox outputs a suite of NRCS agricultural practice opportunities at the field scale -- some have direct equivalents to Bay Program BMPs, while others do not. Since there are many assumptions made to produce these opportunity footprints across the entire watershed, they are not intended to be ground truth and should only serve as a high level reference for helping to plan efforts in combination with expert on-the-ground input. The outputs are expected to be publicly available after June 2024. 2022: No progress to date.
2.3*	Develop a local system to capture data collection on urban structural and non-structural practices	Add development related BMPs to PK/FieldDoc so that as land use data sets are updated, there are accompanying BMPs	Municipal engineers, Chesapeake Conservancy, JCPC, Municipalities, student interns	Urban/suburban landscape	2022	Currently municipalities are not collecting BMP data because it is not required in non-MS4 communities. Must incentivize communities to report, no existing system in place.	Reporting platform	N/A	Training 5 – Student Internships to Support CAP Implementation	N/A \$50,000 per year	2025: No progress to date. 2024: No progress to date. 2023: No progress to date.	2022: The Foundation for Pennsylvania Watersheds applied for a NFWF Most Effective Basins grant in April of 2022 to support Phase 2 of BMP verification remote sensing analysis. Phase 2 would include analyzing wet ponds and detention basins in urban areas across Juniata County. PA DEP has updated FieldDoc to allow for additional reporting of urban practices. The grant was not awarded.
2.4*	Implement a documentation program for commercial and homeowner nutrient applications in developed lands Support current legislation for fertilizer bill.	Support fertilizer legislation – where legislation requires reporting, be the data clearinghouse Legislation will support the implementation of Urban Nutrient Management – 1,200 acres	PSU Extension	Countywide	TBD	Education of responsible parties, receiving timely information, training on reporting system, will need direction from State on what's expected and any reporting system that's developed.	TBD based on fertilizer legislation if passed	TBD based on fertilizer legislation if passed	1 – FTE Clean Water Coordinator for Planning Commission Urban Nutrient Management \$10 per acre \$12,000	\$130,000 per year	2022: On July 11, Governor Wolf signed SB 251, a bipartisan bill sponsored by Senator Gene Yaw (R) and Senator Carolyn Comitta (D), into law. Pennsylvania now has a law governing turfgrass fertilizer application dates, practices, rates, and type of fertilizer used. We are uncertain on how documentation and crediting will occur with the new bill.	2023: DEP is recognizing conservation landscaping through reporting in FieldDoc. Awaiting DEP's direction on the future of Urban Nutrient Management Plans.

2025 Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Report – JUNIATA COUNTY

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2.5*	Improve Agricultural BMP reporting utilizing PracticeKeeper, Capital RC&D Transect Survey, PSU Survey, Manure Transport Reporting and Remote Sensing	Increase reporting of agriculture plans into PracticeKeeper Work with Capital RC&D to improve current transect survey routes to be more inclusive Work with PSU to produce better response rate to the PSU survey for Juniata County Work with PDA/DEP to improve manure transport reporting	DEP, JCCD, NRCS, PDA, NRCS, Juniata County Farm Bureau, Capital RC&D, Chesapeake Conservancy, PSU Survey, Manure Brokers	Countywide	2022-2025	Private sector ag planners do not have access to PracticeKeeper. Ag planners do not have time to report into PK. Current Capital RC&D routes are not all inclusive. Current response rates are low and miss a large demographic of Juniata County farmers. Manure brokers are not required to report data annually. Data is not all inclusive.			5 – Summer interns for reporting and verification See 3.5 for funding needs to improve cover crop reporting for Capital RC&D	\$50,000 – per year See 3.5 for funding needs to improve cover crop reporting for Capital RC&D	2025: JCCD staff is still completing their training with BMP trackers like Practice Keeper. Additional time is needed. 2024: JCCD Staff have been introduced to Practice Keeper and FieldDoc, however more time for training will need allotted prior to reporting BMPs through Practice Keeper. 2023: Capital RC&D Cover Crop Survey held in June 2023. 2022: In the Spring of 2022 HRG participated in a beta testing group for the PracticeKeeper 3rd Party Module. PADEP initially released the module in June of 2022 before recalling the system for additional bug fixes. Phase 2 of the BMP verification grant submitted by the Foundation for PA Watersheds includes budget for interns from Susquehanna University to enter BMPs into PracticeKeeper.	
2.6*	Standardized Reporting for Dairy Precision Feeding	Counties would like to utilize the dairy precision feeding BMP. However, current reporting guidelines do not allow for clear reporting standards on feed reduction amounts, how to report, and who is qualified to report. Improved reporting standards would allow 3,400 Animal Units of Dairy Precision Feeding	Chesapeake Bay Program, Penn State Extension, Dairy co-ops	Countywide	2022	It is recommended that milk urea-nitrogen (MUN) be an acceptable standard for reporting dairy precision feeding. Guidelines need to be posted on acceptable MUN rates and work with dairy integrators to receive MUN data to report to DEP.	N/A	N/A	Reporting protocol	N/A	2022: No progress to date, reporting standards still remain an issue to utilize the BMP.	2023: Recommend removal from CAP due to the lack of advancement of reporting standards for dairy precision feeding. Implementing a DPF program also requires sometimes significant equipment upgrades and management changes for the farmer, and these changes/upgrades lack funding sources for implementation.
Priority Initiative 3: Achieve New Pollutant Reductions												
3.1	Implement Willow Run Cold Water Conservation Plan	Potential agriculture BMP restoration on a CAFO located in Dougherty Run Look at requiring timber management plans for lumber mills in the watershed Widen forest buffer at State Game Land 215 to 100 feet in width Plant a buffer in Willow Run and Dougherty Run Work with landowners to improve riparian areas Increase water quality monitoring	JCCD, Juniata Watershed Alliance, Municipalities	Willow Run Watershed Dougherty Run Lack and Tuscarora Townships	Ongoing	Lack of volunteers to support Juniata Watershed Alliance. Ensure support of watershed alliance moving forward. Lack of technical assistance and funding to support BMP implementation.	Technical Support and plan development		1 – FTE Clean Water Coordinator for Planning Commission 1 – FTE Clean Water Coordinator for Conservation District	\$130,000 per year \$130,000 per year \$25,000 to increase water quality monitoring \$500,000 for BMP implementation	2025: In Winter 2025, PA Fish & Boat in partnership with WPC have visited and developed project plans for a stream restoration and riparian buffer planting on State Game Lands 215 along Willow Run. The stream restoration and buffer planting is planned for a 2026 CAP project. 2024: PA Fish & Boat has been contacted about Willow Run and possible stream restoration projects. A site visit is to be performed in the near future to determine project scoping. The Willow Run Conservation Plan is also being partnered with PA Game Commission 2023: No progress at this time. 2022: No progress at this time.	2025: Action item changed to green.

2025 Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Report – JUNIATA COUNTY

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3.2	Implement Lost Creek Cold Water Conservation Plan	Opportunities for streambank restoration especially in lower portions of lost creek watershed Riparian buffers and agriculture BMPs are also a way to restore lost creek Potential formation of a new watershed group 2 – potential new restoration opportunities to explore 1 – stream restoration project to be completed soon	JCCD, Juniata Watershed Alliance, WPC, PFBC	Lost Creek Watershed	Ongoing	Lack of volunteers to support Juniata Watershed Alliance. Ensure support of watershed alliance moving forward. Lack of technical assistance and funding to support BMP implementation.	Technical Support and plan development		1 – FTE Clean Water Coordinator for Conservation District \$500,000 for project implementation	\$130,000 per year \$500,000 for project implementation	2025: Another Lost Creek stream restoration project was completed on 08/04/2025 on Bob Kratzer's property. The restoration restored ~1,300 linear feet. 2024: The Lost Creek Stream Restoration at Mark Amig's property was completed on 7/19/2024. JCCD & PA Fish and Boat are also working to complete stream restoration on Bob Kratzer's property (just upstream of Mark Amig) sometime in 2025. 2023: JCCD is working with one landowner for project implementation. JCCD is developing the project for possible CAP funding in 2024. Additionally, DGR program replaced undersized stream crossing (double pipes) with a larger, bank full aluminum structural plate arch pipe. 2022: Stream restoration project completed. Continuing to focus on Lost Creek as the top priority watershed for restoration, but finding willing landowners is a barrier. 2 projects have been identified and Western	
3.3*	Help farmers and operators to be in compliance with state and federal requirements: Conservation and Nutrient Management Plans	Soil and Water Quality Conservation Plans (Ag E&S) 30,000-15,000 acres Nutrient Management (Manure Management) 22,000-25,000 new acres of Core N and 16,200 30,000 new acres of Core P Work with Act 38 operators (54), Preserved Farms (26), and certified organic farms to document plans already required by the respective program	4R Alliance, JCCD, Juniata County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, Juniata County PSU Extension, West Branch Association, Integrators (Bell and Evans, Country View, Empire Kosher, Cramers, Pilgrims Pride, Milk Industry)	Countywide Ag Land	2022-2025	Lack of DEP inspections. Reporting and verification of Ag Plans, NRCS plans expire and do not get reverified, private plans are never entered. Lack of technical assistance to support agriculture planning and implementation, one on one farm outreach is best way to capture existing plans. Act 38 and Preserved Farms not required to enter plans in PK, Recommendations to require programs to enter plans into PK State agencies must work with integrators to require compliance by farmers. Some integrators require compliance, but not all, great way to communicate with farmers as well	6 – additional Ag Planners to work with farmers to develop required plans	\$780,000 per year \$15 per acre for a total cost of \$450,000 \$15 per acre for a total cost of \$330,000	\$780,000 per year \$15 per acre for a total cost of \$450,000 \$15 per acre for a total cost of \$330,000	2025: JCCD staff conducted 20 plan reviews, 41 annual status reviews, and wrote 3 new manure management plans. Two staff members are undergoing certification training. 4 plans participated in the 2025 Ag Plan Reimbursement program from PACD to date. 2024: JCCD Staff conducted 14 plan reviews, 45 annual status reviews, wrote 6 new MM plans, and conducted 5 status reviews on MM plans. Newly hired staff are working towards Nutrient Management certifications to increase capacity at for Technical Assistance. 2023: New staffing at JCCD will expand plan compliance review. 10 manure management plans have been written by JCCD. 1 additional plan has been submitted to PACD's ag plan reimbursement program. 2022: PACD recently announced their Growing Greener grant for Ag Plan Reimbursement Farmers	2023: Goals were increased to reflect number of acres already with plans implemented, or decreased to reflect of lack of progress of action item.	

2025 Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Report – JUNIATA COUNTY

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3.4	Advanced Nutrient Management (4R) Practice Education and Implementation	<p>Transition manure management plans to nutrient management plans and incentivize implementation</p> <p>Increase reporting of supplemental nutrient management BMPs through existing programs and initiatives.</p> <p>Increase existing 4R practice (N & P Rate, Placement and Timing by 6,000-5,000 acres per year)</p> <p>Explore the idea of increasing pre sides nitrogen testing (PSNT) or Chlorophyl testing to District program participants</p>	4R Alliance, JCCD, Juniata County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, Juniata County PSU Extension, West Branch Association Crop Management	Countywide Ag Land	2022-2025	<p>Landowner interest, BMP verification (annual)</p> <p>Lack of Technical assistance to support agriculture planning and implementation.</p> <p>Additional funding to support soil testing. Soil testing is key to meeting the recommendations of supplemental BMPs.</p> <p>Machine dependent for most farming operations.</p> <p>Cost of fertilizer is self-regulating farmers to use less fertilizer; therefore,</p>	<p>Educational support</p>	<p>CBF grant</p>	<p>6 additional Ag Planners to work with farmers to meet 4R standards</p> <p>1 agronomist</p>	<p>\$780,000 per year</p> <p>\$130,000 per year</p> <p>\$10 per acre of advanced nutrient management planning per type</p> <p>total cost for all is \$360,000</p>	<p>2025: No progress to date.</p> <p>2024: No progress to date.</p> <p>2023: HRG has worked with the counties on methods to integrate supplement NM reporting into current workflows in the Chesapeake bay Contract, Nutrient Management Contract, current PSNT programs, and equipment rental programs. HRG also provided outreach at several events to increase adoption of 4R practices within the region.</p> <p>2022: No progress at this time.</p>	<p>2025: Recommend removing from CAP due to lack progress for this action item.</p> <p>2023: Goals were decreased to reflect of lack of progress to date.</p> <p>Action Number Performance Target verbiage updated for the 2023 Milestone.</p>
3.5*	Implement Practice to improve soil health and sustainability (Tillage Management and Cover Crops)	<p>Determine feasibility of having a county/state cost share program to enhance adoption of the annual practice</p> <p>Implement tillage management and cover crops on an annual rate of 26,500 28,000 acres High Residue, 3,200-6,300 acres Conservation Tillage, 1,500 2,600 4,100 acres Low Residue, 8,300 21,000 acres of cover crops and 12,600 acres of cover crops with fall nutrients</p> <p>Implementation challenges (continued): Organic farmers are using tillage to manage weeds and vertical tillage is becoming more popular among farmers, younger generation is “trying” tillage for experience</p>	JCCD, Juniata County Farm Bureau, NRCS, Private Sector Agriculture Farm Visits, Juniata County PSU Extension, West Branch Association Crop Management	Countywide Ag Land	2022 – investigation 2023 – next steps	<p>Capacity to manage the program, landowner interest</p> <p>Lack of technical assistance and farm planners to work with farmers to transition to High Residue Tillage</p> <p>Current verification methods do not accurately capture implemented amounts – work with Capital RC&D to improve Transect Survey Routes</p> <p>Farmers are harvesting cover crops for forage, need accurate efficiency crediting for commodity cover crops</p> <p>Existing Cover Crop Programs have strict plant by date that does not work with changing weather patterns and wetter years</p>	<p>Transect survey</p>	<p>Many Farmers use CSP for tillage management</p> <p>County JCCD – staff to administer the program</p> <p>Capital RC&D Transect Survey</p>	<p>6 additional Ag Planners to transition farmers to high residue</p> <p>\$90 per acre traditional per year</p> <p>\$747K for a 5-year total of \$3.735M (incentive payment, administration, Capital RC&D reporting)</p> <p>\$50 per acre fall nutrients per year</p> <p>\$630K for 5-year total of \$3.15M</p> <p>\$50,000</p>	<p>\$780,000 per year</p> <p>\$90 per acre traditional per year</p> <p>\$747K for a 5-year total of \$3.735M (incentive payment, administration, Capital RC&D reporting)</p> <p>\$50 per acre fall nutrients per year</p> <p>\$630K for 5-year total of \$3.15M</p> <p>\$50,000</p>	<p>2025: Implementation is ongoing through NRCS. There are 52 contracts implementing cover crop practices in Juniata County. The soil health workgroup held one workshop and another is scheduled for September 17.</p> <p>2024: Ongoing through NRCS, 18 cover crop contracts through EQIP were completed in 2024. The Soil Health Workgroup held two workshops.</p> <p>2023: Ongoing through NRCS. Soil Health workgroup led by NRCS. Soil station at Join Juniata-Snyder County Envirocamp. JCCD is interested in creating a Cover Crop program in County.</p> <p>2022: Ongoing through NRCS through their CSP program.</p> <p>Soil Health Workshop planned for October of 2022. Soil health was highlighted at the Enviro-camp. Ongoing meetings with Soil Health Group which meets 3-5 times a year.</p> <p>Through these efforts, willing landowners will be identified to implement the practices.</p> <p>Capital RC&D is continuing to survey and verify</p>	<p>2025: Low residue tillage goals were increased to reflect number of acres already being treated.</p> <p>2023: Goals were increased to reflect number of acres already being treated.</p>

2025 Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Report – JUNIATA COUNTY

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3.6	Implement more pasture management BMPs	Prescribed grazing – 3,200 acres Off Stream Watering – 150 200 acres Forest buffers on fenced pasture corridor – 20 acres Grass buffers on fenced pasture corridor – 20 80 acres Land Retirement to Ag Open Space – 170 400 Acres	JCCD, NRCS, Private Ag Consultants, CBF, Chesapeake Conservancy, Juniata County PSU Extension, West Branch Association	Countywide ag lands – landowners who raise horses, dairy, beef and other pasture grazing animals	2025	Landowner education, BMP funding for non-buffer work, plan updates, data gathering. Lack of Technical assistance to support agriculture planning and implementation. Old NRCS plans need to be updated to comply with prescribed grazing definition – difficult to get landowner buy-in – fund alternative watering and fencing; most pastures are streamside. Increasing construction costs are resulting in canceled NRCS contracts.	Landowner education		6 – additional Ag Planners to provide technical assistance and ag planning 3 – additional FTE environmental technician	\$780,000 per year \$390,000 per year Prescribed Grazing \$540 per acre \square \$1.728M total Off stream Watering \$500 per acre \square \$75K total FB Buffer W/ Exclusion \$10,500 per acre \square \$210K total GB Buffer W/ Exclusion \$2,750 per acre \square \$55K total Land Retirement \$500 per acre \square \$85K total	\$780,000 per year \$390,000 per year Prescribed Grazing \$540 per acre \square \$1.728M total Off stream Watering \$500 per acre \square \$75K total FB Buffer W/ Exclusion \$10,500 per acre \square \$210K total GB Buffer W/ Exclusion \$2,750 per acre \square \$55K total Land Retirement \$500 per acre \square \$85K total	2025: No progress to date, but will keep in CAP because of potential future partnership opportunities with NRCS and FSA. 2024: No Progress to date. 2023: No progress to date. 2022: Phase 1 of BMP verification identified 197 potential hits for streambank exclusion fencing. This data set will allow for increased reporting of buffered acres with exclusion fencing. JCCD is discussing the potential to reactivate the Streambank Fencing Program. There is a concern for JCCD capacity to hit targets by 2025.	2025: Grass buffers goal was increased to reflect number of acres already treated.
3.7*	Riparian buffer and re-forestation BMPs	320 riparian forest buffer acres, (260) acres lost since 2017 need reverified 100 150 riparian grass buffer acres – (25) acres lost since 2017 need reverified 25-75 acres – Agriculture Tree Planting 50 10 acres – urban forest buffer 4 2 acres – urban tree canopy 70 2 acres – urban forest planting	CBF, Chesapeake Conservancy, NRCS, JCCD, Private Sector Agriculture Farm Visits, Juniata Watershed Alliance, West Branch Association, PPL	Countywide Mifflintown Boat Launch and Muskrat Spring are an opportunity WPC and PFCBC working on projects in Delaware Creek	2022 – line up landowners 2023-2025 – implementation	Landowner partnerships, landowner education, volunteer acceptance of buffer plantings, buffer maintenance guide for farmers, routine site visits to confirm buffers are thriving, invasive species removal during establishment. Flash grazing must be allowed with buffer installation. Funding program must include a 5-10-year maintenance program to establish buffers along with incentive program \$4K minimum per acre payment.	Materials	Budget available to be determined	6 – additional Ag Planners to provide technical assistance and ag planning 3 – additional FTE environmental technician	\$780,000 per year \$390,000 per year Forest Buffer \$10,000 per acre \square \$1.1M Grass Buffer \$2,500 per acre \square \$187,500 Tree Canopy \$5,500 per acre \square \$5.5K Tree/Forest Planting \$10,000 per acre \square \$710,000	\$780,000 per year \$390,000 per year Forest Buffer \$10,000 per acre \square \$1.1M Grass Buffer \$2,500 per acre \square \$187,500 Tree Canopy \$5,500 per acre \square \$5.5K Tree/Forest Planting \$10,000 per acre \square \$710,000	2025: An ~1.5 acre riparian buffer planting is planned to be completed in 2026 at Willow Run in conjunction with a stream restoration project. Discussions with other landowners (specifically ACAP projects) are ongoing as riparian buffers will need implemented to complete projects in the coming years. 2024: JCCD Staff is planning to reach out to Riparian Rangers before the end of 2024 to help promote construction of new buffers. Newly planted riparian buffers were installed on 2 ACAP projects with 1 more buffer to be installed at a later date. 2023: Riparian Ranger workshop held in June 2023 to gain volunteers and interest. 2022: Applied for in 2022, DEP Growing Greener - Prioritizing Forested Buffer Incentives - Tier 1 and 2 Counties, Huntingdon, Juniata, and Dauphin - NRCS Codes:560/575/340/382/561/468/516/367/558/578/580/620/645/360/313/614 - Conservation Districts and NRCS, This project will pickup landowner cost-share for NRCS practices if a buffer is installed, we also pay for site prep and maintenance of buffers. We have 12 projects still	2025: Tree planting goal was increased to reflect number of acres already treated. 2023: Goals were increased to reflect number of acres already implemented, or decreased to reflect of lack of progress of action item.

2025 Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Report – JUNIATA COUNTY

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											Implementation of buffers. We have 12 projects, 3000 looking for more, and are in the process of contracting with 7 contractors to do site prep and maintenance on buffers.	
											Juniata County's Riparian Ranger Program has been up and running since June of 2021. The program helps to maintain existing forest buffers around the county with 5 volunteers.	
											Phase 1 of BMP verification will identify potential hits for grassed waterways and forest buffers implemented in the past 10 years. These potential BMPs will need field verified but provide a great opportunity to identify BMPs not currently reported.	
3.8	Wetland restoration implementation on marginal production ag land	48 100 acres of Wetland Restoration Identify 1 large property owner from University of Vermont restorable wetland layer to help identify where wetland restoration is feasible	Chesapeake Conservancy, JCCD, NRCS, Private Sector Agriculture Farm Visits, Juniata Watershed Alliance	Countywide	2022–2025	Willing landowner; appropriate siting, design, and construction for successful restoration result Lack of technical assistance for landowner outreach and agriculture planning	Landowner outreach	3 – additional FTE environmental technician 2 – stream biologist	\$390,000 per year \$280,000 per year Wetland Restoration \$30,000 per acre \$540K	2025: A 0.25 acre wetland restoration project was completed at Port Royal Lions Club Park by USFWS on 05/02/2025. This included a 1 acre wetland vegetative planting. No other wetland restoration projects are being planned at this time. 2024: HRG has been utilizing existing maps and outreach to determine potential locations for wetland restoration projects. From there HRG plans to develop a regional grant application for the SRBC Consumptive Use Grant. 2023: No progress to date. 2022: No progress at this time.	2025: Goals were decreased to reflect of lack of progress to date.	
3.9	Stream Restoration (Urban and Agriculture)	11,000 5,000 Linear feet (~2 miles) Urban Stream Restoration 4,400 Linear feet (<1 mile) Agriculture Stream Restoration	CBF, Chesapeake Conservancy, TU National, PFBC Stream Restoration Team, JCCD, JCPC, Juniata Watershed Alliance, Municipalities, West Branch Association	Rapid delisting areas top priority & Countywide	2022 – 2025	Design/permit/construction cycle seems to work in two-year increments, there is an assumption that eroded/degraded streams exist based upon 403(d) listing – should that not be the case in the field, adjust quantitative goal down and ensure buffers are in place Lack of funding to cover engineering design		Design, permit, construction services 2 – Municipal Engineers 3 – FTE Design, Engineering, Permit 2 – stream biologists	Assume urban \$900/LF - \$9.9M Assume rural \$400/LF -\$1.8M \$280,000 per year \$420,000 per year \$280,000 per year	2025: JCCD completed two stream restoration projects through CAP funding and two stream restoration projects through Growing Greener funding in 2025. CAP projects included ~1,900 linear feet (~1,300 feet on Lost Creek and ~600 feet on Juniata River) and Growing Greener projects included ~2,575 linear feet (~1,075 feet at Guss Park and ~1,500 linear feet at Zooks Dam, all on East Licking Creek). 2024: Two stream restoration projects were completed in July 2024 in the Lost Creek and Delaware Creek watersheds totaling 2,500 linear feet. Partners involved included WPC, PFBC, JCCD, HRG. Additional stream restoration projects are planned for 2025 on Lost Creek & East Licking Creek. 2023: East Licking Creek / Lion's Club Park project completed. Restored 2,550 linear feet of stream. Have 2 additional projects, one on Lost Creek and another in the upper reaches of East Licking Creek near Zook's Dam. 2022: Western Pennsylvania Conservancy applied to	2023: Goals were decreased to reflect of lack of progress to date.	

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3.10	Implement more barnyard runoff control/loafing lot management	0-125 145 acres of barnyard runoff control – see implementation challenge/CAST model issue 24 acres of loafing lot management 31 acres of agricultural drainage management	JCCD, NRCS, Private Ag Consultants, CBF, Chesapeake Conservancy, Juniata County PSU Extension, West Branch Association	Countywide Farms	2022-2025	Lack of Technical assistance to support agriculture planning and implementation Lack of funding to cover engineering design Increasing construction costs are cancelling NRCS contracts 0 acres are currently available in CAST and is not accurate, need to address model limitations			6 – additional Ag Planners to provide technical assistance and ag planning 3 – FTE Design, Engineer, Permit 3 – FTE Inspector construction Services Agriculture Stormwater Management \$10K per acre \pm \$310K	\$780,000 per year \$420,000 per year \$315,000 per year Agriculture Stormwater Management \$10K per acre \pm \$310K	2025: JCCD in partnership with NRCS has 3 projects looking to install barnyard runoff BMPs. These projects are at different phases but should all be completed by 2026. Additionally, there are 6 roofed heavy use areas planned for construction later this year and in 2026. 2024: JCCD partnered with NRCS on 3 projects to install barnyard runoff and roofed heavy use areas. 2023: JCCD partnered with NRCS on 5 projects to install barnyard runoff and roofed heavy use areas. Second round of contracts will add an additional 2 projects (Fall 2030). 2022: Phase 1 of BMP verification will identify where barnyard clusters are located and determine if they are livestock operations or poultry operations. CAST continues to limit the number of opportunities for this BMP. While not reporting at 100% as previously reported in 2020. Due to the loss of 7 acres the BMP is below 100%, but will hit 100% if those 7 acres are reverified. This does not allow for the reporting of new acres.	2025: Goals were increased to reflect number of acres already being treated. 2023: Goal was increased to reflect number of acres already being treated, and an increase in available funding for related projects.
3.11	Animal Waste Storage Systems	2,000 67,000 AUs of animal waste management systems 3,500 3,700 AUs of mortality composters Current capacity through NRCS and JCCD implements about 5 farms projects per year	JCCD, NRCS, Private Ag Consultants, CBF, Chesapeake Conservancy, Juniata County PSU Extension, West Branch Association	Livestock & Poultry farms	2022-2025	Time to get through planning, design, and construction; outreach to smaller farms that likely need the assistance; match cash value for small farms; readiness to plan/implement projects when outreach efforts yield willing landowners Lack of funding to cover engineering design	Project implementation – 5 farms a year		6 – additional Ag Planners to provide technical assistance and ag planning 3 – FTE Design, Engineer, Permit 3 – FTE Inspector construction Services Animal waste management system \$175,000 per project, assume 100 AUs per project \$3.5M in total	\$780,000 per year \$420,000 per year \$315,000 per year Animal waste management system \$175,000 per project, assume 100 AUs per project \$3.5M in total	2025: JCCD in partnership with NRCS has 11 animal waste storage systems to be constructed in the coming years. 2024: JCCD partnered with NRCS on 4 projects to install animal waste storage systems. 2 have been completed as of August 2024 and 2 are planned to be completed by the end of 2024. 2023: JCCD partnered with NRCS on 5 projects to install barnyard runoff and roofed heavy use areas. Second round will add an additional 2 projects (Fall 2023) 2022: BMP Verification Phase 1, shows the potential to report an additional 31 animal waste storage facilities currently not reported through PracticeKeeper.	2025: Goal was increased to reflect number of AUs already being treated. 2023: Goal was increased to reflect number of acres already being treated, and an increase in available funding for related projects.
3.12*	Urban Stormwater Management Non-Regulated Communities	Implement existing ordinances and Catalogue existing BMPs that fit into this category Stormwater Treatment – 2 acres treated Wet Ponds and Wetlands – 73 0 acres treated Dry Detention Ponds – 4 0 acres treated Dry Extended Detention Ponds - 1 acre treated Impervious surface reduction - 1-0 acre	JCP, JCCD, developing municipalities, Keystone Council of Governments, Tri County Regional Planning Commission	County-wide	Ongoing 2022-2025	Coordination/ training for municipal staff, FieldDoc batch opportunity, non-MS4 engagement (what's in it for them?), difficulty obtaining past information (MS4s typically have databases from 2003-present).	Reporting platform		5 Summer interns for reporting and verification 2 – Municipal Engineers 1 – municipal planner \$160,000 for all stormwater BMPs	\$50,000 – per year \$280,000 per year \$130,000 per year \$160,000 for all stormwater BMPs	2025: A potential urban stormwater project was identified at the Port Royal Speedway, however, there has been no contact with the Borough or Speedway since April 2025. JCCD will continue to follow up with this potential project lead. 2024: No progress to date. 2023: No progress to date. 2022: There aren't any MS4's in Juniata County. JCCD is attempting to map PSCM BMP's from NPDES permitted sites into PracticeKeeper - started doing this in 2021, will attempt to keep doing this as projects are terminated and staff time permits.	2025: Action item changed to yellow. 2023: Goals were decreased to reflect of lack of progress to date.

2025 Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Report – JUNIATA COUNTY

<p align="center">2025 Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Report – JUNIATA COUNTY</p> <p align="center">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</p>												
Action #	Description	Performance Target(s)	Responsible Party(is) and Partnerships	Geographic Location	Expected Timeline	Potential Implementation Challenges or Recommendations	Resources Available		Resources Needed		Annual Progress to Date (2021 to 2025)	Reason for Change to Action Item (2024-2025 milestone period)
							Technical	Financial	Technical	Financial		
3.13	Conservation Landscaping/Turf to Meadow Conversion	Promote new program and enable one large tract landowners' participation 70 10 acres of Conservation Landscaping	JCPG, DCNR, Chesapeake Conservancy, municipalities	Developed areas in County municipalities	2022 - 2025	Landowner education and acceptance. Existing mowing ordinances and weed ordinances can be a challenge to implementation.	Planting plan assistance		1 – FTE Municipal Planner 3 – additional FTE environmental technician	\$130,000 per year \$130,000 per year \$2,500 per acre meadow \approx \$175,000 budget for all	2025: JCCD in partnership with WPC is finalizing a lawn conversion and upland tree planting project on ~3.25 acres with landowner Jeannie Stroup. Additionally, JCCD is in discussions with two more landowners regarding possible lawn conversion projects. 2024: JCCD has been in contact with two different landowners interested in lawn conversion projects. Both projects are still in the planning phase, with an estimated implementation date sometime in 2025. 2023: No progress to date. 2022: No progress to date.	2023: Goals were decreased to reflect of lack of progress to date.
3.14*	Continue dirt and gravel road program	32 miles overall restored through past projects- Dirt & Gravel Road Erosion & Sediment Control - Driving Surface Aggregate with Outlets - 25,000 LF (5 miles) Continue to implement the program annually	JCCD	Countywide	2025	Continue D&G Road program funding. Expand Dirt and Gravel Road Program to include farm lanes.	Education, technical assistance, project oversight 1 – technical staff administering the program	\$1.4 Million since 1998	1 – FTE Clean Water Coordinator for Conservation District Dirt and Gravel Roads \$40 per foot \approx TBD	\$130,000 per year	2025: 2 DGR projects are currently under contract and planned to be completed in the coming years. The projects will include 4 cross pipes to be installed along with ~333 feet of underdrain. JCCD also has 3 LVR projects completed in 2025 with two others under contract. 2024: One Project was completed on Maze road totaling 3,300 feet with 12 new cross pipes and 769 linear feet of underdrain. 5 Projects are in the works and planned to be completed in the coming years. 2023: 1 DGR project replaced double pipes on Lost Creek (North Ridge Road) with one 15.08 ft aluminum structural plate arch pipe. 4 LVR projects in process. 1st project (Cider Press Road, Beale Township) replaces an undersized driveway pipe and a larger cross pipe to help convey stormwater to Markee Creek. Project length is 385 ft. Second project (Maze Road, Delaware Township, 3,300 ft) added 4 additional cross pipes, replaced 3 cross pipes, and installed 1,070 feet of underdrain to collect spring seeps. The third project (Goldie Hollow Road, Greenwood Township, 6,985 ft) installed 6 French Mattresses (570 feet total) and 748 feet of underdrain to collect spring seeps and road base issues, added 2 new cross pipes, and proposes hydroseeding unstable banks. 4th project (Earnie's Road, Monroe Township) will add one cross pipe, replace 1 cross pipe, install 900 feet of underdrain and additional off ROW work on 50 ft of driveway to divert water from flowing onto the road. Next round of applications is open and due Sept. 8, 2023. 2022: The D&G program has one project approximately 2/3 of a mile of driving surface aggregate being replaced in Fall of 2022. A stream crossing in the Lost Creek Watershed is slated for Spring 2023 which will replace two 30" pipes with a 14' single span structure.	

2025 Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Report – JUNIATA COUNTY

Action #	Description	Performance Target(s)	Responsible Party(is) and Partnerships	Geographic Location	Expected Timeline	Potential Implementation Challenges or Recommendations	Resources Available		Resources Needed		Annual Progress to Date (2021 to 2025)	Reason for Change to Action Item (2024-2025 milestone period)
							Technical	Financial	Technical	Financial		
3.15*	Work with PennDOT and local municipalities to reduce frequency of mowing road ditches and along roadways	Educate local municipal leaders and PennDOT on the importance of keeping higher vegetation along roadways to prevent erosion and increase nutrient uptake.	Local Municipalities, DEP and PennDOT	Countywide	2023	PennDOT's and Municipal willingness to cut back on mowing programs. DEP Chesapeake Bay Program will need to assist in the education of PennDOT.			1 FTE Clean Water Coordinator for Planning Commission	\$130,000 per year	2023: No progress to date. 2022: No progress to date.	2023: Consistent lack of progress and lack of coordination/buy in from PennDOT through State partners.
3.16	Private Funding & Grant Administration	Identify some private funding sources that may be able to supplement public funding sources/existing sources utilized for stakeholders, continue to work with partners to facilitate additional funding.	Existing project implementer networks	Countywide	2022-2023	Need to expand network, educational aspect of less common funders, logistics of utilizing unproven funding sources (or lesser known). Grant administration is a challenge due to limited staff and time-consuming nature of grant reporting and administration.	Financial services		1 FTE Conservation District Grant Manager 1 FTE Planning Commission Grant Manager 2 – staff accountants	\$130,000 per year \$130,000 per year \$140,000 per year	2025: JCCD is partnering with Land O' Lakes on 4 different ACAP projects. 2024: JCCD partnered with Organic Valley to complete one ACAP project. JCCD is also currently partnering with Land O' Lakes to complete another ACAP project. 2023: FFAR and Walton Family Foundation opportunities did not proceed. No progress to report from County-led activities. The Alliance for the Chesapeake Bay has partnered and applied for NFWF Most Effective Basins for 3 projects in Juniata County. Should hear back on those grants in October 2023. Land O'Lakes also has a contract with at least one Dairy project that has partnered with NRCS. 2022: HRG and LFT are exploring potential opportunities to apply to the Foundation for Food & Agriculture Research (FFAR) and the Walton Family Foundation's new program, Achieving Conservation through Targeting Information, Outreach and Networking (ACTION) to support innovative research that increases adoption of conservation practices. A potential grant application would bolster farm visits	

2025 Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Report – JUNIATA COUNTY

Action #	Description	Performance Target(s)	Responsible Party(is) and Partnerships	Geographic Location	Expected Timeline	Potential Implementation Challenges or Recommendations	Resources Available		Resources Needed		Annual Progress to Date (2021 to 2025)	Reason for Change to Action Item (2024-2025 milestone period)
							Technical	Financial	Technical	Financial		
Priority Initiative 4: Research, Education, and Training												
4.10	Develop new water quality monitoring data into Chesapeake Data Explorer/Chesapeake Monitoring Cooperative database	Successful data input/acceptance by ALLARM and other environmental groups program by end of 2025	ALLARM, Keystone Water Resources Center, Juniata College, Juniata Watershed Alliance	Countywide	2025	Data precision, QAQC, opportunity to educate landowners about local stream health and what they can do about it. Currently no groups doing water quality monitoring.	Watershed specialist		Volunteers for Water quality monitoring New monitoring equipment 1 – watershed specialist 3 – additional FTE environmental technician 2 – stream biologist/environmental scientist	N/A \$10,000 \$130,000 per year \$130,000 per year \$280,000 per year	2025: JCCD watershed specialist has implemented a new water monitoring program, monitoring ~24 surface water samples throughout all watersheds in Juniata County on a quarterly basis. Discussions with ALLARM have halted as of now. 2024: HRG and JCCD met with ALLARM with interest in starting a Stream Team to provide local water quality monitoring. This summer time was spent to develop stronger relationships with local watershed groups. ALLARM plans to provide a presentation about the program in the fall. 2023: Capacity changes with the Coordinator and Conservation Districts has pushed the convening of the Watershed Specialists. We will reevaluate in 2024 if this should be a priority at the County level or if it should be scaled to the State or Federal level. 2022: In the fall of 2022, HRG will convene the Watershed Specialist to identify the largest "gaps" of water quality monitoring data, develop strategies to comprehensively incorporate new data to support CAP efforts. ALLARM is in the process of developing citizen scientist monitoring data collection protocols to	
4.2	Supporting Juniata Watershed Alliance for short-term success and long-term sustainability aligning with their goals	Continue to grow the Juniata Watershed Alliance to encompass additional members and ensure the Watershed Alliance can maintain 501(c)3 status. Work with the Alliance to support with outreach, engagement, new project identification and implementation	Juniata Watershed Alliance	Juniata Watershed Alliance – countywide	Ongoing	Willing volunteers and leaders to establish and run watershed organizations to be successful and support with implementation Juniata Watershed Alliance only has 6-8 members and current scope may be too large. Need to redefine focus and look at establishment of new watershed groups. Maintaining 501(c)3 status can be challenging.	Social media shares Project development support	1 – FTE Clean Water Coordinator for Planning Commission 1 – FTE Clean Watershed Specialist \$5,000 per organization to produce promotional materials (hats, shirts, stickers) for members \$5,000 per year	\$130,000 per year \$130,000 per year \$5,000 per year	2025: JWA board of directors are looking at having the Alliance go dormant as they wait for new board members with more time to assist with JWA projects. 2024: JWA has taken a halt with the introduction of new watershed staff. Nick is interested in working with JWA on future projects and plans to hold an outreach meeting/event in the coming future. 2023: JWA is actively working with JCCD on many outreach events, Riparian Rangers, Canal House Cleanup (stream side and Riparian Corridor), and will be co-hosting a CREP field day in October. 2022: JWA is actively working with JCCD. There are many outreach events, riparian installations, and participation in the Riparian Rangers.		