

**Pennsylvania Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Milestone Reporting**

- *Progress Reporting Period: January 1, 2021 – December 30, 2021 (Progress to Date for 2020-2021)*
- *Milestone Reporting Period: January 2, 2022 – December 30, 2023 (Milestone Adjustments for 2022-2023)*

Action #	Description	Performance Target(s) and 2022-2023 Updates	Responsible Party(ies) and Partnerships	Geographic Location	Expected Timeline	Potential Implementation Challenges or Recommendations	Resources Available Technical and Financial	Resources Needed Technical and Financial	Progress to Date (2020 - 2021) and Milestone Adjustments (2022 – 2023)
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**Priority Initiative 1: Communications and Outreach**

**Section 2, State Action, Numeric Commitments**

2.1.1A	Continue communication, outreach and stewardship programs to increase the use of conservation tillage and no-till practices.	306,196 acres in conservation tillage; 805,778 acres in no-till	PDA, SCC, CDs, CCAs, Private Consultants, Penn State Extension, No Till Alliance, Farmland Preservation, Local Farmland Trusts / Conservancies, PA Farm Bureau	Chesapeake Bay	December 2025				<p><b>2020 Update:</b> All state agencies, WIP action leaders and partner organizations continue to communicate the message and the availability of funding (technical or financial). This BMP is encouraged and emphasized. PA has invested significant resources through the REAP tax credit program to assist PA farmers in purchasing No-till equipment.</p> <p><b>2021 Update:</b> All state agencies and partner organizations continue to communicate the message and the availability of funding (technical or financial). This BMP is encouraged and emphasized. As shown in the Numeric Milestones, submitted progress through 2021 shows an increase in reported no-till. PA has invested significant resources through the REAP tax credit program to assist PA farmers in purchasing No-till equipment. In 2021, \$3.5 million in tax credits were awarded for no-till equipment through REAP.</p> <p>The PA No Till Alliance continues to assist in education / outreach/ training / etc. See <a href="https://panotill.org/">https://panotill.org/</a></p>
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<p><b>2.1.2A</b></p>	<p>Continue communication, outreach and stewardship programs to increase implementation of cover crops.</p>	<p>547,695 acres with fall nutrients, traditional cover crop; 161,601 acres of land without fall nutrients, traditional cover crop; 124,106 acres no fall nutrients and harvested crop</p>	<p>PDA, SCC, CDs, CCAs, Private Consultants, Penn State Extension, No Till Alliance, Farmland Preservation, Local Farmland Trusts/Conservancies, PA Farm Bureau</p>	<p>Chesapeake Bay</p>	<p>December 2025</p>	<p>Challenges include CBP definition of cover crop and the inability to report commodity cover crop via transect survey methodology.</p>			<p><b>2020 Update:</b> All state agencies, WIP action leaders and partner organizations continue to communicate the message and the availability of funding (technical or financial). This BMP is encouraged and emphasized. REAP made some changes to the cover crop BMPs for FY 2019-20 and beyond. Also, Cover Crops are eligible for 90% Tax Credit in any area covered by an agricultural TMDL.</p> <p><b>2021 Update:</b> All state agencies and partner organizations continue to communicate the message and the availability of funding (technical or financial). This BMP is encouraged and emphasized. As shown in the Numeric Milestones, submitted progress through 2021 shows an increase in reported cover crop acres. REAP provides that Cover Crops are eligible for 90% Tax Credit in any area covered by an agricultural TMDL. In 2021, \$210,500 was awarded in tax credits for cover crops and roller/crimpers thru the REAP tax credit program.</p> <p>Nearly 400 acres of cover crops were planted last fall utilizing \$13,109 of CEG funds.</p>
<p><b>2.1.3A</b></p>	<p>Continue communication, outreach and stewardship programs to increase implementation of pasture management.</p>	<p>180,201 acres of land used for pasture would follow NRCS Prescribed Grazing Plan or Resource Improvement Practice.</p>	<p>NRCS, Penn State Extension, Private Consultants, CDs</p>			<p>Challenges include CBP definition of Prescribed Grazing and non-alignment with PA State regulatory requirements under Chapter 91 Manure Management and Chapter 102 Ag E&amp;S.</p>			<p><b>2020 Update:</b> All state agencies, WIP action leaders and partner organizations continue to communicate the message and the availability of funding (technical or financial). This BMP is encouraged and emphasized</p> <p><b>2021 Update:</b> All state agencies and partner organizations continue to communicate the message and the availability of funding (technical or financial). This BMP is encouraged and emphasized. As shown in the Numeric Milestones, submitted progress through 2021 shows an increase</p>

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2.1.4A	Communicate with EPA Region 3 Agricultural Liaison, Ag Permitting, Compliance and Enforcement Staff	Provide status updates related to agricultural programs and BMP implementation	DEP, SCC, EPA	Statewide	Quarterly			<p><b>2020 Update:</b> Initial call held with EPA permitting, compliance, and agriculture staff on November 24, 2020 to discuss the Key Areas to Address in EPA’s Milestone Evaluation.</p> <p><b>2021 Update:</b> DEP and SCC meet with EPA CBPO and Water Division staff on a quarterly basis to discuss WIP progress. DEP staff also meets with EPA CBPO on a bi-weekly and/or monthly basis to discuss technical assistance needs as well as model process needs. DEP and SCC responded to informal questions regarding Pennsylvania’s agricultural programs submitted by EPA Water Division in written format as well as via virtual conference call. In 2022, the EPA Animal Agriculture Programs Assessment will be conducted.</p>
2.1.1F	Implement a comprehensive communication/outreach strategy to engage farmers/landowners in planting and maintaining riparian forest buffers.	85,000ac. of forest buffers planted on agricultural lands, and 3,100 acres of forest buffers on developed/non-ag lands.	DCNR, DEP, PSC, RFBAC, PA WIP III Forestry Workgroup, SCC, PDA, PSU, etc.	Chesapeake Bay	By 2022 Continue implementation through 2025	Coordination, scheduling, lack of funding for marketing/communications/outreach/education, etc.		<p><b>2020 Update:</b> DCNR, in cooperation with its partners via the RFBAC (Riparian Forest Buffer Advisory Committee), launched a two-fold outreach effort in June 2020 that included a direct mailing to riparian area landowners and a public media campaign: <a href="https://www.dcnr.pa.gov/Conservation/Water/RiparianBuffers/BufferMyStream/Pages/default.aspx">https://www.dcnr.pa.gov/Conservation/Water/RiparianBuffers/BufferMyStream/Pages/default.aspx</a> Collaboration continues with RFBAC and DCNR, and has discussed with PA Farm Bureau opportunities to enhance outreach and communications with PA farmers.</p>

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2.1.2F	Implement a communication/outreach program to engage a variety of turf owners to plant trees and meadows on their properties.	5K acres of "Urban Forest Expansion" (turf to trees) + 5K acres of "Conservation Landscaping" (turf to meadow).	PRPS, DCNR, DEP, agencies and partners, municipalities and parks, etc.	Chesapeake Bay	By 2023	Brand new program-Coordination, scheduling, lack of funding, etc.		<p><b>2020 Update:</b>                  DCNR, in cooperation with its partners, formed a new Lawn Conversion Advisory Committee in early 2020. This committee includes a variety of partners and stakeholders who will work together to inform future outreach and communications efforts. DCNR also launched a dedicated lawn conversion website in 2020  <a href="https://www.dcnr.pa.gov/Conservation/Water/LawnConversion/Pages/default.aspx">https://www.dcnr.pa.gov/Conservation/Water/LawnConversion/Pages/default.aspx</a>, and has dedicated a staff person to coordinate this work.</p> <p><b>2021 Update:</b></p>

									DCNR continues to work with the LCAC to develop outreach materials and a DIY guide to small lawn conversion projects. Some outreach materials will be ready by the end of 2021. But developing a steady stream of implementation funding for lawn conversion implementation projects has been a challenge, which has dampened outreach efforts as landowners have been frustrated. Their interest in the new program is growing, but DCNR has been unable to implement many projects. As soon as a steady mechanism for funding has been developed, DCNR will reinvigorate outreach efforts around Lawn Conversion.
<b>2.1.3F</b>	Communicate the importance and values of forests and farmland to facilitate and encourage state and local land conservation programs.	Increase conserved lands both in the headwaters of the PA Chesapeake Bay watershed and near developing areas.	DCNR, DEP, PALTA, etc.	Chesapeake Bay	By 2023	Coordination, scheduling, lack of funding.			<p><b>2020 Update:</b> DCNR Bureau of Forestry celebrated its 125<sup>th</sup> anniversary in 2020; finalized the statewide Forest Action Plan, and is currently drafting a revised strategic plan with a 30-year planning horizon. As part of these planning efforts, DCNR conducted public polling on the importance of forests to people, and will incorporate these results into future work.</p> <p><b>2021 Update:</b> DCNR continues to engage in numerous communications and outreach events and methods around the importance of forests and conservation, including social media posts <i>Good Natured Pennsylvanians</i>, newsletters such as <i>the Resource</i>, tours, meetings, and other events. Engaging state and local leaders in buffer planting events, including human health benefits: <a href="https://www.media.pa.gov/pages/DCNR_details.aspx?newsid=739">https://www.media.pa.gov/pages/DCNR_details.aspx?newsid=739</a>, <a href="https://www.media.pa.gov/pages/DCNR_details.aspx?newsid=748">https://www.media.pa.gov/pages/DCNR_details.aspx?newsid=748</a>. DCNR's work initiated several news articles published in The Bay Journal and Pennsylvania Forests. The Forest Action Plan was completed and announced: <a href="https://www.media.pa.gov/Pages/DCNR_details.aspx?newsid=770">https://www.media.pa.gov/Pages/DCNR_details.aspx?newsid=770</a>. A Walk In Penns</p>

									Woods event occurs annually: <a href="https://sites.psu.edu/walkinpennswoods/">https://sites.psu.edu/walkinpennswoods/</a>
<b>2.1.4F</b>	Emphasize the full range of benefits & co-benefits of stream and wetland restoration to facilitate additional implementation.	Increased acres of wetlands restored to approximately 400 acres annually; increased feet of stream restoration projects implemented to approximately 60,000 linear feet annually.	DEP and appropriate NGO partners.	Chesapeake Bay	By 2023	Coordination, scheduling, lack of funding.	<p>DEP staff are developing stream restoration training courses for County Conservation District and DEP staff on the Clean Water Academy</p> <p>DEP staff reviews of legacy sediment removal floodplain restoration (FR-LSR) projects that are subject to state and federal regulations including Chapter 102, Chapter 105/106 and Section 401 Water Quality Certifications. Currently approved FR-LSR plans will provide approximately 50 acres of wetland restoration and 35,000 linear feet of stream restoration.</p> <p>Chapter 105/Section 401 WQC revisions currently being reviewed will further support</p>	<p>Four Wetlands Encroachments &amp; Training Division (WET) staff and \$40 million in annual project funding to facilitate project implementation.</p> <p>Eight staff to facilitate development of the banking industry in PA and to begin implementation of the ILF program in 2021.</p> <p>Dedicated funding sources to support demonstration projects, including monitoring and research of those projects.</p>	<p><b>2020 Update:</b> No additional staff have been added to program complement.</p> <p><a href="#">The Pennsylvanian’s Guide to Permitting for Watershed Improvement Projects</a> was published in December 2020.</p> <p>Program staff participated in CBP’s efforts to improve stream and wetland restoration definitions and crediting for Legacy Sediment Removal (LSR) projects (2020 Consensus Recommendations to Improve Protocols 2 and 3 for Defining Stream Restoration Pollutant Removal Credits.)</p> <p>Reviewed and approved three compensation banking projects completed since last data reporting. Wetland acres and stream linear footage will be reported. Initiation of one In-lieu Fee (ILF) project began in 2020.</p> <p>Compensation crediting guidance and submission of Draft ILF Instrument is to occur at the end of the 2020 reporting period.</p> <p><b>2021 Update:</b> Compensation crediting guidance and submission of Draft ILF Instrument did not occur by the end of the 2020 reporting period and are still in progress as of 9/29/2021. Program staff continue to work diligently toward the goal of submitting the Draft ILF Instrument by early 2022. As shown in the Numeric Milestones, submitted progress through 2021 shows an increase in reported urban stream restoration, due to increased reporting from MS4 permittees to the Chesapeake Bay Watershed Model.</p>

							implementation of aquatic resource restoration projects.		
2.1.1S	Continue to engage with municipalities and others on the benefits of implementing and maintaining stormwater management practices through web-based trainings, in-person meetings, workshops, etc.	Implementation of stormwater BMPs within MS4 PRPs, construction stormwater permits, and developed areas outside of the scope of the permitting programs	DEP, PMAA, CCAP, Conservation Districts, Penn State	Chesapeake Bay	Ongoing			<p>Limitations on the amount of training that can be developed due to current DEP staff levels.</p> <p><b>2020 Update:</b> DEP continues to assist MS4s with permit implementation. DEP has worked with Penn State Extension to produce “Urban Stormwater Basics” training courses that will be published to DEP’s Clean Water Academy for public use.</p> <p><a href="#">The Pennsylvanian’s Guide to Permitting for Watershed Improvement Projects</a> was published in December 2020.</p> <p><b>2021 Update:</b> DEP continues to assist MS4s with permit implementation. DEP developed guidance on stream restoration crediting (crediting checklists and Clean Water Academy training). Additionally, DEP coordinated with EPA to present a series of MS4 Forums for municipalities located in the Chesapeake Bay Watershed. These forums gave municipalities the opportunity to learn from each other and share lessons learned about BMP project implementation. All of these presentations are posted for permittees to reference on Clean Water Academy. As shown in the Numeric Milestones, submitted progress through 2021 shows an increase in reported urban stream restoration, due to increased reporting from MS4 permittees to the Chesapeake Bay Watershed Model. Additionally, MS4 communities receive funds through the Growing Greener Plus and CAP Implementation Grant programs to install BMPs that are identified in Pollutant Reduction Plans and Countywide Action Plans.</p>	

<p><b>2.1.2S</b></p>	<p>Provide more awareness of the expanded opportunities for BMP implementation in connection with the MS4 permit requirements</p>	<p>Demonstrate success in improvements to local water quality using the MS4 Flexibilities</p>	<p>DEP, EPA</p>	<p>Statewide</p>	<p>Begins October 2019</p>				<p><b>2020 Update:</b> DEP has been in discussions with partners in Lancaster County for several potential projects that may utilize the flexibilities DEP has provided MS4s to work with the agricultural sector.</p> <p><b>2021 Update:</b> DEP continues to respond to inquiries from permittees looking to implement BMP projects within the expanded opportunity areas. DEP Southcentral Regional Office has scheduled weekly pre-application meetings for York and Lancaster counties to bring their proposed projects and includes their MS4 permitting chief in those meetings as well as the Waterways and Wetlands Program staff. More information regarding the MS4 flexibilities is available under FAQ #69 at: <a href="https://files.dep.state.pa.us/Water/BNPNSM/StormwaterManagement/MunicipalStormwater/MS4_FAQ.pdf">https://files.dep.state.pa.us/Water/BNPNSM/StormwaterManagement/MunicipalStormwater/MS4_FAQ.pdf</a></p>
<p><b>2.1.3S</b></p>	<p>Track and incentivize MS4 and nonpoint source coordination and collaboration</p>	<p>Document utilization of MS4 and nonpoint source flexibility through PRPs and Annual Reports</p> <p>Incentivize collaborative approaches through Countywide Action Plan (CAP) development and implementation funding and support</p>	<p>DEP, Chesapeake Bay Counties, MS4s</p>	<p>Statewide</p>	<p>Begins October 2019</p>				<p><b>2020 Update:</b> MS4s submitted annual reports on or before 9/30/2020 and revisions to PRPs to incorporate flexibilities are possible in the future.</p> <p><b>2021 Update:</b> DEP strongly supports joint or collaborative efforts for BMP projects to satisfy other MS4 permit obligations. The Collaboration section of DEP's MS4 website was updated this year to include recommendations on developing written agreements to guide collaborations, and list examples of permittees who are part of collaborative efforts. CAP development and implementation has led to strengthened partnerships across sectors.</p>

2.1.4S	Continue dialogue with EPA regarding expanding opportunities for MS4 implementation		DEP, EPA	Statewide	Ongoing				<p><b>2020 Update:</b> This collaboration with EPA is ongoing.</p> <p><b>2021 Update:</b> DEP continues to have ongoing discussions with EPA on this topic. DEP also has discussed this topic with county CAP leaders and municipal officials.</p>
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**Section 3, Countywide Actions**

3.1.1	Continue to develop and collaborate on communication and outreach strategies to support CAP implementation in all counties, with a particular focus on Tier 3 and 4 counties who have recently completed CAPs.	Webinars and calls to provide overview of WIP, define the expectations, and discuss next steps with Tier 3 & 4 counties. Designed to prepare these counties for CAP implementation, the second phase of the WIP process.	DEP, Technical Coordinator, Bay office, Agencies Outreach, Communication contractor, Communication and Engagement Workgroup, External Contractor, DEP Region CAP Support Teams	Tier 3 & 4 counties	Ongoing	<p>DEP/state staffing limitations and funding limitations around human resource needs</p> <p>Continued participation and engagement of counties due to staffing and funding limitations</p> <p>Funding for CAP implementation</p>	See Funding and Resources Section, <i>Resources Needed Phase 2</i> columns below	See Funding and Resources Section, <i>Resources Needed Phase 2</i> columns below	<p><b>2020 Update:</b> DEP created DEP Regional CAP Support Teams in the Northeast, Northcentral, and Southcentral regions to aid DEP Chesapeake Bay Office (DEP) in outreach and support to the Tier 3 and 4 Counties. With their support, DEP conducted webinars and extensive outreach to Tier 3 and 4 conservation districts, planning commissions, and county commissioners.</p> <p>The DEP conducted a Region CAP Support Team Workshop to educate DEP region staff on the WIP and CAP project. DEP and the Region CAP Support Teams conduct weekly calls to address concerns and questions that arise from the outreach to the Tier 3 and 4 counties, as well as calls with county leaders.</p> <p>The DEP created an extensive library of resources and courses on DEPs Clean Water Academy that serves as an information and document sharing portal for the Tier 3 and 4 counties.</p> <p><b>2021 Update:</b> The DEP and the DEP Region CAP Support Teams met with the Tier 3 and 4 counties to secure their participation in the development of a CAP. This led to a 100%</p>
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									<p>participation from the Tier 3 and 4 Counties.</p> <p>The DEP conducted the 2<sup>nd</sup> Coordinator Training Academy in a fully virtual format due to COVID-19 constraints for the Tier 3 and 4 counties to educate the counties on the Phase 3 WIP, what the CAP development process looks like, what resources are available, and how to write their CAPs.</p> <p>The Tier 3 and 4 FAQs and Coordinator Grant FAQs were expanded to CAP Technical, CAP Grant, and County CAP FAQs, and were utilized as ever-expanding documents where all questions from the counties are addressed.</p> <p>The DEP created three resource email accounts: Pilot and Tier 2 counties, Tier 3 and 4 counties, and CAP Grants. This allows the DEP to better track all questions from the counties and maximizes efficiency in response with limited staff resources.</p> <p>DEP developed a CAP Project Tracking spreadsheet to track projects, milestones, and contacts and shares it with internal team members using an easy to access system.</p> <p>DEP maintains and continually updates the extensive library of materials on the CWA. Given the volume of materials available to counties, DEP reorganized the CWA materials for a more user-friendly experience.</p>
3.1.2	Conduct outreach via webinars and one-on-one meetings to provide support to the counties through the implementation process.	Tier 3 & 4 county regional groupings will transition to, and begin CAP implementation utilizing their assigned external coordinator, DEP and the DEP Region CAP Support Team.	DEP, Technical Coordinator, Bay office, Agencies Outreach, Communication contractor, Communication	Tier 3 & 4 counties	Ongoing	State staffing support  No new dedicated funding streams  County staffing issues may hinder county abilities to utilize all funds that are	See Funding and Resources Section, <i>Resources Needed Phase 2</i> columns below	See Funding and Resources Section, <i>Resources Needed Phase 2</i> columns below	<p><b>2020 Update:</b> The DEP Regional Support Teams and the DEP Chesapeake Bay Office has conducted several outreach meetings with each of the 26 Tier 3 and 4 counties, to present the Countywide Action Planning (CAP) process, answer questions, troubleshoot</p>

			<p>and Engagement Workgroup, External Contractor, DEP Region CAP Support Team</p>			<p>available due to staff concerns, based on experience with Pilot and Tier 2 counties.</p>		<p>issues, present materials, and work through next steps.</p> <p>The Susquehanna River Basin Commission (SRBC) conducted meetings with each county to review their Clean Water Technical Toolbox and answer technical questions.</p> <p>DEP has developed several Tier 3 and 4 and Coordinator Grant FAQs to assist the Tier 3 and 4 counties.</p> <p>The Tier 3 and 4 counties have organized into 10 regional groups. Each of these 10 groups will share a coordinator position. Grant applications for each coordinator position have been submitted.</p> <p><b>2021 Update:</b> The Tier 3 and 4 counties have completed and submitted their CAPs, with 30 counties completing individual CAPs and 4 counties completing a regional CAP.</p> <p>The DEP, with assistance from Consulting with a Purpose, developed a comprehensive timeline with key benchmarks identified to assist the counties with strategically planning through and past the CAP planning process.</p> <p>DEP Chesapeake Bay Office staff established biweekly Touchbase Tuesday webinars designed to meet with the coordinators and county lead entities to provide trainings and opportunities for collaboration. DEP Chesapeake Bay Office and DEP Region CAP Support Teams transitioned from the Touchbase Tuesdays to monthly calls with the county groupings to provide more individualized support as the counties began finalizing their CAPs. These monthly calls will continue through implementation. The Touchbase Tuesday calls are being utilized for larger trainings as needed.</p>
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3.1.3	<p>CAP implementation across Pilot, Tier 2,3 and 4 counties.</p>	<p>External coordinator designated for each Pilot and Tier 2 county to assist with CAP planning and implementation efforts.</p> <p>2022-2023 Update: there will be an external coordinator designated for each Pilot and Tier 2 county and each Tier 3 and 4 county grouping to assist with CAP progress and implementation efforts. Focus will be on CAP implementation in support of PA's WIP goals. Extensive staff time will be dedicated to WIP/CAP project management and coordination to support counties in CAP implementation and to work with state action leaders in supporting this effort. Continued expansion of services outlined in the 2021 Milestone Update.</p> <p>Region CAP Support Teams will continue to support this effort.</p> <p>External coordinators will also continue to be funded.</p>	<p>DEP, Technical Coordinator, Bay office, Agencies, Outreach, Communication contractor, Communication and Engagement Workgroup, External Contractor</p>	<p>Pilot and Tier 2 Counties</p> <p>2022-23 Update: Pilot, Tier 2, 3 and 4 counties</p>	<p>Begins January 2020</p>	<p>State staffing support</p> <p>Internal and External Coordination limited due to funding limitations for human resources</p>	<p>See Funding and Resources Section, <i>Resources Needed Phase 1 &amp; 2</i> columns below</p>	<p>See Funding and Resources Section, <i>Resources Needed Phase 1 &amp; 2</i> columns below</p>	<p><b>2020 Update:</b></p> <p>Pilot Counties have begun implementation of their Countywide Action Plans (CAPs). Counties were able to apply for CAP Implementation Grant Funds to support CAP implementation.</p> <p>Lancaster, York, Cumberland and Franklin County received Conservation Excellence Grant (CEG) funding to support implementation efforts.</p> <p>Community Clean Water Action Plan Coordinators were hired to support implementation. Tier 2 counties each hired a Community Clean Water Action Plan Coordinator to support plan development. Tier 2 counties are in the final stages of finalizing their CAPs.</p> <p><b>2021 Update:</b></p> <p>All counties (Pilot, Tier 2,3,4) have finalized and are implementing CAPs. All counties were eligible to apply for CAP Implementation Grant Funds to support CAP implementation. DEP is providing nearly \$17.4 million in CAP Coordinator and Implementation Grant funds for 2022 calendar year (to include EPA Ag and EJ MEB grant funds and CBRAP funds for BMP Verification).</p> <p>Conservation Excellence Grant (CEG) funding is also available to support implementation efforts in several high loading counties.</p>

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<p><b>3.1.4</b></p>	<p>Seek staffing to support this large-scale coordination and support effort.</p>	<p>An external contractor will work one on one with the pilot counties to begin the implementation of their countywide action plan.</p> <p>2022-2023 Update: and with one additional position added at the end of 2021, the internal coordinators will be provided specific territories throughout Pennsylvania’s Chesapeake Bay Watershed for efficient and effective coordination efforts.</p> <p>Facilitation support and marketing services will continue with Consulting with a Purpose and Water Words That Work in support of extensive WIP and CAP outreach and engagement needs.</p>	<p>DEP, Technical Coordinator, Bay office, Agencies Outreach, Communication contractor, Communication and Engagement Workgroup, External Contractor</p>	<p>Pilot Counties</p>	<p>Begins January 2020</p>	<p>State staffing support</p> <p>Internal and External Coordination</p> <p>Federal funding for Tier 2 and Pilot Counties was not provided in a timely manner, thereby pushing our schedule with Tier 3 and 4 counties back.</p>	<p>See Funding and Resources Section, <i>Resources Needed Phase 1</i> columns below</p>	<p>See Funding and Resources Section, <i>Resources Needed Phase 1</i> columns below</p>	<p><b>2020 Update:</b> Each Pilot County and Tier 2 County received \$100,000 in state Environmental Stewardship Funds to hire a Community Clean Water Action Plan Coordinator to support CAP implementation.</p> <p>The Community Clean Water Action Plan Coordinator application has been released for Tier 3 and 4 counties.</p> <p>Two additional Chesapeake Bay Office Coordinators were hired to support efforts.</p> <p><b>2021 Update:</b> External coordinators have been hired by county partners for each Pilot and Tier 2 county and each Tier 3 and 4 county grouping to assist with CAP planning and implementation efforts.</p> <p>Extensive facilitation support and marketing services were utilized in 2021 through contracts with Consulting with a Purpose and Water Words That Work in support of extensive WIP and CAP outreach and engagement needs during planning and implementation. Some examples of these efforts include the 2020 Progress Report Summary and the 2020 Healthy Waters Healthy Communities Annual Report. Both of these documents are published on the <a href="#">Tracking Pennsylvania’s Progress</a> website.</p>

**Section 9, Climate Change**

<p><b>9.1.1C</b></p>	<p>Pennsylvania Climate Impacts Assessment</p>	<p>Reduce an additional 1.81 million pounds of nitrogen and 0.095 million pounds of phosphorus delivered to the Chesapeake Bay due to climate change by 2025.</p>	<p>DEP</p>	<p>Statewide</p>	<p>Ongoing</p>				<p><b>2021 Update:</b> The 2021 Pennsylvania Climate Impacts Assessment was released in May 2021. This is a new milestone for 2022-2023.</p>
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9.1.2C	Pennsylvania Climate Action Plan	<p>Reduce an additional 1.81 million pounds of nitrogen and 0.095 million pounds of phosphorus delivered to the Chesapeake Bay due to climate change by 2025.</p> <p>A Climate Action Plan for Pennsylvania is conducted every 3 years, per Act 70 of 2008. The most recent Pennsylvania Climate Action Plan can be found on DEP’s website: <a href="#">PA Climate Action Plan</a></p>	DEP	Statewide	Ongoing			<p><b>2021 Update:</b> The 2021 Pennsylvania Climate Action Plan was released in September 2021. This is a new milestone for 2022-2023.</p>
9.1.3C	Local Climate Action Program	<p>Reduce an additional 1.81 million pounds of nitrogen and 0.095 million pounds of phosphorus delivered to the Chesapeake Bay due to climate change by 2025.</p> <p>The Local Climate Action Program provides technical assistance to local governments to develop local greenhouse</p>	DEP	Statewide	Began 2020			<p><b>2021 Update:</b> Currently, 12 local governments are participating in the program for 2021/2022 fiscal year. This is a new milestone for 2022-2023.</p>

		<p>gas inventories and climate action plans. More information about the program can be found on DEP’s website: <a href="#">Local Climate Action Program</a></p> <p>2022-2023 Update: Draft climate action plans are due from participating municipalities in June 2022. DEP is working to find a partner to take on the program for future years.</p>						
9.1.4C	DEP Energy Programs Office (EPO) Clean Energy Program (CEP) Plan	<p>Reduce an additional 1.81 million pounds of nitrogen and 0.095 million pounds of phosphorus delivered to the Chesapeake Bay due to climate change by 2025.</p> <p>The CEP Plan is intended to guide EPO in fulfilling its obligations to support energy conservation and efficiency, advance clean energy technologies, and provide energy security and resilience while improving the environment and health of Pennsylvanians through education, outreach, funding, and technical support. More information about the CEP can be found here: <a href="#">Clean Energy Program Plan</a></p>	DEP	Statewide	Ongoing			<p><b>2021 Update:</b> DEP released the CEP Plan in November 2020 and has used the plan to better align Department goals and programs. This is a new milestone for 2022-2023.</p>
9.1.5C	Annual Pennsylvania Greenhouse Gas Inventory	Reduce an additional 1.81 million pounds of nitrogen and 0.095 million pounds of phosphorus delivered to the	DEP	Statewide	Ongoing	DEP is currently looking for opportunities to shorten the lag time between data availability and report publication.		<p><b>2021 Update:</b> The 2021 PA GHG Inventory report (2018 data year) is complete. This is a new milestone for 2022-2023.</p>

		Chesapeake Bay due to climate change by 2025.						
		The GHG inventory is updated annually, per Act 70 of 2008, and published mid-year on DEP's website: <a href="#">GHG Inventory</a>						
<b>Section 10, Communication and Engagement Strategy</b>								
<b>10.1.2</b>	Develop the outreach materials, webinars, templates for letters and mailings and success stories identified by the Communications and Engagement (C&E) Workgroup for their use in message delivery and outreach.	<p>Final materials will be distributed to the C&amp; E Workgroup materials as they are finished for their use.</p> <p>2022-2023 Update: facilitation support and marketing services will continue with Consulting with a Purpose and Water Words That Work in support of extensive WIP and CAP outreach and engagement needs.</p> <p>DEP's Communications Office will continue to provide support through interviews, coordinating media events, and news releases highlighting Phase 3 WIP and CAP progress and efforts.</p>	DEP/DCNR/PDA Communication Office, DEP		As needed		\$200,000	<p><b>2020 Update:</b> Outreach efforts for C&amp;E Workgroup: DEP's contractors, Consulting with a Purpose and Water Words That Work, worked with the C&amp;E Workgroup to identify outreach and engagement needs for local partners in different sectors and geographies, and then worked in coordination with the C&amp;E Workgroup to develop county leader invitation to participate letters and documents, webinars and social media campaigns that were used to explain the WIP and CAP efforts. These materials built the foundation for outreach and engagement for Tier 1, 2, 3 and 4 outreach.</p> <p>Outreach efforts for CAP county coordinators: DEP maintains a contract with Water Words That Work to provide communication support to the Phase 3 WIP. Water Words That Work has produced communication templates, PPTs, brochures and training to county coordinators to support local efforts. Water Words That Work continues to provide communication support for state lead efforts.</p> <p>DEP Communications Office developed talking points document for integrated messaging at county and state levels. Used by all counties.</p> <p><b>2021 Update:</b> Extensive facilitation support and marketing services were utilized in 2021 through contracts with Consulting with a</p>

								<p>Purpose and Water Words That Work in support of extensive WIP and CAP outreach and engagement needs during planning and implementation.</p> <p>DEP’s Communications Office provided support through interviews, media events and news releases highlighting Phase 3 WIP and CAP progress and efforts.</p> <p>In April 2021, DEP Chesapeake Bay Office Director participated in the hour-long Chesapeake Bay Summit, hosted by Maryland Public Television and shown on Pennsylvania Public Broadcasting Station.</p> <p>Talking points and presentations were developed and provided through numerous public participation outlets, including meetings hosted by the State Conservation Commission Board of Directors; DEP Agriculture Advisory Board; DEP Water Resources Advisory Committee; DEP Citizens Advisory Council; County Commissioners Association of Pennsylvania; PA Farm Bureau; Chesapeake Bay Program Citizens Advisory Committee; and the Chesapeake Bay Commission.</p>
10.1.3	Finalize the DEP Web-based StoryMap.	Final StoryMap	DEP Communication Office		March 2020		\$20,000	<p><b>2020 Update:</b> Launched storymap focused on public education during Chesapeake Bay Watershed Awareness Week in June. Promoted via press release, a social media campaign, and stakeholder outreach. Over 3,500 views since launch. <a href="#">Healthy Waters, Healthy Communities.</a></p> <p><b>2021 Update:</b> Completed in 2020 and will be incorporated in the 2022 Integrated Water Quality Report story map in 2022.</p>
10.1.4	Schedule and participate in focus groups, forums and workshops, as appropriate.	Presentations and summaries of such events and the input provided	C & E Workgroup members; DEP/DCNR/PDA	Chesapeake Bay	As needed			<p><b>2020 Update:</b> DEP worked with the Bay Local Government Advisory Committee and</p>

		will be shared as appropriate.	Communication Offices, DEP					<p>participated in WIP listening sessions conducted by LGAC. Outreach was also conducted with nonprofit partners.</p> <p>WIP Steering Committee Workgroup chairs participated in sector-specific outreach to the agriculture community and webinars were held with local leaders.</p> <p><b>2021 Update:</b> Completed in 2020</p>
10.1.5	<p>Communications and Engagement Workgroup members will use the delivery tools developed to reach their respective constituents through mailings, newsletters, their respective websites, conferences, workshops, etc. about the importance of clean water and the goals of the Phase 3 WIP.</p>	<p>Mailings, newsletters, websites, conferences and workshops of C&amp;E Workgroup are utilized as appropriate to convey the message developed.</p> <p>DEP will continue to publish its informative monthly WIP newsletter, weekly emails to CAP partners, and update the website.</p>	<p>C &amp; E Workgroup members; DEP/DCNR/PDA Communication Offices, DEP</p>	Chesapeake Bay	Between now and 2025			<p><b>2020 Update:</b> DEP Communications Office launched the Phase 3 WIP News monthly newsletter: a go-to resource for the latest updates at the state and county levels and in funding, data and reporting, and other areas of the Phase 3 WIP effort. Through promotion and outreach, subscriptions have increased from about 90 in June to 278 in December.</p> <p>C&amp;E Workgroup members, as well as WIP action leaders utilized above-mentioned outreach tools in organization publications and mailings (member letters, magazines, newsletters, etc) and on organization websites and presented at meetings and conferences.</p> <p><b>2021 Update:</b> DEP continued to publish a monthly Phase 3 WIP Newsletter, renamed <a href="#">Healthy Waters – Pennsylvania. Partnership. Progress.</a> This collaborative newsletter shares updates and progress from federal, state and county partners, and is utilized to share updates from DEP and announce various funding opportunities for the counties. Anyone can subscribe to receive the electronic newsletter in their inbox or visit the website to see the monthly archive.</p> <p>DEP provided a weekly email update to county CAP coordinators and Action Leaders with up to the moment funding,</p>

									<p>outreach and training opportunities that are relevant to their CAP work.</p> <p>DEP continually updates the WIP and CAP webpages as new material is developed.</p>
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**Priority Initiative 2: Funding and Resources**

**Section 2, State Action, Programmatic and Narrative Commitments**

<p><b>2.2.1</b></p>	<p>Pass legislation providing a funding source or combination of funding sources for the implementation of the Phase 3 WIP.</p>	<p>PA Farm Bill - The Conservation Excellence Grant provides grants, loans, and tax credits to incentivize agricultural BMPs in priority geographies as found within the WIP.</p> <p>Keystone Tree Fund – This fund will go toward DCNR’s tree planting initiatives</p> <p>Clean Streams Fund</p> <p>Growing Greener III</p>	<p>PDA, DCNR, DEP, State Legislature, Governor’s Office</p>		<p>2019-2020 Session</p> <p>2021-2022 Session</p>			<p><b>2020 Update:</b>                  DCNR continues to make state funding available for forestry BMP implementation including riparian forest buffers, urban tree canopy, urban forest expansion, conservation landscaping, and forest conservation through easements and acquisition. DCNR provides funding through three primary mechanisms: C2P2 grant program, TreeVitalize grants, and on-demand funding for forest buffers via partnership with Western PA Conservancy.</p> <p>The Keystone Tree Fund is still building; implementation funding is not yet available to DCNR. Secretary Dunn and State Forester Shultzabarger intend to strategize on other potential funding sources.</p> <p>Conservation Excellence Grant Program (CEG): The State Conservation Commission (SCC) entered into delegation agreements with four county conservation districts – Tier 1 - Lancaster and York counties and Tier 2 - Cumberland, Franklin counties for the implementation of the CEG Program created under the 2019 PA Farm Bill Initiative. Funding for the delegation agreements is provided by state appropriations and a Chesapeake Bay Implementation Grant (CBIG) sub-award to the Commission.</p> <p>The Lancaster and York county conservation districts have been accepting</p>
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								<p>CEG applications since July 2020. The LCCD awarded three CEG grants totaling \$158,000 for grassed waterway and diversion BMPs, animal waste storage facility, heavy use area protection and streambank fencing BMPs. The YCCD awarded five CEG grants totaling \$37,857 for grassed waterway and cover crop BMPs (360 acres). Both conservation district outreach efforts include posting CEG information on the conservation district’s websites and newsletter and flyers distributed to agricultural support program organization in the counties Cumberland and Franklin county conservation districts will begin accepting CEG application in January 2021.</p> <p>Expansion of REAP Program: An additional \$3 million was included in the annual REAP allocation for tax credits providing a total of \$13 million. Prioritization of tax credits in the Chesapeake Bay Watershed has not been initiated with the expanded allocation; however, approximately 70% of the annual allocation of tax credits is awarded to eligible producers and projects in the Chesapeake Bay watershed.</p> <p><b>2021 Update:</b>  CEG: The SCC continues with delegation agreements with seven county conservation districts – Tier 1 - Lancaster and York counties and Tier 2 - Cumberland, Franklin, Bedford, Centre and Lebanon counties for the implementation of the CEG Program.</p> <p>The Lancaster and York county conservation districts have been accepting CEG applications since July 2020. Between July 2020 and September 2021, the LCCD awarded 27 CEG grants totaling \$1,252,434.15. The YCCD awarded 9 CEG grants totaling \$49,247.50.</p>
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								<p>of out-of-pocket costs for some high-priority BMPs</p> <p>The Keystone Tree Fund is currently generating approximately \$20k per month to specifically support riparian buffer grants and the TreeVitalize program. DCNR is allocating approximately \$200k to this year's C2P2 applicants from this fund.</p> <p>Additionally, many legislative bills have been proposed. This includes the Clean Streams Fund (Senate Bill 832) and the Growing Greener III (Senate Bill 525), which may, at least in part, utilize American Rescue Plan Act (ARPA) funds.</p>
2.2.1(i)	<p>Incentivize implementation of Agriculture BMPs that comprise 60% and/or 10-fold increase of the nitrogen reductions through complementary local, state, federal, non-profit and private funding programs</p>	<p>Initiate Conservation Excellent Grant Program, to include bundling grants with REAP tax credits and low-interest loans in Tier 1 Counties.</p> <p>Expand funding of REAP tax credits and prioritize in Chesapeake Bay Watershed.</p> <p>Initiate Chesapeake Bay Ag Inspection Program – Phase 2, to include providing cost-share to farmers that are yet to be or have been inspected, in select counties.</p> <p>Coordinate with NRCS to identify and prioritize funding through RCPP, EQIP, CREP, and other federal funding programs.</p> <p>Prioritize up to 50% of Growing Greener funding to nutrient and sediment reducing practices in the Chesapeake Bay</p>	<p>PDA, SCC, DCNR, DEP, PENNVEST, EPA, NRCS, Pilot, Tier 1 and Tier 2 counties, non-profit and private entities</p>		<p>Ongoing</p> <p>Beginning July 2020</p>			<p><b>2020 Update:</b></p> <p>The vendor for the Center for Water Quality Excellence has been selected and is Keystone Safety Services, Inc. d/b/a Land Logics Group. Contracts have been finalized and a Notice to proceed was issued on November 12, 2020. Next step is to get the virtual center component up and running which is anticipated by May 2021. Also, between now and May 2021 and beyond, the vendor will be doing outreach at events, assuming those events happen, and appropriate COVID safety protocols can be maintained. The physical center should be opening June/July 2021. The Pilot will focus on Lancaster and York Counties initially.</p> <p>SCC staff continues to work with staff from the Treasury Department to reinvigorate the AgriLink Loan Program. This existing program previously made more than \$5 million in low interest loans, but has been inactive for approximately 8 years due to lack of funding to “subsidize” these linked deposit loans. This discussion was sidetracked in 2020 due to the challenges presented by COVID. PennVEST has also recently expressed an interest in exploring a linked deposit low</p>

		<p>Watershed through Block Grants (CAP Implementation Grants)</p> <p>Pilot Center for Water Quality Excellence, which will provide financial assistance and technical guidance, in Tier 1 Counties.</p> <p>Prioritize EPA CBIG funds for riparian forest buffer and agriculture BMP implementation in Tier 1 and 2 counties.</p> <p>Utilize EPA “Most Effective Basin” (MEB) funds to cost-share implementation of agriculture BMPs in geographic areas of highest impact in the Chesapeake Bay Watershed.</p>							<p>interest loan program for agricultural BMPs.</p> <p>The SCC is actively implementing its new Conservation Excellence Grant (CEG) program through agreements with Lancaster, York, Cumberland and Franklin Conservation Districts, as well as a pending agreement with Lancaster Farmland Trust and Salisbury Township (Lancaster County) as a public private partnership pilot. Total funding for these five CEG agreements is nearly \$6 million, and the SCC received an additional \$2 million in state funds in November to continue this effort.</p> <p>Pennsylvania DEP announced the Growing Greener Plus awards on December 30, 2020. More than \$16 million has been awarded to projects in the Chesapeake Bay Watershed, with many of those projects focused on agricultural Best Management Practices and forested riparian buffer implementation.</p> <p><b>2021 Update:</b> PENNVEST continues exploring a linked deposit low interest loan program for agricultural BMPs.</p> <p>In December 2021, the AgriLink Loan Program was relaunched. More information can be found here: <a href="https://www.agriculture.pa.gov/Plants_Land_Water/StateConservationCommission/Pages/Agriculture-linked-Low-Interest-Loan-Program-.aspx">https://www.agriculture.pa.gov/Plants_Land_Water/StateConservationCommission/Pages/Agriculture-linked-Low-Interest-Loan-Program-.aspx</a></p> <p>The Center for Water Quality Excellence funded by PENNVEST is up and running both virtually and with a storefront. 2021 –2022 focused on outreach. CEG: The SCC continues with delegation agreements with seven county conservation districts – Tier 1 - Lancaster and York counties and Tier 2 - Cumberland, Franklin, Bedford, Centre</p>
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									<p>and Lebanon counties for the implementation of the CEG Program.</p> <p>The Lancaster and York county conservation districts have been accepting CEG applications since July 2020. Between July 2020 and September 2021, the LCCD awarded 27 CEG grants totaling \$1,252,434.15. The YCCD awarded 9 CEG grants totaling \$49,247.50.</p> <p>The Cumberland and Franklin county conservation districts began accepting CEG application in January 2021. Between January 2021 and September 2021, the CCCD awarded 4 CEG grants totaling \$427,000. The FCCD awarded 19 CEG grants totaling \$949,640.04.</p> <p>The Bedford and Centre county conservation districts have been accepting CEG applications since March 2021. Between March 2021 and September 2021, the BCCD awarded 1 CEG grant totaling \$250,000. The CCCD awarded 5 CEG grants totaling \$735,000.</p> <p>The Lebanon county conservation district has just been included into the CEG program and is in the process of executing a delegation agreement. LCCD has already been in preliminary talks with 5 operations and expect to have 5 applications ready to be accepted as soon as they can begin accepting applications.</p> <p>All conservation district outreach efforts include posting CEG information on the conservation district's websites and newsletter and flyers distributed to agricultural support program organization in the counties</p> <p>Lancaster Farmland Trust began a Private Party Partnership with the SCC in October 2020. Ever since the inception LFT has been working with 5 grant recipients totaling \$900,000.</p>
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									<p>Expansion of REAP Program: Since 2019, REAP continues at a \$13 million allocation for tax credits providing a total of \$13 million. Approximately 70% of the annual allocation of tax credits is awarded to eligible producers and projects in the Chesapeake Bay watershed. Applicants from ag-impaired TMDL watersheds (including the Chesapeake Bay) are eligible for a REAP tax credit equal to 90% of out-of-pocket costs for some high-priority BMPs.</p> <p>CEG: The SCC continues with delegation agreements with seven county conservation districts – Tier 1 - Lancaster and York counties and Tier 2 - Cumberland, Franklin, Bedford, Centre and Lebanon counties for the implementation of the CEG Program.</p> <p>The Lancaster and York county conservation districts have been accepting CEG applications since July 2020. Between July 2020 and September 2021, the LCCD awarded 27 CEG grants totaling \$1,252,434.15. The YCCD awarded 9 CEG grants totaling \$49,247.50.</p> <p>The Cumberland and Franklin county conservation districts began accepting CEG application in January 2021. Between January 2021 and September 2021, the CCCD awarded 4 CEG grants totaling \$427,000. The FCCD awarded 19 CEG grants totaling \$949,640.04.</p> <p>The Bedford and Centre county conservation districts have been accepting CEG applications since March 2021. Between March 2021 and September 2021, the BCCD awarded 1 CEG grant totaling \$250,000. The CCCD awarded 5 CEG grants totaling \$735,000.</p> <p>The Lebanon county conservation district has just been included into the CEG</p>
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2.2.2	Identify and implement the process and develop and implement specific procedures for the award of “block grants” to the lead planning teams for the implementation of the CAPs.	Policy and procedures and a grant agreement developed for use in the development and award of grants to counties in the implementation of the CAPs	DEP, Comptroller’s Office		Begins Fall 2019			<p><b>2020 Update:</b> Allocation-based funding program (Community Clean Water Coordinator and CAP Implementation Grants) were developed and approved in Fall 2019</p> <p><b>2021 Update:</b> Allocation-based funding program (Community Clean Water Coordinator and CAP Implementation Grants) have been implemented annually since Fall 2019. It takes 4-6 weeks on average, from the time of application submission and the time of award.</p>

<p><b>2.2.3</b></p>	<p>Initiate allocation of funding utilizing “block grants” to the lead planning and implementation teams of the CAPs</p>	<p>Allocate state and federal funding to Pilot and Tier 2 counties to fund coordinators as well as to accelerate the implementation of their CAPs.</p> <p>Allocate state and federal funding to Tier 3 and 4 counties once CAPs are developed.</p> <p>Best Management Practices in the CAPs focus on reductions for agricultural, stormwater, and forestry/natural sectors.</p>	<p>DEP, Comptroller’s Office</p>		<p>Begins January 2020</p>				<p><b>2020 Update:</b> Eight Community Clean Water Coordinator Grants for the Pilot and Tier 2 Counties were provided via PA state Environmental Stewardship Funds (ESF), totaling \$800,000 in the initial year (January-December 2020) and \$1.8 million for Pilot, Tier 2, 3 and 4 counties in second year (January – December 2021).</p> <p>CAP Implementation Grants were provided to the Pilot Counties via CBIG2 in the initial year (January-December 2020) and to the Pilot and Tier 2 Counties via ESF the second year (January-December 2021).</p> <p>Applications for both rounds were submitted by the counties in a four-week open round and awarded in less than six weeks thereafter.</p> <p><b>2021 Update:</b> In December 2021, a total of \$17.4 million was awarded for County Coordinators, CAP Implementation Grants, and BMP Verification. EPA Most Effective Basin (MEB) funding was allocated to Lancaster (EJ funding) and Chester (Ag funding). <a href="https://www.governor.pa.gov/newsroom/gov-wolf-announces-17-4-million-to-improve-local-water-quality-for-chesapeake-bay-watershed/">https://www.governor.pa.gov/newsroom/gov-wolf-announces-17-4-million-to-improve-local-water-quality-for-chesapeake-bay-watershed/</a></p>
<p><b>2.2.4</b></p>	<p>Continue to work with NFWF to fund the Local Government Implementation (LGI) grants</p>	<p>Assist with the development of RFP and review of applications</p> <p>2022-2023 Update: NFWF anticipates continued coordination with DEP and sister agencies on delivery of Pennsylvania-specific funding streams, including LGI and MEB funding, as well as ongoing coordination for</p>	<p>DEP</p>		<p>Begins February 2020</p>				<p><b>2020 Update:</b> On February 2, 2020, representatives from EPA, DEP, and NFWF met to discuss the PA LGI RFP. Some annual practices were added to the list of Priority practices that could be funded through this grant. NFWF hosted a webinar for LGI grant applicants, which reviewed the RFP and application process on March 17, 2020. Due to the pandemic, the application deadline was extended from April 16, 2020 to April 30, 2020. On June 5, 2020</p>

		<p>Pennsylvania implementation through the INSR and SWG programs.</p>							<p>Staff from EPA, DEP and NFWF took part in a grant review meeting.</p> <p><b>2021 Update:</b>          In February 2021, National Fish and Wildlife Foundation announced \$1.2 million in grant funding for 8 PA LGI projects that will help improve local waters in Pennsylvania and contribute to the restoration of the Chesapeake Bay. The awards will directly support efforts by local governments and partners throughout the Bay watershed in Pennsylvania to implement water quality projects that reduce polluted runoff from urban, suburban, and agricultural lands.</p> <p>In April 2021, NFWF released the Small Watershed Grant (SWG) Program Request for Proposals. DEP, EPA and NFWF staff participated in review of the applications and included PA LGI criteria for PA implementation projects submitted under the 2021 SWG grant opportunity. The 2021 SWG grant slate will be announced in October 2021.</p> <p>In June 2021, NFWF announced 2021 awards under the Innovative Nutrient and Sediment Reduction Grants program, including nearly \$5 million in awards to Pennsylvania projects, including support for DCNR’s forest buffer and conservation landscaping goals, and support for several emerging CAP-coordinated county-level implementation efforts.</p> <p>In June 2021, NFW released the Pennsylvania Most Effective Basins grant program Request for Proposals. Building from successful coordination through PA-LGI funding and the 2021 SWG program, NFWF engaged DEP and EPA staff in review and selection of projects for the programs inaugural round. The 2021 MEB slate will be announced in November 2021.</p>
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<p><b>2.2.5</b></p>	<p>Engage with other jurisdictions regarding interstate trading and cross-jurisdictional financing (e.g. Conowingo)</p>		<p>DEP, PennVest, SRBC</p>		<p>2025</p>			<p><b>2020 Update:</b> PA continues to co-chair the Conowingo WIP (CWIP) Steering Committee and has been in discussions with other jurisdictions regarding the CWIP Finance Structure, as well as potential partnerships related to pay-for-performance strategies.</p> <p><b>2021 Update:</b> Letter of Understanding was negotiated with other jurisdictions and SRBC for SRBC to serve as the financial entity for Conowingo WIP funding.</p>
<p><b>2.2.6</b></p>	<p>Investigate the potential for and implementation of short-term, low-interest, loans and other financing streams for agricultural projects</p>		<p>PennVest, PDA, DEP</p>		<p>2021  Implement beginning 2022</p>			<p><b>2020 Update:</b> Meeting held with AG Choice to determine interest in a Link Deposit style program utilizing PENNVEST funds. General support and interest exist among all parties. Structure of a program is being further investigated with a second meeting planned upon gathering of additional information.</p> <p>Additionally, a sublevel revolving loan fund is under discussion with regional planning agencies to provide low interest loans directly to eligible applicants including agriculture in cooperation with local County Conservation Districts. Initial meetings have been held with interest from all parties. Regional planning agencies is assembling terms that can work for them for further discussion.</p> <p>SCC staff continues to work with staff from the Treasury Department to reinvigorate the AgriLink Loan Program. This existing program previously made more than \$5 million in low interest loans, but has been inactive for approximately 8 years due to lack of funding to “subsidizes” these linked deposit loans. This discussion was sidetracked in 2020 due to the challenges presented by COVID. PennVEST has also recently</p>

								<p>expressed an interest in exploring a linked deposit low interest loan program for agricultural BMPs.</p> <p>The SCC is actively implementing its new Conservation Excellence Grant (CEG) program through agreements with Lancaster, York, Cumberland and Franklin Conservation Districts, as well as a pending agreement with Lancaster Farmland Trust and Salisbury Township (Lancaster County) as a public private partnership pilot. Total funding for these five CEG agreements is nearly \$6 million, and the SCC received an additional \$2 million in state funds in November to continue this effort.</p> <p><b>2021 Update:</b> AgChoice link deposit program is unable to be implemented as they do not do certificates of deposit.</p> <p>Additionally, a sublevel revolving loan fund continues to be discussed with regional planning agencies to provide low interest loans directly to eligible applicants including agriculture in cooperation with local County Conservation Districts. Initial meetings have been held with interest from all parties. Regional planning agencies is assembling terms that can work for them for further discussion. Progress delayed due to COVID.</p> <p>SCC staff continued to work with staff from the Treasury Department to roll out the 2<sup>nd</sup> edition of the AgriLink Loan Program. In December 2021, AgriLink Loan Program was relaunched. More information can be found here: <a href="https://www.agriculture.pa.gov/Plants_Land_Water/StateConservationCommission/Pages/Agriculture-linked-Low-Interest-Loan-Program-.aspx">https://www.agriculture.pa.gov/Plants_Land_Water/StateConservationCommission/Pages/Agriculture-linked-Low-Interest-Loan-Program-.aspx</a></p>
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									<p>CEG: The SCC continues with delegation agreements with seven county conservation districts – Tier 1 - Lancaster and York counties and Tier 2 - Cumberland, Franklin, Bedford, Centre and Lebanon counties for the implementation of the CEG Program.</p> <p>The Lancaster and York county conservation districts have been accepting CEG applications since July 2020. Between July 2020 and September 2021, the LCCD awarded 27 CEG grants totaling \$1,252,434.15. The YCCD awarded 9 CEG grants totaling \$49,247.50.</p> <p>The Cumberland and Franklin county conservation districts began accepting CEG application in January 2021. Between January 2021 and September 2021, the CCCD awarded 4 CEG grants totaling \$427,000. The FCCD awarded 19 CEG grants totaling \$949,640.04.</p> <p>The Bedford and Centre county conservation districts have been accepting CEG applications since March 2021. Between March 2021 and September 2021, the BCCD awarded 1 CEG grant totaling \$250,000. The CCCD awarded 5 CEG grants totaling \$735,000.</p> <p>The Lebanon county conservation district has just been included into the CEG program and is in the process of executing a delegation agreement. LCCD has already been in preliminary talks with 5 operations and expect to have 5 applications ready to be accepted as soon as they can begin accepting applications.</p> <p>All conservation district outreach efforts include posting CEG information on the conservation district’s websites and newsletter and flyers distributed to agricultural support program organization in the counties.</p>
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									Lancaster Farmland Trust (LFT) began a Private Party Partnership with the SCC in October 2020. LFT has been working with 5 grant recipients totaling \$900,000.
<b>Section 2, State Action, Numeric Commitments</b>									
<b>2.2.1A</b>	Investigate the incorporation of alternative manure treatment technologies and other potential strategies to address areas of excess manure nutrient generation and capital investment required for implementation of manure treatment systems.	Identify various strategies to minimize nutrient imbalances in areas of excess manure nutrient generation, including the incorporation of manure treatment technologies and manure transport, as they are determined to be feasible.	PDA, SCC, DEP Nutrient Trading Program, NRCS	Chesapeake Bay counties that are identified to have excess manure generated for crop need	December 2025	Capital investment, cost effectiveness, and modeled nutrient reduction effectiveness is of concern.			<p><b>2020 Update:</b> DEP, PDA and SCC staff continue to work with Energy Works and other proposed manure treatment technologies to have treatment technologies properly recognized and credited under the Chesapeake Bay Watershed Model. In addition, several counties have identified and prioritized manure transport as a component of their County Action Plans (CAPs).</p> <p>SCC and DEP have held discussions with and provided information pertaining to animal density and manure production to PennAg Industries and other consultants have occurred as it relates to the transport of manure from two Tier 2 counties.</p> <p>SCC and DEP have been in discussions with one Tier 1 county as it relates to better tracking of manure transport within and outside of that county.</p> <p><b>2021 Update:</b> The SCC, PDA, and DEP continue to work with EnergyWorks (gasification of layer manure), ESPOMA (transport and treatment of layer manure to a full line of bagged home use fertilizers), and <a href="#">Epcot Crenshaw Corporation</a>/ Stroud Water Research (Bio-char).</p>
<b>2.2.1A(i)</b>	Prioritize and/or incentivize increased manure transport and manure transport implementation and tracking in counties, such as		DEP, SCC, PDA, Lancaster County		Beginning 2020	Tracking and auditing of manure hauler/broker records			<p><b>2020 Update:</b> Tracking tools were updated in PracticeKeeper and Nutrient Balance Sheets from manure brokers, received by Conservation Districts, are to be entered.</p>

	Lancaster County, that have been identified through CBPO Modeling Tools to be in excess of organic nutrients								Continue to reinforce with manure brokers that NBS are to be submitted to conservation districts by regulation.  <b>2021 Update:</b> Continue to reinforce with manure brokers that NBS are to be submitted to conservation districts by regulation and thus entered into PracticeKeeper.  The SCC has started the process of a regulatory review of the Commercial Manure Hauler and Brokers Program.
<b>2.2.1F</b>	Maximize existing funding sources for riparian forest buffer implementation in Pennsylvania.	Fully utilize existing funding sources for buffer implementation and maintenance annually, including federal, state, and private programs (esp. under-utilized programs such as REAP).	DEP (GG, 319), USDA (CREP+), SCC (REAP), DCNR (C2P2) TreePennsylvania (TreeVitalize) CBF (K10), etc.	Chesapeake Bay	By 2025	Rigid programs, existing restrictions, coordination, lack of understanding about all individual programs, etc. Lack of funds to start a new program.			<b>2020 Update:</b> See above under 2.2.1. DCNR leadership intends to explore additional opportunities in early 2021.  <b>2021 Update:</b> DCNR is funding buffers through its C2P2 program with Keystone Rivers funding, the Environmental Stewardship Fund, and the Keystone Tree Fund. DCNR also anticipates allocating \$700,000 of oil and gas funding to support on-demand, shovel-ready buffer projects. DEP funds buffer projects through the CAP Implementation Grants and Growing Greener Plus grant program. DEP also continues to work with USDA-FSA and PACD in partnership for the <a href="#">PA CREP Program</a> .
<b>2.2.2F</b>	Expand TreeVitalize and utilize other programs to facilitate community tree planting and maintenance.	50 New Acres of New Urban Trees (300 trees = 1 acre)	Tree Pennsylvania, DCNR, PSU, municipal partners, etc.	Chesapeake Bay	By 2022	Coordination, scheduling, lack of funding.			<b>2020 Update:</b> DCNR named a new TreeVitalize Leader in 2020 and is currently exploring opportunities to both solidify and expand the TreeVitalize program.  <b>2021 Update:</b> DCNR hired a Tree Equity Specialist who will focus on community engagement around tree planting.
<b>2.2.3F</b>	Create additional, flexible funding options for riparian forest buffers.	Develop new, innovative PA (or Ches. Bay) funding source and mechanism for	All agencies and partners	Chesapeake Bay	Ongoing/ASAP	Innovation, Funding, Coordination, etc.			<b>2020 Update:</b> In cooperation with Western PA Conservancy, DCNR has established a

		<p>Buffers, including incentive programs for landowners utilizing buffer co-benefits such as wildlife habitat, income/product potential, flood mitigation, etc. Streamline funding source similar to DCNR's NFWF-Funded Stream ReLeaf program.</p>						<p>mechanism to provide on-demand, flexible funding to partners for buffer implementation. We plan to seek additional funding for this program. We have also been actively engaged in numerous discussions with NGO partners, consultants, and USFS on alternative conservation financing strategies to leverage private capital.</p> <p><b>2021 Update:</b> DCNR has continued conversations with various NGO partners, consultants, and USFS on conservation financing strategies to leverage private capital, or develop a revolving funding mechanism. In August 2021, the Riparian Forest Buffer Advisory Council (RFBAC) meeting focused entirely on this topic.</p> <p>DCNR has hit some hurdles on the flexible funding mechanism developed with WPC, through the new Master Agreement with WPC that began 7/1/21, new opportunities could exist. DCNR aims to find a solution to this issue before the end of the 2021 calendar year.</p> <p>DEP funds buffer projects through the CAP Implementation Grants, as applied for by the counties to implement their priority initiatives.</p>
2.2.4F	<p>Ensure that riparian forest buffers are adequately maintained to ensure survival by developing a Maintenance funding source for NGOs to develop their own maintenance programs.</p>	<p>Develop a Riparian Forest Buffer Maintenance funding source to create the capacity for NGOs to develop their own maintenance programs for new and already-implemented buffers (up to 5 years after initial planting).</p>	<p>All agencies and partners involved in riparian forest buffer implementation</p>	<p>Chesapeake Bay</p>	<p>Ongoing</p>	<p>Lack of interest in funding maintenance from traditional funding sources as it does not result in "new" load reductions.</p>		<p><b>2020 Update:</b> Most DCNR funding sources provide for establishment and maintenance; but we do not currently have a dedicated source for maintenance. The Riparian Forest Buffer Advisory Committee will be launching an Action Team focused on Maintenance in 2021 to explore options on how to address this and other RFB maintenance concerns.</p> <p>The SCC included maintenance on riparian forest buffers as a new qualifying reimbursable expense through the REAP program, which pays farmers back in tax</p>

								<p>credits for out-of-pocket expenses related to best management practices that promote on-farm conservation.</p> <p>In FY 19-20, the enabling legislation for the REAP Tax Credit Program was amended to provide a 90% tax credit for a number of priority BMPs in areas with a TMDL with impairments from agricultural nutrients and sediments (entire PA Bay watershed). Included in this amendment is a 90% tax credit for the installation and maintenance of forest riparian buffers. Changes were made to the REAP guidelines for FY20-21 and is now available.</p> <p><b>2021 Update:</b> Due to the COVID-19 global pandemic and funding issues, the Maintenance Action Team effort with the RFBAC was put on hold. This will be resumed in late 2021 or early 2022. Available DCNR funding sources continue to provide funds for post-planting establishment costs.</p> <p>Partners in Lancaster have developed BEST, or the Buffer Establishment Support Team, which works on and fundraises for buffer maintenance for any buffers planted within Lancaster County.</p> <p>The SCC is working with the Stroud Water Research Center on a sample / draft maintenance agreement / contract and funding options for riparian forest buffer maintenance.</p>
<b>2.2.5F</b>	Continue and Increase Urban Tree Canopy Grants to Communities and non-governmental organization Partners	Utilize and increase funding available through the TreeVitalize annual grant program. Encourage tree planting and/or conservation of existing tree canopy in existing DCNR Grant programs, other agency grant programs as	DCNR, Tree Pennsylvania, PRPS	Chesapeake Bay	Ongoing	Current Funding does not meet demand. Processes, procedures, and administration.		<p><b>2020 Update:</b> Please refer to 2.2.2.F.</p> <p><b>2021 Update:</b> Grants are now offered through the department’s C2P2 program, funded with Environmental Stewardship and Keystone Tree Funds.</p>

		appropriate (grants to community parks, etc.) Connect this work to DCNR's Climate Plan.						
<b>2.2.6F</b>	Leverage existing funding sources for Stream and Wetland Restoration.	Explore potential to improve leveraging of EQIP, CFA and REAP programs to support creditable/conforming stream and wetland restoration implementation, management and monitoring.	DEP, NRCS, SCC, NGOs, DCNR, Universities, etc.	Chesapeake Bay	Ongoing	Strict program regulations, lack of knowledge about existing programs and creditable BMPs, etc.		<p><b>2020 Update:</b> Utilization of CAP Implementation Grants for stream and wetland restoration projects. Also, please refer to 2.1.4.F</p> <p><b>2021 Update:</b> Utilization of CAP Implementation Grants and Growing Greener for stream and wetland restoration projects. In 2021, DEP Growing Greener competitive grants program provided additional preference for flood resiliency and stream and floodplain restoration projects. DCED continues to fund stream restoration and flood protection projects through the Commonwealth Financing Authority (CFA) <a href="#">Act 13 Watershed Restoration and Protection Program (WRPP)</a>. DEP provides technical assistance, construction oversight and funding through the <a href="#">Stream Improvement Program</a> and the <a href="#">Flood Protection Program</a>.</p>
<b>2.2.7F</b>	Develop funding opportunities for turf conversion programs.	Include Conservation Landscaping as an eligible BMP in existing conservation grant programs. Seek new innovative funding sources and mechanisms. Explore funding opportunities tied to flood mitigation.	DCNR, TreePennsylvania, TreeVitalize, DEP, etc.	Chesapeake Bay	By 2021	Time, finding funding sources, etc.		<p><b>2020 Update:</b> DCNR allocated \$50,000 for implementation as part of its Lawn Conversion Program launch in 2020. An additional \$75,000 was made available for 2021, and a portion of DCNR's EPA CBIG award for 2021 will be available for Lawn Conversion practices. The Alliance for the Chesapeake Bay received a NFWF SWG grant to fund Lawn Conversion practices in 2020 and 2021. DCNR is also working with partners to explore options for funding Lawn Conversion practices via the existing C2P2 grant opportunities in 2021, and DCNR plans to apply for a NFWF INSR grant in early 2021 that would also make Lawn Conversion implementation funding available to partners.</p> <p><b>2021 Update:</b></p>

									<p>\$75,000 was made available for 2021, and a portion of DCNR’s EPA CBIG award for 2021 was also utilized for Lawn Conversion practice implementation. However, the demand for implementation has far outpaced the funding available. The Alliance for the Chesapeake Bay is working to finalize their NFWF SWG grant to fund Lawn Conversion practices in 2021. Further, DCNR was recently awarded a \$1M NFWF INSR grant, of which \$500K will be utilized for work supporting Lawn Conversion.</p> <p>DCNR continues to work with the existing C2P2 grant program to determine how to best incorporate Lawn Conversion practices. DCNR expects partners to apply to the C2P2 program in early 2022 for grants that include Lawn Conversion implementation.</p>
2.2.8F	Continue to implement stream restoration, emphasizing legacy sediment removal and floodplain restoration projects (FR-LSR). Identify areas that may have low cost-to-benefit ratios for nutrient load reductions from FR-LSR projects. Pair stream, wetland, and other aquatic resource restoration projects with upland BMPs whenever possible.	Identify areas that would benefit from Legacy Sediment Removal and Ecosystem Restoration throughout priority areas of the watershed	DEP, CDs, Watershed Organizations, Private sector companies or NGOs working on remote sensing tools		Beginning 2020	Capital investment for design/implementation is of concern.	Restorable wetland mapping and probable wetland mapping are completed and available for public use to target potential sites. Total Wetness Index (TWI) data is now available for use in evaluating potential pollutant flow paths and BMP effectiveness.  USGS Scientific Investigation Report (SIR 2020-5031) of monitoring efforts at Big Spring Run that provide verified	Additional cross program development of tools for targeting aquatic resource restoration BMP implementation, particularly FR-LSR projects.  Additional cross program coordination, expert panel participation and technical expertise.  Re-evaluation of the cost-effectiveness for established BMPs based on existing program data.	<p><b>2020 Update:</b></p> <ol style="list-style-type: none"> <li>1. Data published to PASDA PA’s GIS data clearing house. Discussed with DEP Water Quality/TMDL program and consultants.</li> <li>2. Ongoing EPA Wetland Program Development Grant project is focusing on developing a Watershed Legacy Alteration Index. Grant extension, contracts and revised work plan in place.</li> <li>3. Scientific research and monitoring of restoration projects in several watersheds across PA was accomplished with assistance from Federal, State and Private funding sources. These scientific research and monitoring efforts provide credible results and a basis for developing cost-effective aquatic resource restoration projects.</li> </ol> <p><b>2021 Update:</b></p> <p>DEP recently completed working with PSU to publish Total Wetness Index (TWI) and Geomorphon Landform mapping that provides foundational data for</p>

							load reductions and a basis to evaluate benefits for FR-LSR restoration projects.  Cost-effectiveness analysis of FR-LSR project at Big Spring Run compared with alternative BMP's published in 2019 that demonstrates the potential of targeting low cost solutions for watershed hot spots impaired by legacy sediment (Flemming et al, 2019 Legacy sediment erosion hot spots: A cost-effective approach for targeting water quality improvements).	Identify broader historical watershed scale legacy alterations, distributions and effects and integrate cross program data collection and analysis to develop targets for aquatic resource restoration projects.	understanding landform/waterflow paths and project potentials. Both datasets are available on Pennsylvania Spatial Data Access (PASDA).
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**Section 3, Countywide Actions**

<b>3.2.1</b>	<p><b>Phase 1 (Pilot and Tier 2 counties):</b> Provide 8 – Community Clean Water Coordinators (External Full Time position)</p> <p><b>Phase 2 (Tier 3 &amp; 4 counties):</b> Provide 13 – Community Clean Water Coordinators (External Full Time position)</p>	External coordinating staff would be assigned to individual Tier 1 & 2 counties in phase 1, and to regionalized Tier 3 & 4 counties in phase 2. External Coordinators would be DEP contractors reporting to the DEP Internal Coordinators. Serve as the point of contact to their assigned	DEP  External Contractor  County Planning Offices  County Conservation Districts	Chesapeake Bay	<p><b>Phase 1:</b> Begins in January 2020, ongoing through 2025</p> <p><b>Phase 2:</b> Begins in August 2020, ongoing through 2025</p>	State staffing support  Internal and External Coordination  Federal funding for Tier 2 and Pilot Counties was not provided in a timely manner in order to begin Phase 1. This pushed the schedule back for both Phase 1 and Phase 2.		<p><b>Total:</b> 21 – Community Clean Water Coordinators \$2,100,000 (\$100,000 per coordinator)</p> <p><b>Phase 1:</b> 8 – Community Clean Water Coordinators \$800,000</p>	<p><b>2020 Update:</b> Phase 1 implementation is in progress. 8 – Community Clean Water Action Plan Coordinators were hired in Tier 1 &amp; 2 Counties. PA state Environmental Steward Funds were used to fund these positions.</p> <p>Phase 2 planning is in progress. 10 – Community Clean Water Action Plan Coordinator positions are provided, and the application is open. Environmental Stewardship Funds will also be used to fund these positions.</p>
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		<p>county(ies). They would support county efforts to develop and implement countywide action plans.</p> <p>2022-2023 Update: DEP will continue to fund and continue to seek federal funding for:</p> <p>8 – Community Clean Water Action Plan Coordinators in Pilot &amp; Tier 2 Counties. 10 – Community Clean Water Action Plan Coordinator positions hired in Tier 3&amp;4 counties.</p>	Other County Partners					<p><b>Phase 2:</b> 13 – Community Clean Water Coordinators \$1,300,000</p>	<p>No federal funding received for these positions.</p> <p><b>2021 Update:</b> Provided funding to sustain: 8 – Community Clean Water Action Plan Coordinators in Pilot &amp; Tier 2 Counties. 10 – Community Clean Water Action Plan Coordinator positions hired in Tier 3&amp;4 counties.</p>
3.2.2	<p><b>Phase 1:</b> Provide 3 – Community Clean Water Coordinator (Full Time Internal Coordinator Position)</p> <p><b>Phase 2:</b> Provide 7 – Community Clean Water Coordinator (Full Time Internal Coordinator Position)</p>	<p>Internal Coordinators: Would be DEP employees. Internal Coordinators would serve as the point of contact and provide WIP coordination for DEP and all other state agencies for external coordinator and technical coordinators.</p>	DEP		<p><b>Phase 1:</b> Begins in January 2020</p> <p><b>Phase 2:</b> Begins in August 2020</p>	<p>State staffing support</p> <p>Internal and External Coordination</p> <p>Phase 1 – internal coordinators were on-boarded beginning January 2020</p>		<p><b>Total:</b> 10 – Community Clean Water Coordinator \$1,000,000 (\$100,000 per coordinator)</p> <p><b>Phase 1:</b> 3 – Community Clean Water Coordinator \$300,000</p> <p><b>Phase 2:</b> 7 – Community Clean Water Coordinator \$700,000</p>	<p><b>2020 Update:</b> DEP Chesapeake Bay Office hired one internal Coordinator. This makes a total of three Internal coordinators to support Phase 3 WIP efforts. The three internal coordinators are currently supporting the coordination of all state agencies, WIP action leaders and 34 active counties.</p> <p><b>2021 Update:</b> Chesapeake Bay Office hired one Internal Coordinator in December 2021, with the turnover of one earlier in 2021. Staffing challenges continue at same levels as 2020 update above. For this reason, DEP developed Region CAP Support Teams, to utilize existing staff and expand their job duties and responsibilities. Two (2) Conservation District Field Representatives (CDFR) assist with county support within the Chesapeake Bay watershed.</p> <p>Four (4) CDFR positions were posted in November 2021, of which three (3) will be located in the Northeast and Southcentral regions. Interviews commenced in early 2022.</p>

<p><b>3.2.3</b></p>	<p><b>Phase 1:</b> Provide 2 – Clean Water Technical Assistance Coordinators (Full Time Technical Coordinator)</p> <p><b>Phase 2:</b> Provide 8 – Clean Water Technical Assistance Coordinators (Full Time Technical Coordinator)</p>	<p>Technical Coordinator: A DEP contractor reporting to the DEP Internal Coordinator. The Technical Coordinator would be responsible for: for providing information and facilitation of planning tools through the planning and implementation process, assist with reporting and tracking of milestones annual progress, assist in model runs for plan development and during annual milestone updates.</p>	<p>Technical Contractor</p>		<p><b>Phase 1:</b> Begins in July 2019</p> <p><b>Phase 2:</b> Begins in August 2020</p>	<p>State staffing support</p> <p>Internal and External Coordination</p> <p>Technical coordinators will have varied workloads.</p> <p>Phase 1: preparation for Phase 1, to include development of tools (guides, toolboxes, web-based reporting systems, training) was on schedule.</p>		<p><b>Total:</b> 10 – Clean Water Technical Assistance Coordinators \$900,000 (\$90,000 per coordinator)</p>	<p><b>2020 Update:</b> DEP Chesapeake Bay Office hired one internal Technical Coordinator. Additionally, DEP maintains a contract with the Susquehanna River Basin Commission (SRBC) to provide additional technical support to Phase 3 WIP efforts. Support was provided to Phase 1 counties for CAP development and implementation support. Phase 2 support was provided with CAP technical toolbox development and technical assistance at stakeholder meetings.</p> <p><b>2021 Update:</b> One internal Technical Coordinator and the DEP-contracted Susquehanna River Basin Commission (SRBC) continue to provide additional technical support to Phase 3 WIP efforts. Support was provided to Phase 1 counties for CAP implementation support and numeric progress updates to Pilot counties’ CAP milestones. Phase 2 support was provided with CAP technical toolbox development and technical assistance at stakeholder meetings.</p>
<p><b>3.2.4</b></p>	<p><b>Phase 1:</b> Provide 1 – Clean Water Facilitation Coordinator (Full Time Facilitation Coordinator Position)</p>	<p>Facilitation Coordinator: A DEP contractor reporting to the DEP Internal Coordinator.</p>	<p>Facilitation Coordinator  DEP</p>		<p>April 2019</p>	<p>State staffing support</p> <p>Internal and External Coordination</p>		<p>1 – Clean Water Facilitation Coordinator \$100,000</p>	<p><b>2020 Update:</b> DEP maintains a contract with Consulting With a Purpose to provide facilitation and planning support for Phase 3 WIP efforts. Consulting With a Purpose continues to provide facilitation for internal and external coordination and county support.</p> <p><b>2021 Update:</b> DEP maintains a contract with Consulting With a Purpose to provide facilitation and planning support for Phase 3 WIP efforts. Consulting With a Purpose continues to provide facilitation for internal and external coordination and county support.</p>
<p><b>3.2.5</b></p>	<p><b>Phase 1:</b></p>	<p>Outreach Coordinator: A DEP contractor reporting</p>	<p>Outreach Coordinator</p>		<p>April 2019</p>	<p>State staffing support</p>		<p>1 – Clean Water Outreach</p>	<p><b>2020 Update:</b> DEP maintains a contract with Water Words That Work to provide outreach and</p>

	Provide 1 – Clean Water Outreach Coordinator (Full Time Outreach Contractor)	to the DEP Chesapeake Bay Office, in coordination with WIP Communication and Engagement Workgroup and DEP Communication Office.	DEP			Internal and External Coordination		Coordinator \$100,000	<p>communication coordination support for the Phase 3 WIP. Water Words That Work continues to provide support for communication tools and support for both internal and external needs.</p> <p><b>2021 Update:</b> DEP maintains a contract with Water Words That Work to provide outreach and communication coordination support for the Phase 3 WIP and CAP efforts. Water Words That Work continues to provide support for communication tools and support for both internal and external needs.</p>
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**Priority Initiative 3: Expanding Capacity for Technical Assistance**

**Section 2, State Actions, Programmatic and Narrative Commitments**

<b>2.3.1</b>	Implement a pilot of the Center for Water Quality Excellence concept in the four pilot counties of Lancaster, York, Adams and Franklin Counties.	<p>A Request for Proposals will be released and awardee put in place. Assistance will be provided to landowners and municipalities to complete projects.</p> <p>Assistance includes outreach and resources (both technical and financial) to municipalities and farmers to implement BMPs.</p>	DEP, Pennvest	Lancaster and York	RFP done April 2020 Pilot done Summer 2021				<p><b>2020 Update:</b> The vendor for the Center for Water Quality Excellence has been selected and is Keystone Safety Services, Inc. d/b/a Land Logics Group. Contracts have been finalized and a Notice to Proceed was issued on November 12, 2020. Next step is to get the virtual center component up and running which is anticipated by May 2021. Also, between now and May 2021 and beyond the vendor will be doing outreach at events, assuming those events happen and appropriate COVID-19 safety protocols can be maintained. The physical center should be opening June/July 2021. The Pilot will focus on Lancaster and York Counties initially.</p> <p><b>2021 Update:</b> The <a href="#">Center for Water Quality Excellence</a> funded by PENNVEST is up and running both virtually and with a storefront. 2021-2022 effort is focused on outreach.</p>
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**Section 9, Climate Change**

<b>9.3.1C</b>	Complete the Penn State Study, <i>Climate Change Impacts on Pennsylvania's Watershed Management</i>	Study will answer some key questions that will be used to more effectively select and target practices	DEP, Penn State	Statewide	July 2020				<p><b>2020 Update:</b> Completed as part of Climate Impacts Assessment, press release issued April 2020.</p>
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	<i>Strategies and Water Quality Goals</i>	that will address climate resiliency goals.						Posted on DEP Climate Change Impacts page: <a href="https://www.dep.pa.gov/citizens/climate/Pages/impacts.aspx">https://www.dep.pa.gov/citizens/climate/Pages/impacts.aspx</a>  <b>2021 Update:</b> Completed in 2020. No further update.
<b>9.3.2C</b>	Pennsylvania Climate Academy	Reduce an additional 1.81 million pounds of nitrogen and 0.095 million pounds of phosphorus delivered to the Chesapeake Bay due to climate change by 2025.  This project supports the Green Gov Council through technical assistance to achieve the goals set forth in the 2019-1 Executive Order, Commonwealth Leadership in Addressing Climate Change and Promoting Energy Conservation and Sustainable Governance. DEP over the past fiscal year developed an accredited Climate Training Course for DEP participants which can now be delivered to a wider audience as a Climate Academy. This Academy when paired with the public facing mission of the PA Green Gov Council can be used to educate local governments and the public on Climate and the benefits of sustainable governance.  2022-2023 Update: Two Climate Activator trainings	DEP, GreenGov Council	Statewide	Ongoing			<b>2021 Update:</b> 106 DEP personnel took CC-P training, and 16 of those people received their CC-P credential in Fiscal Year 2020/2021. The Pennsylvania Climate Leadership Academy was established in the second half of 2021. This is a new milestone for 2022-2023.

		and two CC-P courses will be offered for Pennsylvania leaders and decision-makers through the Academy.							
<b>Section 2, State Actions, Numeric Commitments</b>									
<b>2.3.1A</b>	Initiate Implementation of Pennsylvania’s Agriculture Conservation Stewardship Program (ACSP)	Finalize draft program guidance, application, and on-farm assessment tools; 3 <sup>rd</sup> party verification process, pilot program; and release program for initial implementation	Certified Third Parties, CDs, DEP, SCC, PDA	Chesapeake Bay	July 2020 Ongoing				<p><b>2020 Update:</b> Development of the PA ACSP is on hold until early 2021 due to COVID challenges and staffing challenges.</p> <p>A pilot conducted in Fall/Winter 2019 indicated a need to investigate additional methods and alternatives to incentivize participation by farmers and third-party verifiers.</p> <p><b>2021 Update:</b> PDA/SCC renegotiated a contract with EPA for an NPG grant agreement to provide resources for the development and implementation of PACS</p>
<b>2.3.2A</b>	Work with third-parties, integrators, and co-ops to identify alternative methods to support and assess compliance with regulations without use of regulatory entities	Assess/increase implementation of agricultural plans and BMPs using programs such as those developed by Turkey Hill, Alliance for Chesapeake Bay, and MD/VA Cooperative	Certified Third Parties, Integrators and Cooperatives, DEP	Chesapeake Bay – Animal Producers	December 2025				<p><b>2020 Update:</b> Ongoing efforts to fund Penn State College of Agriculture’s 2020 Producer Survey.</p> <p>Continue Turkey Hill/ PennAG Industries efforts to get certain practices credited.</p> <p>Funding and support of PAOneStop: <a href="https://extension.psu.edu/programs/nutrient-management/planning-resources/paonestop">https://extension.psu.edu/programs/nutrient-management/planning-resources/paonestop</a></p> <p><b>2021 Update:</b> Penn State, PDA, SCC, and DEP hold a joint Letter of Understanding (LOU) and serve on an Executive Committee and Management Committee to oversee the development and enhancements made to <a href="#">PAOneStop</a>. SCC and DEP continue funding and support for the PAOneStop program. Discussions are taking place to see if PAOneStop could serve as an</p>

								<p>alternative method to support compliance, mapping balance sheet development, manure and nutrient setbacks, etc. Additionally, an online survey mechanism has been developed for PAOneStop to be initially used in the 2022 Producer Survey data collection.</p> <p>Continue to work with the Alliance for the Chesapeake Bay, Giant Foods, and Maryland and Virginia Milk Cooperative Association to support local dairy farms to improve their land and water.</p> <p>Continue to work with the Hershey Company and Alliance for the Chesapeake Bay on <i>Sustainable Dairy Pa</i>, to support more sustainable and climate friendly dairy supply chain in Pa for the Hershey Milk Chocolate Company.</p> <p>Continue Turkey Hill Clean Water Partnership to incentivize dairy farms to use a conservation plan and BMPs on their farms.</p>
2.3.3A	Implementation of Animal Waste Management Systems (AWMS)	Adequate manure storage for 90% of swine/poultry operations; 75% of all other animal types	NRCS, CDs, Private Consultants, Swine and Poultry Integrators	Chesapeake Bay – Animal Producers	December 2025	Need to increase amount of licensed P.E’s and those with job approval authority in order to meet PA regulatory requirements for liquid storages. Need to increase number of qualified engineers for solid storages.		<p><b>2020 Update:</b> Continue to meet with NRCS and other ag partners during the Quarterly Technical Committee meetings. Continued funds via CBIG for Chesapeake Bay Engineering Specialists and Engineer Assistants, as well as state funds for joint funding with NRCS for PA Association of Conservation Districts Engineer Specialists in the four pilot counties. NRCS continues to provide training and Job Approval Authority for Conservation District ag technician staff.</p> <p>Penn State University has initiated a conservation training curriculum to prepare graduating students for a career in ag conservation.</p> <p>CEG and CAP Implementation Grants, for instance, are available for pilot and Tier 2</p>

								<p>counties to allocate for AWMS implementation. However, further funds are needed to meet the needs for technical assistance and engineering design of liquid and semi-solid storages.</p> <p><b>2021 Update:</b> CEG and REAP programs are available for Tier 1 and Tier 2 counties to allocate for AWMS implementation. However, further funds are needed to meet the needs for technical assistance and engineering design of liquid and semi-solid storages.</p> <p>DEP, SCC, NRCS, and PACD continue to work together to provide funding for engineering and technical support staff via Chesapeake Bay Technicians, Chesapeake Bay Engineer Assistants and Specialists, Chesapeake Bay Watershed Conservation Initiative (CBWCI), and Technical Assistance Grant (TAG). Conversations are ongoing regarding effective and efficient deployment of services from these funding programs and staff.</p>
2.3.4A	Develop web-based and in-person training for Manure Management Planning and Agriculture Erosion and Sediment Control Planning	<p>Finalize Soil Erosion and Sedimentation Control Manual for Agricultural Operations technical guidance (383-4200-002) and train conservation districts and consultants.</p> <p>2022-2023 Update: Implement web-based and in-person training for Manure Management Planning and Agriculture Erosion and Sediment Control Planning; Revise the Manure Management Manual Technical Guidance Document by 2023</p>	DEP, Penn State Extension, SCC, NRCS	Statewide	September 2020	TGD finalized and released October 2019. Training in development.		<p><b>2020 Update:</b> Four web-based training modules for the Ag E&amp;S Manual were developed by DEP staff and opened for public consumption on DEP's Clean Water Academy.</p> <p>Entered into agreement with Penn State Extension to create additional in-person curriculum as well as to ensure consistency between PAOneStop and the Ag E&amp;S Manual.</p> <p><b>2021 Update:</b> Penn State is in development of curriculum as well as finalizing the PAOneStop Ag E&amp;S Plan reporting template and instructions.</p> <p>Ag E&amp;S Plan and Manure Management Plan modules continue to be provided via DEP's Clean Water Academy.</p>

<p><b>2.3.5A</b></p>	<p>Focus agricultural technical assistance and financial resources in areas of highest need and impact to the Chesapeake Bay, to include targeted watershed approach</p>		<p>DEP, SCC, PDA</p>	<p>Chesapeake Bay</p>	<p>Ongoing  Beginning July 2020</p>			<p><b>2020 Update:</b> Both CEG and the new DEP phase 2 inspection funding (for BMPs) is being rolled out based on the Phase 3 WIP Tiered Counties priority status. See the CEG discussion at 2.2.1.</p> <p><b>2021 Update:</b> The SCC continues to target resources at Tier 1 and 2 counties. Approximately \$10 million for agricultural BMPs is funded through CEG and REAP. Additionally, the Nutrient Management Program funds full time staff (FTEs) at conservation districts, with Chesapeake Bay watershed conservation districts making up 85% of the FTE funding.</p> <p>Governor Wolf announced support of the Chesapeake Conservancy and partners’ “30 by 30” initiative, with a goal to delist 30 stream segments for agricultural impairments by 2030. Currently, there are 39 stream segments identified for this “rapid delisting” approach in Lancaster, Union, Clinton, Snyder, Lycoming, Huntingdon, and Centre Counties. DEP continues to work with the Chesapeake Conservancy and county partners to support this endeavor through targeted financial and technical assistance, such as through EPA State Capacity Grant for targeted watersheds in Lancaster County.</p>
<p><b>2.3.6A</b></p>	<p>Coordinate existing technical assistance for more effective and efficient deployment of services</p>	<p>Work with federal, state, local agencies as well as private and nonprofit entities to identify and communicate the available services and locations of those services, as well as gaps in service areas and how to effectively fill them</p>	<p>DEP, SCC, NRCS, PACD, Private Consultants, Nonprofits</p>	<p>Chesapeake Bay</p>	<p>2023</p>	<p>Swift and effective deployment of services requires additional staff at the federal, state, and local level as well as additional private industry capacity</p>		<p><b>2021 Update:</b> Discussions began in late 2021 based on CAP needs identified in multiple counties throughout the Chesapeake Bay Watershed. This is a new milestone for 2022-2023.</p>
<p><b>2.3.1F</b></p>	<p>Increase technical assistance available to landowners interested in</p>	<p>Create both new Commonwealth staff positions and new positions at partner</p>	<p>DCNR, PDA, DEP, SCC, DCED, etc.</p>	<p>Chesapeake Bay</p>	<p>Ongoing</p>	<p>Funding, overhead, space, capacity, available candidates, on-boarding process, hiring process, etc.</p>		<p><b>2020 Update:</b> DCNR is currently in the process of filling a new Commonwealth position that would focus partly on riparian forest buffers, and</p>

	<p>implementing riparian forest buffers.</p>	<p>organizations, and increase entrepreneurial opportunities for forest buffer work.</p>							<p>continued to make C2P2 grants available to help partner organizations fund positions for buffer outreach and implementation work with landowners.</p> <p>Further, various implementation funding for buffers made available by DCNR can be utilized in some fashion to provide money to buffer contractors/entrepreneurs to implement buffers.</p> <p>DCNR and the Alliance for the Chesapeake Bay continue to work with individuals with barriers to employment to encourage new buffer planting and maintenance entrepreneurs through the Correctional Conservation Collaborative program.</p> <p><b>2021 Update:</b> DCNR was able to fill one additional position focused on Watershed Forestry (buffers and lawn conversion) in early 2021.</p> <p>DCNR was also awarded a NFWF INSR grant that supports an additional new position for two years, as well as a grant from the USFS that will support the hiring of three more individuals for one year. DCNR hopes to fill these four new positions via their agreement with WPC in early 2022, once the grant contracts have been finalized.</p> <p>The trainings for individuals with barriers to employment to encourage new buffer planting and maintenance entrepreneurs, in partnership with the Alliance for the Chesapeake Bay, were halted due to the COVID pandemic. When prisons are able to reopen to guests, DCNR and the Alliance hope to reinvigorate this program. Although no Correctional Conservation Collaborative programs were held in 2021, DCNR did wrap up work on a Chesapeake Bay Trust-funded GIT grant for the program in 2021, and a training manual as well as maps of</p>
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									opportunities was developed for DCNR and partners by the project contractor, Chesapeake Conservation Landscaping Council.
<b>2.3.2F</b>	Increase Urban Forestry Technical Assistance Available to Communities and Citizens.	Fund positions within the Commonwealth system and with partner organizations.	DCNR, TreePennsylvania, Penn State Extension, PHS, etc.	Chesapeake Bay	Ongoing	Funding, overhead, space, capacity, available candidates, on-boarding process, hiring process, etc.			<p><b>2020 Update:</b> Nothing new to report.</p> <p><b>2021 Update:</b> DCNR hired a Tree Equity Specialist to focus on community outreach and engagement.</p>
<b>2.3.3F</b>	Create a turf-conversion technical assistance program.	Identify existing subject matter experts in native grassland and meadow establishment to evaluate and design a new program, technical guidance/specifications, etc. then create new Commonwealth positions to provide technical support to landowners.  2022-2023 Update: Implement turf-conversion technical assistance program.	DCNR, Alliance for the Chesapeake Bay, Pheasants Forever, PGC, TreePennsylvania, PSU, etc.	PA Bay-wide	By 2022	Creating a new program-start-up costs, time, approvals, budgets, etc.  Implementation requires additional funds to sustain program.			<p><b>2020 Update:</b> See above on launch of new Lawn Conversion Program. The Lawn Conversion Advisory Committee is working on technical guidance documents and trainings for landowners and contractors, as well as local government and NGO partners.</p> <p><b>2021 Update:</b> DCNR intends to fully incorporate Lawn Conversion into its watershed forestry program. All new hires for positions that will be developed out of recently received grants will be trained in both Lawn Conversion and Riparian Forest Buffer technical assistance.</p> <p>There is still a strong need for additional technical assistance for Lawn Conversion to help meet intense demand from landowners.</p>
<b>2.3.4F</b>	Provide informed technical assistance for stream and wetland restoration projects to ensure they are completed in an adequate, reportable manner.	Ensure that county and agency field staff are trained to support potential creditable wetland restoration opportunities. Integrate trainings into existing, well-attended courses.	NRCS, CCDs, SCC, PDA, DEP, DCNR, TNC, and other NGOs.	PA Bay-wide	Ongoing	Training, staff capacity, etc.  Inconsistent use of terminology and definitions (federal, state and FGDC) continues to contribute to challenges associated with communicating	Clean Water Academy technical assistance contract in place to develop training courses for the Clean Water Academy to assist CCD and DEP staff in permit	Additional cross program guidance development is needed to transfer knowledge of acceptable restoration practices for the purposes of credit reporting.	<p><b>2020 Update:</b> 1. General Permit processing training sessions completed. Additional training sessions under development for late 2020 and 2021 targeting compensation determinations and environmental assessment restoration plan approvals.  2. DEP staff participated in Chesapeake Bay Program's 2020 efforts to improve stream and wetland restoration</p>

							<p>application reviews.</p> <p>Technical presentation and webcast 2019 - <a href="https://chesapeakestormwater.net/events/big_spring_run_research/">https://chesapeakestormwater.net/events/big_spring_run_research/</a></p> <p>Reviews of legacy sediment removal floodplain restoration (FR-LSR) projects that are subject to state and federal regulations including Chapter 102, Chapter 105/106 and Section 401 Water Quality Certifications</p>	<p>Existing monitoring and assessment programs for streams and other aquatic resources must identify and report additional impairments, including legacy sediments and other legacy alterations.</p>	<p>definitions and crediting for Legacy Sediment Removal projects.</p> <p><b>2021 Update:</b> Engaging in a STAC BMP crediting workshop as a Steering Committee member and presenter planned for 2022 regarding multi-benefit accounting and unintended consequences.</p>
<b>2.3.5F</b>	Expand the PFBC Stream Restoration Initiative, implementing stream restoration projects resulting in load reductions with habitat co-benefits, to counties in the southcentral region of the state, starting with one or more of the four pilot counties to include Adams, Franklin, Lancaster and York.	Expand model in Northcentral Region and work with partners in Franklin County to start a similar initiative in the Southcentral Region. This starts with the creation of new positions within the PFBC.	DEP, PFBC	NC, SC regions	January 2020	EPA provided funds to PFBC in order to hire additional staff.			<p><b>2020 Update:</b> Completed: Four Fisheries Biologists were hired in 2020 to expand the Northcentral stream restoration model in the NC region and move into the SC region.</p> <p><b>2021 Update:</b> PFBC has made significant progress on the expansion of the stream restoration initiative in the Northcentral PA region while adding resources to the Southcentral part of the watershed. PFBC also added four more staff in 2021 to assist with restoration projects.</p>
<b>2.3.1S</b>	Complete revisions to the Pennsylvania Stormwater BMP Manual		DEP, Villanova University and subcontractor	Statewide	Draft 2022-2023 Final 2023				<p><b>2020 Update:</b> A preliminary draft is nearly complete and will be shared with an internal workgroup</p>

									for review and comment in the near future.  <b>2021 Update:</b> The updated BMP manual is still under development with a plan for public engagement and comment in 2022.
<b>2.3.1W</b>	Wastewater Plant Performance Technical Assistance	Perform enhanced technical assistance to wastewater treatment facilities to support reduced nutrient loadings from these facilities.  DEP reports progress every 6 months to EPA for grant outputs and outcomes.	DEP	Chesapeake Bay	December 2020 Continue through 2025 as funds allow				<b>2020 Update:</b> Existing Wastewater Technical Assistance program continues. Funds have been provided by EPA to purchase necessary supplies and equipment.  <b>2021 Update:</b> Wastewater Technical Assistance program continues. Funds have been provided by EPA to purchase necessary supplies and equipment.
<b>2.3.1W(i)</b>	Wastewater Plant Performance Technical Assistance	Purchase of equipment and supplies to provide enhanced technical assistance and perform servicing and calibration of equipment	DEP		September 2021 Continue through 2025 as funds allow				<b>2020 Update:</b> Existing Technical Assistance program continues.  <b>2021 Update:</b> Wastewater Technical Assistance program continues. Funds have been provided by EPA to provide enhanced technical assistance and perform servicing and calibration of equipment.
<b>2.3.1W(ii)</b>	Wastewater Plant Performance Technical Assistance	Provide training related to reducing nutrient loads for wastewater treatment facility staff for a total of eight facilities			September 2021 Continue through 2025 as funds allow				<b>2020 Update:</b> Existing Technical Assistance program continues.  <b>2021 Update:</b> Wastewater Technical Assistance program continues. Training related to reducing nutrient loads was provided for wastewater staff at nine facilities.

Priority Initiative 4: Reporting and Tracking

Section 2, State Actions, Programmatic and Narrative Commitments								
2.4.1	Pass legislation to revise Pennsylvania’s Right to Know Law to allow for additional confidentiality of landowner records.		Private Sector, Agricultural Organizations		2020-2021 Legislative Session			<p><b>2020 Update:</b> No action on this item</p> <p><b>2021 Update:</b> No action on this item</p>
2.4.2	Develop a planning and prioritization tool for use in the development and refinement of the CAPs.	<p>A final tool available to county planning teams for use in the prioritization and tracking of practices and future planning</p> <p>2022-2023 Update: Chesapeake Commons procurement and contract may be renewed via the ITQ list. DEP, CC and the Pilot and Tier 2 CAP Coordinators will work together to discuss and implement the previously identified FieldDoc enhancements through the Data Review Team.</p> <p>Enhancements to connect FieldDoc with the Data Warehouse are ongoing, following procurement and IT requirements.</p>	DEP, EPA, Chesapeake Conservancy, Chesapeake Commons	Chesapeake Bay	Begin 2020			<p><b>2020 Update:</b> FieldDoc was customized to meet the needs of local stakeholders. The Data Tools Review Team, lead by Tier 1 and 2 County Coordinators, provided extensive recommendations on enhancements needed to FieldDoc. This review process was completed from March 2020 to August 2020. All critical enhancements were completed by the FieldDoc development team. FieldDoc was introduced for public use in August/September of 2020. Counties are strategizing plans to increase the use of FieldDoc. Additional non-critical enhancements were identified by the Data Tools Review Team and will begin in 2021.</p> <p><b>2021 Update:</b> From the original Chesapeake Commons (CC) contract, FieldDoc has started the process to complete DEP’s cloud use case so in the future FieldDoc can be connected to the Data Warehouse as the public facing electronic platform. DEP and CC are working closely to renew the FieldDoc contract for another year to complete the identified enhancements from 2020. A scope of work and budget was submitted to DEP in 2021. CC is working on being added to the PA’s ITQ Procurement List. The Tier 2 counties have been added to FieldDoc so they can input non-cost share/non-regulatory BMPs into FieldDoc. Pilot county updated goals were also submitted to be incorporated.</p> <p>Pennsylvania’s 2020 EPA model progress metrics were added to compare with the county CAP goals.</p>

<p><b>2.4.3</b></p>	<p>Work with the Chesapeake Bay Program Partnership, Water Quality Goal Implementation Team, to elicit support for a joint remote sensing project with other jurisdictions</p>		<p>DEP, EPA, Chesapeake Bay Program Partnership</p>	<p>Chesapeake Bay</p>	<p>Begin March 2020</p>				<p><b>2020 Update:</b> Met with WQGIT chairs and BMP Verification Ad Hoc Committee Chairs as it pertains to coordinating and broadening remote sensing opportunities across the watershed. Discussions are ongoing.</p> <p><b>2021 Update:</b> DEP provided Chesapeake Bay Regulatory Accountability Program (CBRAP) funds to all counties that are participating in the CAP implementation process for BMP verification, to be spent through 2022. Some counties have developed a theoretical concept / white paper for remote sensing, based on lessons learned documented in the report from the 2016 NRCS Potomac Watershed Remote Sensing Project and assessed by <a href="#">TetraTech in their third-party report</a>. DEP is encouraging these counties to pursue remote sensing of practices that have been approved for this type of verification methodology and identified in Pennsylvania’s BMP Verification Program Plan.</p>
<p><b>2.4.4</b></p>	<p>Continue enhancements to PracticeKeeper to capture agricultural and other source sector BMPs as well as compliance and inspection tracking and reporting.</p>		<p>DEP</p>	<p>Statewide</p>	<p>Ongoing</p>				<p><b>2020 Update:</b> 1. Ag Inspection Module updates complete. 2. NMP Module updates in progress. 3. BMP Module (Inspection/verification) updates nearly complete. 4. CEG enhancement in progress. 5. 319/Growing Greener enhancement in progress.</p> <p><b>2021 Update:</b> 1. Nutrient Management Program Module updates in Progress. 2. BMP Module (inspection/verification) updates complete. 3. CEG enhancement complete. 4. Section 319/Growing Greener grant program enhancements nearly complete. 5. Partner plan submission in progress.</p>

								6. Tenant transfer in progress.
2.4.5	Update the Pennsylvania BMP Verification Plan and Quality Assurance Program Plan (QAPP)	2022-2023 Update: DEP will be working in 2022 via the CBP Watershed Technical Workgroup to give suggestions on updating the QAPP format and requirements. DEP will continue to submit revised QAPP based on established content requirements and timelines.	DEP, EPA	Chesapeake Bay	Annually, as needed			<p><b>2020 Update:</b> Both were updated and sent to EPA on December 1, 2020 - there may be updates if additional progress information is presented from the Penn State Survey.</p> <p><b>2021 Update:</b> DEP sent out new QAPP guidance and template to all of 37+ data reporters to be incorporated into the 2021 QAPP. The QAPP and BMP Verification Plan Addendum were updated and submitted to EPA's CBPO by the December 1, 2021 deadline. DEP continues to work with EPA's CBPO and Water Division to clarify their QAPP expectations. DEP met multiple times with EPA and provided written responses to questions provided by EPA over the course of several months leading up to the QAPP and BMP Verification Program Plan submission. The 2021 QAPP and BMP Verification Program Plan are posted to <a href="#">DEP BMP Verification</a> website.</p>
2.4.6	Work with EPA and the Chesapeake Bay Program Partnership to enhance the existing crediting protocols for programs and practices that improve water quality in Pennsylvania not currently getting full credit in the Chesapeake Bay Watershed Model.	Finalized crediting protocol that considers all aspects of practices and programs not currently getting credit in the Chesapeake Bay Watershed Model that improve water quality in Pennsylvania. This includes but is not limited to compensatory mitigation, land conservation practices related to mine reclamation, dairy precision feeding, etc.	DEP, Bay Program Partnership		January 2021  Ongoing	Buy in from the Chesapeake Bay Program Partnership		<p><b>2020 Update:</b> Presented to the Management Board in April 2020 as it related to stream and wetland compensatory mitigation and mitigation banks. Requested responses from EPA CBPO in early summer 2020 as it related to wetland and stream compensatory mitigation and mitigation banking. Received EPA CBPO draft response on 12/1/2020. Next steps are currently under consideration.</p> <p>Working with DEP Bureau of Abandoned Mine Reclamation (BAMR) on strategies for accounting for and crediting water quality improvements as it relates to mine reclamation/AMD projects.</p> <p>Pulled together a group of internal and external subject matter experts (DEP, SCC,</p>

									<p>Penn State Extension, Consulting entities) to better account for and credit Dairy Precision Feeding.</p> <p><b>2021 Update:</b> SCC has been working with Penn State University and through the Chesapeake Bay Ag Workgroup to develop and approve a methodology for Dairy Precision Feeding.</p> <p>The Chapter 105 proposed rulemaking includes amendments to Section 20a, which is proposed to be retitled Compensation for impacts to aquatic resources. The proposed for update to Section 20a coincides with advances in science and current understanding of environmental and aquatic resource restoration principles. These revised requirements will also dovetail with the federal mitigation requirements, introduced under the 2008 federal mitigation rule, so that applicants and the regulated community will not have to comply with two different standards, as Pennsylvania's standards will satisfy the federal standards. The proposed amendments to Section 20a will establish compensatory mitigation standards including siting criteria for service areas, standards for assessment of impacts and the valuation of proposed compensation, monitoring and performance standards.</p> <p>DEP has been in discussion with USGS, CBPO staff, and STAC representatives and have begun the development of a STAC workshop proposal to be submitted in February 2022, with a focus on in-stream water quality improvements and habitat improvements due to AMD treatment systems. If approved, the goal would be to hold the workshop in late 2022, with a potential for a convening of an Expert Panel in early 2023.</p>
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<p><b>2.4.7</b></p>	<p>Install additional monitoring station(s) and begin to collect “real-time water quality data on the Susquehanna River to further document the story of progress made by Pennsylvania’s efforts to restore local streams and the Chesapeake Ba as part of implementation of the Phase 3 WIP</p>	<p>Monitoring station(s) and water quality results.</p> <p>2022-2023 Update: The 2022 Integrated Water Quality Monitoring and Assessment Report (Integrated Report) will be published in 2022. It shows the delisting of many impaired stream miles that have been restored to water quality standards, including 32 miles of the Bennet Branch Sinnemahoning Creek.</p> <p>The 2022 Integrated Report includes a section dedicated to the Chesapeake Bay and activities to implement the Chesapeake Bay TMDL. This page will highlight multiple activities and progress that has occurred. The Integrated Report will also include the Chesapeake Bay Healthy Waters Healthy Communities story map and the Sediment and Nutrient Assessment Program (SNAP) Report by SRBC that has been reformatted to an interactive report using an ESRI Storymap application.</p>	<p>DEP Bureau of Clean Water</p>	<p>Susquehanna River</p>	<p>January 2021 Ongoing</p>			<p>1 person \$600,000</p>	<p><b>2020 Update:</b> Ongoing monitoring at 77 Water Quality Network Stations in the Bay watershed continues at up to monthly frequency. This includes 36 Bay nutrient Loading stations that are sampled monthly and are also included in the bay non-tidal network that includes an addition stormwater sediment sampling events per year.</p> <p>Data is uploaded annual to the DUET database and select stations were included in trends analysis to measure progress in the <u>2020 Integrated Report</u>. The results of the trends analysis of mainstem Susquehanna and select tributaries is generally a reduction in total N, P and Suspended Sediment throughout the basin over the past 10 years.</p> <p><b>2021 Update:</b> DEP’s Water Quality Division has successfully submitted additional chemistry data from the period of 2010 - 2020 to the national Water Quality Portal. The enhancement updated/added a total of 2,021,291 records from 64,907 sampling events. This provides other monitoring site data than is provided with the Water Quality Network. These records are statewide but the majority are from the Bay watershed.</p> <p>SRBC published the <a href="#">2021 SNAP report</a> in storymap format in October 2021.</p>
<p><b>2.4.8</b></p>	<p>Updates to the Nutrient Credit Trading Program – Nutrient Trading Tool</p>	<p>Incorporate performance-based credit trading tool through the Chesapeake Bay Nutrient Tracking Tool (CBNTT) for transparent, interactive, site-specific, and regionally consistent</p>	<p>DEP Bureau of Clean Water</p>	<p>Chesapeake Bay</p>	<p>Beginning January 2020</p>				<p><b>2020 Update:</b> CBIG3 and NEIEN funding sources for the work have been identified and are available, and the vendors are ready to proceed, but approval to proceed with the work contracts has not been granted.</p>

		<p>methodology linked to the Chesapeake Bay modeling tools, for calculating nutrient credits that can be generated from nonpoint sources and used by point sources to meet NPDES permit obligations in a cost-effective way</p> <p>More detail can be found in DEP’s workplan for the Chesapeake Bay Implementation Grant. DEP reports progress every 6 months to EPA for grant outputs and outcomes.</p> <p>2022-2023 Update: The PA Nutrient Credit Trading Program (Program) intends to use RIBITS, the Regulatory In lieu fee and Bank Information Tracking System developed by the US Army Corps of Engineers with support from EPA, US Fish &amp; Wildlife Service, Federal Highway Administration, and NOAA Fisheries to track water quality trading (WQT) activities and credits for restoration banks recognized under Natural Resource Damage Assessment statutes. The WQT portion was sponsored by the USDA Office of Environmental Markets. Currently, VA is participating as a pilot state and MD also intends to use RIBITS. PA’s use of RIBITS will facilitate Program activities and</p>							<p><b>2021 Update:</b>          CBIG3 and NEIEN funding sources are available and work has begun to update CBNTT for use by the Program. The Program intends to pursue updating RIBITS to serve as a tool for administering the Program.</p>
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		increase consistency and transparency in trading among Bay states.						
<b>2.4.8(i)</b>	Continue to implement 3:1 trading ratio for nonpoint source (NPS) credit generation and trading until performance-based or other method-based tool (e.g. CBNTT) is established	This interim policy has been in use and is documented in the Phase 2 WIP Nutrient Trading Supplement found on DEP's Nutrient Trading website	DEP Bureau of Clean Water	Chesapeake Bay	Ongoing			<p><b>2020 Update:</b> The 3:1 ratio continues to be implemented until the program has moved to CBNTT and uses a performance-based calculation methodology.</p> <p><b>2021 Update:</b> The 3:1 ratio continues to be implemented until the program has moved to CBNTT and uses a performance-based calculation methodology.</p>
<b>2.4.9</b>	Continue to work with the Federal Facilities Workgroup and Federal Facilities to report BMPs installed and maintained and finalize local planning goals		EPA, DEP, DoD	Chesapeake Bay	Ongoing			<p><b>2020 Update:</b> The federal BMPs were reported to EPA for 2020 Progress.</p> <p><b>2021 Update:</b> Federal Facility BMPs received from Federal partners were reported with Pennsylvania's 2021 Progress Submission. DoD tracking has shown Pennsylvania's reporting of Federal BMPs is at one of the highest success rates (NEIEN acceptance) in the watershed.</p>
<b>2.4.10</b>	Active participation and collaboration in Chesapeake Bay Partnership Technical Workgroups focused on CAST model updates	Integrate best available data and science from Pennsylvania and ensure that historic model process issues like excess/cutoff are addressed across the partnership in the two-year CAST model updates.	DEP, SCC, DCNR, EPA, Chesapeake Bay Jurisdictions, NRCS, DoD, and Partnership	Chesapeake Bay	CAST-23 planning begins 2022			<p><b>2021 Update:</b> DEP and other stakeholders regularly attend and contribute to EPA's CBPO office workgroups under the Bay Program's Water Quality Goal Implementation Team for science-based technical updates to CAST.</p> <p>Notably in 2021, the DEP participated in the newly formed BMP Verification Ad Hoc Committee, Agriculture Ad Hoc Committee, Land Use and Water Technical Work Group, and Conowingo WIP Steering Committee concerning the CAST21 Workplan. Below are the summarized 2021 outcomes:</p>

									<p>1. BMP Verification Ad Hoc Committee: Discussed BMP Credit durations for Barnyard Runoff Control (BRC), Loafing Lot Management (LLM), Forest Buffers, Grass buffers, and Wetlands. Presented findings from Pennsylvania’s verification and inspection programs related to BRC/LLM. Forest Buffers and Tree Plantings were changed from 10 to 15-year credit duration. DEP gave feedback on BMP Verification and the volume of the historically reported BMPs from federal sources (such as CREP) lost to credit duration expiration.</p> <p>2. NRCS NEIEN Crosswalk: DEP and SCC have worked with NRCS to identify gaps in reporting, including the LOU described in 2.4.4A. One area of recent note is the inability to report many NRCS funded practices (such as those funded through Conservation Stewardship Program CSP funding) because there is not an associated “crosswalk” in the NEIEN list. This is a significant issue that must be addressed no later than CAST-23, and DEP and NRCS will work together to ensure that it is included in the CAST-23 workplan.</p> <p>2. Ag Ad Hoc Committee: DEP and SCC staff represented Pennsylvania on the Ag Ad Hoc Committee to review and execute the CAST-21 workplan. However, multiple areas of the workplan that were raised by Pennsylvania were not addressed due to lack of partnership support, such as modeled nutrient management issues on full-season soybeans and the addition of known animals into the modeling tools.</p> <p>3. Land Use Workgroup: Discussed new land classifications, cover/use 2017-2019 updates and hydrography data. Partnered with Chesapeake Conservancy to provide local land cover/use review. Incorporated a new method of detecting extractive lands.</p>
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									<p>4. Watershed Technical Workgroup: Discussed back out and cutoff issues related to forest buffers.</p> <p>5. Conowingo WIP Steering Committee: Participate as a Co-chair of the Steering Committee and actively engage in discussions relating to Activity 1, 2, and 3. Activity 3 is focused on BMP data management, tracking and reporting; work with Activity 3 leads, Chesapeake Conservancy, to ensure streamlined reporting requirements and crediting.</p> <p>DEP will continue to address CAST updates through these and other EPA CBPO Workgroups under the governance of the Water Quality Implementation Team.</p> <p>This is a new milestone for 2022-2023.</p>
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**Section 2, State Actions, Numeric Commitments**

<b>2.4.1A</b>	Work with the Chesapeake Bay Program Partnership to establish a creditable practice or combination of practices for implementation of advanced soil health strategies or plans on farms in the Chesapeake Bay Watershed Model for future crediting of these initiatives. Once established as a practice or set of practices that can be credited for progress in the model, commit additional funding or the technical and financial assistance necessary to implement these practices.		DEP, PDA, SCC		January 2021	Buy in from the Chesapeake Bay Program Partnership			<p><b>2020 Update:</b> Action has not started</p> <p><b>2021 Update:</b> Action has not started</p>
<b>2.4.2A</b>	Expand reporting of dairy precision feeding	Assess and report implementation of dairy precision feeding for 175,000 Animal Units (approximately 152,000 milking cows)	PDA, Dairy Co-ops, PACS Program, Dairy Nutritionists, PA Dairyman’s Assoc., CDs, NRCS		December 2025	Voluntary program. Need to have the ability to track and report what dairy farmers are already doing.			<p><b>2020 Update:</b> Action is moving forward as planned, workgroup discussing and will be presenting to the CBP Ag Workgroup in January 2021</p>

									<p><b>2021 Update:</b> PDA and PSU have presented this approach to the Ag Workgroup. PDA and PSU are developing a proposal for workgroup consideration.</p>
2.4.3A	Expand reporting of Enhanced Nutrient Management	<p>64,640 acres with no manure applied would be managed based on a nitrogen and phosphorus based nutrient management plan;</p> <p>64,640 acres with no manure applied would be managed with nutrient management plans to meet nitrogen and phosphorus requirements as well as supplemental practices based on rate, timing, and placement for nitrogen and phosphorus.</p> <p>Tracking of acres with manure applied, where the land would be managed with nutrient management plans to meet nitrogen and phosphorus requirements as well as supplemental practices based on rate, timing, and placement for nitrogen and phosphorus</p>	4R Nutrient Stewardship Alliance, PACS, CCAs, CDs, SCC, DEP		December 2025	Voluntary program. Need to have the ability to track and report what farmers are already doing.			<p><b>2020 Update:</b></p> <ol style="list-style-type: none"> <li>Working on the incorporation of verification of Supplemental nutrient management (NM) BMP implementation during annual Act 38 Status Reviews.</li> <li>CBAIP – Standard Operating Procedure and training materials released to support the tracking of Supplemental NM BMPs verified during inspections.</li> <li>Counties have included these BMPs into their CAPs and are actively working to verify them through CAP Implementation Grants and other funding sources and partnerships (e.g. NFWF and 4R Alliance).</li> </ol> <p>Action is moving forward as planned, workgroup discussing and developing forms</p> <p><b>2021 Update:</b></p> <ol style="list-style-type: none"> <li>Verification of Supplemental Nutrient Management (NM) BMPs on Act 38 Annual Status Reviews began October 2021. A live webinar was held for certified technicians and recorded for future reference.</li> <li>Counties are actively reporting supplemental NM BMPs in the PracticeKeeper Database while conducting inspections and site visits.</li> <li>Coordinating with Penn State University and SCC for the deployment of the 2022 Penn State Voluntary Producer Survey for the Tier 2 and Tier 3 counties, which will also capture supplemental NM BMP implementation.</li> </ol>

<p><b>2.4.4A</b></p>	<p>Expand reporting of grass buffers</p>	<p>50,000 acres of land adjacent to streams for establishment of grass buffers at least 35 feet in width</p>	<p>NRCS, DEP, CDs</p>		<p>December 2025</p>	<p>Costs associated with on-site inspection to determine grass buffers; use of aerial imagery a potential</p>			<p><b>2020 Update:</b> Agricultural Grass Buffers are being reported through PracticeKeeper, as well as the BMP Partner submission module through the Agricultural Plan Reimbursement Program. Grass buffers are also being reported through Penn State survey, that is scheduled to report by the end of 2020.</p> <p><b>2021 Update:</b> Agricultural Grass Buffers were reported to EPA’s CBPO from PracticeKeeper, as well as the BMP Partner submission module through the Agricultural Plan Reimbursement Program, and Penn State survey as part of DEP’s 2020 progress submission. Grass Buffer credit duration was being assessed in the Chesapeake Bay Program Partnership BMP Verification Ad Hoc Committee. As shown in the Numeric Milestones, submitted progress through 2021 shows an increase in reported grassed buffer acres.</p> <p>DEP, SCC, NRCS, and USGS hold a joint Letter of Understanding (LOU) to assess duplication of Conservation Technical Assistance (CTA) reporting in four counties. Currently, NRCS reported CTA projects do not get accounted for due to concerns related to duplicate reporting. DEP provided state reported data to USGS to assess with NRCS reported data. To date, USGS has not yet produced a report from this data sharing project.</p>
<p><b>2.4.5A</b></p>	<p>Inventory existing agricultural BMPs and BMP needs through survey, agricultural planning, and inspection programs, focusing on geographic areas through the Tiered approach</p>		<p>PDA, SCC, DEP, CDs, Penn State Extension, NRCS, USGS, EPA</p>		<p>Beginning Spring 2020</p>				<p><b>2020 Update:</b> 1. PA Farm Conservation Practices Inventory was voluntarily submitted by agricultural operators in Adams, Franklin, and York Counties. Verifications were completed by Penn State Extension professionals, and data analysis is on-going.</p>

									<p>2. MOU is finalized, and data analysis and comparison is ongoing across DEP PracticeKeeper and USDA datasets in Franklin, Juniata, Lancaster, and York Counties.</p> <p>3. The Chesapeake Bay Ag Inspection Program (CBAIP) continues to collect and report BMP data across the PA Bay watershed as part of initial and follow-up inspections.</p> <p>4. CBAIP has initiated Phase 2 (Plan and BMP Implementation) inspections in Adams, Chester, and Lancaster Counties.</p> <p>PA's Agricultural Plan Reimbursement Program BMPs are continuing to be reported to Practice Keeper by Team Ag and Larson (APRP contractors) through the BMP Partner Module.</p> <p><b>2021 Update:</b></p> <p>1. PA Farm Conservation Practices Inventory was voluntarily submitted by agricultural operators in Adams, Franklin, and York Counties. Verifications were completed by Penn State Extension professionals, and data analysis is complete.</p> <p>2. Data analysis and comparison is ongoing across DEP PracticeKeeper and USDA datasets in Franklin, Juniata, Lancaster, and York Counties.</p> <p>3. The Chesapeake Bay Ag Inspection Program (CBAIP) continues to collect and report BMP data across the PA Chesapeake Bay watershed as part of initial and follow-up inspections. The <a href="#">2020-2021 Agriculture Inspections Annual Summary</a> was published to the website in December 2021.</p> <p>4. CBAIP Phase 2 (Plan and BMP Implementation) inspections continue in Adams, Chester, and Lancaster Counties</p>
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									<p>and has expanded to all counties where initial inspections are complete. Information related to the Phase 2 portion of the CBAIP is included in the 2020-2021 Agriculture Inspections Annual Summary.</p> <p>5. SCC and DEP continue funding and support for the PaOneStop program. Enhancements to PaOneStop will allow for use during the 2022 producer survey data collection.</p>
2.4.1F	<p>Ensure adequate tracking of partner-implemented forestry BMPs including forest buffers, tree canopy, conservation landscaping, urban forest expansion, stream wetland restoration.</p>	<p>Develop mechanism to capture partner reported and privately funded buffers and other BMPs, with appropriate QA/QC processes, enabling those BMPs to be properly credited.</p> <p>2022-2023 Update: DEP and DCNR Bureau of Recreation and Conservation are developing crosswalk lists, training, and enhancements for reporting priority BMPs that are implemented as part of their grant programs, like parks rehabilitation projects (e.g. green infrastructure, tree planting, and forest buffers).</p>	<p>DEP, DCNR, PDA, SCC, EPA, PACD, NGOs, Farm Organizations, NRCS, PSU</p>	<p>PA Bay-wide</p>	<p>Ongoing</p>	<p>QA/QC of partner data, system access, etc.</p>			<p><b>2020 Update:</b> DCNR Forestry entered BMPs into Practice Keeper from 2017 – 2020 and they were reported as part of 2020 Progress to EPA.</p> <p>Chesapeake Bay Foundation’s (CBF) Keystone 10 Million Trees Initiative reported their tree plantings from 2018 – 2020 and was submitted to EPA.</p> <p>DEP is working with DCNR Recreation to report their BMPs in Practice Keeper.</p> <p>FieldDoc, in partnership with Chesapeake Commons, was launched in October 2020 to capture BMPs that are not part of a Commonwealth cost share or regulatory program.</p> <p>NFWF BMPs are going to reported through FieldDoc.</p> <p>DCNR’s TreeVitalize program submitted tree planting BMPs from 2015 – 2019 for 2020 Progress.</p> <p><b>2021 Update:</b> DCNR Forestry Program entered BMPs into Practice Keeper from 2017 – 2021 and these BMPs were reported as part of 2020 and 2021 Progress to EPA.</p> <p>DCNR’s TreeVitalize program submitted tree planting BMPs from 2015 – 2019 were reported as part of 2020 Progress to EPA. DCNR Forestry and TreeVitalize will</p>

								<p>continue to report their BMPs to PracticeKeeper.</p> <p>DEP's DEP and DCNR collaborated with Chesapeake Bay Foundation to set up a PracticeKeeper Partner BMP Module. CBF updated their internal data collection process and requirements to accurately include spatial parcel data that they are going enter PracticeKeeper. DCNR is the reviewing entity and will be QA/QC the data and exporting CBF data from Practice Keeper to submit to DEP. CBF will report historic data to DCNR in a spreadsheet form, but moving forward CBF will utilize PracticeKeeper for all of their future reporting.</p> <p>As part of DCNR's Climate Resiliency initiative, DCNR Recreation is working with DEP to report their BMPs in PracticeKeeper. DCNR Recreation agreed to "pilot" PracticeKeeper to report BMPs for York and Lancaster County. DCNR Recreation is going to update their grant close out form to include reporting BMPs.</p> <p>For FieldDoc, Chesapeake Commons added the Tier 2 counties so they can input non-cost share/regulatory BMPs along with the Pilot counties. EPA's CBPO 2020 Progress metrics will be added for the Pilot and Tier 2 counties in FieldDoc to compare with the county CAP goals.</p> <p>NFWF BMPs were reported through FieldDoc to EPA's CBPO for 2020 progress.</p>
2.4.2F	Celebrate successful implementation and maintenance of forestry BMPs through reporting successful efforts.	Generate broad understanding and acceptance of watershed restoration efforts and how they improve quality of life in PA communities through reporting successful efforts, resulting in a greater	All agencies and partners.	PA Bay-wide	Ongoing	Report generation, digestible messaging, continual messaging, etc.		<p><b>2020 Update:</b> DCNR included forest buffers and lawn conversion practices in its monthly e-newsletter, <i>The Resource</i>, and celebrated forestry BMPs through the USFS Shared Stewardship agreement signing committing to the Bay Forest Restoration Strategy.</p>

		<p>appetite for forestry and all BMPs. Broader acceptance and appetite for these BMPs will make outreach and implementation less time-intensive, less expensive processes.</p>						<p>Teddi Stark received the 1st Annual Watershed Leadership Award which will be given annually during the Riparian Forest Buffer Summit.</p> <p>The Buffer Vocational Training at Huntingdon State Correctional Institute was a part of the Correctional Conservation Collaborative and received a Governor’s Environmental Excellence Award in 2020, as well as local news coverage.</p> <p><b>2021 Update:</b> David Wise of Stroud Water Research Center received the 2<sup>nd</sup> Annual Watershed Leadership Award, which was presented at PA’s Virtual 2021 Buffer Summit.</p> <p>DCNR continued to share success stories via social media and resource newsletters, as they were available.</p> <p>DCNR invited executive and legal staff who work on our many agreements to a partner planting to celebrate progress on buffers internally.</p> <p>CCLC is making October 2021 “buffers month”, and hosting and sponsoring outreach and events around riparian forest buffers.</p>
2.4.1S	<p>Collect Municipal Separate Storm Sewer System (MS4) BMP data using the new reporting systems for electronic submission for annual reports and inspections</p>	<p>Implement use of MS4 e-Inspection application. Complete e-reporting system for annual reports by December 2022</p>	DEP, MS4s	Statewide	Begin 2019			<p><b>2020 Update:</b> DEP is initiating a new project to develop a web-based system for MS4 annual reports to collect BMP data.</p> <p>DEP is utilizing an electronic system for recording MS4 inspections (“eInspection”).</p> <p><b>2021 Update:</b> The development of an electronic reporting system for MS4 Annual reports is underway. It is anticipated that this system will begin to be implemented for reporting year 2022.</p>

2.4.2S	Initiate and collect stormwater BMP data from other DEP programs implementing provisions of the Chapter 102 regulations, to include required post-construction stormwater management.			Statewide	Begin 2020				<p><b>2020 Update:</b>  DEP is anticipating the launch of the Chapter 102 ePermit system on January 25, 2021, to allow the regulated community to submit Notices of Intent (NOIs) electronically for PAG-02 NPDES General Permit coverage for stormwater discharges associated with construction activities. The ePermit system will be built in phases, in which new and amendment PAG-02 NOIs will be released first, followed by individual NPDES permit applications and then erosion and sediment control (E&amp;S) permit applications. Use of Chapter 102 ePermit will be voluntary at first, but is expected to be required in the future. The system represents a significant step forward in DEP’s ability to collect information on earth disturbance activities and BMPs across Pennsylvania.</p> <p><b>2021 Update:</b>  The Chapter 102 ePermit system is available for voluntary use for:  1. New NOIs and amendments for the PAG-02 General NPDES Permit (released January 25, 2021);  2. New applications and amendments for Individual NPDES Permits for Stormwater Discharges Associated with Construction Activities (released April 21, 2021); and  3. New applications and amendments for Erosion and Sediment Pollution Control (E&amp;S) Permits for Discharge of Stormwater Associated with Construction Activities (released August 4, 2021).</p> <p>System availability for New NOIs for the Erosion and Sediment Control General Permit (ESCGP-3) for earth disturbance associated with Oil and Gas Exploration, Production, Processing or Treatment Operations or Transmission Facilities is tentatively planned for release on December 8, 2021. The ePermit system</p>
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									records anticipated PCSM BMPs for earth disturbance projects.
<b>2.4.3S</b>	Continue to track MS4 PRP submission, review, and approval.	Internal report is updated and maintained on a quarterly basis and provided to regional staff as well as DEP executive team	DEP Bureau of Clean Water		Ongoing				<p><b>2020 Update:</b> DEP's Bureau of Clean Water continues to track MS4 PRPs. Here are the numbers: 1. Percentage of PRPs reviewed of those received: 100% (178 total, there are multiple joint PRPs that include about 250 MS4s) 2. Percentage approved of those reviewed: 87% (155 of 178) 3. Total PRPs not received: 8 4. Total PRPs not yet approved: 31 Note this is being tracked in terms of PRPs instead of MS4s, since there are multiple joint PRPs that involve many jurisdictions. The York County PRP includes more than 40 MS4 which will be approved shortly.</p> <p><b>2021 Update:</b> There are 345 small regulated MS4s in the Chesapeake Bay watershed (not including PennDOT and PA Turnpike Commission). Of these, 79 have waivers. Of the remaining 266 with permit coverage, 84% have approved PRPs.</p>
<b>2.4.1W</b>	Explore the feasibility of developing a GIS based online monitoring and reporting program that municipalities can use to report on-lot system operation and maintenance.		DEP						<p><b>2020 Update:</b> Project has been scoped with the help of DEP IT. Until funds are available to support the development, the system cannot be further developed and implemented.</p> <p><b>2021 Update:</b> State funds have been made available through the Clean Water Fund. Project is in the intake queue for DEP Bureau of Information Technology.</p>
<b>Section 3. Countywide Actions</b>									
<b>3.4.1</b>	Track and report progress in Phase 3 WIP planning and implementation in all counties.	Development of Countywide Action Plans (CAPs) in all counties in Pennsylvania's	DEP, Local planning leaders, External Coordinators	All Counties in CBWS	Phase 1 Begins July 2019 Phase 2 Begins Feb 2020	State staffing support  Internal and External Coordination			<p><b>2020 Update:</b> Pilot counties submitted annual progress templates to DEP for their Countywide Action Plan in October. DEP met and discussed progress templates with each of</p>

		<p>Chesapeake Bay Watershed.</p> <p>For 2022-2023, DEP staff will conduct a full review of each county CAP and develop a CAP Highlights and Trends summary of findings with an accompanying spreadsheet that provides more details of each CAP item/initiative (with counties listed) for state and federal action leaders to utilize for strategic planning and policy making.</p>						<p>the pilot counties. Tier 2 counties submitted their Draft Plans in October and are in the final stages of finalizing their CAPs. Tier 2 counties will submit their first annual progress report in 2021.</p> <p><b>2021 Update:</b> Pilot counties submitted annual progress reports and 2022-23 CAP milestone updates to DEP for their Countywide Action Plans in September. DEP met and discussed progress templates and milestones with each of the pilot counties.</p> <p>Tier 2 counties submitted annual progress reports to DEP for their Countywide Action Plans in September. DEP met and discussed progress templates with each of the Tier 2 counties.</p> <p>All Tier 3 and 4 counties competed and submitted their CAPs to DEP in September 2021. DEP met and discussed CAP initiatives with each of the Tier 3 and 4 counties. DEP also conducted a “Transition to Implementation” webinar in December for the Tier 3 and 4 counties.</p> <p>County annual progress and two-year milestone updates are published to the <a href="#">DEP Countywide Action Plans</a> website.</p>
3.4.2	Update reductions in the County Planning Progress template upon completion of each county plan.	<p>Completion of Countywide Action Plans (CAPs) in all counties in Pennsylvania’s Chesapeake Bay Watershed.</p> <p>2022-2023 Update: DEP will continue to contract with SRBC to assist in updated Tier 2 CAST runs, updating County CAP Toolboxes, and working</p>	DEP, Local planning leaders, External Coordinators	All Counties in CBWS	Phase 1 Begins January 2020	State staffing support  Internal and External Coordination		<p><b>2020 Update:</b> Tier 2 counties are in final stages of finalizing their CAPs. The Phase 3 WIP input file will be updated in 2021 to represent the Tier 2 CAPs.</p> <p><b>2021 Update:</b> DEP and SRBC have worked closely to assist Pilot and Tier 3 and 4 counties with CAST scenarios. To facilitate this process, DEP and SRBC collaborated on the following:</p>

		on Acid Mine Drainage (AMD) initiatives.							<ol style="list-style-type: none"> <li>1. Create a standardized and user-friendly BMP Template with directions, BMP crosswalk and definitions and for counties plan their BMPs numeric goals. DEP/SRBC provided training and answered questions about the BMP Template.</li> <li>2. When counties submitted their BMP Template, SRBC created CAST scenarios and shared results in pie charts and tables via PowerPoint to be reviewed by DEP. SRBC and DEP discussed the CAST scenario results before presenting to each county.</li> <li>3. DEP/SRBC collaborated to present the CAST results, use the Toolbox to highlight areas of opportunity, and answer technical questions.</li> <li>4. DEP/SRBC presented the difference between CAST17 and CAST19 to each Tier 1 county and answer technical questions.</li> <li>5. DEP/SRBC worked together to investigate and find solutions to issues concerning wastewater and excess in the CAST19 model.</li> <li>6. SRBC is on track to complete Pilot and Tier 3 and 4 Snapshots and Implementation Toolboxes.</li> <li>7. SRBC provided a comprehensive QA/QC document for their contracted work for DEP. DEP did a QA/QC analysis of SRBC's Franklin County CAST Scenario</li> </ol>
3.4.3	Track and report progress to continue implementation of the Phase 3 WIP State Numeric Commitments described in Section 4, State Actions in the counties with minimal reductions.	Completion of Countywide Action Plans (CAPs) in all counties in Pennsylvania's Chesapeake Bay Watershed.	DEP, Local planning leaders, External Coordinators	All Counties in CBWS	Phase 2 Begins August 2020	State staffing support  Internal and External Coordination			<p><b>2020 Update:</b> Conservation Districts continue to use the PracticeKeeper system, as required by their Nutrient/Manure Management and Bay Technician agreements. PennDOT was added as a new reporting program for stormwater BMPs for 2020 progress. DCNR Recreation is working to report stormwater BMPs on non-MS4 land through PracticeKeeper.</p> <p><b>2021 Update:</b> See above for CAP updates.</p>

									PracticeKeeper data collection is improving with expanded use by County Conservation Districts with improved functionality including Partner (non-CCD) BMP Submission capability.
3.4.4	Amend the Phase 3 WIP to incorporate the additional CAPs that are developed (Phase 1 and 2)	Completion of Countywide Action Plans (CAPs) in all counties in Pennsylvania's Chesapeake Bay Watershed	DEP	Phase 1: Tier 2 Counties Phase 2: Tier 3 and 4 Counties	Phase 1: December 2020  Phase 2: December 2021	State staffing support  Internal and External Coordination			<p><b>2020 Update:</b> Phase 1 CAPs are completed.</p> <p><b>2021 Update:</b> Phase 1 and Phase 2 CAPs are completed and published to the <a href="#">DEP Countywide Action Plans</a> website.</p> <p>Pennsylvania's Phase 3 WIP Amendment was submitted to EPA by December 31, 2021 and published to the <a href="#">DEP Pennsylvania's Plan</a> website.</p>

Priority Initiative 5: Compliance

Section 2, State Actions, Programmatic and Narrative Commitments

2.5.1	Pass the Fertilizer Bill to achieve the identified nutrient reductions on urban and agriculture lands.				2019-2020 Legislative Session				<p><b>2020 Update:</b> Fertilizer Bill was not passed in the 2019-2020 Legislative Session.</p> <p><b>2021 Update:</b> Fertilizer Bill is being discussed in the 2020-2021 Legislative Session.</p>
2.5.2	Review, consider and potentially incorporate a revised Phosphorus Index into the planning requirements for land application of biosolids.	Incorporate revised P index tool into future nutrient management planning efforts where approved for use	SCC, Penn State, DEP, NRCS	Statewide	July 2020				<p><b>2020 Update:</b> DEP is on track and currently developing draft permits to reissue for the beneficial use of sewage sludge, PAG-07, PAG-08, and PAG-09. One of the items for consideration is incorporation of the management of sewage sludge with the consideration of the total phosphorus content of the sewage sludge. No decisions have been made on what will or will not be in these draft permits to date.</p> <p><b>2021 Update:</b> P-Index Version 3 is still in development and testing, hopefully to be released in early 2022. DEP is doing outreach on the changes to the general permits that authorize land application of biosolids</p>

									which include the incorporation of the - index to the biosolids management requirements. DEP is coming up against significant opposition to the proposed P-index requirement.
2.5.3	Develop State Agency nutrient reduction planning goals and the associated Action Plans for meeting those planning goals for the installation of practices on lands owned and maintained by state agencies.	Completed State Agency Action Plans for the reduction of nutrients on lands owned and operated by state agencies.  2022-2023 Update: PFBC is participating in a sediment reduction project using stream restoration BMPs with a floodplain approach on PFBC's headquarters property in Dauphin County. Goals of the project are to reduce sediment and nutrient loading to the Chesapeake Bay, and Restore stable stream, wetland, and floodplain system. This project is anticipated to be completed in 2022.	DEP, DCNR, Other Agencies responsible for the management of state lands, Governor's Office	Watershed-wide	January 2021				<p><b>2020 Update:</b> The Pennsylvania Fish and Boat Commission (PFBC) is partnering with DCNR's Bureau of Forestry to conduct a pilot riparian forest buffer implementation project along the Juniata River on four parcels owned by PFBC, which will total approximately eight acres of buffer planting. These plantings are scheduled to take place in April 2021. If all goes well with these pilot plantings, PFBC will look into additional parcels owned by the Commission for potential riparian forest buffer implementation.</p> <p><b>2021 Update:</b> The partnership plantings with PAFBC took place in April 2021, and PAFBC is working with PA DCNR to identify additional locations for plantings in 2022.</p> <p>DCNR is also exploring options for Lawn Conversion project implementation on DCNR-controlled lands, such as at state park and state forest offices.</p>

**Section 2, State Actions, Numeric Commitments**

2.5.1A	Implement NPDES Concentrated Animal Feeding Operation (CAFO) Program Delegation	Permit 100% of all CAFOs (350+ operations in Chesapeake Bay Watershed); Inspection metrics and results are provided to EPA annually per the required Compliance Monitoring Strategy. EPA also requires NPDES permitting and compliance information to be provided by DEP for ICIS database inclusion.	DEP		Ongoing				<p><b>2020 Update:</b> A modification of the PAG-12 General Permit was issued by DEP on October 31, 2020 requiring the submission of NOIs to remain covered under PAG-12. DEP has submitted an end of year CMS report and will continue to provide CAFO permit and compliance information to ICIS.</p> <p><b>2021 Update:</b> DEP and EPA have attended the Agricultural Advisory Board (AAB) CAFO workgroup as they deliberate areas for streamlining the permit application and</p>
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		2022-2023 Update: Implement proactive outreach strategies to regulated community to ensure PAG-12 general permit renewal by April 2023.						reporting process. DEP will work with the AAB as well as EPA to ensure that there is transparent and consistent communications regarding the PAG-12 and it remains on schedule for renewal.
2.5.2A	Complete complaint follow-up for CAFO and non-CAFO facilities		DEP, SCC, CDs		Ongoing			<p><b>2020 Update:</b> DEP's regional offices complete this activity on an ongoing basis.</p> <p><b>2021 Update:</b> DEP's regional offices complete this activity on an ongoing basis.</p>
2.5.3A	Implement Chesapeake Bay Agriculture Inspection Program, Phase 1, with an emphasis on meeting state planning requirement on non-CAFO operations.	Inspect 10% of the agricultural acreage annually. More information can be found in our Standard Operating Procedure published on DEP's website. Additionally, progress is reported to EPA every 6 months per the Chesapeake Bay Regulatory and Accountability Program grant.	DEP, CDs	Chesapeake Bay	Ongoing			<p><b>2020 Update:</b> Chesapeake Bay Ag Inspection Program (CBAIP) Standard Operating Procedure was updated in May 2020. The 2019-2020 Annual Inspection Summary has been developed and published to the DEP Ag Compliance website.</p> <p><b>2021 Update:</b> Chesapeake Bay Ag Inspection Program (CBAIP) Phase 1 (CBO-INSP-001) Standard Operating Procedure was updated in May 2021. The <a href="#">2020-2021 Agriculture Annual Inspections Summary</a> was published to the DEP website in December 2021.</p>
2.5.4A	Implement Chesapeake Bay Agriculture Inspection Program, Phase 2 Pilot, with an emphasis on meeting both state planning and implementation requirements on non-CAFO operations.	2022-2023 Update: The CBAIP Phase 2 program will continue to be expanded as more counties complete their Phase 1 inspections.	DEP, SCC, CDs, NRCS, Private Consultants	Chesapeake Bay	Beginning July 2020	Available funding for Technical Assistance and construction of BMPs remains a concern.		<p><b>2020 Update:</b> Chesapeake Bay Ag Inspection Program – Phase 2 Standard Operating Procedure was finalized June 2020 along with the Phase 2 Inspection Program Funding Guidelines (provided via DEP Environmental Stewardship Funds). Phase 2 Inspections have been/will be conducted in Lancaster, Chester, and Adams counties by the conservation districts, and in York County by the DEP Southcentral Regional Office beginning in July 2020.</p> <p><b>2021 Update:</b></p>

									CBAIP Phase 2 (CBO-INSP-002) Standard Operating Procedure was updated in May 2021. The <a href="#">2020-2021 Agriculture Annual Inspections Summary</a> was published to the DEP website in December 2021.
<b>2.5.5A</b>	Participate in EPA’s formal assessment of Pennsylvania’s Animal Agriculture Programs	2022-2023 Update: EPA will conduct a follow-up assessment of Pennsylvania’s animal agriculture programs to the initial 2015 assessment.	EPA, DEP, SCC, PDA, CCDs	Chesapeake Bay/Statewide	Beginning January 2022				<b>2021 Update:</b> DEP and SCC staff responded to informal questions and began the review of the questionnaire. This is a new milestone for 2022-2023.
<b>2.5.1S</b>	Complete the Pollutant Reduction or Total Maximum Daily Load Plan Reviews for the 2018 Municipal Separate Storm Sewer System (MS4) permits	Complete technical review and issue permits  2022-2023 Update: this Action Number will be merged with 2.4.3S	DEP, MS4 permittees	Statewide	2020	MS4s not addressing DEP review comments, staff shortages			<b>2020 Update:</b> DEP has reviewed and approved the majority of PRPs and TMDL Plans submitted in 2017. There are a few complicated cases, including cases under litigation, that have delayed completion of reviews.  <b>2021 Update:</b> The majority of MS4 permittees within the Chesapeake Bay Watershed have approved PRP plans and are working on BMP implementation to meet the pollutant load reduction obligations of their MS4 permits. There are currently 43 permittees in the Bay Watershed without approved PRPs. DEP is working with these permittees to resolve the technical deficiencies with their PRPs to that they can be approved.
<b>2.5.2S</b>	Develop the 2023-2028 NPDES MS4 Permit	In the development of this permit, provide opportunities for input from stakeholders, including but not limited to the Phase 3 WIP Stormwater Workgroup, as part of the normal public participation process.	DEP	Statewide	2019 through 2022				<b>2020 Update:</b> DEP has prepared conceptual plans for the next permit term and has solicited and received input from the regulated community and other stakeholders.  <b>2021 Update:</b> DEP is continuing to work on next permit and is accepting comments from interested parties through the MS4 resource account ( <a href="mailto:RA-EPPAMS4@pa.gov">RA-EPPAMS4@pa.gov</a> ).
<b>2.5.3S</b>	Continue to implement the NPDES Municipal	Inspection metrics and results are provided to	DEP	Statewide	Ongoing				<b>2020 Update:</b>

	Stormwater Program Delegation, to include permitting, compliance, inspection, and enforcement.	EPA annually per the required Compliance Monitoring Strategy. EPA also requires NPDES permitting and compliance information to be provided by DEP for ICIS database inclusion.							<p>An end of year CMS report has been submitted, and DEP will continue to provide permit and compliance information to ICIS.</p> <p><b>2021 Update:</b> An end of year CMS report will be submitted during the Fall of 2021 for FFY 2021, and DEP will continue to provide permit and compliance information to ICIS.</p>
<b>2.5.4S</b>	Develop the NPDES Industrial Stormwater Permit	2022-2023 Update: Renew the PAG-03 general permit.	DEP	Statewide	2019 through 2021				<p><b>2020 Update:</b> A draft of the PAG-03 general permit for reissuance has been developed and is under legal review.</p> <p><b>2021 Update:</b> The current PAG-03 has been administratively extended for one year. The draft PAG-03 is under review.</p>
<b>2.5.5S</b>	Continue to implement the NPDES Industrial Stormwater Program Delegation, to include permitting, compliance, inspection, and enforcement.	Inspection metrics and results are provided to EPA annually per the required Compliance Monitoring Strategy. EPA also requires NPDES permitting and compliance information to be provided by DEP for ICIS database inclusion.	DEP	Statewide	Ongoing				<p><b>2020 Update:</b> An end of year CMS report has been submitted and DEP will continue to provide permit and compliance information to ICIS.</p> <p><b>2021 Update:</b> An end of year CMS report has been submitted and DEP will continue to provide permit and compliance information to ICIS.</p>
<b>2.5.6S</b>	Continue to implement the NPDES Construction Stormwater Program Delegation, to include permitting, compliance, inspection, and enforcement.	Pennsylvania’s Chapter 102 requires NPDES permitting for an acre or more of earth disturbance related to construction activities. The requirements also include post-construction stormwater management on all permitted sites. Inspection metrics and results are provided to EPA annually per the	DEP	Statewide	Ongoing				<p><b>2020 Update:</b> DEP continues to implement the NPDES program under Chapter 102 with the assistance of delegated conservation districts. An end of year CMS report has been submitted and DEP will continue to provide permit and compliance information to ICIS.</p> <p><b>2021 Update:</b> DEP continues to implement the NPDES program under Chapter 102 with the assistance of delegated conservation</p>

		required Compliance Monitoring Strategy. EPA also requires NPDES information to be provided by DEP for ICIS database inclusion.							districts. An end of year CMS report has been submitted and DEP will continue to provide permit and compliance information to ICIS.
<b>2.5.7S</b>	Continue water quality demonstration requirements for post-construction stormwater management	Beginning in 2019, DEP's Ch 102 program overhauled the water quality approach and started to require every applicant to perform a quantitative demonstration that their project will not cause post-construction TSS and nutrient loads in excess of pre-construction loads. Prior to this requirement, there was a presumption that if volume management was met water quality requirements would also met.	DEP	Statewide	Ongoing				<b>2021 Update:</b> DEP continues to require Chapter 102 NPDES permittees to demonstrate that their projects will not cause post-construction total suspended sediment (TSS) and nutrient loads in excess of pre-construction loads. This is a new milestone for 2022-2023.
<b>2.5.1W</b>	Continue to implement the NPDES Sewage and Industrial Waste Program Delegation, to include permitting, compliance, inspection, and enforcement	Inspection metrics and results are provided to EPA annually per the required Compliance Monitoring Strategy. EPA also requires NPDES permitting and compliance information to be provided by DEP for ICIS database inclusion.	DEP	Statewide	Ongoing				<b>2020 Update:</b> DEP continues to implement the NPDES program. An end of year CMS report has been submitted and DEP will continue to provide permit and compliance information to ICIS.  <b>2021 Update:</b> DEP continues to implement the NPDES program. An end of year CMS report has been submitted and DEP will continue to provide permit and compliance information to ICIS.

**Section 9, Climate Change**

<b>9.1.1C</b>	Regional Greenhouse Gas Initiative (RGGI)	Reduce an additional 1.81 million pounds of nitrogen and 0.095 million pounds of phosphorus delivered to the Chesapeake Bay	DEP	Statewide	Ongoing				<b>2021 Update:</b> On September 1, 2021, the Independent Regulatory Review Commission (IRRC) adopted the regulation for Pennsylvania to participate in RGGI. This is a new 2022-2023 milestone.
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		<p>due to climate change by 2025.</p> <p>Executive Order 2019-7 directed DEP to develop a rulemaking to establish a cap-and-trade program that would ultimately allow Pennsylvania facilities to buy and sell credits from states participating in the RGGI. 2022-2023 Update: Implementation of the RGGI rulemaking is expected to begin.</p>							
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**Phase 3 Watershed Implementation Plan (WIP) Planning and Progress Reporting Template**

1. Inputs – These are both existing and needed resources, public and private, to implement the identified priority initiative. These include both technical and financial resources, such as personnel, supplies, equipment and funding.
2. Process – what is each partner able to do where and by when. These are the action items listed under each priority initiative.
3. Outputs and outcomes – both short and long-term. The performance targets are the intermediate indicators that will measure progress.
4. Implementation challenges – any potential issues or roadblocks to implementation that could impede outputs and outcomes.

**For each Priority Initiative or Program Element:** Use the fields, as defined below, to identify the inputs and the process that will be followed to achieve each priority initiative. This is the “who, what, where, when and how” of the plan:

**Description** = What. This may include programs that address prevention, education, or as specific as planned BMP installations that will address the Priority Initiative. A programmatic or policy effort will require some ability to quantify the anticipated benefits which will allow calculation of the associated nutrient reductions.

**Performance Target** = How. This is an extension of the Description above. The Performance Target details the unique BMPs that will result from implementation of the Priority Initiative and serves as a benchmark to track progress in addressing the Priority Initiative. Performance Targets may be spread across multiple Responsible Parties, Geographies, and Timelines based on the specifics of the Initiative.

**Responsible Party(ies)** = Who. This is/are the key partner(s) who will implement the action items through outreach, assistance or funding, and who will be responsible for delivering the identified programs or practices.

**Geographic Location** = Where. This field identifies the geographic range of the planned implementation. This could extend to the entire county or down to a small watershed, based on the scale of the Priority Initiative, range of the Responsible Party, or planned funding/resources.

**Expected Timeline** = When. Provide the expected completion date for the planned activity. This should be a reasonable expectation, based on knowledge and experience, that will aid in tracking progress toward addressing the Priority Initiative.

**Resources Available: Technical & Funding** = This field will note technical and financial resources secured/available to implement the program (Description).

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

**Potential Implementation Challenges/Issues** = This field will note challenges and issues that may delay program implementation (Description).