During the time that Delaware's draft milestones were developed (March 2, 2020), and the final milestones were submitted (June 1, 2020), COVID-19 hit. Delaware state government is currently is currently projecting a \$784.5 million decline in revenue over the two fiscal years, and that figure is expected to increase. Budget impacts are certain for both environmental and agricultural related programs. Delaware remains a committed partner to the restoration of the Chesapeake Bay, but suggest flexibility from EPA as the impact plays out.

Target Date	Programmatic Milestone Commitment(s) / BMP Implementation Target(s) ¹ [Reference WIP page and (to extent possible) number/type of BMPs in CAST scenario ² if applicable]	Deliverable	Lead Agency	Comments/ Status Updates
Agricultural	Sector			
December 2020	Implement a shallow water pond and riparian buffer in the Broad Creek Watershed. [WIP Section 4.3.2]	BMP	SCD	Completed.
2020-2021	Support research with the USGS to investigate the use of remote sensing for verification of winter cover crop planting and termination on the Delmarva Peninsula. [WIP Section 4.2]	Research	DNREC, DDA, USGS	Funds were provided to support this effort and will be continued into the 2022 milestone period.
2020-2021	The Delaware Department of Agriculture has secured \$2.9 million dollars more from the State budget to put toward paying producers for acres of cover crops. DDA is requesting \$2.9 annually for cover crops through FY2023. We expect that this infusion of funds and subsequent matching will allow us to bring our acres of cover crops in the State near available acres. The funds are being incorporated into already existing cover crop programs run by the county Conservation Districts. DDA is	BMP Implementation	DDA	Completed. Acres have been reported annually through annual progress updates.

¹ BMP implementation targets are 2-year numeric projections of specific BMPs that are key to achieving the 2025 Phase III Planning Targets. Providing these targets is an alternative to providing the numeric CAST scenario, as agreed to at the January 24, 2020 PSC meeting. See:

https://www.chesapeakebay.net/channel_files/40423/iv.b. numeric_milestones_wqgit_approved_january_2020_clean.pdf

 $^{^{2}}$ As part of the adaptive management process for achieving water quality goals, jurisdictions may submit programmatic milestones that modify, are in place of, or are in addition to milestones listed in their WIPs so long as the jurisdiction can demonstrate that they will be as effective toward meeting water quality goals. To the extent possible, jurisdictions to indicate the number and type of BMPs in the milestone CAST scenario (if applicable) that correspond to programmatic milestones.

	currently working on outreach to producers to let them know that these funds exist. Delaware's goal is to implement 74,738 acres annually within this milestone period. [WIP Section 4.2]			
2020-2021	Bring percentage of permitted CAFOs to 50% of known universe by processing 75 permits in 2020. Process an additional 75 permits in 2021. Process incoming NOIs and assist farmers with accurately completing them. Host workshops to provide information and assistance with the permitting process. [WIP Section 4.2.4]	3 GPs established, NOIs permitted, & program outreach	DDA/DNREC	CAFO General Permit 2 is active, and we are now processing permit applications in batches. The first batch was public noticed in December 2021 with no comments received. Online training is also being developed to provide outreach and assistance to permittees.
2020-2021	Inspect each permitted farm at least once every five years. With a goal to meet or exceed 20% of permitted facilities inspected annually, in addition to inspections of include new or problem facilities. [WIP Section 4.2.4]	Inspections of farms covered under GPs	DDA/DNREC	Due to COVID-19 restrictions, no CAFO inspections occurred during much of this milestone period. As of July 2021 we have resumed inspections. DDA helped coordinate response from 5 farms on table top audits for 308

				compliance. 4 farms required no further action at this time. SWDS CAFO staff will accompany DDA on 10% of audits minimum as soon as practical. Biosecurity concerns during this period have also limited access to farms.
2020-2021	CAFO General Permit 1 will be drafted in 2020 and submitted to EPA for review by November 30, 2020. This will allow for public notice in early January. Absent a prolonged public process, the permit shall be reissued by March 31, 2021. [WIP Section 4.2.4]	GP1 permit renewed	DNREC/DDA	A public hearing was held on June 30th, 2021, on CAFO General Permit 1 and GP 3. Comments were accepted through July 15. We received comments and are drafting the Technical Response Memos (TRMs) for review by the Hearing Officer. Most farms requiring permit coverage are in the GP1 group.
2020-2021	CAFO General Permit 3 was submitted to EPA for comment in FY20. Upon receiving comments DNREC will review and make necessary changes. Anticipate public notice by end of July 2020. Absent a prolonged public process the permit shall be issued by September 30, 2020. [WIP Section 4.2.4]	GP3 issuance	DNREC/DDA	A public hearing was held on June 30th, 2021, on CAFO General Permit 1 and GP 3. Comments were accepted

				through July 15. We received comments and are drafting the Technical Response Memos (TRMs) for review by the Hearing Officer. Most farms requiring permit coverage are in the GP1 group.
2020-2021	The Delaware Department of Agriculture has hired a full-time employee tasked with CAFO inspections as of November 2019. They expect CAFO inspection numbers to increase over the milestone period. [WIP Section 4.2.4]	CAFO inspections	DDA	The DDA position has been unfilled since the end of Dec 2019. Some state funded positions have been reallocated to supplement CAFO needs for NOI processing to cover this gap. This part-time position is facing difficulties in hiring due to job market competition. A strategy to cover these duties is under development which may include using current staff to increase their workload to also handle these tasks.

2020-2021	Delaware has over 1,500 miles of tax ditches within the Chesapeake Bay portion of the state. Many of the ditches are currently being maintained as an herbaceous grass buffer. Delaware will explore opportunities for the inclusion of maintained ditches as grass buffers and additional implementation of grass buffers along tax ditches. [WIP Section 4.3.2.1]	Project	DNREC and Conservation Districts	This milestone will be reassessed for 2022. This project will be completed during the 2022/2023 Milestone Period.
December 2021	The Sussex Conservation District will restore 2,200 linear feet of the Bridgeville Branch Tax Ditch. [WIP Section 4.3.2.6]	Numeric BMP	SCD	This project has been delayed due to the planned demolition of the Bridgeville Wastewater Treatment Facility which impacts the proposed restoration project. The restoration project is on track to be completed by Fall of 2022 and will be carried forward to the 2022/2023 Milestones.
2020-2021	Identify and prioritize, via GIS mapping, tax ditch segments that are opportunities for BMPs, including grass buffers, forest buffers, stream restoration, etc. Prioritization will be based on factors including pollutant load reduction potential (N, P, TSS), ecological benefit, cost, and sub-watershed effectiveness. [WIP Section 4.3.2]	GIS priority map	DNREC	Completed. Analysis to be updated in 2022 using updated land use data.

2020-2021	The Sussex Conservation District will develop promotional videos and TV advertising campaigns to increase the implementation of the air seeder and cover crops to improve water quality. [WIP Section 4.2.1]	Creation and distribution of promotional materials (i.e. TV advertising, social media, etc.)	Sussex Conservation District	The commercials that were filmed in October 2019 in order to capture the planting and establishment of cover crops began airing in early May 2021 on WBOC, WRDE, and WBOC Fox 21 and will run through the end of July to complement SCD's Cover Crop Cost-Share Sign-up. Click here to view the whole series of SCD cover crop commercials at the bottom of the page.
December 2021	The Sussex Conservation District will hold three workshops and one field day for farmers to educate them on soil health techniques such as no-till, crop rotations, and planting cover crops. [WIP Section 4.2.8]	Outreach	Sussex Conservation District	 Completed. 1.5-day regional Soil Health Conference in February 2020 for approximately 250 participants. On January 14, 2021, a virtual Caffeine & Cover Crops was held featuring Keith Berns, NACD

				 Soil Health Champion and owner of Green Cover Seed in Nebraska. 25 people attended. February 10, 2021, another virtual Caffeine & Cover Crops was held featuring presentations by Jayme Arthurs of NRCS and Amy Shober, PhD., on appropriate cover crop seeding rates. There were 30 people in attendance.
2020-2021	DDA anticipates maintaining the current level of funding and effort for the manure relocation program. Similar manure relocation numbers are expected throughout the milestone period. [WIP Section 4.3.1.10]	Manure transport	DDA	Participation in and funding continue to be maintained in the Manure Relocation Program. The Nutrient Management Program increased cost share rates in October 2020 due to inflation and fuel costs. Progress has been reported

				annually through NEIEN.
2020-2021	The Delaware Department of Agriculture has a goal of capturing supplemental nutrient management practices in annual reporting from the State's producers. DDA is currently working with the 4R Alliance to develop a survey to include along with annual reports. This survey will be reviewed and approved by the Nutrient Management Commission. Subsequent regulatory compliance checks will include verification of this reporting. [WIP Section 4.2.2]	Capture of Supplemental Nutrient Management Practices in Annual Report	DDA	A survey has been completed and will be incorporated into the annual report moving forward.
2020-2021	With the hiring of an additional full-time DDA inspector, DDA anticipates meeting the inspection percentage goal put forth in their new SOP. [WIP Section 4.2.2]	Increase inspection percentage toward SOP Goal	DDA	Inspection and staffing have been a challenge during this milestone period due to COVID and access to farms.
2020-2021	Implement 164,916 acres of Soil Conservation and Water Quality Plans annually	Numeric BMP	DDA	Completed, reported annually though NEIEN.
2020-2021	DNREC will explore the opportunity to work with NRCS to help fund lower ranking EQUIP through the Delaware's CBIG.	New projects/program	DNREC & NRCS	This opportunity is being explored and will be carried forward into 2022.
Dec. 2020	The Nanticoke Watershed Alliance will develop a BMP guidebook targeted for poultry growers. [WIP Section 4.4.2]	Outreach material	Nanticoke Watershed Alliance	Completed. Available online at: <u>https://nanticokeriver.</u> <u>org/wp-</u> <u>content/uploads/2021</u> <u>/04/NWA-Poultry-</u> <u>Guide.pdf</u>
2020-2021	The Conservation Districts will conduct BMP Inspections as part of BMP Verification Program. The Districts will inspect expired BMPs and provide inspection reports. The intent is to ensure	BMP inspections	Conservation Districts	The Conservation Districts have migrated to the

	proper and continued function of the agricultural BMPs. The Districts will continue to utilize PracticeKeeper and/or the mobile application Collector to track BMP implementation and compliance inspections. [WIP Section 4.4.4]			Collector App to track BMP Implementation and compliance inspections. Districts have reported verification and progress data successfully during the milestone period.
2020-2021	The Sussex Conservation District is advocating for whole-farm conservation plans rather than plans for only a portion of a farm. This approach would capture all existing BMPs on that farm (including BMPs that are not cost-shared). SCD has an ongoing incentive program that offers \$250 cost-share for the first 100 whole-farm plans submitted. [WIP Section 4.4.3]	Whole-farm plans	SCD	SCD was able to provide incentives to several farms during the milestone period. It has been a challenge to engage farms in this practice to reach the goal of 100. SCD will continue this effort in 2022/2023.
2021	Numeric BMP - Animal Waste Storage (livestock and poultry) of 884,176 animal units. [WIP Section 4.3]	Numeric BMP	DDA	Reported annually through NEIEN.
2021	BMP - Manure Transport of 45,734 dry tons [WIP Section 4.3]	Numeric BMP	DDA	Reported annually through NEIEN.
2021	Nutrient Management – Core Plans: 130,936 acres [WIP Section 4.3]	Numeric BMP	DDA	Delaware will provide acreage that has been verified using one of the Partnership approved protocols. Reported to NEIEN in 2021.

2021	Nutrient Management –Rate Nitrogen: 46,213 acres [WIP Section 4.3]	Numeric BMP	DDA	Delaware will provide acreage that has been verified using one of the Partnership approved protocols.
2021	Nutrient Management Precision Timing Nitrogen: 46,213 acres [WIP Section 4.3]	Numeric BMP	DDA	Delaware will provide acreage that has been verified using one of the Partnership approved protocols.
Developed S	ector			
December 2020	Implement a living shoreline in the City of Seaford along the Nanticoke River. [WIP Section 3.3.2]	Project	SCD & DNREC	Completed in Riverview Park.
December 2020	Complete Stormwater Infrastructure Inventory and Mapping for the City of Seaford and identification of stormwater retrofit opportunities. [WIP Section 3.4.3]	Project	City of Seaford, funded by DNREC	Completed.
Summer 2020	Fund a Summer Scholar through the University of Delaware Cooperative Extension to help map stormwater BMPs funded with federal and state grants. [WIP Section 3.4.5]	Map	DNREC & University of Delaware	Completed. UD Intern assessed 10 previously implemented rain gardens throughout the state.
May 2021	Reissue Seaford and Invista NPDES permits. Both permits to expire Oct 31, 2020. Assuming timely applications and no need for prolonged negotiations, anticipate permit reissuance by May 2021. [WIP Section 3.3.2.10]	Reissue permits	DNREC - SWDS	Invista's permit was issued in early 2021; Seaford has been delayed. Seaford is expected to be completed by early 2023.
October 2021	Bridgeville NPDES permit will be terminated.	Permit termination	DNREC - SWDS	The Permit will not be terminated until

	Bridgeville is working to connect their collection system to Seaford Wastewater Treatment plant, transfer all their flow to that facility and decommission their wastewater treatment plant. Current schedule has that connection by April 2021. Following that connection, Bridgeville will have to decommission their facility prior to their NPDES permit being terminated. Any delays in their connection to Seaford will add delays to their permit termination. [WIP Section 3.2]			existing facility is demolished. Connection did occur and was completed at the end of April 2021.
December 2020	The Nanticoke Watershed Alliance will host a minimum of 2 homeowner workshops targeting homeowners and HOAs. NWA will design and install two demonstration stormwater BMP projects on religious organization campuses, civic association properties, or other organizations' properties. [WIP Section 3.2]	Outreach	NWA	Completed.
2025	The Delaware Environmental Navigator (DEN) is a widely used in Delaware for tracking all permitted on-site wastewater treatment and disposal systems (OWTDS). The DNREC Ground Water Discharges Section (GWDS) has been working with Delaware Department of Technology and Information (DTI) personnel to upgrade the system for better management of our permitting and monitoring data. The upgrades include using EQUIS (Environmental Quality Information System) to manage Large OWTDS operations and groundwater monitoring data and utilize business intelligence software (such as Power BI) to analyze data from DEN for permit tracking, compliance checking and enforcement. [Section 3.4.5]	Improved permit tracking	DNREC & DTI	Implementation of system upgrades to improve management of permitting and monitoring data continues moving forward. This is a multi-year, multi-step process that continues to be coordinated and implemented in partnership with the Dept. of Technology and Information.
December 2020	The Livable Lawns Program was launched in 2014 as an incentive program for homeowners to encourage those who apply their own fertilizer to use Livable Lawns practices. The Livable Lawns program has been expanded to Sussex County and the Chesapeake Bay Watershed which will help us assess the urban nutrient issues. The requirements for both Step 1 and Step 2 of	Increase landowner participation	DNREC and Delaware Nursery and Landscaping Association	This effort is ongoing and will continue into 2022.

	Livable Lawns are here: <u>http://www.delawarelivablelawns.org/statement.php</u> .			
	Working with conservation partners, Delaware will assess nitrogen loads from the urban sector. [WIP Section 6.1.4]			
December 2020	The Livable Lawns Program certifies lawn care companies that follow environmentally friendly practices in fertilizer application while educating property owners: <u>http://www.delawarelivablelawns.org/commercial.php</u> . We will increase the number of certified applicators in the state. [WIP Section 6.1.4]	Increase certified applicators to 6 statewide	DNREC and Delaware Nursery and Landscaping Association	Completed.
December 2021	Increase acreage enrolled in the Livable Lawns Program by 10% by December 2021. [WIP Section 6.1.4]	Numeric BMP	DNREC and Delaware Nursery and Landscaping Association	Completed.
December 2020	The City of Seaford will conduct an Outfall Reconnaissance Survey to document and inventory all their stormwater outfalls. The resulting inventory will be used in conjunction with existing stormwater spatial data to develop a GIS database of linear stormwater assets. [WIP Section 3.2.2.2.2]	Develop GIS database of Seaford stormwater system	City of Seaford	Completed.
December 2020	The Nanticoke Watershed Alliance will plant over 1 acre of trees in the Nanticoke Watershed. [WIP Section 3.4]	Numeric BMP	Nanticoke Watershed Alliance	Completed. The NWA planted 1,500 trees in 2021.
December 2020	The Nanticoke Watershed Alliance will host a training program targeting landscapers to encourage native tree plantings. [WIP Section 3.4]	Outreach	NWA	In progress/on-going. Certification program has been developed and the next session is scheduled for February 2022.
December 2020	Issue Delaware's MS4 Phase II General Permits [WIP Section 3.2.2.2]	Permits	DNREC	The Phase II MS4 General Permits have been through a first

				round of public comments. Based on the comments received, we modified the permits which requires a second round of public notice. This milestone will be extended into 2022.
December 2020	DNREC's Surface Water Discharges Section will issue an Industrial Stormwater General Permit that more effectively addresses TMDL requirements and is consistent with EPA's revised Multisector General Permit. [WIP Section 3.2.2]	Industrial Stormwater General Permit	DNREC	Industrial Stormwater Multisector General Permit – We are scheduling public outreach workshops on the program in January 2022 followed by a 30-day public notice. Permit issuance is anticipated by end of Q4 2022.
December 2020	Reissue the Phase I MS4 permit for New Castle County. [WIP section 3.2]	Permit	DNREC	The permit is currently being redrafted to be consistent with the Phase II permits where applicable. This effort is expected to be completed by the end of 2022.
December 2021	For DNREC's Sediment and Stormwater Program, develop online training program to be available 365 days/year to enhance compliance assurance for Contractor Certification: Certified Construction Reviewer, Recertification, and/or Stormwater Design Engineers by June 30, 2022. [WIP Section 3.2.2.1]	Online training	DNREC, SSP	The development of an on-line, on-demand Contractor Training Program certification was completed and

				launched in March 2021. The course is integrated into Delaware's Learning Center platform and consists of interactive training modules and an exam. During this reporting period over 160 individuals have completed the online course. This is a higher number than reported in each of the two previous reporting periods. The Program is evaluating other training and certification offerings
December 2020	DNREC Sediment & Stormwater Program will coordinate with Surface Water Discharges Section to issue a stand-alone Construction General Permit and revise underlying State regulations contained in Part 9.2 of the NPDES regulations. [WIP Section 3.2]	Construction General Permit	DNREC, SSP & SWDS	has been reviewed and accepted by EPA. Public Hearing for changes to State regulations anticipated late 3 rd /early 4 th quarter of 2020.

December 2021	The Delaware Department of Agriculture will coordinate efforts for the development of a Turf Nutrient Management Plan for Delaware. Once the plan has been developed, efforts will focus on increasing enrollment in the certification program and verification of urban nutrient management compliance. [WIP Section 3.3.2.4]	Plan	DNREC, DDA	A Turf Grass Nutrient Management Extension Agent was hired by the University of Delaware. The Extension Agent has successfully delivered certification training to individuals through, updated fertility recommendations for turf, provided training and courses to several professional organizations, and completed inspections and evaluations.
Natural Secto				Cost-share has been
December 2020	Install at least 1 living shoreline project in partnership with the Sussex Conservation District [WIP Section 4.3.2]	Project	DNREC & SCD	made available through the CBIG. Seaford Project.
2020-2021	Support a University of Delaware Cooperative Extension Agent that will act as a liaison with landowners to increase BMP implementation. [WIP Section 3.4 and 4.4]	Position	UD	Turf Grass Extension Agent.
2020-2021	DNREC will organize a restoration workgroup that will focus on finding opportunities for increased implementation of wetland restoration practices and grass buffers. Delaware's goal is to implement 3,000 acres of wetland restoration practices annually. [WIP Section 4.3.2.2]	Internal workgroup and numeric BMP	DNREC	Delaware Restoration Work Group held our first meeting in July 2021. Second meeting was in November 2021.

	The Delaware Wetlands Monitoring and Assessment Team is planning to take a closer look at the success of wetland restoration and wetland mitigation projects in effort to identify			Annual progress is reported through NEIEN. Increased verification efforts and implementation efforts will be addressed in 2022. We are in the process of this project now. We secured funding for this in Oct. 2020 which runs through 2022. Progress includes gathering information and conducting interviews
2020-2021	barriers to these wetland projects only reaching limited functional potential. This will include considering problems with site selection, determining metrics for ecological uplift, and a realistic maturity progression analysis. Funding will need to be secured. [WIP Section 4.3.2.2]	Project	DNREC	about current performance requirements. Also evaluating in-house data to determine standards for naturally occurring wetlands. Seeking input and discussing appropriate metrics to evaluate functional progression.
2020-2021	DNREC will explore opportunities to collect data for grass buffers that are installed and being maintained along tax ditches. Delaware's goal is to implement and report 3,000 acres annually. [WIP Section 4.3.2.1]	Numeric BMP	DNREC	This effort will be established in 2022/2023.
December 2020	DelDOT will incorporate nearly 3 acres of new tree plantings into Bohemia River Project. [WIP Section 4.3.2]	Numeric BMP	DelDOT	Completed.

December 2020	Collect high temporal and spatial resolution groundwater quality data to monitor for trends and assess the effectiveness of BMPs on local-scale groundwater and drinking water quality. [WIP Section 4.4.4]	Data	DNREC – GWDS and DDA	Completed. Presentations to the WIP Interagency Workgroup made in December 2021 by Alex Soroka, USGS.
March 2020	Plant 3.5 acres of trees in Blackbird State Forest - Cypress Complex Tract [Section 4.3.2.4]	Numeric BMP	DDA – Forest Service	Delayed due to COVID as planting was to be completed by volunteers. Project is expected to be completed in the next milestone period pending availability of volunteers.
General			1	
2020-2021	Delaware will evaluate current outreach goals and incorporate diversity and environmental justice goals. [WIP Section 3.4 and 4.4]	Determine opportunities to incorporate diversity and environmental justice goals into citizen stewardship outreach.	DNREC	Delaware continues to focus on this effort. Citizen Engagement workshops have been held in 2021 to further these efforts.
2020-2021	Continue to update and expand Delaware's BMP Tracking and Reporting Tool. This Tool is used to replace the previous BMP progress reporting database that is no longer functioning. [WIP Section 3.4.5 and 4.4.4]	BMP Tracking and Reporting Tool	DNREC	This tool was updated in 2021 to address fatal flaws impacting reporting to NEIEN. Future efforts to improve functionality

				will continue into 2022.
2020-2021	Delaware is losing many acres of BMPs due to the requirements of the BMP Verification Program. The State will continue to participate in the BMP Verification meetings to determine the path forward and to receive model credit for BMPs already on the ground and functioning. [WIP Section 3.4.5 and 4.4.4]	Workgroup participation	DNREC & DDA	DNREC and DDA staff continue to participate in the BMP Verification Ad Hoc workgroup. Local efforts are also underway to ensure implementation and reporting of verification data.