

**January 1, 2018 – December 31, 2019 Delaware’s Programmatic Milestones**

<b>Stormwater</b>				
<b>Target Date</b>	<b>Milestone (Phase 2 WIP Section Reference)</b>	<b>Deliverable</b>	<b>Lead Agency</b>	<b>Comments/Status Updates</b>
09/2018, unless a public hearing is request	Finalization of the Phase II MS4 General Permit(s) for the State of Delaware (Section 7.1.2.2.3)	Fully developed and reviewed Phase II MS4 General Permit(s)	DNREC, SWDS	DNREC-SWDS has prepared two pre-notice draft Phase II MS4 General Permits. A proposed Tier I GP for communities currently holding individual Phase II MS4 Permits and a proposed Tier II GP for newly identified MS4 communities. In addition, DNREC-SWDS has prepared a draft waiver for communities that (based on specific criteria) do not require MS4 permit coverage at this time. The draft permits and waiver were presented to permittees at a Sussex Conservation District-DNREC sponsored MS4 Workshop on June 15, 2017. Permittee comments on the draft permits were received on July 28, 2017. EPA comments on the draft permits and waiver were received on October 13, 2017. DNREC-SWDS is preparing a “Response to Comments” letter and revising the draft permits and waiver criteria accordingly. Upon completion of DNREC’s internal review process and additional review by EPA (if needed), the draft permits and proposed waiver criteria will be formal noticed and be made available for public comment. Public notice is anticipated for August 2018. If this schedule can be maintained it is anticipated that the permit will be finalized and signed effective by September 2018 unless a public hearing is requested.
2018-19	Maintenance Inspections as part of Verification Program ( <a href="#">Delaware's Quality Assurance Project and Verification Plan</a> )	Inspect 200 BMPs	Conservation Districts	Districts will inspect expired BMPs and provide inspection reports. The intent is to ensure proper and continued function of the stormwater facilities and look for ways to gain additional water quality. This project is funded through the

				Chesapeake Bay Regulatory and Accountability Grant.
2018-19	Monitoring of Bio-Reactor Performance (Section 7.2)	Sampling of flows from upstream and downstream of the Bio-reactor BMP	SCD	Conduct monthly sampling to determine the effectiveness of nutrient removal from a bio-reactor in a suburban setting.
January 2019	Provide technical support to Delegated Agencies for implementing the revised sediment and stormwater regulations (Section 7.1.1.4)	Staff Support	DNREC SSP	Technical staff will conduct monthly conference calls with Delegated Agency technical staff to answer questions, address concerns and provide support in implementation of revised Sediment and Stormwater Regulations in the interim period prior to the effective date of revised regulations. Following the effective date of revised regulations, technical support will be provided on an as-needed basis.
January 2019	Refine Sediment & Stormwater Program (SSP) offset program (Section 7.1.1.4)	Amended 5101 Delaware Sediment and Stormwater Regulations	DNREC SSP	The Sediment and Stormwater Program's efforts to address other stormwater offset options beyond fee-in-lieu include proposed amendments to the 5101 Delaware Sediment and Stormwater Regulations. Timeline for changes to the Sediment and Stormwater Regulations, including those addressing offsets, is planned for publication in July 2018 with the regulations becoming effective January 2019.
12/2019	Work with communities on MS4 permit compliance (Section 7.1.2.2.4)	Identify municipalities needing coverage; Provide Guidance and Outreach	DNREC, SWDS	DNREC-SWDS continues to hold one-on-one MS4 related meetings with town councils and community representatives of current and future MS4 permitted communities including quarterly meetings with Delaware Department of Transportation and New Castle County representatives. DNREC-SWDS intends to continue efforts to explain permit requirements, provide onsite technical guidance, participate in outreach events, provide networking opportunities, and present information on funding resources to the regulated community.

12/2019	Working with conservation partners, assess nitrogen loads from urban nutrient management (Section 8.6.1)	Increase landowner participation in the CB watershed from 29 to 50 for step 1 and 1 to 5 for step 2	DNREC, DNLA	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 Livable Lawns are here: <a href="http://www.delawarelivablelawns.org/statement.php">http://www.delawarelivablelawns.org/statement.php</a> .
12/2019	Increase participation of commercial applicators in the Livable Lawns program (Section 8.5.12)	Increase certified applicators to 6 statewide (2 of those being in the CB watershed)	DNREC, DNLA	The Livable Lawns Program certifies lawn care companies that follow environmentally-friendly practices in fertilizer application while educating property owners: <a href="http://www.delawarelivablelawns.org/commercial.php">http://www.delawarelivablelawns.org/commercial.php</a> . We will increase the number of certified applicators in the state.
09/30/19	Revise General Permit for industrial storm water sites that addresses not only the Chesapeake Bay TMDLs, but also other TMDLs established within the State of Delaware. The Revised General Permit will reflect new federal mandates, implement stricter standards such as the inclusion of effluent limitations, and may require stricter reporting and monitoring requirements (Section 7.1.2.1.4)	Multi-Sector Industrial Stormwater General Permit	DNREC, SWDS	DNREC is re-focusing its effort to develop and issue a Multi-Sector/Industrial Stormwater General Permit prior to significantly revising the State's "General Permit" regulations. DNREC-SWDS's part-time contractual employee submitted a draft permit for internal review in March 2017 and funding for the contract expired in June 2017. Since the contract is no longer in effect, DNREC-SWDS has limited staffing resources to expedite permit issuance. However, staff did review the contractor's proposed draft permit and revised the draft permit in order to better address Delaware's specific needs. Upon completion of DNREC-SWDS's internal review process, a pre-notice draft permit will be submitted to EPA for review and comment. Key staff leading this initiative left the program as of

				June 2018; therefore, DNREC is currently pursuing backfilling that that position. Once the new staff member is on board and unless comments warrant significant revisions, public notice of the draft permit is anticipated for November 2018. If this schedule can be maintained (and unless comments require significant revisions, stakeholder discussion, and/or a public hearing is requested), it is anticipated that the permit will be finalized and signed effective by December 2018.
2018-2019	Continue to utilize PracticeKeeper to track BMP implementation and compliance inspections	Utilization of an application	Sussex Conservation District	

**Wastewater**

<b>Target Date</b>	<b>Milestone (Phase 2 WIP Section Reference)</b>	<b>Deliverable</b>	<b>Lead Agency</b>	<b>Comments/Status Updates</b>
2019	Reissue NPDES Permit for Mobile Gardens	Renewed permit	DNREC, SWDS	Permit expires October 31, 2018.
2018-2019	Review Wastewater Treatment Work Group protocol for advanced onsite systems (Section 6.6)	Protocol Review and Approval	DNREC, GWDS	Review and approve protocol for on-site advanced wastewater treatment systems across all Bay Watershed jurisdictions. Two FTEs participate on the Chesapeake Bay Data Sharing committee sponsored by EPA for approval of N reducing units for individual on-site wastewater and disposal systems. One FTE is an active member of the Wastewater Treatment Work Group. This milestone is on-going through monthly or bi-monthly meetings.
2018	Development of Septic Tank Pumpout Tracking Database (Section 6.4)	Septic Tank Pumpout Tracking Database; Phone application for pump-outs using the existing DE Environmental	DNREC, GWDS & DTI	Database needs are ongoing to update systems and make more user friendly applications. The application of this milestone is contingent upon funding.

		Navigator (DEN) to have GIS capabilities to record location and number of gallons pumped from septic tanks		Update January 2018: CBRAP II funds are dedicated now to allow DTI to complete development and begin implementation of the application. GWDS has completed the testing phase with DTI on a phone and web-based application to record septic tank pump outs. These applications will transfer the data gathered on-site and transfer it to our existing database within the Delaware Environment Navigator (DEN) framework. The application should go live March 1, 2018.

**Agriculture**

<b>Target Date</b>	<b>Milestone (Phase 2 WIP Section Reference)</b>	<b>Deliverable</b>	<b>Lead Agency</b>	<b>Comments/Status Updates</b>
2018-19	Inspections as part of Verification Program ( <a href="#">Delaware's Quality Assurance Project and Verification Plan</a> )	80% of expiring BMPs inspected annually	Conservation Districts	Districts will inspect expired BMPs and provide inspection reports. The intent is to ensure proper and continued function of the agricultural BMPs. This project is funded through the Chesapeake Bay Regulatory and Accountability Grant.
12/31/19	Increase BMPs for beginning farmers (Section 9.3.6)	Assist beginning farmers implement poultry headquarters water quality BMPs. Increase BMPs for beginning farmers.	SCD	In February 2016, Sussex Conservation District received approval for an RCPP grant to help beginning farmers with the implementation of poultry headquarters BMPs. The NRCS EQIP program is oversubscribed in Sussex County and beginning farmers may have to wait two years or more before receiving financial assistance with BMP implementation. In the first year of the RCPP Program, 11 contracts were written for a total of 8 composters and 16 freezer units (3 contracts). Of these contracts, 4 composters and

				5 freezer units were implemented. The remaining contracts (4 composters and 11 freezer units) will be implemented in early 2018. Applications for the RCPP Program are ongoing and there are currently 9 applications waiting to be processed and contracted. Additional applications are expected during 2018.
12/31/18	Conduct Soil Health Workshops in the Chesapeake Bay Watershed (Section 9.6)	2 Workshops	Kent and Sussex Conservation Districts	The Districts will hold two workshops for farmers to educate them on soil health techniques such as no-till, crop rotations, and planting cover crops.
12/31/19	Work with AG partners to pilot a woodchip bioreactor and/or denitrification wall (Section 9.6)	Implementation of 1 BMP	NRCS, Conservation Districts	SCD will continue to work with landowners to identify an ideal location to implement a project in 2018. This project to be funded with Chesapeake Bay Implementation Signatory Funds.
Ongoing	Compliance improvement plan (Section 9.3.1)	Soil P database collection	DDA	Develop trends in soil P to demonstrate plan efficacy Status: DDA's Nutrient Management Program has offered incentives for a voluntary reporting of soil P data from all certified NM consultants. This new initiative has yielded thousands of acres of real data to be synthesized and repeated in 2022. In the 2018-19 milestone period, soil P data will be enhanced with more consultants' participation.
Ongoing	Compliance improvement plan (Section 9.3.1)	Follow compliance improvement plan and narrative.	DDA and other state partners	The DE Nutrient Management plan developed and included farmer survey and outreach as well as targeted follow-up site visits for program participants with inadequate feedback in manure testing, annual report submissions and continuing education credit maintenance. New goals were outlined in August 2017 for major program updates and accompanying narrative. Elements have been included in this document as separate items.
3/1/18	Compliance improvement plan (Section 9.3.1)	Re-develop Audit SOP	DDA	Standardize who what where and when for DDA compliance Audits

12/31/18	Compliance improvement plan (Section 9.3.1)	Revise audit forms	DDA	Improving measurables for water quality related plan elements, like realistic yield goals, application rates, timing improvements and farm gate balance.
10/31/2019	Compliance improvement plan (Section 9.3.1)	Enhance the role PSI in the inspection	DDA	Improve ability to evaluate water quality benchmarks during the inspection
Q1 2018	Compliance improvement plan (Section 9.3.1)	Host workshop with Bay partners	DDA	Evaluate and document strategies from neighboring states and enhance effort to overhaul DE's protocols
11/30/18	Compliance improvement plan (Section 9.3.1)	Revise penalty schedule	DDA	Improve equity with stormwater sector and DNREC regulations
1/31/18	Compliance improvement plan (Section 9.3.1)	Derive, justify and achieve statistical significance	DDA	Working with Tetra Tech team, determine inspection rate for random or some combination of random and targeted for statistically significant statewide compliance
Ongoing	Animal feeding operations in Ches. Bay Watersheds to be covered by a Concentrated Animal Feeding Operation permit (Section 9.3.2)	3 GPs established and NOIs permitted	Delaware Dept. of Agriculture/ DNREC	
Ongoing	Animal feeding operations in Ches. Bay Watersheds to be covered by a Concentrated Animal Feeding Operation permit (Section 9.3.2)	Inspections of farms covered under GPs ongoing	Delaware Dept. of Agriculture/ DNREC	
Ongoing	Maintain Manure Transport (Section 9.6.1.14)	Maintain manure transport numbers	DDA	Manure transport rates should hover around \$0.12 per ton-mile to stay competitive with fuel prices and neighboring programs. Target 65,000T annually.
2018	Include Mortality Rendering in Manure Transport (Section 9.6.1.14)	Collect frozen and rendered poultry mortality	DDA	Manure transport funding will help pilot a project where the pick-up fees from mortality freezers will be cost-shared up to 75%. In return the DDA will receive nutrient content data on those rendered mortalities that will be available as reportable BMPs upon Mortality Panel convening.

2018 – funding permitting	Scientific review and update of Phosphorus Site Index (Section 9.6.4.8)	Informal report with sources	UD and DDA	<p>Investigate the scientific literature on phosphorus transport and water quality impacts since the DE P index was published, including the recent NRCS Conservation Innovation Grant projects on P indices in the Chesapeake Bay watershed, to determine if P Site index revision is necessary for DE Nutrient Management Program’s technical standards in order to avoid P over-application, P build up in soils, and P losses. Host a meeting with EPA to discuss the results of this investigation.</p> <p>Revising the sub-surface component of its PSI is a priority for research funding with the Delaware Department of Agriculture.</p>
2018-2019	Implementation of Standard Operating Procedures for Delaware Nutrient Management Plan Verification for Land and/or Animal Operations.	Implementation	DDA	
Ongoing	Database Improvement Plan (Section 9.3.1)	NM database conversion to new system	DDA	BMPs like NMPs, Manure transport and practices associated with CAFOs will be gleaned and collected into the future in this tool. Other enhancements using geospatial software will be evaluated as well.
Ongoing	Increase oversight of Nutrient Management (Section 8.6.1)	Implement new inspection protocols for NM Plans	DDA	The DE NM Program Administrator met individually with all newly certified Consultants to ensure quality. This is a new initiative without measured performance. Dozens of calls have been fielded from urban applicators and we expect a considerable increase in annual reporting from that sector over the next several years. A future 2019 milestone will include an increase in inspection of Urban Nutrient Management which will include landscape and lawn care companies getting outreach-based

				compliance calls and visits to remind them of the regulations there are expected to follow. This effort will bolster the NM footprint in this community and reward compliance.
2018	Participate in the newly established Agricultural Drainage Ditch BMPs Expert Panel (Section 9.6.3.4)	Expert panel coordination	DDA and DNREC staff	This panel has made progress through Dec 2017 and will produce a report soon with added help from the Ag WG.
12/31/18	Enhance efficiency of audits (Section 9.3.1)	Improve compliance performance	DDA	DDA has reached out to a select group of certified planners to schedule random audits in a way where the Consultants can be present and assist their clients in locating information to speed the audit process. This has reduced audit completion time by up to 25% and encourages more efficient travel from DDA to the field.
2018-2019	Continue to utilize PracticeKeeper to track BMP implementation and compliance inspections	Utilization of an application	Sussex Conservation District	

### Planning & Landuse

Target Date	Milestone (Phase 2 WIP Section Reference)	Deliverable	Lead Agency	Comments/Status Updates
12/31/18	Laurel Waterfront Redevelopment Plan for Broad Creek (Section 8.2.11)	Implementation of Green Infrastructure Upgrades	University of Delaware Landscape Design Program	Production of the construction drawings for the green infrastructure/stormwater features for two of the design components is completed and integrated into the design for the “Tidewater Park” nature-based play area. The features included a constructed wetland as well as a bioretention area. The Town, along with partners, is seeking funding to implement the green infrastructure components in the public spaces associated with this plan. Projects include bioretention areas, living shoreline, etc. Implementation is contingent on the availability of funding.
12/2018	Implementation of Green Infrastructure Improvement Plan and design to address stormwater in Bethel (Section 8.2.4)	Implementation of Green Infrastructure Improvements	Town of Bethel and George,	The Town of Bethel, along with Laurel, received technical assistance funding from the National Fish and Wildlife Foundation to develop design plans and engineering for Green Infrastructure

			Miles and Burh, Inc.	Improvements within the community. Phase 1 of the plan was funded and completed in Winter 2015-2016. The Town and partners are seeking funding for additional phases of the project. Phase 1 included implementation of bioretention gardens, Filterra tree boxes, and shoulder stabilization. Future phases will include living shoreline and additional bioretention and Filterra units. Phase 1 construction is complete and final inspection has taken place and they are seeking funding for Phase 2.
12/2018	Seaford Park Stormwater Improvement Plan (Section 8.2.1)	Implementation Plan for Green Infrastructure Improvements	University of Delaware (UD) Sustainable Coastal Communities Initiative	<p>The City of Seaford with assistance from the University of Delaware Sustainable Coastal Communities Initiative has commissioned a feasibility study, conceptual design drawings and profile drawings to address a shoreline erosion problem along the Nanticoke River at Riverfront Park. A planting plan and recommendations will also be provided for 2 additional City parks to address flooding and provide for riparian buffer plantings.</p> <p>A planning grant has been received to fund the feasibility study, conceptual design drawings and profile drawings to address a shoreline erosion problem along the Nanticoke River at Riverfront Park.</p>
2018	Implementation of Green Infrastructure improvements along 6 <sup>th</sup> Street and the Rossakatum Branch in Laurel (Section 8.2.11)	Implementation of Green Infrastructure Improvements	Town of Laurel and George, Miles and Burh, Inc.	The Town of Laurel has applied for and received approval for a loan through the Delaware's Clean Water State Revolving Fund to implement this project and construction is currently. Cost of the project is expected to be up to \$1.5 million. Projects included installation of multiple Filterra units, and separation of a combined sewer system.
2018	Participation in CBPO Offset Workgroup (Section 8.3.2.1)	Workgroup participating	DNREC	Delaware does not expect to have a standalone offset workgroup. Any offsets will be included as a part of the stormwater regulatory process.

				After being challenged and the law amended, Delaware's Stormwater Regulations are still under development. During the regulatory development process, affected stakeholders expressed interest in a broader Statewide trading and offset program. A Policies and Procedures subcommittee meeting will be held on January 18, 2018 to put forth offset language for the Sediment and Stormwater Regulations. EPA's Pat Gleason has been invited.
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**Restoration & Public Lands**

<b>Target Date</b>	<b>Milestone (Phase 2 WIP Section Reference)</b>	<b>Deliverable</b>	<b>Lead Agency</b>	<b>Comments/Status Updates</b>
3/2018	Implement 24 acres of tree planting in Blackbird State Forest – Cypress Complex Tract. (Section 10.1.2)	Tree plantings of 24 acres	DDA, Delaware Forest Service	This project will be implemented and completed in March 2018.
2018-19	Inspections as part of Verification Program ( <a href="#">Delaware's Quality Assurance Project and Verification Plan</a> )	80% of expiring BMPs inspected annually	DNREC and Conservation Partners	Inspect expired BMPs and provide inspection reports. The intent is to ensure proper and continued function of BMPs reported by conservation partners. This project is funded through the Chesapeake Bay Regulatory and Accountability Grant.
7/1/2019	Identify and prioritize tax ditch segments that are opportunities for stream restoration projects or green infrastructure bank stabilization projects within the Chesapeake Bay Watershed. Prioritization will be based on factors including pollutant load reduction potential (N, P, TSS), ecological benefit, cost, and sub-watershed effectiveness. (Section 10.4.1)	GIS map with highlighting tax ditch prioritized tax ditch segments.	DNREC Drainage Program	This is a carryover milestone from the 2017 programmatic milestones. Once program vacancies are filled in early 2018 a project team will be assembled to work on this task.

1/1/2019	Develop small team to focus on implementation of BMPs that improve the quality of water once it is in the ditch or stream. The practices included will be those identified by Ditch BMP expert panel. (Section 10.4.1)	Team with responsibility of BMP implementation.	DNREC Drainage Program	This will require an additional staff member in the drainage program and funding will be sought after in the first half of 2018.
3/1/2018	After selecting a contractor from an RFP to remap all wetlands statewide, which includes the Chesapeake Bay watershed area, begin to work to update wetland spatial data that is more than 10 years old. (Section 10.3.1)	New wetland maps based on 2017 aerial imagery.	DNREC Watershed Assessment Section	RFP is being prepared for advertisement to select a contractor. New statewide wetland maps will allow assessment of wetland gains, loss or change in the Chesapeake Bay watershed.
12/31/19	Using the Delaware Comprehensive and Rapid Assessment Methods, monitor and assess wetland condition in the Choptank River and Chester River watersheds in Delaware.(Section 10.1.1)	Wetland Condition Assessment Report for the two watersheds	DNREC, Wetland Monitoring and Assessment Program	No work will begin until the spring of 2019.

### Communications

Target Date	Milestone (Phase 2 WIP Section Reference)	Deliverable	Lead Agency	Comments/Status Updates
Ongoing	Evaluate current outreach goals and incorporate diversity and environmental justice goals (Section 14.1)	Determine opportunities to incorporate diversity and environmental justice goals into citizen stewardship outreach.	DNREC	This milestone is ongoing. Current outreach goals have been evaluated and new ways to incorporate diversity and environmental justice goals have been determined.
12/31/19	Incorporate diversity and environmental justice goals in outreach efforts (Section 14.1)	Use new template to track ethnicities of participants in outreach events.  Provide Spanish WIP materials and information on websites	DNREC	

12/31/19	Participate in public outreach events, workshops, contests, recreational opportunities (Section 14.1)	Participate in 24 outreach events, workshops, contests, or recreational opportunities.  Launch new Nonpoint Source Outreach Project	DNREC	
12/31/19	Participate in interviews with local news stations (Section 14.1)	Participate in 8 Radio/TV/Online interviews	DNREC	
12/31/19	Social Media Management (Section 14.5.1)	Manage social media accounts	DNREC	
12/31/19	Video Production (Section 14.5.1)	Produce / add 8 new videos to Delaware Watersheds playlist	DNREC	
12/31/19	Staff communications workgroups (Section 14.1)	Serve as chair of Communications workgroup	DNREC	
12/31/19	Develop and Strengthen Partnerships (Section 14.4)	Evaluate current partnerships and opportunities for new partnerships	DNREC	
12/31/19	Staff Local Government Engagement Initiative Committee (Section 14.1)	Serve on LGEI Committee	DNREC	