NEIEN Appendix Updates

Watershed Technical Workgroup

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CAST BMPs

There are 25 CAST BMPs added using the CAST BMP name

1. Agricultural Stormwater Management
2. Biofilters
3. Broiler Mortality Freezers
4. Broiler Mortality Freezers
5. Broiler Mortality Freezers
6. Conservation Landscaping Practices
7. Denitrifying Ditch Bioreactors
8. Diploid Oyster Aquaculture 2.25 Inches
9. Diploid Oyster Aquaculture 3.0 Inches
10. Diploid Oyster Aquaculture 4.0 Inches
11. Diploid Oyster Aquaculture 5.0 Inches
12. Diploid Oyster Aquaculture Greater 6.0 Inches
13. Lagoon Covers
14. Septic Denitrification - Advanced
15. Septic Effluent - Advanced
16. Septic Secondary Treatment - Advanced
17. Site-Specific Monitored Oyster Aquaculture
18. Site-Specific Monitored Oyster Aquaculture
19. Site-Specific Monitored Oyster Aquaculture
20. Sorbing Materials in Ag Ditches
21. Triploid Oyster Aquaculture 2.25 Inches
22. Triploid Oyster Aquaculture 3.0 Inches
23. Triploid Oyster Aquaculture 4.0 Inches
24. Triploid Oyster Aquaculture 5.0 Inches
25. Triploid Oyster Aquaculture Greater than 6.0 Inches

Credit Duration

- Does not have a credit duration
  - Agricultural Stormwater Management
  - Biofilters
  - Lagoon Covers

- Inconsistent credit duration
  - Stream Channel Stabilization = Non-urban stream restoration
    - Area treated unit = 5 years, Other units = 10 years.
    - Non-urban stream restoration credit duration = 10
    - Urban stream restoration credit duration = 5
  - Urban Forest Planting
    - Has a duration of 15 years.
    - All other tree and forest BMPs are 10 years.

NRCS and FSA BMPs

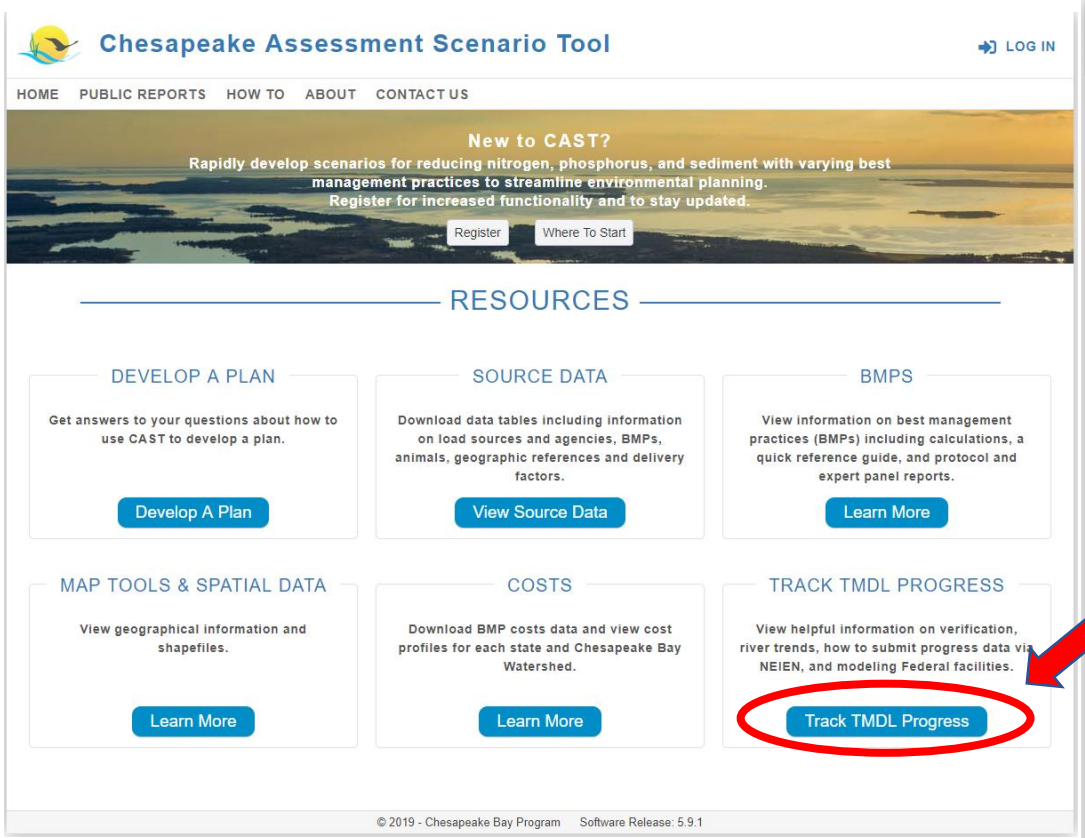
- 353 NRCS and FSA BMP names were added as “draft” or “no water quality benefit”
- These will no longer be denoted as “invalid” in NEIEN
- These will not receive N, P, or S reduction credit in CAST
- Examples:
  - Irrigation Pipeline
  - Land Clearing
  - Manage livestock access to streams/ditches/other waterbodies to reduce pathogens in surface water
  - Managing livestock parturition to coincide with forage availability
  - Mulching to improve soil health
  - Multi-species Native Perennials for Biomass/Wildlife Habitat
  - Nutrient Management Plan – Applied
  - On Farm Composting of Farm Organic Waste
  - On-farm energy audit
  - On-farm forage based grazing system
  - Pasture Grazing Bundle # 7 (Improves forage utilization)
  - Permanent Introduced Grasses and Legumes
  - Plant Tissue Testing and Analysis to Improve Nitrogen Management
  - Pollinator Habitat
  - Recycle 100% of farm lubricants
  - Use drift reducing nozzles, low pressures, lower boom height and adjuvants to reduce pesticide drift

Change in Status

BMP NAME	SB BMP in NEIEN	COMMENTS	STATUS	Comments
Drainage Water Management			Draft	possible change in status to "Release" with mapping to WaterContStruc
Structure for Water Control	WaterContStruc	For each no the conversion is 26 acres	Release	possible change in status to "NoWQBenefit"
Water Control Structure	WaterContStruc	For each System/Structure/Count the conversion is 26 acres	Release	possible change in status to "NoWQBenefit"
Water Control Structure RI	WaterContStruc	RI Approved	Release	possible change in status to "NoWQBenefit"

Cover Crop Mapping—Drilled Planting Method, corrected by MDA

MEASUREMENT NAME in NEIEN Appendix	SB BMP in NEIEN	Full Name
RYEGRASS Early NO TILL Traditional	CoverCropTradARED	Cover Crop Traditional Annual Ryegrass Early Drilled
RYEGRASS Normal NO TILL Traditional	CoverCropTradARND	Cover Crop Traditional Annual Ryegrass Normal Drilled
BARLEY Early NO TILL Traditional	CoverCropTradBED	Cover Crop Traditional Barley Early Drilled
BARLEY Normal NO TILL Traditional	CoverCropTradBND	Cover Crop Traditional Barley Normal Drilled
CANOLA/RAPE Early NO TILL Traditional	CoverCropTradBRED	Cover Crop Traditional Brassica Early Drilled
FORAGE RADISH Early NO TILL Traditional	CoverCropTradFED	Cover Crop Traditional Forage Radish Early Drilled
CLOVER/WHEAT Early NO TILL Traditional	CoverCropTradLGLED	Cover Crop Traditional Legume Plus Grass 25-50% Early Drilled
CLOVER/WHEAT Normal NO TILL Traditional	CoverCropTradLGLND	Cover Crop Traditional Legume Plus Grass 25-50% Normal Drilled
SPRING OATS Early NO TILL Traditional	CoverCropTradOHED	Cover Crop Traditional Oats, Winter Hardy Early Drilled
SPRING OATS Normal NO TILL Traditional	CoverCropTradOHND	Cover Crop Traditional Oats, Winter Hardy Normal Drilled
RYE Early NO TILL Traditional	CoverCropTradRED	Cover Crop Traditional Rye Early Drilled
RYE Late NO TILL Traditional	CoverCropTradRLD	Cover Crop Traditional Rye Late Drilled
RYE Normal NO TILL Traditional	CoverCropTradRND	Cover Crop Traditional Rye Normal Drilled
TRITICALE Early NO TILL Traditional	CoverCropTradTED	Cover Crop Traditional Triticale Early Drilled
TRITICALE Normal NO TILL Traditional	CoverCropTradTND	Cover Crop Traditional Triticale Normal Drilled
WHEAT Early NO TILL Traditional	CoverCropTradWED	Cover Crop Traditional Wheat Early Drilled
WHEAT Late NO TILL Traditional	CoverCropTradWLD	Cover Crop Traditional Wheat Late Drilled
WHEAT Normal CONVENTIONAL Traditional	CoverCropTradWND	Cover Crop Traditional Wheat Normal Drilled
WHEAT Normal NO TILL Traditional	CoverCropTradWND	Cover Crop Traditional Wheat Normal Drilled


Chesapeake Assessment Scenario Tool
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New to CAST?
Rapidly develop scenarios for reducing nitrogen, phosphorus, and sediment with varying best management practices to streamline environmental planning.
Register for increased functionality and to stay updated.
Register
Where To Start
RESOURCES
DEVELOP A PLAN
Get answers to your questions about how to use CAST to develop a plan.
Develop A Plan
SOURCE DATA
Download data tables including information on load sources and agencies, BMPs, animals, geographic references and delivery factors.
View Source Data
BMPS
View information on best management practices (BMPs) including calculations, a quick reference guide, and protocol and expert panel reports.
Learn More
MAP TOOLS & SPATIAL DATA
View geographical information and shapefiles.
Learn More
COSTS
Download BMP costs data and view cost profiles for each state and Chesapeake Bay Watershed.
Learn More
TRACK TMDL PROGRESS
View helpful information on verification, river trends, how to submit progress data via NEIEN, and modeling Federal facilities.
Track TMDL Progress
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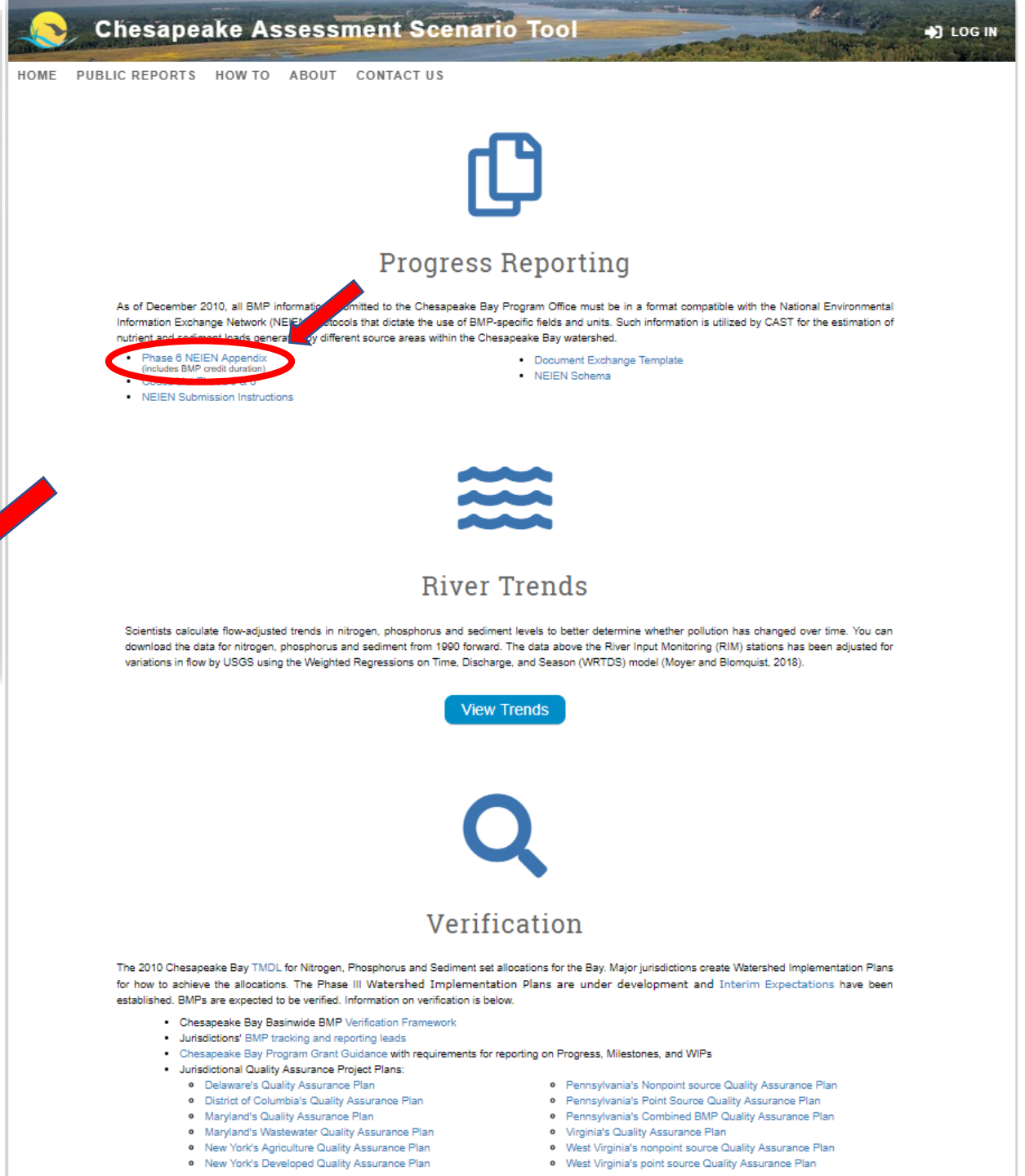
Software Release: 5.9.1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Progress Reporting
As of December 2010, all BMP information submitted to the Chesapeake Bay Program Office must be in a format compatible with the National Environmental Information Exchange Network (NEIEN) protocols that dictate the use of BMP-specific fields and units. Such information is utilized by CAST for the estimation of nutrient and sediment loads generated by different source areas within the Chesapeake Bay watershed.
Phase 6 NEIEN Appendix
(includes BMP credit duration)
NEIEN Submission Instructions
Document Exchange Template
NEIEN Schema
River Trends
Scientists calculate flow-adjusted trends in nitrogen, phosphorus and sediment levels to better determine whether pollution has changed over time. You can download the data for nitrogen, phosphorus and sediment from 1990 forward. The data above the River Input Monitoring (RIM) stations has been adjusted for variations in flow by USGS using the Weighted Regressions on Time, Discharge, and Season (WRTDS) model (Moyer and Blomquist, 2018).
View Trends
Verification
The 2010 Chesapeake Bay TMDL for Nitrogen, Phosphorus and Sediment set allocations for the Bay. Major jurisdictions create Watershed Implementation Plans for how to achieve the allocations. The Phase III Watershed Implementation Plans are under development and Interim Expectations have been established. BMPs are expected to be verified. Information on verification is below.
Chesapeake Bay Basinwide BMP Verification Framework
Jurisdictions' BMP tracking and reporting leads
Chesapeake Bay Program Grant Guidance with requirements for reporting on Progress, Milestones, and WIPs
Jurisdictional Quality Assurance Project Plans:
Delaware's Quality Assurance Plan
District of Columbia's Quality Assurance Plan
Maryland's Quality Assurance Plan
Maryland's Wastewater Quality Assurance Plan
New York's Agriculture Quality Assurance Plan
New York's Developed Quality Assurance Plan
Pennsylvania's Nonpoint source Quality Assurance Plan
Pennsylvania's Point Source Quality Assurance Plan
Pennsylvania's Combined BMP Quality Assurance Plan
Virginia's Quality Assurance Plan
West Virginia's nonpoint source Quality Assurance Plan
West Virginia's point source Quality Assurance Plan

Ultimately, Progress is Reflected in the Monitoring Data