

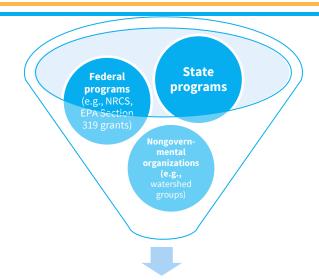
September 18, 2025

BMP Crosswalk Review

Olivia Devereux Agriculture Workgroup

EPA funding supports reporting of point source monitoring data and nonpoint source management practices Grant recipients
(jurisdictions)
must submit
Quality
Assurance
Project Plans
(QAPPs) outlining
how data is
reported

After
implementation,
jurisdictions
collect and submit
data to the Bay
Program Office,
which then loads
it into CAST

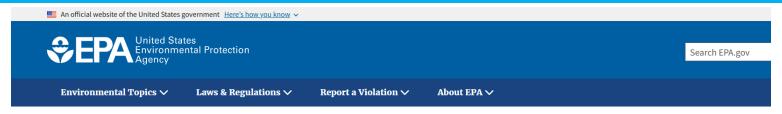


States submit to CBPO using practice names approved through the Watershed Technical Workgroup.

CBPO standardizes submissions by matching submitted names and units to CAST through the "Appendix"

Submitters have 2.5 months to review, update, and correct their data

EPA verifies data using established Verification Protocols



Home / EPA Grants

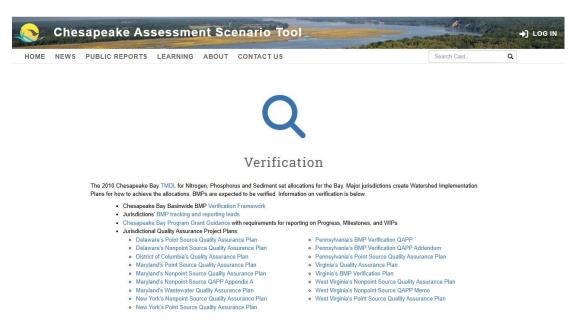
EPA Grants

Open Opportunities – Grants.gov 🔼 Grant Programs-SAM.gov <a>Z **Overview for Applicants and Recipients** How to Apply **Grant Forms** Competition **Training** Webinars Policy, Regulations and Guidance \vee Terms & Conditions **Grant Closeouts** Suspension and Debarment Regional Grants Information

Chesapeake Bay Program Grant Guidance

- 2025 Chesapeake Bay Program Grant Guidance Rev. May 2025.pdf (pdf) (792.85 KB, June 2025)
- Attachment 1 Workplan Template (docx) (45.37 KB, June 2025)
- Attachment 2_Multi Year Budget Detail Template_No edits.xlsx (xlsx) (32.51 KB, December 2024)
- Attachment 3_Progress Report Template_Rev. May 2025.docx (docx) (46.61 KB, June 2025)
- Attachment 4 Data Submission Specifications and Requirements (updated Nov 2024) (pdf) (290.93 KB, Nov 2024)
- Attachment 5_Guidance for Data Info and Doc Deliverable_No edits.pdf (pdf) (211.02 KB, Dec 2024)
- Attachment 6_Toxics Data Acquisition Specifications_Rev. May 2025.pdf (pdf) (198.5 KB, June 2025)
- Attachment 7 Budget Guide (updated December 2024) (pdf) (287.67 KB, December 2024)
- Attachment 8 CBARA State Budget Reporting (updated October 2024) (pdf) (184.97 KB, October 2024)
- Attachment 9 MEB Funding Guidance (updated May 2025) (pdf) (288.25 KB, June 2025)

Quality Assurance Project Plans (QAPPs)



- Documented in QAPPs:
 - Data sources
 - Management practice names
 - Data handling procedures
 - Verification programs
 - And more
- All sectors are covered by grants and reporting – this presentation highlights agriculture sector items
- The following slides provide snapshots of how grant recipients track and report data

DNREC Chesapeake Bay Nonpoint Source Data Collection (Page 205)



- Agricultural BMPs Animal Waste Management Structures (AWMS)/Waste Storage facilities: provided for the entire county. Submitted as is and indicated N in the in BD watershed column. Note that "roofs and covers" is a type of AWMS. Data provided by DDA for 2014. Previously provided by NRCS.
- Conservation Tillage Percentage provided by county for Conservation Tillage and High Residue Minimum Soil Disturbance. Can be entered as a percentage. Data provided by DNREC WAMS in 2014.
- Cover Crops Where cover crop names were not accepted in NEIEN, the acres were divided evenly between each crop type and submitted individually. If the cover crop names were still not accepted in NEIEN, they were changed to general "cover crop" to receive the minimum credit.

Maryland's Best Management Practice Verification Protocol (Page 17, Table 2-1)



Table 2-1. Agriculture BMP Groupings.

NRCS/MDA Code	Name	CBP Name	BMP Grouping	Data Source		
327	Conservation Cover	LandRetireOpen	Visual Multi-Year	Conservation Tracker		
342	Critical Area Planting	LandRetireOpen	Visual Multi-Year	Conservation Tracker		
318	Dead Bird Composting Facility	MortalityComp	Visual Multi-Year	Conservation Tracker		
382	Fencing	GrassBuffExcl ForestBuffExcl	Visual Multi-Year	Conservation Tracker		
386	Field Border	GrassBuffers	Visual Multi-Year	Conservation Tracker		
393	Filter Strip	GrassBuffers	Visual Multi-Year	Conservation Tracker		
412	Grassed Waterway	GrassBuffers	Visual Multi-Year	Conservation Tracker		
512	Pasture & Hayland Planting	LandRetirePas	Visual Multi-Year	Conservation Tracker		
528	Prescribed Grazing	PrecRotGrazing	Visual Multi-Year	Conservation Tracker		
391	Riparian Forest Buffer	ForestBuffers	Visual Multi-Year	Conservation Tracker		
390	Riparian Herbaceous Cover	GrassBuffers	Visual Multi-Year	Conservation Tracker		
558	Roof Runoff Structure	BarnRunoffCont	Visual Multi-Year	Conservation Tracker		
580	Streambank and Shoreline Protection	NonUrbStrmRest	Visual Multi-Year	Conservation Tracker		
587	Structure For Water Control	WaterContStruc	Visual Multi-Year	Conservation Tracker		
612	Tree/Shrub Establishment	TreePlant	Visual Multi-Year	Conservation Tracker		
313	Waste Storage Structure	AWMS	Visual Multi-Year	Conservation Tracker		



WIP Tracking & Reporting

Phase 6.0 model

Sources of Data

Conservation Tracker

MACS database

NM Database (AIR)

WIP Category

Ag Stormwater Management

Ag Drainage Management

Alternative Crops

Animal Waste Management Systems

Barnyard Runoff Controls

Conservation Plans/SCWQP

Cover Crop

Exclusion Fence w/ Grass or Forest Buffer Exclusion Fence w/ Narrow Grass or Forest Buffer

Forest Buffers

Grass Buffers

Horse Pasture Management Land Retirement to Pasture or Open Space

Litter Amendments (Poultry)

Loafing Lot Management

Off-stream Watering w/o Fencing

Manure Transport

Mortality Composters

Precision/Rotational Grazing

Stream Restoration Ag

Tree Planting

Wetland Restoration

Nutrient Management

Conservation Tillage & High Residue Management Cropland Irrigation

Manure Incorporation or Injection Nursery Capture & Reuse

BMP Codes

ASM - Agricultural Stormwater Management (Animal Facilities)

587 – Structure for Water Control
RI 17 – Water Control Structure
606 - Subsurface Drain
620 - Underground Outle

604 – Saturated Buffer 605 – Denitrifying Bioreactor 606 - Subsurface Drain 620 - Underground Outlet 782 - P Removal System 554 - Drainage Mngmt Plan

RI 3 - Alternative Crop/Switchgrass

313 – Waste Storage Structure 359 – Waste Treatment Lagoon

425 – Waste Storage Pond RI 1 – Dry Waste Storage Structure

558 - Roof Runoff Structure

RI 16 - Barnyard Clean Water Diversion

382 (A-C) - Fencing

RI 4a/b – Watercourse Access Control - narrow grass or trees RI 5/6 - Watercourse Access Control - grass or trees

391 – Riparian Forest Buffer

RI 9 – Forest Nutrient Exclusion Area RI 10 – Forest Buffer on Watercourse

386 – Field Border 390 – Riparian Herbaceous Cover

393 – Filter Strip 412 – Grassed Waterway

RI 7/8 - Grass Nutrient Exclusion /Grass Buffer on Watercourse

512 – Forage and Biomass Planting RI 13 /14– Conversion to Pasture or Hayland

327 - Conservation Cover 342 and 342A - Critical Area Planting

591 – Amendments for the Treatment of Ag Waste

561 - Heavy Use Area Protection (excl. poultry)

614 - Watering Facility RI 18 - Watering Trough

316 - Animal Mortality Facility

RI 2 – Animal Compost Structure

528 - Prescribed Grazing RI 15 - Rotational Grazing

580A/B – Streambank Protection or Shoreline Protection

584 - Channel Bed Stabilization

380 – Windbreak/Shelterbelt Establishment 612 – Tree/Shrub Establishment

422A/B – Hedgerow Planting RI 11/12– Veg. Buffer on Poul

RI 11/12- Veg. Buffer on Poultry - grass or trees

657 – Wetland Restoration 658 – Wetland Creation

NY Chesapeake Bay USC Nonpoint Source QAPP

(Page 29)

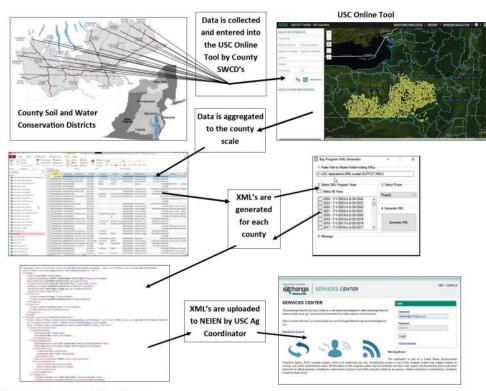


Figure 3. USC Database System work-flow diagram

2024 PA DEP QAPP (Page 24-25)



Table A10-1 Primary Sources of BMP information

Data Source/Type	How Information is Received	Contact	ВМР Туре	Implementation Mechanism	
National Park Service ⁴	Excel file obtained from program contact	R. Senos	Various	Cost-Share	
US Fish and Wildlife ⁴	Excel file obtained from program contact	L. Dawson	Various	Cost-Share	
DEP Stream Bank Fencing Program	PracticeKeeper Report to Data Warehouse	K. Bresaw	Agricultural	Cost-Share	
DEP Chesapeake Bay Implementation Grants	PracticeKeeper Report to Data Warehouse	K. Bresaw	Agricultural	Cost-Share	
DEP Section 319 Non-Point Source Program	PracticeKeeper Report to Data Warehouse	S. Kleiner	Forestry	Non-Cost Share	
DEP Abandoned Mine Land Reclamation Program	Excel file obtained from program contact	J. Sassaman	Rural Land	Regulatory	
DCNR Forest Harvest Information	Excel file obtained from program contact	R. Beleski	Forestry	Regulatory	
PGC Forest Harvest Information	Excel file obtained from program contact	P. Lupo	Agricultural	Cost-Share	
PA Act 38 Nutrient Management	PracticeKeeper Report to Data Warehouse	K. Bresaw	Various	Regulatory	
PA Growing Greener Grant Program 1	PracticeKeeper Report to Data Warehouse	S. Kleiner	Ag/Urban	Regulatory	
MS4 Program	Excel file obtained from program contact	J. Eberl	Urban	Regulatory	
PA Oil and Gas Program	Excel file obtained from program contact	D. Harvey	Urban	Regulatory	
PA Waste Program	Excel file obtained from program contact	J. Dunham	Various	Cost-Share	
PA Air Quality Program ⁵	Excel file obtained from program contact	V. Trivedi	Ag/Urban	Regulatory	
Chapter 102 Program	Excel file obtained from program contact	K. Bloom	Urban	Regulatory	
FSA program-specific BMPs	Excel file obtained from USGS	USGS/Devereux ²	Agricultural	Cost-Share	
NRCS program-specific BMPs	Excel file obtained from USGS	USGS/Devereux ²	Urban	Cost-Share	
USDA Rural Development Program ⁴	Listing received from program contact	L. Thomas	Agricultural	Cost-Share	
SCC Resource Enhancement and Protection Program	Excel file from program contact	J. Semke	Agricultural	Cost-Share	
DEP-funded Cover Crop Survey ³	Excel file from program contact ³	A. Basehore	Rural land	Non-Cost Share	
SCC Dirt and Gravel Road Program	Excel file obtained from program contact	K. Corradini	Various	Cost-Share	
DEP Nutrient Trading Program ⁵	Tabular data obtained from program	R. Colyer	Various	Non-Cost Share	
PennVest Program	Excel file obtained from program contact	P. Wenrich	Various	Cost-Share	
Stream Improvement Program	Excel file obtained from program contact	W. Kcenich	Agricultural	Non-Cost Share	
Grass Roots Program ⁴	Excel file obtained from program contact	A. Basehore	Urban	Cost-Share	
TreeVitalize/Urban Forestry Program	PracticeKeeper Report to Data Warehouse	J. Brockmeyer	Agricultural	Cost-Share	
DEP-funded Conservation Tillage Survey	Tabular data obtained from program Tabular	A. Basehore	Agricultural	Non-Cost Share	
NRCS Potomac Pilot ⁴	Excel file provided by NRCS	J.Kraft	Agricultural	Non-Cost Share &	
DEP-funded Ag Planning Reimbursement Program	PracticeKeeper Report to Data Warehouse	N. Miller	Agricultural	Cost-Share	

Table A10-1 Primary Sources of BMP information (continued)

Data Source/Type	How Information is Received	Contact	ВМР Туре	Implementation Mechanism Regulatory Cost-Share Federal Funds Regulatory Cost-Share Cost-Share Cost-Share Regulatory Regulatory	
DEP Ag Inspections National Fish & Wildliffe Foundation Dept. of Defense – Federal Lands PA Dept. of Transportation (PennDOT) Dept of Conservation and Natural Resources (DCNR) Chesapeake Bay Foundation DEP Septic Tank Pump-outs DEP Septic Tank Pump-outs DEP Waterways Engineering and Wetlands	PracticeKeeper Report to Data Warehouse Excel file provided by program contact FacticeKeeper Report to Data Warehouse FieldDoc Report to Data Warehouse Excel file provided by program contact Excel file provided by program contact	K. Bresaw J. Reilly K. Du Bois R. Heineman T. Stark K. Leaverton J. Dawes B. Schlauderaff S. Reisinger	Agricultural Various Urban Urban Ag/Urban Various Various Urban Natural		
PDA Penn State Producer Survey PA Turnjoike Commission US Army Corp and Engineers (USACE) Larson Design Group (LDG) DEP Countywide Action Plan (CAP) Implementation Grant ACAP Catalwing Action for Clean Water in PA's Capital Region	Excel file provided by program contact Excel file provided by program contact Excel file provided by program contact PracticeKeeper Report to Data Warehouse PracticeKeeper and FieldDoc Report to Data Warehouse PracticeKeeper Report to Data Warehouse	M. Royer J. Kaiser M. Spindler J. Glace K. Beats E. Cromer	Agricultural Urban Urban Agriculture Various Various	Non-Cost Share Non-Cost Share Federal Funds Non-Regulatory Non-regulatory Non-regulatory	
Conowingo Watershed Implementation Plan ⁶	PracticeKeeper Report to Data Warehouse	A. Basehore	Agriculture	Non-regulatory	
ccc CCC CRBC	PracticeKeeper Report to Data Warehouse PracticeKeeper Report to Data Warehouse PracticeKeeper Report to Data Warehouse	D. Hennings C. Tice A. Gavin	Agriculture Agriculture Ag/Natural	Non-Regulator Non-Regulator	

¹Data for acres of land under nutrient management are also obtained from other sources as described in Chapter B7.3.3.

² Data obtained from USGS via sub-contractor (Olivia Devereux) under 1619 agreement between USDA and USGS.

³ County-level cover crop data are based on surveys described in Chapter B and Attachment D.

⁴Data have been infrequently provided from this program due to lack of activity or reporting since 2010.

⁵ Program data submission pending.

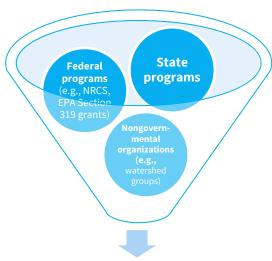
⁶See Attachment J. Conowingo Watershed Implementation Plan (CWIP)

2024 PA DEP QAPP (Page 36)



- As briefly described in Chapter A, BMP-related data **are obtained from multiple sources**. These include data on such activities as agricultural BMPs, urban BMPs, stream restoration and floodplain reconnection, manure transport, animal waste management systems, and other similar activities that can potentially result in model-simulated decreases in nutrient and sediment loads within Pennsylvania's portion of the Chesapeake Bay watershed.
- Depending on the source, information on a variety of BMP types and activities maybe included with data obtained from state or federal programs. In some cases (e.g., NRCS, SCC REAP, DEP Growing Greener, DEP CBRAP or CBIG, and DEP 319 Program), data related to an extensive list of BMPs may be obtained. Whereas in other cases (e.g., the SCC Dirt and Gravel Road Program and the USDA Rural Development Program), information may be provided for only one or two specific BMPs.
- In all cases, as described in more detail in following sub-chapters, **additional processing is** undertaken to translate BMP information into the specific BMP-related names and units required by NEIEN protocols.

Description and Limitations



States submit to CBPO using practice names approved through the Watershed Technical Workgroup.

- The Appendix is a Bay Program data tool that converts submitted data into CAST practices names and units
- Each state maps implemented practices to Appendix practice names differently, as outlined in their QAPPs
- The NRCS-to-CAST practice table is informational only and does not represent any single jurisdiction's data

Appendix: Crosswalk of Submitted Data to CAST Practice Names and Units

BMP Name	Default CAST Load Source Group		Unit Name	CAST Bmp Short Name		Status Name	rement Use	form ation	tion Varia	Square Feet To	CAST		Credit Duration
Animal Waste Management Systems (All Types)	livestock	No. of systems	COUNT	awms		Releas e	1	*	1.000 00000 00		syste ms	False	15
Animal Waste Management Systems (All Types)	livestock	Systems	COUNT	awms		Releas e	2		1.000 00000 00		syste ms	False	15
Cover Crops	row	WHEAT Normal AERIAL Traditional	ACRE	covercr optrad wno	02/01/	NA	315	*	1.000 00000 00		acres	False	1

The Appendix is a Bay Program data tool that translates submitted data into CAST practice names and units.

12

Crosswalk of NRCS to CAST Practice Names

For information only: does not reflect any one jurisdiction's data

						Chesapea
		Bay TMDL				ke Bay
		TN, TP, TSS				Program
		Effect on				Verificati
NRCS		Water				on
practice_co		Quality			CAST_BMP_Definiti	Frequenc
	NRCS practice name		Additional Requirements, All NRCS practices must meet the CAST BMP Definition.	CAST BMP	on v	v v
	Stormwater Runoff Control	Y		Agricultural Stormwater Management	Agricultural stormw	10
635	Vegetated Treatment Area	Υ		Agricultural Stormwater Management	Agricultural stormw	_
316	Animal Mortality Facility	Υ		Animal mortality disposal by composting	The handling, storag	
	Composting Facility	Υ		Animal mortality disposal by composting	The handling, storag	
	Waste Management System	Υ		Animal Waste Management System	Any structure design	
	Waste Separation Facility	Υ		Animal Waste Management System	Any structure design	_
313	Waste Storage Facility	Υ		Animal Waste Management System	Any structure design	15
629	Waste Treatment	Υ		Animal Waste Management System	Any structure design	15
359	Waste Treatment Lagoon	Υ		Animal Waste Management System	Any structure design	15
707	Barnyard Runoff Management	Υ		Barnyard Runoff Control	Includes the installa	10
558	Roof Runoff Structure	Υ		Barnyard Runoff Control	Includes the installa	10
367	Roofs and Covers	Υ		Barnyard Runoff Control	Includes the installa	10
575	Trails and Walkways	Υ		Barnyard Runoff Control	Includes the installa	10
568	Trails and Walkways	Υ		Barnyard Runoff Control	Includes the installa	10
606	Subsurface Drain	Υ		Blind inlets	Drain structure back	5
620	Underground Outlet	Υ		Blind inlets	Drain structure back	5
SOE04	Continuous No Till	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has a	Conservation tillage types	Varies depending on	1
SOE03	Continuous No Till Organic System	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has a	Conservation tillage types	Varies depending on	1
SOE01	Continuous no till with high residue	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has a	Conservation tillage types	Varies depending on	1
BOOOCPL3	Crop Bundle#3 - Soil health rotation, No till	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has a	Conservation tillage types	Varies depending on	1
SOE05	Intensive no-till (Organic or Non-organic systems)	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has r	Conservation tillage types	Varies depending on	1
E329106Z	No till system to increase soil health and soil organic matter content	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has r	Conservation tillage types	Varies depending on	1
E329D	No till system to increase soil health and soil organic matter content	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has r	Conservation tillage types	Varies depending on	1
E329C	No till to increase plant-available moisture	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has i	Conservation tillage types	Varies depending on	1
E329115Z	No till to increase plant-available moisture: moisture management	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has	Conservation tillage types	Varies depending on	1
E329A	No till to reduce soil erosion	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has i	Conservation tillage types	Varies depending on	1
E329B	No till to reduce tillage induced particulate matter	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has i	Conservation tillage types	Varies depending on	1
E329101Z	No till to reduce water erosion	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has i	Conservation tillage types	Varies depending on	1
E345106Z	Reduced tillage to increase soil health and soil organic matter content	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has i	Conservation tillage types	Varies depending on	
E345C	Reduced tillage to increase plant-available moisture	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has i	Conservation tillage types	Varies depending on	1
	Reduced tillage to increase plant-available moisture: moisture management	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has	Conservation tillage types	Varies depending on	1
E345D	Reduced tillage to increase soil health and soil organic matter content	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has	Conservation tillage types	Varies depending on	1
E345144Z	Reduced tillage to reduce energy use	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has	Conservation tillage types	Varies depending on	1
E345E	Reduced tillage to reduce energy use	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has	Conservation tillage types	Varies depending on	1
E345A	Reduced tillage to reduce soil erosion	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has	Conservation tillage types	Varies depending on	1
E345B	Reduced tillage to reduce tillage induced particulate matter	Υ	CAST has 3 tillage BMPs: Low Residue, Continuous High Residue, and Conservation. Each has	Conservation tillage types	Varies depending on	1



Photo by Will Parson/Chesapeake Bay Program with aerial support by Southwings

Thank you!

Any questions? You can contact me at Olivia@DevereuxConsulting.com







USDA Farm Service Agency U.S. DEPARTMENT OF AGRICULTURE



Natural Resources Conservation Service U.S. DEPARTMENT OF AGRICULTURE

Data Submission Mechanism

- NEIEN = National Environmental Information Exchange Network
- Data currently submitted through
 NEIEN nodes
- Post-processed using automated procedures
- Future shift: data will be submitted directly through a CAST upload
- Same post-processing will normalize data to CAST practice names and units

