

2012 Progress

Planned Improvements in Response to Lessons Learned in 2011

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Watershed Technical Workgroup

Outline

- Projections of base data
- Timing of data submission and review
- Data products provided for jurisdiction review
- Special actions taken in response to reviews
- Systematic solutions
 - Completed
 - Planned
- Other issues/Discussion

Base Data Projection

- Animal numbers
 - Linearly extrapolated from previous years
 - The proportion in AFO and CAFO remained the same from prior years. Jurisdictions had option to adjust the proportion
- Septics
 - Linearly extrapolated from previous years
 - Jurisdictions had option to provide different data. Only WV had different data
- Sewage Sludge
 - Held constant. Only jurisdiction with sewage sludge as a nutrient source is VA because of data availability.
- Land Use
 - Projected
 - MD adjusted the land in regulated vs. unregulated urban

Timing of Data Submissions and Review

- 2011 Progress is for BMPs implemented July 1, 2010 to June 30, 2011
- BMP submission deadline—Dec. 31, 2010

DATE	MODEL
Jan. 2, 2011	NEIEN only
Feb. 20, 2011	NEIEN only
Mar. 5, 2011	NEIEN & SB
Apr. 2, 2011	NEIEN & SB & WSM
Apr. 19, 2011	NEIEN & SB & WSM
May 2, 2011	NEIEN & SB & WSM

CBP Data Products

- NEIEN Summary
- Scenario Builder Submitted vs. Credited
- Scenario Builder Summary BMPs
- Watershed Model Loads
- Wastewater Loads and Facilities

Changes in Data Processing

- Each review led to changes in the processing of the data
 - Input to NEIEN
 - Post-processed from NEIEN
 - Scenario Builder
- These changes sometimes caused another issue or brought to light an issue that might not have otherwise been apparent.
- Objective for 2012 Progress is to anticipate issues and provide a systematic solution in advance

General Changes

- Erosion and Sediment Control land use process
- BMPs reported within and outside of the CSOs
- Mapping of Stream Crossing in NEIEN to a SB BMP
- Cover Crop—definitions and established efficiencies for new types
- Street sweeping definition and reporting units clarified and corrected
- Upland acres on TRP credit corrected in SB
- Urban growth correction applied on correct land uses
- New back out process was developed then removed
- Manure transport changed to allow specificity of load from in or out of the watershed. This change precludes validation that removes duplicate records
- Added new land use groups to SB to accommodate VA NRCS data (pasturehay, pasturehayfert, pasturehaynonmfert)
- Corrected segments that did not validate for both land use change and efficiency BMPs
- Corrected units for barnyard runoff control

Changes to Allow Validation in SB for Specific States' Data

- Updated invalid land use group submissions
 - Nutrient Management (WV)
 - Forest Buffers (WV, MD)
 - Grass Buffers (DE)
 - Street Sweeping (DC)
 - NRCS data (VA)
 - Animal BMPs that were on land uses other than C/AFO (VA)
 - Septic data on land uses other than septic (VA)
- Ammonia Emissions Reduction—assumed to be Alum, could have been biofilters or lagoon covers
- Rolling up BMPs to larger land use groups than the states submitted the BMPs on to generate more credit and combine with history (2010 and 2009) for cumulative BMPs

Changes Made by Jurisdictions

- Historic data for 2010
- Units reported for various BMPs
- Cover crop amounts and types (PA, MD)
- HUC12 and 8 leading zero missing, added back (DE, VA, DC)
- “CBWSOnly” missing, was added (NY, DE)
- Fencing in feet calculated and submitted as grass buffers on pasture (DE)
- Wetland restoration on forest applied to pasture (DE)
- Adjustments of BMPs on TRP (WV)
- Where pasture fencing as an annual BMP is submitted as percent, must be continued to report in the same way in future or history will be incorrect (WV)
- Horse pasture management and grass buffers failed validation and changes were made (NY)

Improvements

- Completed
 - Show Forest Harvesting Practices and Erosion and Sediment Control in Submitted vs. Credited so that it does not appear cut off when it is not
- Planned improvements by CBP
 - BMPs on different geographies and land uses, varies for each year of submission yet must be summed for cumulative BMPs
 - NEIEN validation improvements to catch the BMPs that are mapped to ineligible land uses.
 - Allow the urban BMPs on AB vs. CD soil types in NEIEN and SB
 - Add interim BMPs to NEIEN as they are approved (wetland harvest, NM efficiency, conservation till HOM)
 - Review where BMPs are cumulative for one type but annual for another. E.g.: NM is annual but ENM and Decision Ag are cumulative. Varies among jurisdictions
 - Review BMP definitions to make sure they are clear (E.g.: AWMS)
 - Review the BMPs mapped to Conservation Plans in NEIEN. Determine if supplemental or more appropriately mapped to a different BMP
 - Automate data products so they can be produced more quickly

Recommendations

Timeline: the new deadline is 3/01/2013—a full 3 months earlier. ***How can we tighten the schedule?***

- Projections done before 12/31/2012
 - Review by states and adjustments completed before BMPs are even submitted.
- Data products—were these the right products?
- Other suggestions?

EXAMPLES OF DATA PRODUCTS

NEIEN Summary

Year	BMP Name	State	Measure -ment Name	Summarize d Measure Value	Unit Name	Conver- sion Status Code	Appendi x Status	No. of Rec- ords
2010	Dry Detention Ponds & Hydrodynamic Structures	DC	Area Treated	61.1	ACRES	SUCCESS	Release	6
2011	Dry Detention Ponds & Hydrodynamic Structures	DC	Area Treated	5.18	ACRES	SUCCESS	Release	2
2010	Reduction of Impervious Surface	DC	Area Treated	96.35	ACRES	SUCCESS	Release	5
2011	Reduction of Impervious Surface	DC	Area Treated	20.58	ACRES	SUCCESS	Release	6
2010	Bioretention	DE	Drainage Area	28.04	ACRE	ERROR		1
2011	Bioretention	DE	Area Treated	3.41	ACRES	SUCCESS	Release	5

Scenario Builder Submitted vs. Credited

Scenario	STATE	FIPS	BMP General Name	BMP Short Name	BMP Group id	From Land use	To Land use	BMP Group Unit	BMP Unit Submitted	Sub-Submitted	Backed out	Not backed out	Credited	Cut off	Total Credited
2009 N051311	MD	MD(CBWSONl y)	AWMSL livestockafocafo	AWMS	888	Livestock	afocafo	AU	AU	68007	0	68007	68007	0	68007
2009 N051311	MD	MD(CBWSONl y)	AWMSPoultryafocafo	AWMS	888	Poultry	afocafo	AU	AU	132912	0	132912	132912	0	132912

Scenario Builder Summary BMPs

[illegible]

Watershed Model Loads

5/11/12		All Scenario w/ Allocation Air +	1985 Progress	2009 Progress	2010 Progress	2011 Progress
MajorBasin	Jurisdiction	Source	del_TOTN (lbs/year)	del_TOTN (lbs/year)	del_TOTN (lbs/year)	del_TOTN (lbs/year)
Eastern Shore of Chesapeake Bay	PA	AllSources	522,123	514,180	507,928	518,350
Potomac River Basin	PA	AllSources	5,577,630	5,460,648	5,195,606	5,271,091
Susquehanna River Basin	PA	AllSources	118,157,956	110,641,220	106,336,564	106,658,941

Wastewater Loads and Facilities

Wastewater Discharged/EOS Load Summary by State

TN Discharged Loads (lbs/yr)				TP Discharged Loads (lbs/yr)			TSS Discharged Loads (lbs/yr)		
STATE	2010	2011	Reduction	2010	2011	Reduction	2010	2011	Reduction
DE	53,553	40,726	12,827	5,564	6,741	-1,177	25,895	13,109	12,786
DC	2,192,565	1,811,039	381,526	27,455	44,021	-16,566	550,518	1,201,986	-651,468
MD	15,792,823	14,121,094	1,671,729	932,951	841,505	91,447	10,064,086	9,408,850	655,236

2011 WWTP Loads by Facility					Discharged/EOS Loads (lbs/yr)			Delivered Loads (lbs/yr)		
SIG/NONSI G	TYPE	FACILITY	NPDES	LOCATION	TN	TP	TSS	TN	TP	TSS
SIG	MUNICIPAL	BLUE PLAINS	DC0021199	001	170,775	14,809	711,540	170,775	14,809	711,540
SIG	MUNICIPAL	BLUE PLAINS	DC0021199	002	3,697,000	61,844	793,742	3,697,000	61,844	793,742
SIG	MUNICIPAL	LAUREL	DE0020125	001	3,437	742	1,553	3,437	742	1,553