

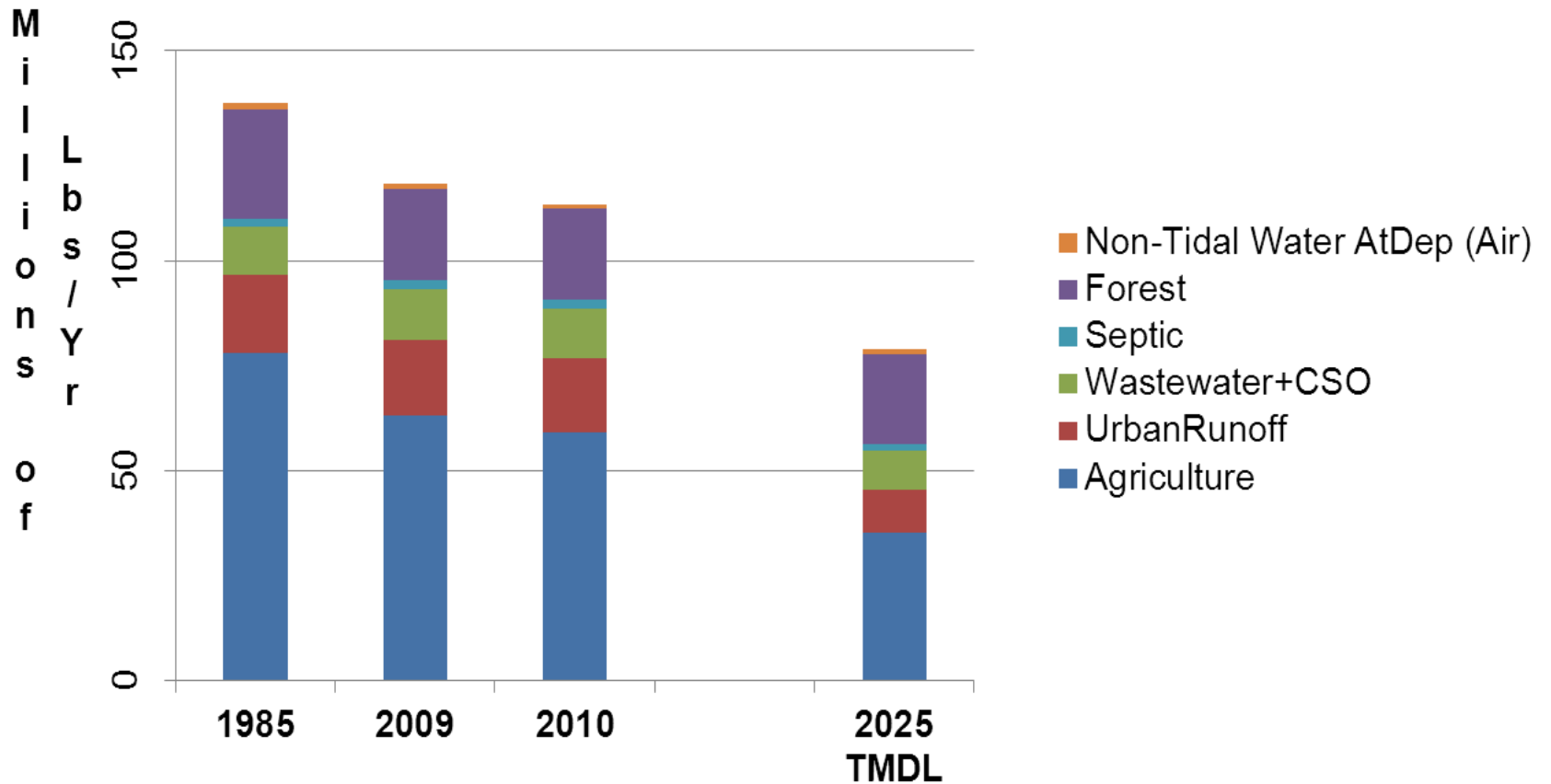


**THE CHESAPEAKE BAY TMDL:  
Restoring Waters of  
Pennsylvania and the  
Chesapeake Bay**

**January 5, 2012**

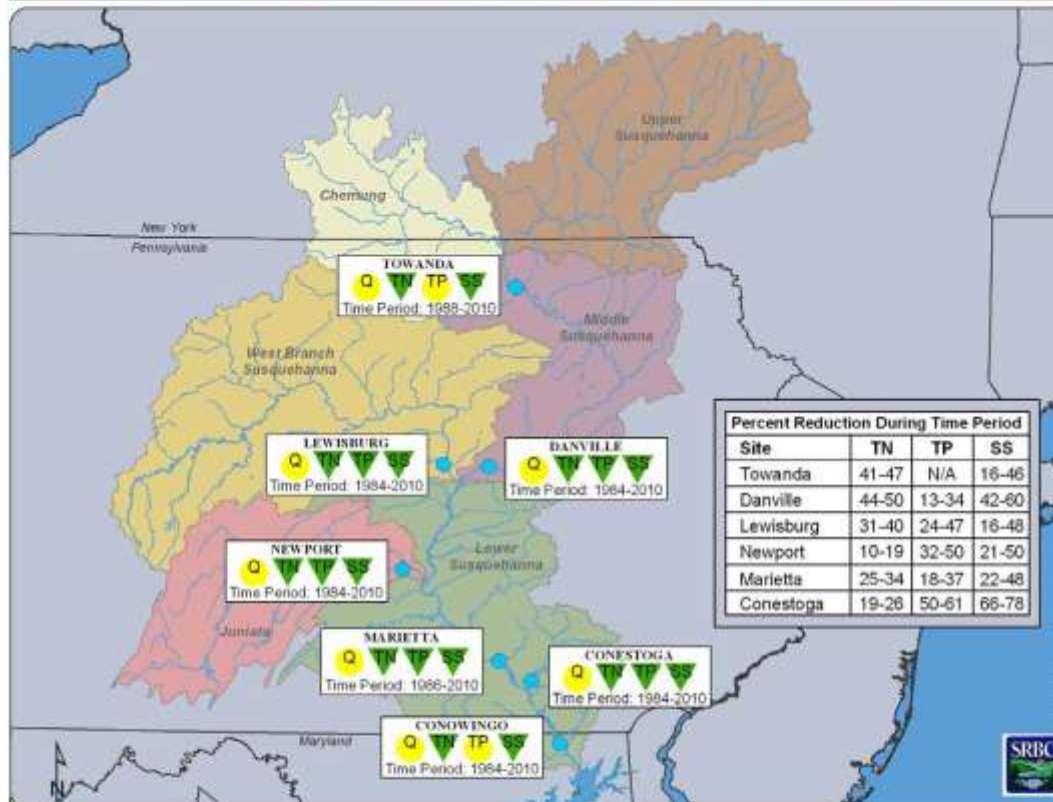
# Progress

## Pennsylvania Delivered Nitrogen by Sector



# Susquehanna River Basin Commission

## FLOW-ADJUSTED CONCENTRATION TRENDS THROUGH 2010



### TRENDS IN FLOW, NITROGEN, PHOSPHORUS AND SUSPENDED SEDIMENT IN THE SUSQUEHANNA RIVER BASIN THROUGH 2010

The Susquehanna River Basin Commission estimates trends in nutrients, sediment, and flow as part of the Chesapeake Bay Program's annual trend update. Trends are calculated based on the USGS water year, October 1 to September 30, using the USGS 7-parameter, log-linear regression model (ESTIMATOR) for nutrient trends and the Seasonal Kendall test for trends in flow.

Trends in flow indicate the natural changes in hydrology. Changes in flow and the cumulative sources of flow (base flow and overland runoff) affect the observed concentrations and the estimated loads of nutrients and suspended sediment. The Flow Adjusted Concentration (FAC) is the concentration after the effects of flow are removed. Trends in FAC indicate that changes have occurred in the processes that deliver constituents to the stream system. This is the concentration that relates to the effects of nutrient-reduction activities and other actions taking place in the watershed.

FAC trends for 2010 remained unchanged from 2009 trends. The chart shows the range in percentage of reductions that have occurred at each site since the beginning of monitoring at the site. For example, TN values at Towanda for 2010 are between 41% and 47% less than 1989 values of TN.



# **Bradford County – What's Your Plan?**

- **Bradford County received a 2011-12 Chesapeake Bay Special Projects Grant for "What's Your Plan?"**
- **Grant awarded in July 2011 for \$13,900.**
- **Project will engage all 1,500 farms in Bradford County - provide compliance/regulatory information to all via site visits, media coverage, meetings, etc.**
- **As of October 2011, Bradford County has addressed 79 farm operators out of the 1,500 in the county; About 5% complete.**

# **ARRA / PENNVEST for Ag BMPs**

- PENNVEST / DEP / EPA awarded Chesapeake Bay Foundation \$14.2 million in federal stimulus funds for Ag BMPs**
- Requirements for participating farmers:**
  - Chapter 102-compliant conservation plan**
  - Nutrient or manure management plan per PA law**
  - Address all ACA's posing risks to surface water**
  - 35' minimum width forested buffers on all streams**

## **ARRA / PENNVEST cont'd**

- Of 113 farmers contacted, 97% were willing to meet these requirements as a condition to receive financial assistance for BMPs**
- Final project included 43 farms implementing 230 Ag BMPs**
- Partners included TeamAg, Red Barn, and conservation districts from Adams, Bradford, Columbia, Montour and Susquehanna Counties**

# **DEP Stream Bank Fencing**



- **For existing livestock problems along streams**
- **Covers high tensile fence, alternative watering and crossings or ramps**
- **14,476 feet of stream bank fencing was installed last year (2.74 miles)**
- **Over 180 miles have been installed since 1994.**
- **Requires 35-foot buffers**

## **Lancaster County Stormwater**

- The Lancaster County Roof Greening Project developed by local partners has converted more than 51,000 square feet of impervious area (roof tops) to pervious area by installing vegetated roofs.
- LIVE Green developed a residential stormwater outreach and education program which is conducting rain barrel workshops in an effort to educate residents about the nature of stormwater pollution.
- Lancaster City developed a Green Infrastructure Plan including a comprehensive strategy for managing stormwater.
- Warwick Township and the Lititz Run Watershed Alliance established stormwater BMP demonstration sites at the Warwick Township Municipal Campus.
- The expansion of stormwater BMP demonstration sites is a project of the Lancaster County Planning Commission, with assistance from the Center for Watershed Protection.
- Watershed implementation plans/restoration plans have been developed by a variety of groups, including the Lancaster County Conservancy.



# 2012 –2013 PA Agriculture Two-Year Milestones

Target Date	Milestone (WIP page reference)*	Deliverable	Lead Agency	Comments/Status Updates
<b>(Sector/Category) Agriculture</b>				
Oct 2013	Complete DEP / EPA CAFO program review to ensure consistency with EPA regulatory requirements. (WIP pg. 97)		DEP	On-going DEP: PA Dept. of Environmental Protection
July 2012	Develop “Model Ag Compliance Policy” for use by conservation districts. (WIP pg. 99)	Written Document	DEP	On-going
Dec 2013	Manure Management Manual Outreach (WIP pg. 97)	20 Training Sessions	DEP	On-going
July 2012	Revise delegation agreement with county conservation districts to implement manure management requirements. (WIP pg. 98)	Written Delegation Agreement	DEP / SCC	SCC: State Conservation Commission
July 2012	Visit farms to ensure operators are aware of regulatory requirements under PA Erosion Control regs. and the Manure Management Manual. (WIP pg. 100)	4000 on-farm visits	DEP / CD	On-going CD: Conservation District

# 2012 –2013 PA Stormwater Two-Year Milestones

Target Date	Milestone (WIP page reference)*	Deliverable	Lead Agency	Comments/Status Updates
<b>(Sector/Category) Stormwater/MS4-PAG 13 (PA General Permit 13)</b>				
	Approved PAG-13 o includes Chesapeake Bay Pollutant Reduction Plan (CBPRP)	General Permit for MS4s	DEP	Completed 09/17/2011
	Distribute PAG-13 Renewal Packets to permittees		DEP	As requested
1/2012 - -3/2012	Conduct Municipal Workshops		DEP	15 workshops
4/30/12	Develop Ches.Bay Pollutant Reduction Plan (CBPRP) Guidance		DEP	Under development
4/30/12	Develop MS4 Permit Guidance		DEP	Under development
4/30/12	Develop MS4 TMDL Plan Guidance		DEP	Under development
6/30/12	40 CFR 123.35(b) Policy on designation of Small MS4s		DEP	
7/1/12	MS4 Compliance Monitoring Strategy	Strategy	DEP	Under development
8/30/12	Update Annual Report		DEP	Under development
9/14/12	MS4 Notice of Intent (NOI) due date		DEP	270 NOI's
3/15/13	Existing MS4 permit coverage extension expires		DEP	
3/16/13	Term of Renewal of PAG-13 begins		DEP	Target date for providing authorization.

# 2012 –2013 PA Stormwater Two-Year Milestones

Target Date	Milestone	Deliverable	Lead Agency	Comments/Status Updates
<b>(Sector/Category) Stormwater/Chapter 102 Revisions</b>				
<b>2012 - 2013</b>	<b>Training and outreach-increased technical assistance for professional stormwater staff, elected officials and the regulated community to assist in identifying opportunities for innovative approaches to new development, or redevelopment retrofit opportunities to address existing stormwater problems</b>		<b>DEP</b>	<b>Ongoing</b>
<b>12/7/12</b>	<b>Revise PAG-2 NPDES Construction Permit</b>	<b>Final Permit</b>	<b>DEP/EPA</b>	<b>Ongoing</b>
<b>12/30/13</b>	<b>PAG-2 Training and outreach</b>	<b>2 Training Sessions</b>	<b>DEP/EPA</b>	

# 2012 –2013 PA Point Source Two-Year Milestones

**(Sector/Category) Point Sources: Number of Bay Facilities Who Must Comply with Nutrient Cap Loads Beginning During the Period July 1, 2012 to June 30, 2014**

**• Significant Sewage and Industrial Facilities**

<b>10/1/2012</b>	<b>51 Sig. Sewage facilities will begin compliance with their cap loads starting 10/1/2012.</b>	<b>DEP</b>	
<b>10/1/2012</b>	<b>1 Sig. Industrial facilities will begin compliance with their cap loads starting 10/1/2012.</b>	<b>DEP</b>	
<b>10/1/2013</b>	<b>29 Sig. Sewage facilities will begin compliance with their cap loads starting 10/1/2013.</b>	<b>DEP</b>	

**• Non-Significant Sewage Facilities**

<b>10/1/2012</b>	<b>3 Sewage facilities will begin compliance with their cap loads starting 10/1/2012.</b>	<b>DEP</b>	
<b>10/1/2013</b>	<b>2 Sewage facility will begin compliance with its cap loads starting 10/1/2013</b>	<b>DEP</b>	

**• Totals:**

<b>10/1/2012 - 10/1/2013</b>	<b>55 Sewage and Industrial facilities will begin compliance with cap loads starting 10/1/2012, and 31 Sewage and Industrial facilities will begin compliance with cap loads starting 10/1/2013 (86 overall).</b>	<b>DEP</b>	
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# **Conewago Creek Conservation Initiative**

- **Conewago Creek is a 52-square mile watershed**
- **2009 – Penn State Ext. and project partners receive \$750,000 NFWF grant.**
- **2010 -- District partners conducted farm surveys of over 90% of farms to develop priorities for conservation work.**
- **2011 -- Conservation Districts and NRCS work with farmers to fund 116 new Ag BMPs, including:**
  - **more than 1,000 feet of new access roads,**
  - **120 feet of stream bank protection,**
  - **three stream crossings,**
  - **more than 2,000 feet of new diversions,**
  - **almost 20,000 feet of new terraces and**
  - **almost 5,000 feet of fencing**

# **Lycoming County Nutrient and Sediment Reduction Program**

- **DEP funded initial work to develop a county Nutrient Trading Program.**
- **County built upon this to obtain a NFWF grant.**  
**Project accomplishments include:**
  - **120+ farm operation inquiries into program**
  - **240+ attendees at 7 farmer outreach events**
  - **600+ acres of cover crops implemented**
  - **Floodplain Restoration site selected; construction planned for Fall 2012**
  - **Four BMPs implemented on County Farm**
  - **13,000+ nutrient credits generated and certified**
  - **Successful sales in first two PENNVEST nutrient credit auctions netting proceeds of more than \$108,000 for participating farmers and County**

# **York County Integrated Water Resource Plan**

**The IWRP was a joint effort between the York County Planning Commission and DEP to develop a model IWRP that could be used by other counties state-wide.**

- Ties all water related issues together in an easy to comprehend and usable manner through a flowchart tool.**
- The IWRP achieves the Act 247 requirement for York County's Comprehensive Plan to include "a plan for the reliable supply of water".**
- The IWRP meets Act 167 requirements for the County-wide Stormwater Management Plan.**

# Next Steps

- **Draft WIP was submitted to EPA on December 15, 2011**
- **Pennsylvania Public Comment Period**
  - **December 17 – January 30 (45 Days)**
  - **Announced in PA Bulletin on December 17<sup>th</sup>**
  - **[ra-chesapeakebayprogram@pa.gov](mailto:ra-chesapeakebayprogram@pa.gov)**
- **Review Comments (Public and EPA)**
- **Submit Final WIP to EPA by March 30, 2012**