Chesapeake Bay Foundation
Saving a National Treasure

Pennsylvania Milestones

2012/2013 FINAL ASSESSMENT

Choose Clean Water Coalition

AT A GLANCE

Agriculture

- ✘ Forest Buffers
- ✘ Conservation Tillage
- ✘ Nutrient Application Management
- ✔ Conservation Plans
- ✔ Barnyard Runoff Control

Urban/Suburban

- ✘ Erosion and Sediment Control
- ✔ Stormwater Infiltration Practices

Wastewater/Septic

- ✔ Wastewater Treatment Plants

See the charts on the inside of this sheet for more information.

For more detailed information on all of Pennsylvania's milestone goals, go to: www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/EnsuringResults.html.

Pennsylvania's Plan for Clean Water: Is the Commonwealth On Track?

Residents in the region are starting to see the benefits of investments and improvements made in local waterways and the Chesapeake Bay. The practices that protect and restore our waterways—tree plantings, conservation planning, septic hookups, and upgrades to wastewater treatment plants—ultimately improve our quality of life by reducing flooding, securing healthier drinking water, beautifying our neighborhoods, and ensuring safer waters for recreation. Unfortunately, despite making progress, the Chesapeake Bay watershed still remains a system dangerously out of balance. Too much nitrogen, phosphorus, and sediment pollution continues to run off our lawns, city streets, and farm fields into local creeks and streams and the Bay.

In 2010, the U.S. Environmental Protection Agency (EPA) and the Bay jurisdictions established science-based limits for these pollutants and state-specific plans to achieve them, together known as the Chesapeake Clean Water Blueprint. EPA, the states, and Washington, D.C., also committed to implement actions to achieve 60 percent of the needed reductions by 2017 and 100 percent by 2025.

To ensure these clean-water efforts stay on track, each of the states and Washington, D.C., committed to two-year goals or milestones detailing the programs and practices intended to be met in the near-term to achieve the 2017 and 2025 long-term goals. The milestones are a critical accountability tool, providing the opportunity to measure progress in the context of long-term Bay restoration efforts. Because of the importance of the milestones, the Chesapeake Bay Foundation and the Choose Clean Water Coalition are collaborating to evaluate and publicize pollution-reduction progress. This report evaluates, for select practices, whether Pennsylvania achieved its 2012/2013 two-year milestone goals and whether or not this progress is on a trajectory to achieve 60 percent implementation by 2017 and full implementation by 2025.

Conclusion

Pennsylvania achieved its 2013 goals for four of the eight practices evaluated. Of particular concern is the gap between current pace and the 2017 goals. For example, forested stream buffers were established at a rate of six acres per day from 2009 to 2013, but must increase to a rate of fifty acres per day, every day, through 2017. Conservation and nutrient management plans provide the base for keeping topsoil and nutrients on the land, rather than polluting waters. The declines in these essential plans are perplexing.

According to the Pennsylvania Department of Environmental Protection 2014 Pennsylvania Draft Integrated Water Quality Monitoring and Assessment Report, Pennsylvania has roughly 19,000 miles of impaired streams. The vast majority of the practices needed to meet our milestone goals will go a long way toward improving the Commonwealth's waters, within the Chesapeake Bay watershed, so our citizens can enjoy the benefits of healthy waters.

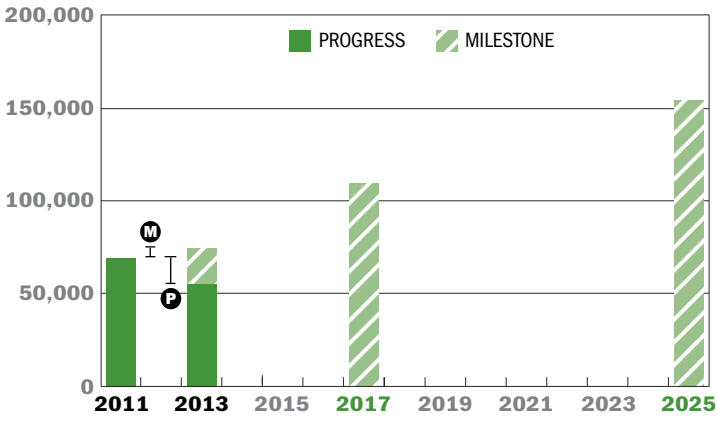
Assessment of Pennsylvania's Progress on Selected Pollution-Reduction Practices for 2013

Forest Buffers *acres*

According to Pennsylvania's Department of Environmental Protection, an error in reporting led to over-estimates of buffers in previous years. The error was corrected in 2013, resulting in an apparent decrease in forest buffer acres. In reality, new buffers are being installed, but nonetheless, Pennsylvania is in danger of not meeting its 2017 goal on one of the most effective practices to improve stream health.

$$\frac{\text{P: -14,337 (2-YEAR INCREMENTAL PROGRESS)}}{\text{M: 5,503 (2-YEAR INCREMENTAL MILESTONE)}} = \textbf{-261\%}$$

Progress Relative to Long-Term Goals* (*acres*)

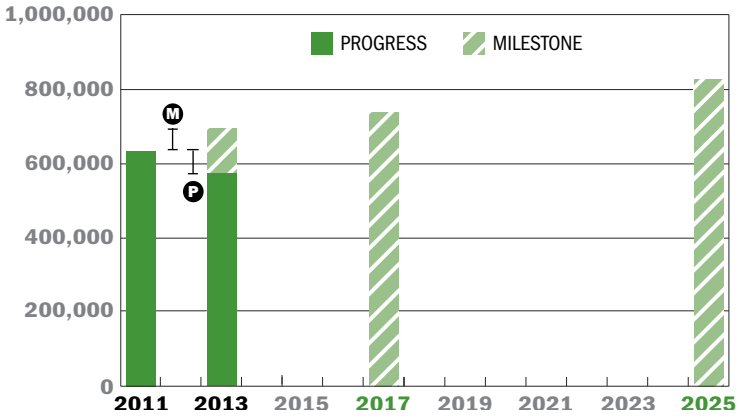


Conservation Tillage *acres*

Although this year's data includes estimates of conservation tillage established voluntarily by farmers, implementation still declined since 2011. Broader adoption will help farms improve soil health, in addition to meeting water-quality goals.

$$\frac{\text{P: -60,923 (2-YEAR INCREMENTAL PROGRESS)}}{\text{M: 60,936 (2-YEAR INCREMENTAL MILESTONE)}} = \textbf{-100\%}$$

Progress Relative to Long-Term Goals* (*acres*)

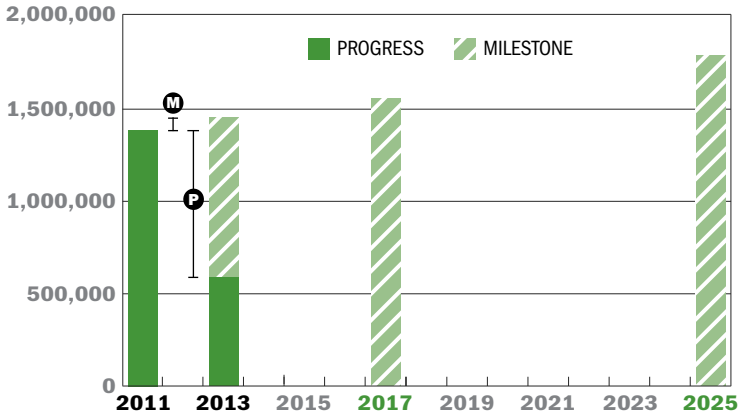


Nutrient Application Management *acres*

This is now reported as an annual practice, with plans older than three years excluded, resulting in reductions from 2011 levels. The Nutrient Management Program no longer has funds to assist farmers with plan development and implementation, likely leading to additional decreases.

$$\frac{\text{P: -798,297 (2-YEAR INCREMENTAL PROGRESS)}}{\text{M: 66,061 (2-YEAR INCREMENTAL MILESTONE)}} = \textbf{-1,208\%}$$

Progress Relative to Long-Term Goals* (*acres*)

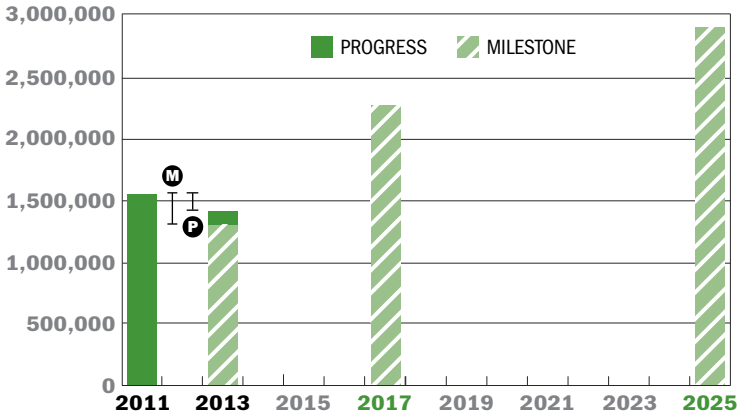


Conservation Plans *acres*

Pennsylvania exceeded its 2013 milestone goal, but the goal itself was not set to acheive the 2017 goal. Plan development actually declined since 2011, partially due to removal of some out-dated plans. This decline is especially concerning because plans are the foundation for many other conservation practices and have been required on all farms since 1972.

$$\frac{\text{P: -142,448 (2-YEAR INCREMENTAL PROGRESS)}}{\text{M: -256,359 (2-YEAR INCREMENTAL MILESTONE)}} = \textbf{N/A}$$

Progress Relative to Long-Term Goals* (*acres*)



*2017 goals are calculated as 2009 Implementation plus 60% of the difference between 2009 Implementation and the 2025 Implementation goal.

Agriculture | Urban/Suburban Polluted Runoff | Wastewater/Septic

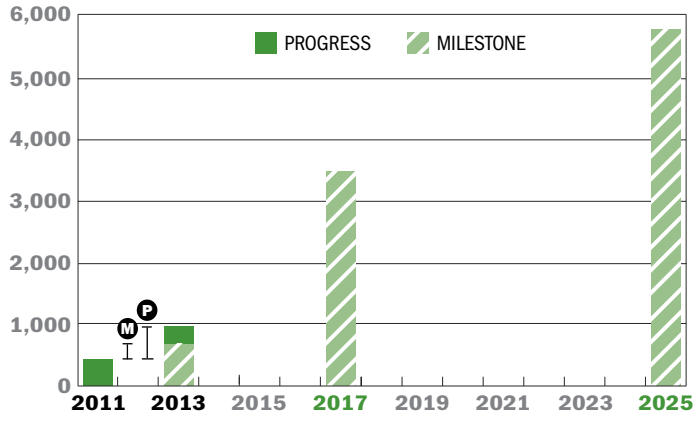
(P) 2-YEAR INCREMENTAL PROGRESS
(M) 2-YEAR INCREMENTAL MILESTONE

Barnyard Runoff Control *acres*

Although the 2013 goal was exceeded, implementation rates need to increase dramatically in order to reach Pennsylvania's 2017 goal. Barnyard improvements yield significant reductions in manure runoff and improvements in herd health.

(P) 547 (2-YEAR INCREMENTAL PROGRESS) / (M) 256 (2-YEAR INCREMENTAL MILESTONE) = **214%**

Progress Relative to Long-Term Goals* (*acres*)

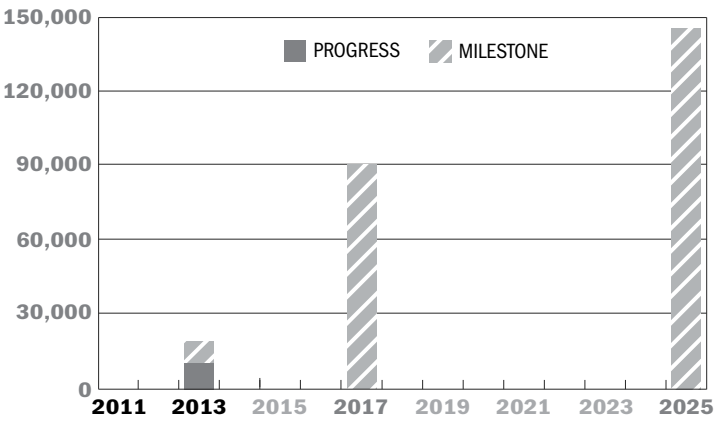


Erosion and Sediment Control** *acres*

The 2013 goal was not achieved. This practice, however, is dependent on the issuance of construction permits so fluctuations in the building industry directly impact implementation. Additionally, consistency in the reporting by other programs, such as abandoned mine reclamation, will also impact reported numbers.

(P) 10,078 (2-YEAR INCREMENTAL PROGRESS) / (M) 18,625 (2-YEAR INCREMENTAL MILESTONE) = **54%**

Progress Relative to Long-Term Goals (*acres*)



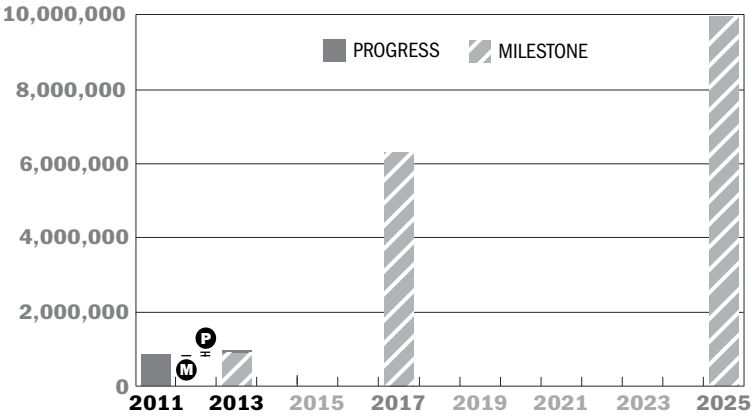
**Includes erosion and sediment control and extractive erosion and sediment control.

Stormwater Infiltration Practices+ *acres*

The 2013 goal has been exceeded, but progress remains less than 20 percent of the 2017 goal. The progress, in part, reflects a data collection effort by the Department of Environmental Protection to account for permitted practices.

(P) 10,984 (2-YEAR INCREMENTAL PROGRESS) / (M) 3,581 (2-YEAR INCREMENTAL MILESTONE) = **307%**

Progress Relative to Long-Term Goals* (*acres*)



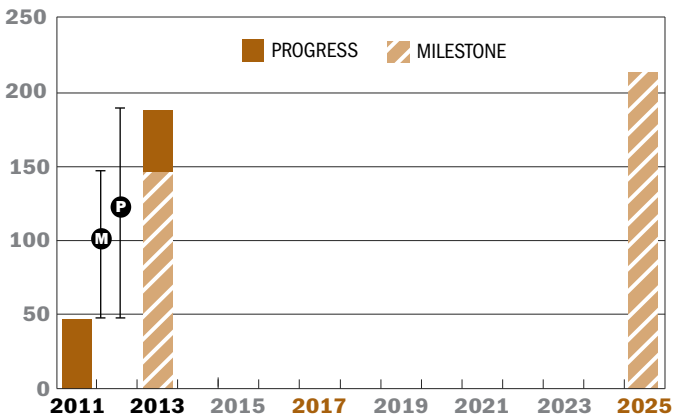
Wastewater Treatment Plants

# of permits issued meeting Blueprint requirements

Pennsylvania has made significant progress in increasing the number of permits issued, substantially exceeding its 2013 milestone goals.

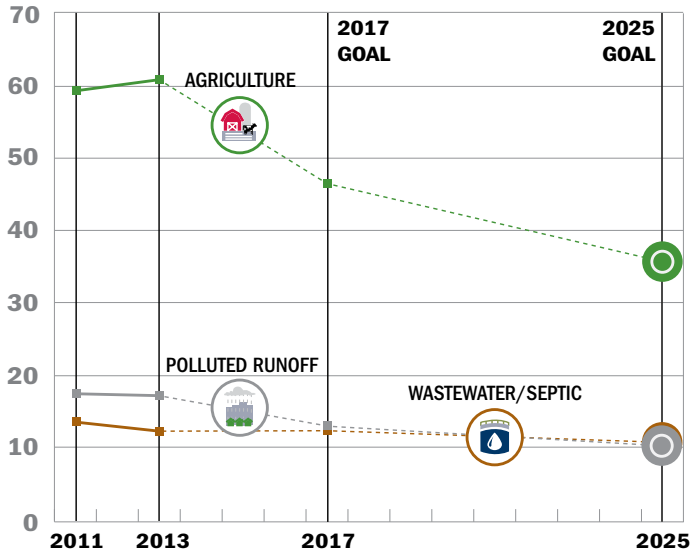
(P) 141 (2-YEAR INCREMENTAL PROGRESS) / (M) 99 (2-YEAR INCREMENTAL MILESTONE) = **142%**

Progress Relative to Long-Term Goals (*# of permits*)



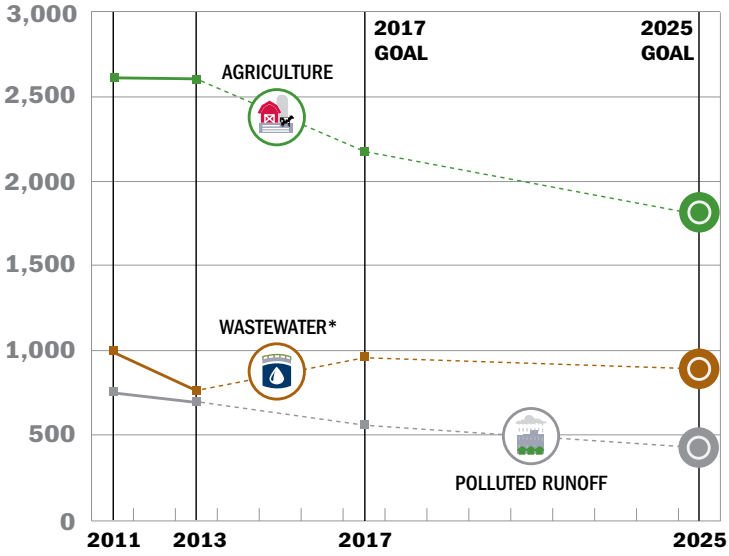
+Includes infiltration practices, filtering practices, bioretention, and bioswales.

Modeled Nitrogen Loads and Long Term Goals in Pennsylvania by Sector (millions of pounds)



Source: Chesapeake Bay Program Watershed Model 5.3.2

Modeled Phosphorus Loads and Long Term Goals in Pennsylvania by Sector (thousands of pounds)



*Pollution reduction is ahead of schedule for this sector.

Pollution Reduction in Pennsylvania at a Glance

Pennsylvania fell short in meeting its overall nitrogen pollution reduction target for 2013 and exceeded its phosphorus reduction target. In particular, estimated loads from the agricultural sector actually increased for nitrogen and only decreased slightly for phosphorus. While the wastewater sector is already meeting or exceeding 2017 nutrient reduction goals, Pennsylvania must accelerate efforts to reduce loads from agriculture and urban and suburban areas.

How this Report was Compiled

We selected a subset of implemented practices within three pollution source categories—agricultural runoff, urban/suburban sources, and wastewater treatment—based on their potential to provide substantial nitrogen, phosphorus, and sediment pollution reductions and offer important lessons for implementation moving forward. Progress (% achievement) was evaluated by looking at incremental progress between the base year, 2011, and 2013, compared to the 2013 milestone goal. Progress during this milestone period was also compared to the long-term (2017 and 2025) implementation benchmarks that the states and Washington, D.C., committed to in their Watershed Implementation Plans. Data were provided by the U.S. Environmental Protection Agency's Chesapeake Bay Program Office.

Success Story

Polluted runoff from urban and suburban areas impairs over 2,500 miles of streams in Pennsylvania and is one of the leading causes of pollution degrading local water quality and the Chesapeake Bay. Many urban and suburban municipalities within Pennsylvania have Clean Water Act permits for polluted runoff that is discharged into local waterways. Municipalities with these permits must prepare Chesapeake Bay Pollutant Reduction Plans (CBPRPs) to address how they will reduce the pollution being discharged into local streams and rivers in order to comply with the Chesapeake Clean Water Blueprint. The key, however, is funding and implementing those plans at a pace to meet 2025 goals.

York County has 43 municipalities with these permits, each required to develop a CBPRP. Recognizing an opportunity for collaboration to optimize cost-effectiveness resulting in maximum pollutant reduction, the York County Planning Commission, York County Conservation District, and several partners have worked with local municipalities (including several without permits) to develop a regional CBPRP that addresses York County watershed-implementation goals in a cooperative and equitable manner. The partners are considering a suite of practices for implementation under the regional CBPRP, including stream restoration, streambank forest buffers, bioswales, and stormwater pond retrofits, to achieve county pollution-reduction goals.

The work being done in York County serves as an example for dealing with polluted runoff from urban and suburban communities in a way that yields multiple benefits, at multiple scales with minimal cost. The York County effort is also a model that may be replicated in areas across the watershed.

CHESAPEAKE BAY FOUNDATION
Saving a National Treasure
6 Herndon Avenue | Annapolis, Maryland 21403
888/SAVEBAY | cbf.org

ChooseCleanWater COALITION
706 Giddings Avenue Suite 1-B | Annapolis, Maryland 21401
443/759-3400 | choosecleanwater.org