CHESAPEAKE BAY FOUNDATION
Saving a National Treasure

Pennsylvania Milestones

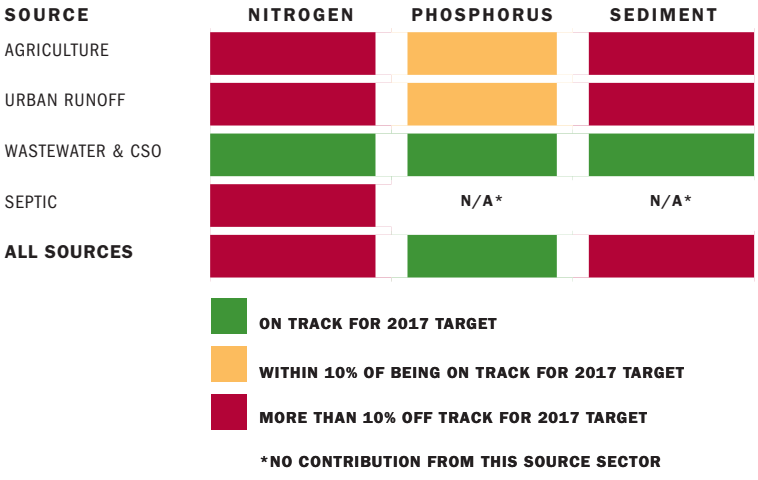
2014-15 INTERIM PROGRESS

Choose Clean Water COALITION

In 2010, the Environmental Protection Agency (EPA), using its authority under the Clean Water Act, established science-based limits for nitrogen, phosphorus, and sediment for the Chesapeake Bay watershed at levels needed to restore the Bay and its tidal rivers to health. To achieve these limits, the six Bay watershed states and the District of Columbia developed, and are implementing, state-specific clean-up plans, with the goal of having practices and programs in place to achieve 60 percent of the needed pollution reductions by 2017, and 100 percent by 2025. In addition, the Bay jurisdictions have adopted milestones that describe the practices and programs they commit to implement every two years on the path to achieve the pollution limits. These two-year milestones are critical components to restoration efforts because they provide the mechanism to hold government accountable for short-term progress toward long-term pollution-reduction goals. This year is the halfway point for the 2014-2015 milestones.

For this report, the Chesapeake Bay Foundation (CBF) and the Choose Clean Water Coalition (CCWC) have taken a closer look at some of the most important pollution-reduction practices to determine whether Pennsylvania's progress with regard to these practices is sufficient to allow the state to achieve its 2014-2015 milestone commitments and, more importantly, to achieve 60 percent implementation by 2017. Specifically, we have evaluated implementation progress for four practices: **forest buffers**, **conservation tillage**, **nutrient management**, and **urban infiltration practices**. Practices were deemed "**on track**", "**slightly off track**", or "**off track**" to meet 2017 goals.

EPA recently evaluated Pennsylvania's progress to date, their findings are summarized below. EPA's report indicates the state is mostly off track. Our analysis of some of the most important practices also suggests more will need to be done to meet 2017 goals.



Source: www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/RestorationUnderway.html
Chart based on data from the Chesapeake Bay Program's 2014 Reducing Pollution Indicator: www.chesapeakebay.net/indicators/indicator/reducing_nitrogen_pollution

Pennsylvania Relative Nutrient Load Reduction

The pie charts below show the relative importance of the various best management practices in terms of pollution reductions needed by 2025. That is, the bigger the slice of pie, the more important the practice is in terms of achieving Pennsylvania's pollution-reduction goals for nitrogen and phosphorus.

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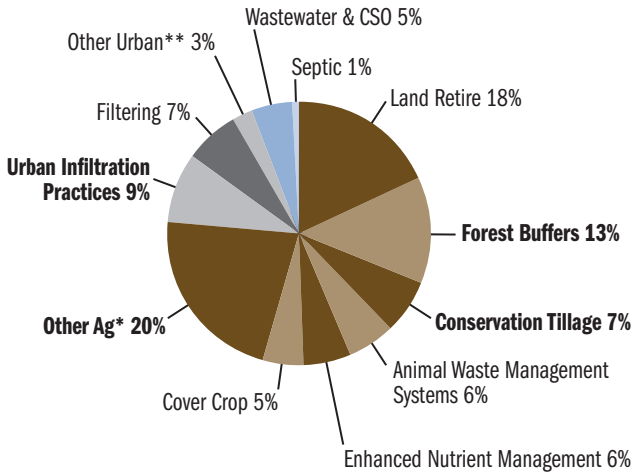

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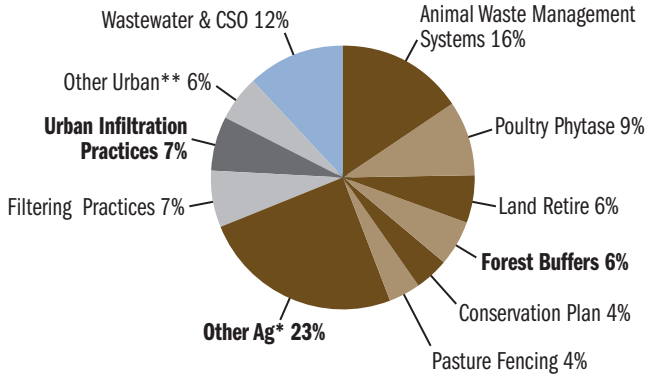


WASTEWATER TREATMENT PLANT URBAN AGRICULTURE

BOLD = EVALUATED PRACTICES

* *'Other Ag' includes practices such as grass buffers, barnyard runoff control practices, **nutrient management**, and pasture management practices that individually account for less than 5% of nutrient reductions.*

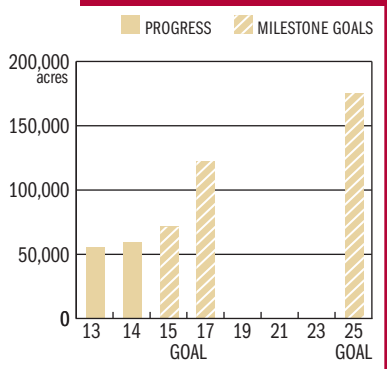
** *'Other Urban' includes practices such as urban nutrient management, impervious surface reduction, and urban tree planting.*

Source: www.chesapeakebay.net/.../sweeney_bmp-source_wiprelativeinfluence_041113.pdf

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

Forest Buffers

OFF TRACK

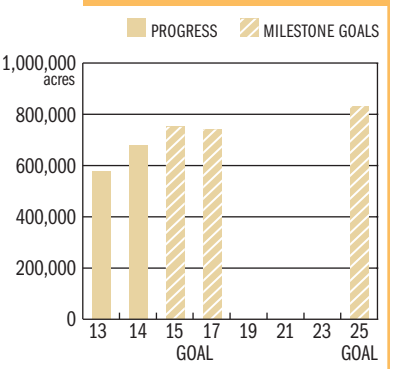


Forest buffers are critical to the health of our local waterways. They prevent pollution from entering our waters, provide wildlife habitat, increase a stream's capacity to cleanse itself, and stabilize streambanks to prevent further erosion and reduce flooding. Unfortunately, Pennsylvania is not on track to meet its 2015 milestone commitment and only one-quarter of the way toward its 2017 goals.

Action needed: Increased outreach and education about buffer benefits, with sufficient technical and financial assistance, are needed, along with innovative approaches, such as targeting resources to areas with greatest potential benefits, or prioritizing limited conservation funds toward projects where buffers will also be established.

Conservation Tillage

SLIGHTLY OFF TRACK



Conservation tillage keeps soils and nutrients in place and out of our waterways, and reduces the labor and fuel needed for crop cultivation. Additionally, conservation tillage results in healthier soils that perform better during droughts and sustain long-term productivity. Pennsylvania is making steady progress implementing this cost-effective practice and is on-track for its 2015 milestone though slightly off track for its 2017 goal.

Action needed: Increased outreach and technical and financial assistance can ensure increased adoption of this practice. Also, efforts are needed to track conservation tillage activities done without assistance from agencies that submit data to be credited in the Chesapeake Bay watershed model.

Nutrient Management

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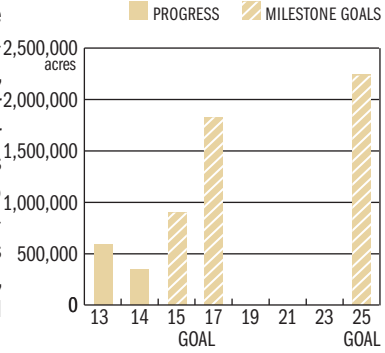

Nutrient Management Plans guide manure application so that the valuable nutrients are provided at the correct rate, time, and place for crop growth, rather than running off to streams and rivers or leaching to groundwater. Pennsylvania is off-track toward meeting both its 2015 and 2017 goals and this poor progress is troubling because these plans form the basis for many other practices, such as manure storage structures and pasture management.

Action needed: A dedicated source of funding and technical assistance to help farmers with plan development and implementation should lead to increases in this practice.

Urban Infiltration Practices

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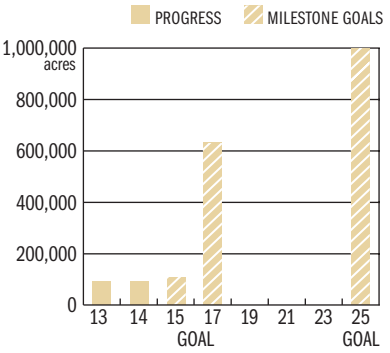

Infiltration practices in the urban and suburban environment capture and store rainfall and surface runoff. These practices reduce pollutants from entering our waterways, increase groundwater recharge, and decrease the volume of stormwater runoff. Pennsylvania is relying heavily on these practices to reduce nitrogen, phosphorus, and sediment from stormwater runoff, but is falling short. With a mere three percent of the 2015 goal met, it will be difficult to get back on track and meet the 2017 goal.

Action needed: Pennsylvania's Department of Environmental Protection should promote regional stormwater authorities to local governments as a sustainable option to implement the Chesapeake Clean Water Blueprint.

Note: Pennsylvania's 2017 goals are calculated as 2009 implementation plus 60 percent of the difference between 2009 implementation and the 2025 implementation goal.

Conclusions

Pennsylvania has approximately 19,000 stream miles impaired by various forms of pollution. Nearly half of Pennsylvania drains to the Chesapeake Bay, which means our local pollution is carried downstream. The Chesapeake Clean Water Blueprint may be our last and best hope to restore the Bay and our local streams, by providing strategies to communities, businesses, and farmers for the adoption of practices that will reduce nitrogen, phosphorus, and sediment pollution.

Although implementing the Blueprint is a challenge, the benefits to our region's economy, society, and environment far surpass the costs. For example, streamside buffers reduce runoff and flooding. Cover crops and conservation tillage reduce nutrient and sediment runoff, while improving crop production. Healthy streams provide opportunities for fishing, and other recreational activities. According to CBF's 2014 Economic Report, the value of these natural benefits in Pennsylvania is estimated to be over $6 billion greater with Blueprint implementation.

Pennsylvania has had great success in implementing agricultural pollution-reduction practices in the last 30 years. However, in recent years, this pace has waned. Pennsylvania has fallen significantly behind in meeting its milestones for agriculture and stormwater practices. Meanwhile, the wastewater treatment sector has exceeded their obligations. There is still time for Pennsylvania to get back on track to meet 2025 targets.

The Commonwealth should ensure all farmers are meeting requirements to keep nutrients and top soil on the land instead of polluting our rivers and streams, and improve tracking, reporting, and verification of pollution-reduction practices. Pennsylvania should also increase financial and technical assistance for all core practices, including to the Resource Enhancement and Protection Program to support various conservation efforts.

The Clean Water Blueprint will only work if all sources of pollution do their fair share. The Blueprint includes measures for accountability, deadlines for achieving pollution reductions, as well as consequences, such as requiring further costly reductions from wastewater treatment plans, for failing to meet them.

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