Maryland Milestones

2012/2013 FINAL ASSESSMENT

Chesapeake Bay Foundation
Saving a National Treasure

Choose Clean Water Coalition

AT A GLANCE

Agriculture

- ✔ Animal Waste Management Systems
- ✔ Forest Buffers
- ✔ Grass Buffers
- ✘ Tree Planting

Urban/Suburban

- ✔ Retrofit Stormwater Management
- Urban Forest Buffers (No Goal Set)

Wastewater/Septic

- ✔ Septic Practices

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

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

Maryland's Plan for Clean Water: Is the State 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 Maryland 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

Maryland has exceeded 2013 Milestone goals for five of the seven practices examined in this report. While this is welcome news, our organizations wonder if Maryland should be setting more ambitious goals for some of these practices like forested buffers and animal waste management systems. Increased adoption of these highly efficient practices could be an effective strategy to achieve needed pollution reductions, especially considering the lack of progress on certain less-efficient practices.

One practice, urban forest buffers, did not have a milestone goal but was included because it has multiple environmental benefits and has significant long-term goals. Implementation so far is only 17 percent of the 2017 goal—which leaves a long way to go in just four years. Across the state and across source sectors, planting trees is being neglected as a valuable practice. Animal waste management nutrient reductions are achieved through nutrient-management plans on each farm. While the two-year goal was exceeded, implementation must increase by 55 percent to reach the 2017 goal. Tree planting on agricultural lands needs to increase and be more accurately reported. Maryland has exceeded the 2025 goal for a suite of polluted runoff retrofits identified in the Watershed Implementation Plan, but significant polluted runoff retrofit requirements facing Municipal Separate Storm Sewer Systems (MS4) jurisdictions in Maryland must also be addressed in future milestone commitments.

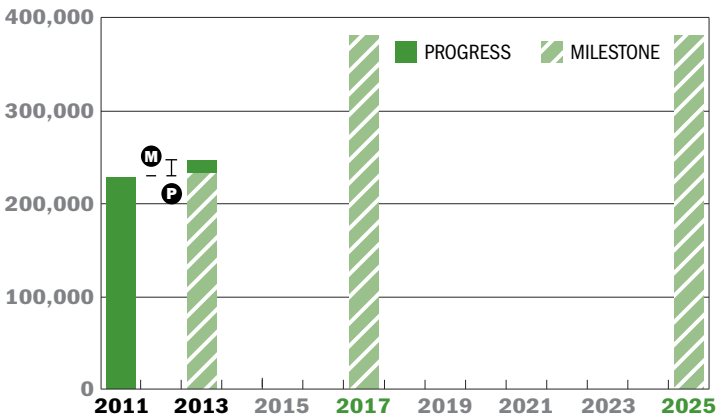
Assessment of Maryland's Progress on Selected Pollution-Reduction Practices for 2013

Animal Waste Management Systems *animal units*

As animal waste management is the most efficient agricultural method for reducing nitrogen, it is critical that the state set and meet bold milestones for this practice. The two-year milestone was exceeded. Accelerated progress on animal waste management will be required to meet the 2017 goal.

$$\frac{\text{P } 18{,}948 \text{ (2-YEAR INCREMENTAL PROGRESS)}}{\text{M } 4{,}257 \text{ (2-YEAR INCREMENTAL MILESTONE)}} = 445\%$$

Progress Relative to Long-Term Goals (*animal units*)

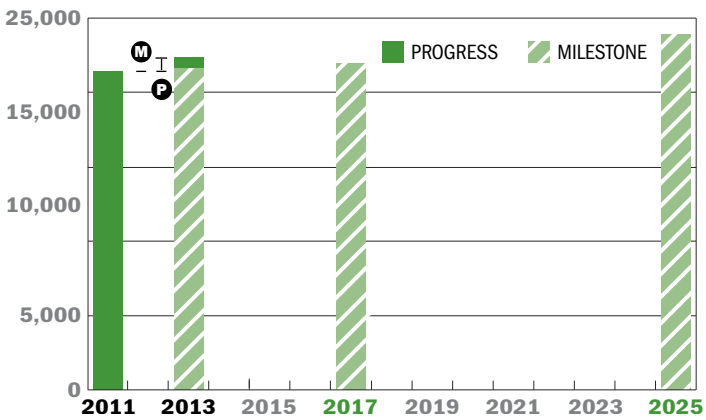


Forest Buffers *acres*

Maryland's agriculture community has already met the 2017 goal for this practice and is well on its way to meeting the 2025 goal. As the second-most-efficient practice behind animal waste management, the state should consider increasing the targets for this practice to achieve greater pollution reductions.

$$\frac{\text{P } 964 \text{ (2-YEAR INCREMENTAL PROGRESS)}}{\text{M } 220 \text{ (2-YEAR INCREMENTAL MILESTONE)}} = 438\%$$

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

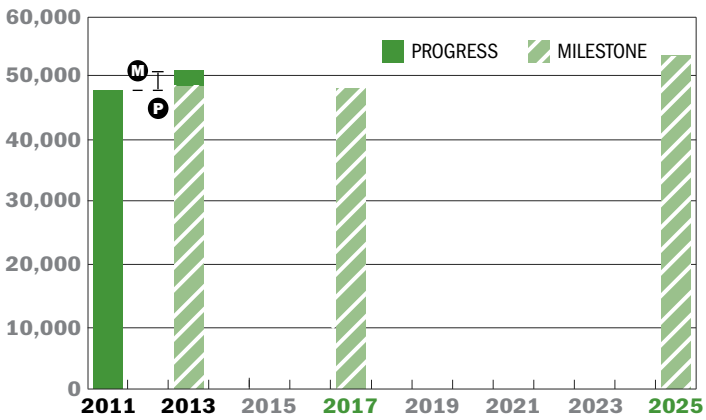


Grass Buffers *acres*

Grass buffers along streams are only slightly less efficient than forested buffers for removing nutrients, but they lack the other important habitat features that forested buffers provide. Progress on this practice is similar to that of forested buffers as it has exceeded the 2017 goal.

$$\frac{\text{P } 3{,}308 \text{ (2-YEAR INCREMENTAL PROGRESS)}}{\text{M } 538 \text{ (2-YEAR INCREMENTAL MILESTONE)}} = 615\%$$

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

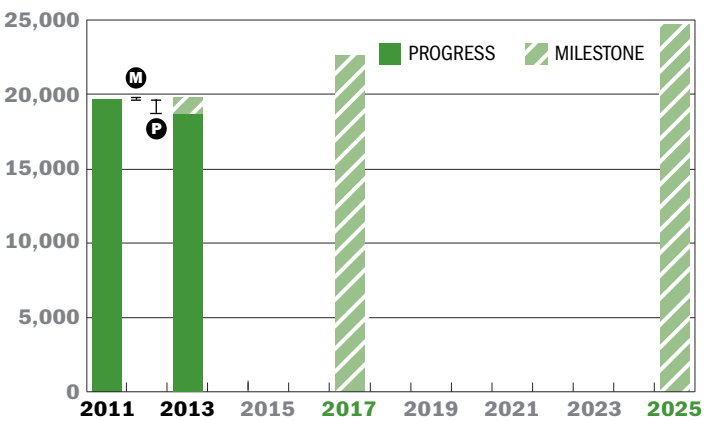


Tree Planting *acres*

Outside the areas near streams, additional tree planting calms erosive winds, sequesters carbon from the atmosphere, and improves soil organic matter. Progress on this practice has been lost as there are 1,000 fewer acres in 2013 than there were in 2011.* The state needs to plant 4,000 additional acres to meet the 2017 target for this BMP.

$$\frac{\text{P } -1{,}065 \text{ (2-YEAR INCREMENTAL PROGRESS)}}{\text{M } 117 \text{ (2-YEAR INCREMENTAL MILESTONE)}} = -910\%$$

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



*According to the state, a data error may account for this decrease.

Agriculture | Urban/Suburban Polluted Runoff | Wastewater/Septic

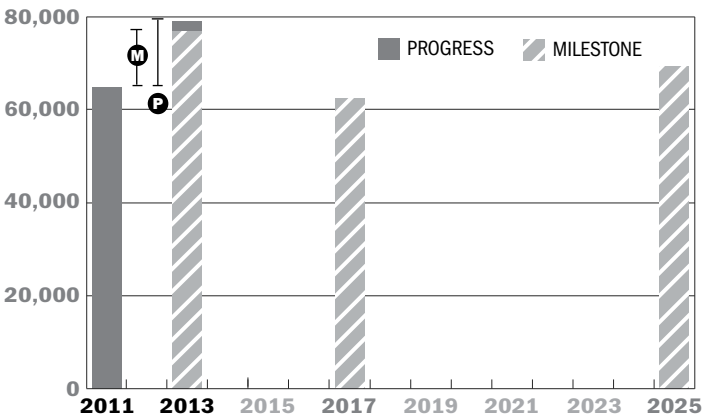
(P) 2-YEAR INCREMENTAL PROGRESS
(M) 2-YEAR INCREMENTAL MILESTONE

Retrofit Stormwater (Polluted Runoff) Management *acres*

New polluted runoff permits issued for Maryland's largest jurisdictions will accelerate progress for this practice. But these permits do not account for growth in impervious surfaces. This practice is a "catch-all" for several urban practices. The long-term goals reflect Maryland's intent to change how they are reporting.

(P) 14,041 (2-YEAR INCREMENTAL PROGRESS) / (M) 12,000 (2-YEAR INCREMENTAL MILESTONE) = **117%**

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

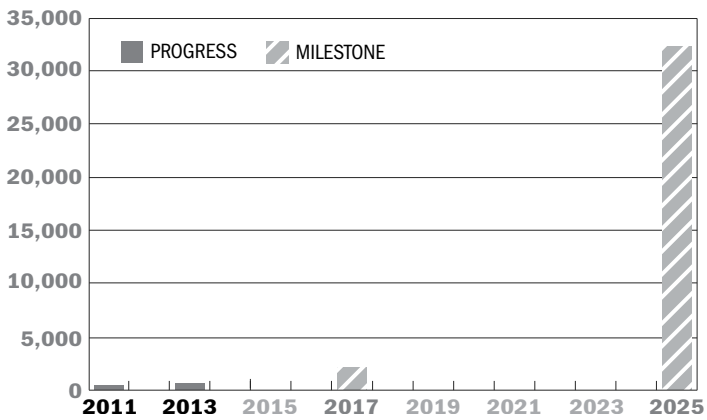


Urban Forest Buffers *acres*

Maryland did not set a 2013 goal for this practice and literally has miles to go. The state needs to plant 1,474 more acres of stream-side forest in the next three years. At 100 feet wide, that's more than 121 miles to meet the 2017 goal, and 2,605 miles to meet the 2025 goal. It is time for Maryland to commit to progress on urban forests.

(NO 2013 GOAL SET)

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

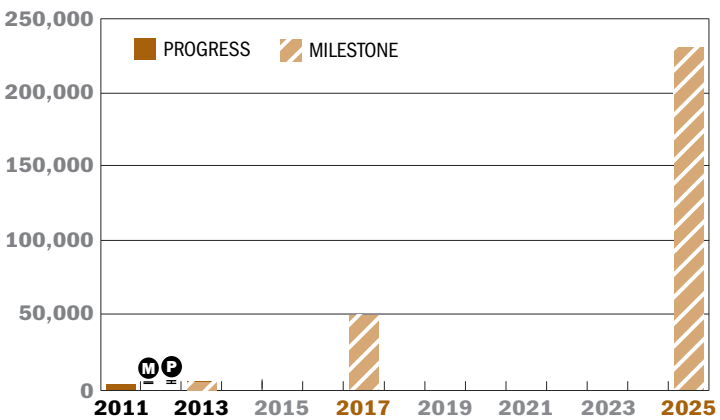


Septic Practices* *systems*

Getting a late start, Maryland has connected over 1,300 systems and converted about 5,100 systems to Best Available Technology (BAT), meeting nine percent of the 2017 goal. BAT systems require routine maintenance to remove pollutants, so homeowners need to do their part and the state needs to hold them accountable.

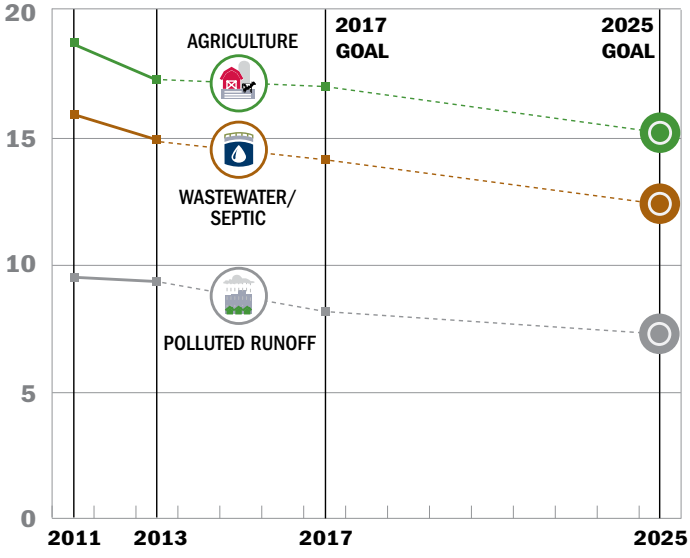
(P) 1,854 (2-YEAR INCREMENTAL PROGRESS) / (M) 1,200 (2-YEAR INCREMENTAL MILESTONE) = **155%**

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



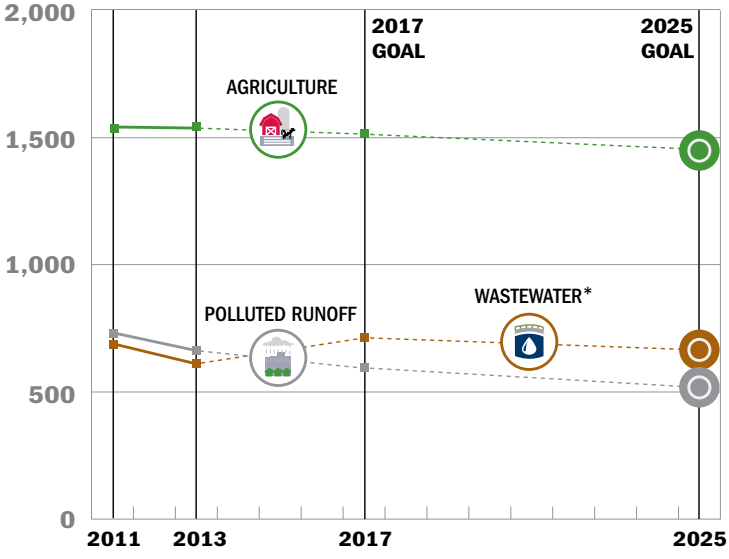
*Septic Practices include septic connections and septic denitrification.

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



Source: Chesapeake Bay Program Watershed Model 5.3.2

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



*Pollution reduction is ahead of schedule for this sector.

Pollution Reduction in Maryland at a Glance

We are seeing progress across most source sectors in Maryland for nitrogen and phosphorus. Agriculture has made the sharpest improvement in nitrogen load reductions, with a larger suite of available practices that are more readily implemented. Capital investments in wastewater treatment continue to show steady progress, while Maryland has only just begun the significant investments needed to reduce polluted runoff.

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. For each practice, 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

In agriculture, like many things, change comes slowly. Progressive farmers paid heed to the science of the Chesapeake Bay and the effects of stream pollution. These early adopters fenced their horses and cows out of streams and provided alternative water sources away from the stream, or limited access to only a small area for drinking. These practices allow the waters to clear and native trees to grow, lessens the threat of downstream bacteria pollution to swimming areas, and reduces farmers' veterinary expenses.

Robust monitoring of these projects throughout the watershed provided crucial data to the Maryland Department of Agriculture and state elected leaders. Their response was to allocate cost share dollars to make these practices more widespread. Many more farmers adopted these practices and streams got cleaner. Beginning January first of this year, Maryland made excluding livestock from streams mandatory.

We feel this is a healthy progression of clean-water policy. Phasing in a regulation while phasing out a cost-share program allows the science, economics, and comfort level with a new practice to develop without causing undo financial hardship to the farmer, or creating a never-ending entitlement for which the public must pay.

CHESAPEAKE BAY FOUNDATION
Saving a National Treasure

6 Herndon Avenue | Annapolis, Maryland 21403
888/SAVEBAY | cbf.org

ChooseCleanWater COALITION

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