



**CHESAPEAKE BAY
FOUNDATION**
Saving a National Treasure

West Virginia 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 West Virginia'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: **animal waste management systems, forest buffers, nutrient management, and poultry phytase**. Practices were deemed **"on track"**, **"slightly off track"**, or **"off track"** to meet 2017 goals.

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

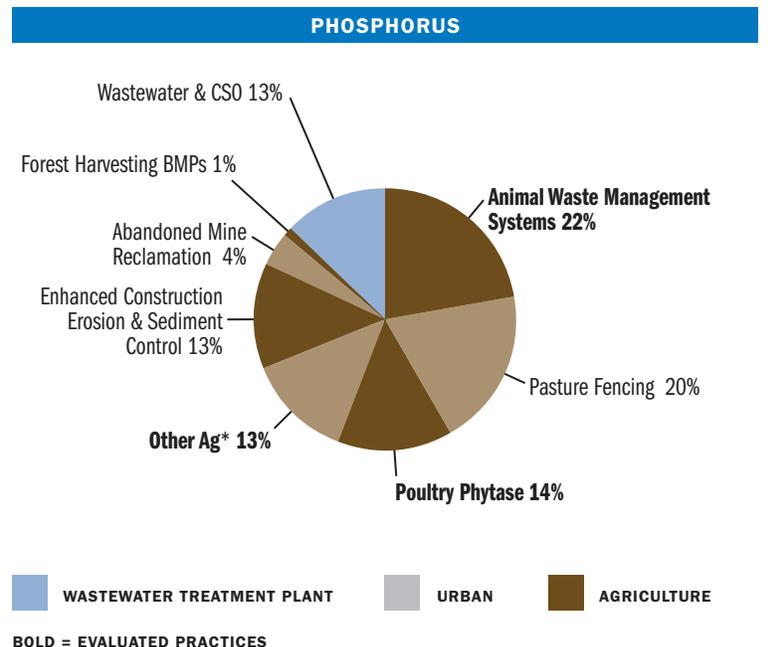
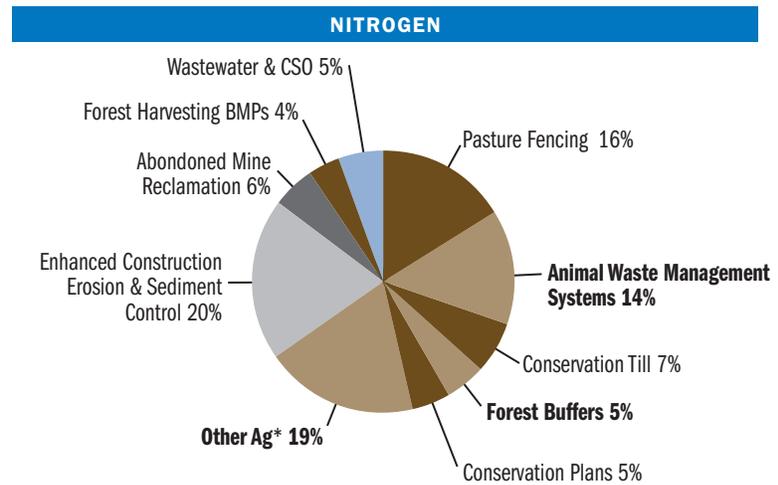
SOURCE	NITROGEN	PHOSPHORUS	SEDIMENT
AGRICULTURE	ON TRACK FOR 2017 TARGET	ON TRACK FOR 2017 TARGET	ON TRACK FOR 2017 TARGET
URBAN RUNOFF	WITHIN 10% OF BEING ON TRACK FOR 2017 TARGET	ON TRACK FOR 2017 TARGET	ON TRACK FOR 2017 TARGET
WASTEWATER & CSO	ON TRACK FOR 2017 TARGET	ON TRACK FOR 2017 TARGET	ON TRACK FOR 2017 TARGET
SEPTIC	ON TRACK FOR 2017 TARGET	N/A*	N/A*
ALL SOURCES	ON TRACK FOR 2017 TARGET	ON TRACK FOR 2017 TARGET	ON TRACK FOR 2017 TARGET

■ ON TRACK FOR 2017 TARGET
■ WITHIN 10% OF BEING ON TRACK FOR 2017 TARGET
■ MORE THAN 10% OFF TRACK FOR 2017 TARGET
 *NO CONTRIBUTION FROM THIS SOURCE SECTOR

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

West Virginia 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 West Virginia's pollution-reduction goals for nitrogen and phosphorus.

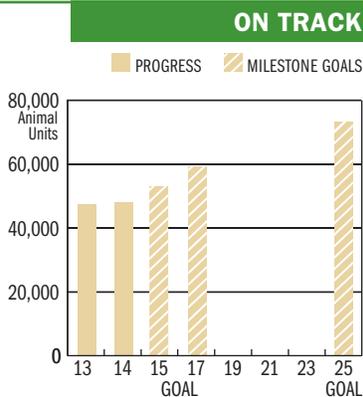


* 'Other Ag' includes practices such as **nutrient management**, stream restoration, land retirement, and pasture management practices that individually account for less than 5% of nutrient reductions.
 Source: www.chesapeakebay.net/.../sweeney_bmp-source_wiprelativeinfluence_041113.pdf

Assessment of West Virginia's Progress on Selected Pollution-Reduction Practices

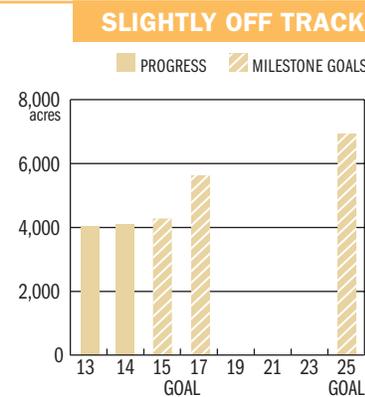
Animal Waste Management Systems

Manure management is crucial to preventing water quality degradation. Farm practices needed include a means of collecting, scraping, or washing animal manure wastes from confinement areas into appropriate waste storage structures. This allows the farmer to spread manure or separated nutrients onto crops at agronomic rates informed by their required nutrient management plans. West Virginia is not on track to achieve their 2015 milestone for this practice, but since 2009 they have made good progress, such that they are on track for their 2017 goal. Implementation of the West Virginia Confined Animal Feeding Operations Program has encouraged better manure storage practices that have helped accelerate implementation.



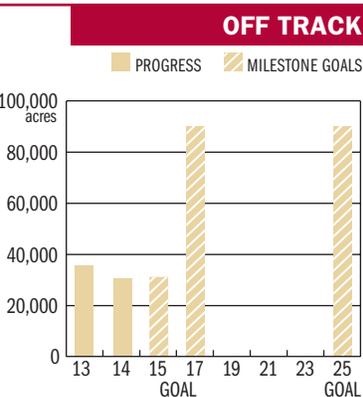
Forest Buffers

Trees, shrubs, and other plants that grow along rivers and streams prevent pollution from entering waterways, stabilize stream banks, provide food and habitat to wildlife, and keep streams cool during hot weather. Despite earlier successes, West Virginia is not on track to achieve their 2015 milestone goal and slightly off-track for their 2017 goal. Implementation efforts are hampered by insufficient resources for outreach and technical assistance. More federal and state resources are needed to support this important practice.



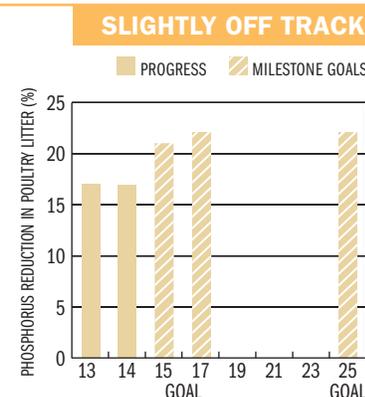
Nutrient Management

Agricultural fertilizers that drain from farm fields are a significant pollutant impacting local waters and the Chesapeake Bay. West Virginia has made progress in the methods used to track nutrient management best management practices, but lags behind in implementing enough nutrient management plans to meet its 2017 goal for this important practice. Crop nutrient management programs are voluntary in West Virginia, and so implementation of this practice has lagged behind other states with a regulatory framework for nutrient management.



Poultry Phytase

Phytase is an enzyme added to poultry feed that improves birds' ability to take up phosphorus from the feed, so that less needs to be added to meet their nutritional requirements. The end result: less phosphorus in the manure. Currently, the milestone information suggests that the state is slightly off track on this practice. More recent data, however, indicates that average phosphorus concentrations in broiler manure has decreased by roughly 24 percent between 2006 and 2012, putting the state at, or close to their 2017 and 2025 targets. The state should continue to work with the poultry industry to ensure that the benefits of the use of phytase and other feed adjustments are maintained and maximized.



Conclusions

For West Virginia to continue to make progress toward meeting pollution-reduction goals, they need more funding and a requirement for nutrient management plans. Voluntary implementation in the agriculture sector is heavily reliant on landowner willingness in addition to funding for outreach, technical assistance, and implementation. Field staff of the state programs are forced to respond to opportunities on a first-come, first-served basis, rather than taking a more strategic watershed-wide planning and coordination approach. This is a systemic problem that can be addressed through additional state and federal funds. One promising opportunity to accelerate forested buffers is implementing the recommendations of the State Buffer Task Force and U.S. Department of Agriculture.

The acceleration of animal waste management systems in recent years was due, in part, to regulations applicable to concentrated animal feeding operations. Requiring nutrient management plans, as well as the funds needed to for technical assistance and implementation, would also accelerate this important practice.

West Virginia should look to models in other states with required crop-nutrient management regimens while at the same time working to adequately fund other important practices.

Lastly, the use of phytase has greatly reduced phosphorus concentrations in poultry manure. The state should continue to work with the industry to maximize the benefits of this and other feed adjustments.

