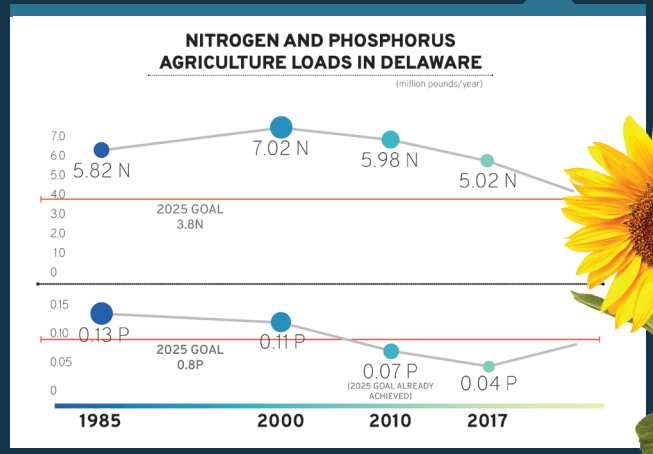


You're Making a Difference!

DE farmers have been implementing BMPs for over 30 years—and pollution prevention efforts are paying off. By 2017, DE had already met some (75% N) or all (100% P) of its 2025 reduction goals (see graph). Even though farmers doubled production since 1985, they have effectively controlled the N and P levels during this 30-year period[1]. This shows that DE farmers' accelerated rate of BMP installation is keeping up with production.

1 Keisman, J.L.D., Devereux, O.H., LaMotte, A.E., Sekellick, A.J., and Blomquist, J.D., 2018, Manure and fertilizer inputs to land in the Chesapeake Bay watershed, 1950–2012: U.S. Geological Survey Scientific Investigations Report 2018–5022, 37 p., https://doi.org/10.3133/sir20185022.

2025 Goal

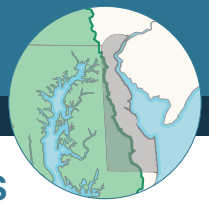
Cover Crops

DE also encourages farmers to install more cover crops, which can trap leftover nutrients during the off-season while providing other benefits (see below). To help enroll and establish cover crops (small grain or mixed cover) on every eligible acre, DE is launching a new cost-share program in combination with cover crop programs sponsored by the Natural Resources Conservation Service. Cost share reduces the expense of essential inputs such as seed, fuel, time and mechanical equipment. Farmers can apply for as much as $50/acre to grow mixed stands of soil-conditioning plants and up to $30/acre for grains that will perform a similar function as a commodity harvested in time to plant soybeans.

Benefits of Cover Crops

- Protect soil from water runoff
- Protect soil from erosion by harsh winter winds and rains
- Reduce or suppress weed growth
- Manage certain insect pests and plant pathogens
- Decomposing plants add organic matter to soil
- Organic matter improves soil structure
- Reduce soil crusting and soil compaction
- Provide ideal conditions/habitats/food for earthworms and other beneficial soil organisms
- Roots increase soil aeration and water infiltration
- Return mineral and nutrients to the soil (nutrient cycling)
- Legumes add nitrogen to the soil
- Reduce nitrogen leaching

DELAWARE'S



Agricultural Progress in Meeting Chesapeake Bay Nutrient Reduction Goals

Who Should I Contact if I Have Questions?

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What are the Chesapeake Bay Nutrient Reduction Goals?

Delaware (DE) is committed to protecting and improving the Chesapeake Bay and tributary waters and is working to meet the Chesapeake Bay Program's restoration goals. In 2010, the U.S. Environmental Protection Agency established the Chesapeake Bay Total Maximum Daily Load (TMDL), a comprehensive cleanup plan to restore the health of the Bay and its local creeks and rivers. The TMDL set watershedwide pollution reduction goals of 25% nitrogen (N), 24% phosphorus (P) and 20% sediment by 2025.

Watershed Implementation Plans (WIPs) detail how and when the jurisdictions (six Bay states and the District of Columbia) draining to the Chesapeake Bay will meet their pollution reduction goals. Phase I and II WIPs (developed in 2010 and 2012, respectively) described actions that the states needed to take by 2017 and will need to take by 2025 to achieve the goals of the Bay TMDL. Phase III WIPs (to be completed in 2019) will provide information on actions states intend to implement by 2025 to meet the Bay TMDL restoration goals.

How Will Delaware's Phase III WIP Affect Me?

Phase III WIPs will specify states' conservation actions needed to achieve the 2025 pollution reduction goals. Example commitments include providing technical assistance for conservation plans, offering incentives for relocating poultry litter, providing cost share for nutrient management planning, verifying voluntary measures, and pursuing policy actions. Phase III WIPs will also detail best management practices (BMPs) that not only improve water quality but also provide other benefits such as improving wildlife habitats, conserving land and encouraging stewardship.

DE's Phase III WIP will encourage farmers to focus on cover crops and nutrient management in addition to 30 other practices already identified in the Phase II WIP. DE's Phase II WIP identified 40 BMPs that can reduce the movement of N and P. Goals for planting riparian forest buffers were reduced, but improved estimates of effectiveness of BMPs surrounding the Soil Health Initiative have compensated for that loss. The Phase III WIP will also include information on cost-share incentives that can be used to encourage these practices.

What Can I Do to Help?

Submit Your Annual Reports and Increase Cover Crops

To help meet the TMDL goals, DE has a new protocol for auditing nutrient management practices and is planning a new initiative to increase cover crops. Delaware's Department of Agriculture (DDA) Nutrient Management Program inspection protocol is the most robust verification system in the Bay watershed. All DE farms have nutrient management plans that require farmers to file annual reports. In the reports, farmers note their acres of nutrient management activities. Farmers also list nutrient/manure transfer details. After receiving the reports, DE inspects 18% of farms reporting nutrient management to calculate a representative compliance rate. Submitting your annual report to DE is vital!

Please Report Your BMPs

DE farmers are successfully using many BMPs in addition to nutrient management and cover crops. Please report your voluntary (not cost-shared) practices to your nutrient management consultant so DDA can record that the practice exists and, during your next inspection, verify it is implemented correctly. Your report will help DE measure success, adjust priorities, and ensure that BMPs are protecting agricultural profitability and local water quality.

Amy Shober and Jennifer Volk of UD Extension work with nutrient management issues impacting DE

Sussex Conservation District (SCD) Cover Crop Air Seeder Program

SCD uses an air seeder to help farmers in the early establishment of cover crops. While a farmer's cash crop is still in the field, the air seeder drops seed below the canopy, allowing for better seed-to-soil contact and even seed distribution.

When the cash crop is harvested, the cover crop is already established and provides water quality and soil health benefits. SCD averaged about 5,000 acres of early planted cover crops in Sussex County for the past three years.