

ROLE OF AGRICULTURE IN THE PHASE III WIPS

Mukhtar Ibrahim and Karl Berger, COG staff

WRTC Meeting
Nov. 6, 2020



Metropolitan Washington
Council of Governments

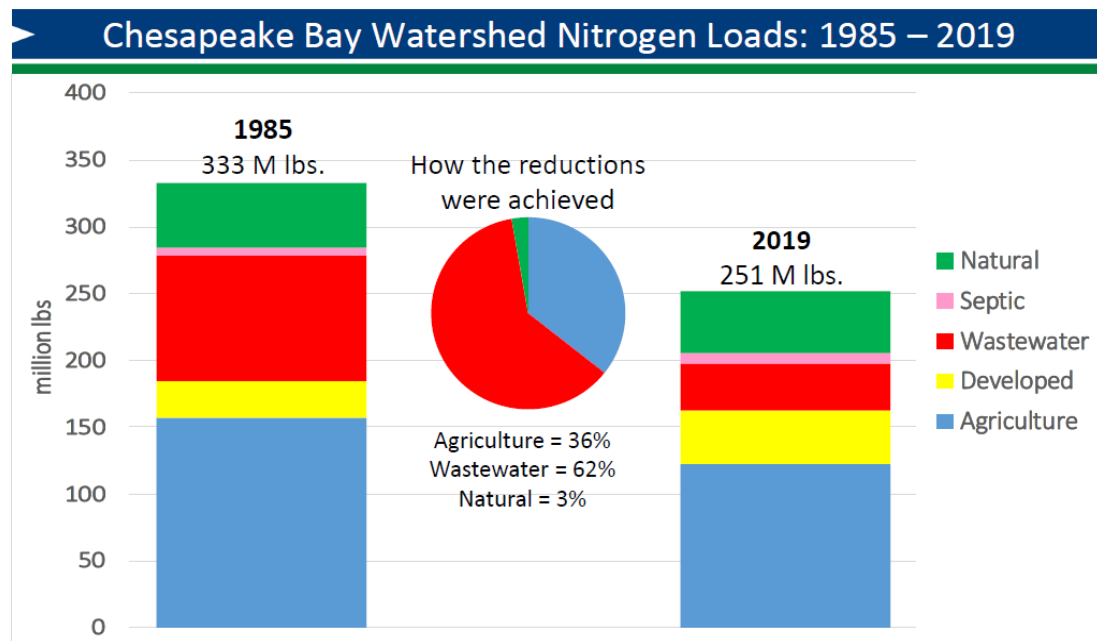
Notes on Slides

- Slides 3 – 5 developed by Bay Program staff
- Slides 6 – 12 developed by COG staff using CAST 2019 data*

* These numbers vary slightly from the official WIP 3 numbers, which were developed using an earlier version of CAST

The Nitrogen Challenge

- Achieving 2025 N target is biggest challenge to meet the TMDL
- 1985 – 2019 all efforts combined have achieved about **61 percent** of the total TN reductions needed
- That leaves **39 percent** of total reductions (about 52 million pounds/year) to be achieved in next 6 years

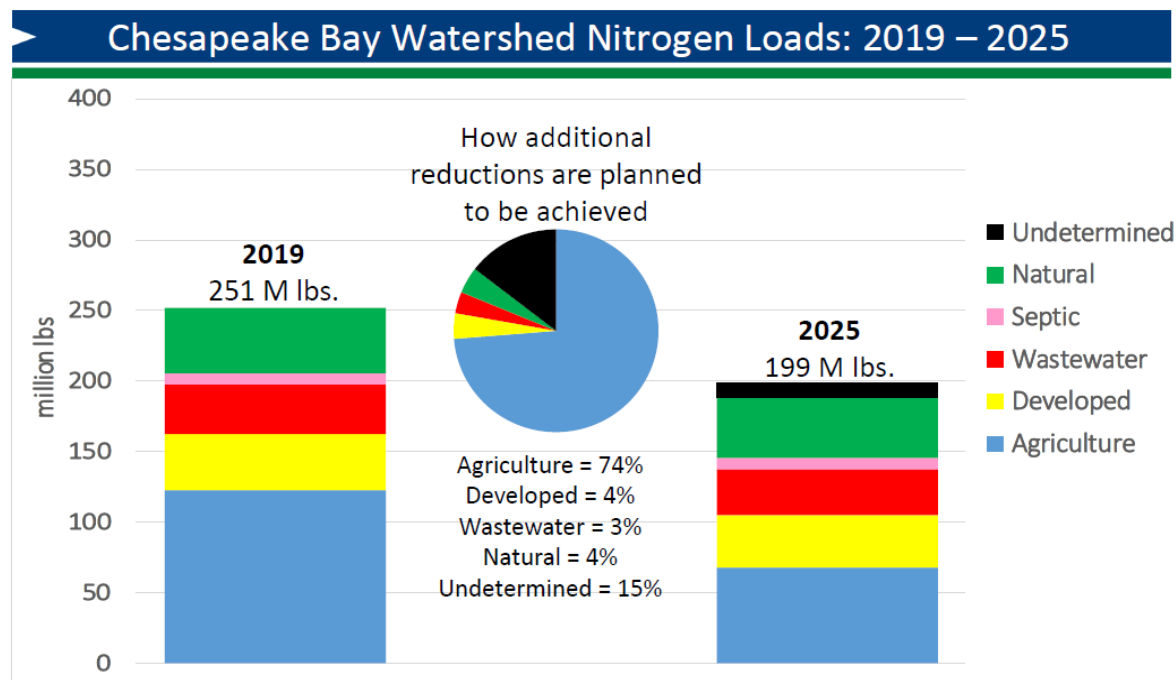


Graphics downloaded from Jeff Sweeney presentation to Chesapeake Bay Commission:
https://www.chesbay.us/library/public/documents/Meetings/September-2020/1-Jeff-Sweeney-Ag_Takes_Center_Stage.pdf

The Nitrogen Challenge

Ag sector reductions key to meeting the TN target

- Few Wastewater sector reductions remain to be made
- Septic and Developed sector reductions are much smaller and harder to achieve
- Natural sector reductions (stream restoration and shoreline practices) are far smaller than ag ones

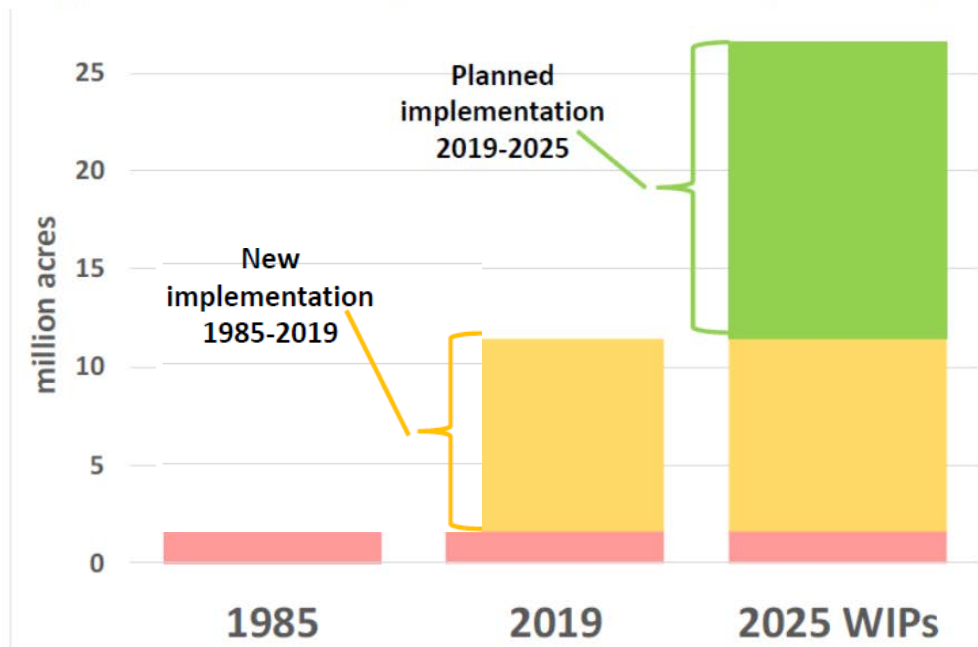


Graphics downloaded from Jeff Sweeney presentation to Chesapeake Bay Commission:
https://www.chesbay.us/library/public/documents/Meetings/September-2020/1-Jeff-Sweeney-Ag_Takes_Center_Stage.pdf

The Nitrogen Challenge

Meeting the TN target will require unprecedented rate of ag BMP implementation

Acres of Agricultural BMP Implementation – Chesapeake Bay Watershed



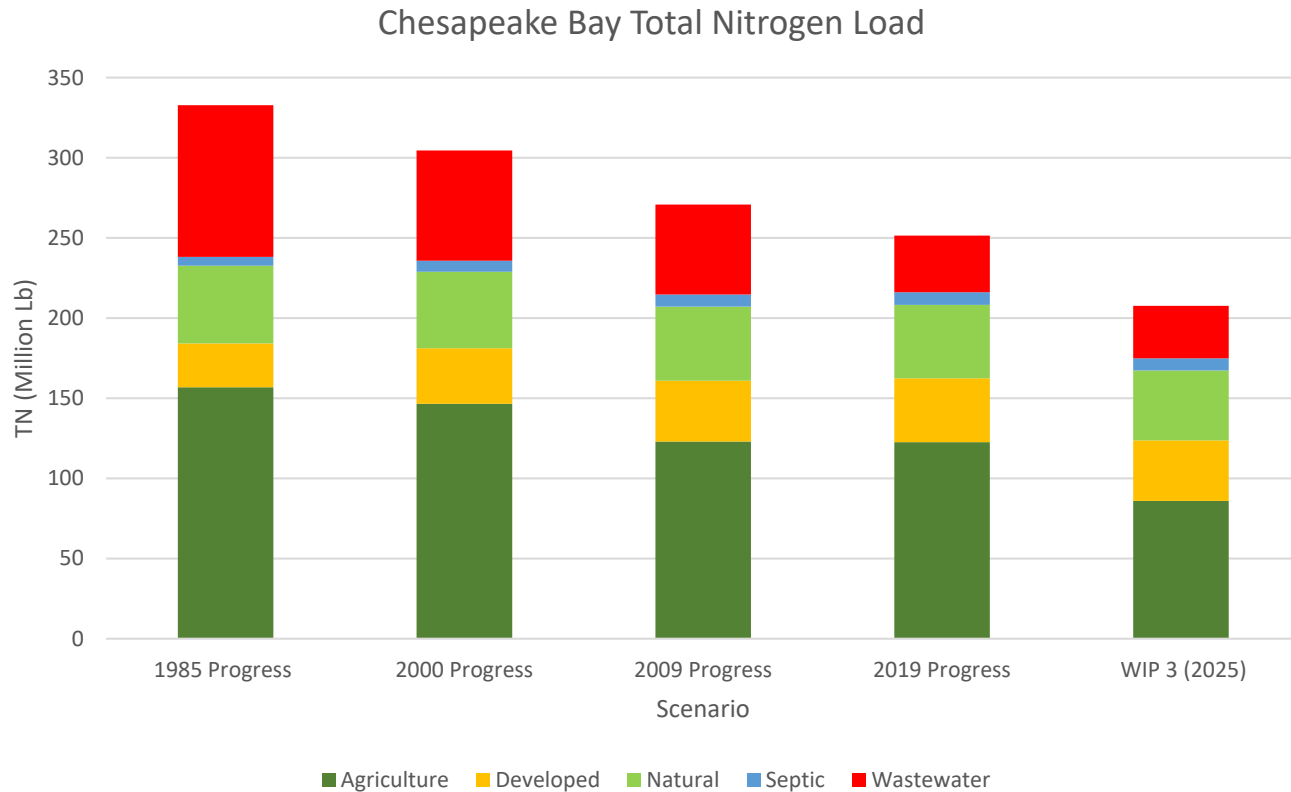
14

Graphics downloaded from Jeff Sweeney presentation to Chesapeake Bay Commission:

https://www.chesbay.us/library/public/documents/Meetings/September-2020/1-Jeff-Sweeney-Ag_Takes_Center_Stage.pdf

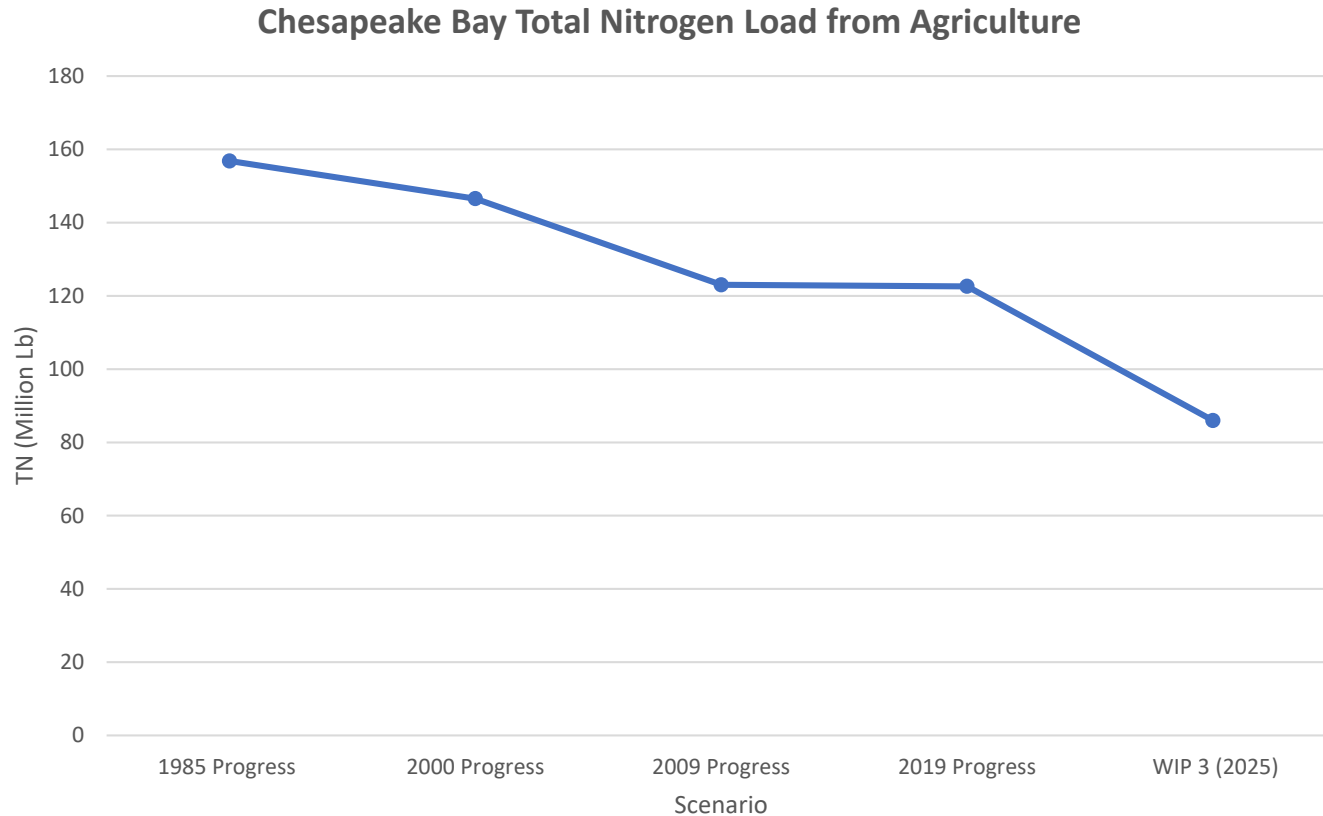


Bay Watershed: All TN Loads over Time



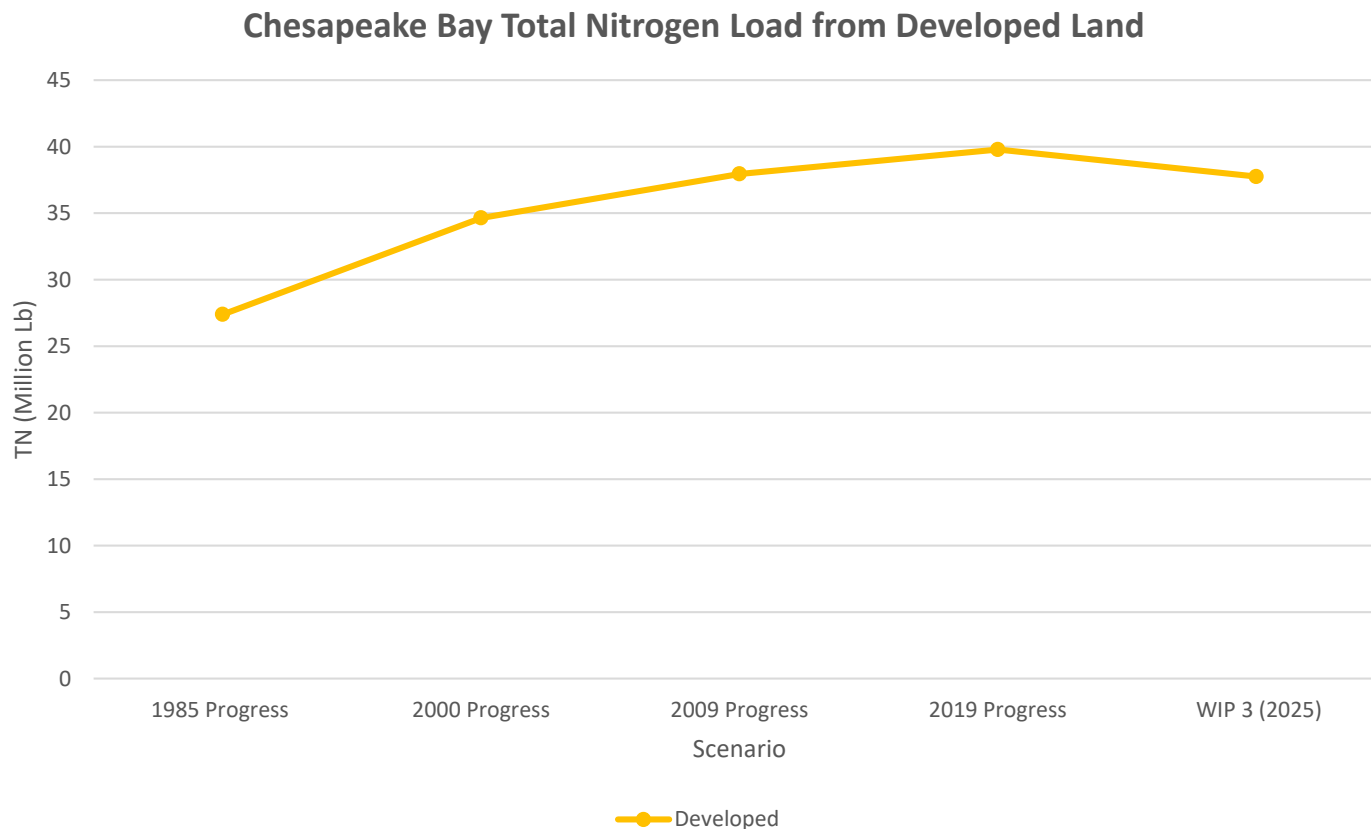
All Loads computed from CAST 2019

Bay Watershed: TN Ag Loads over Time



All Loads computed from CAST 2019

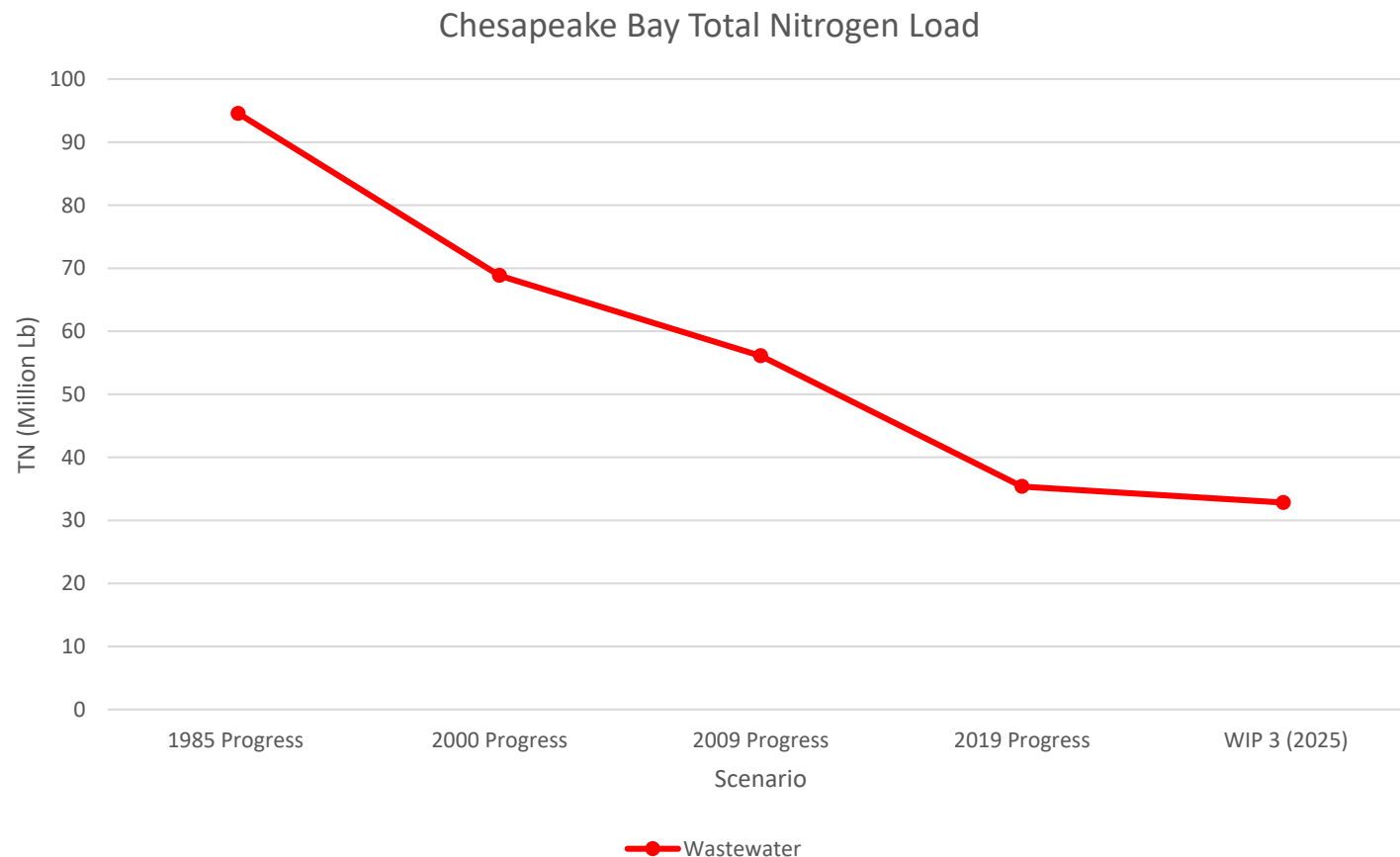
Bay Watershed: TN Urban Loads over Time



All Loads computed from CAST 2019



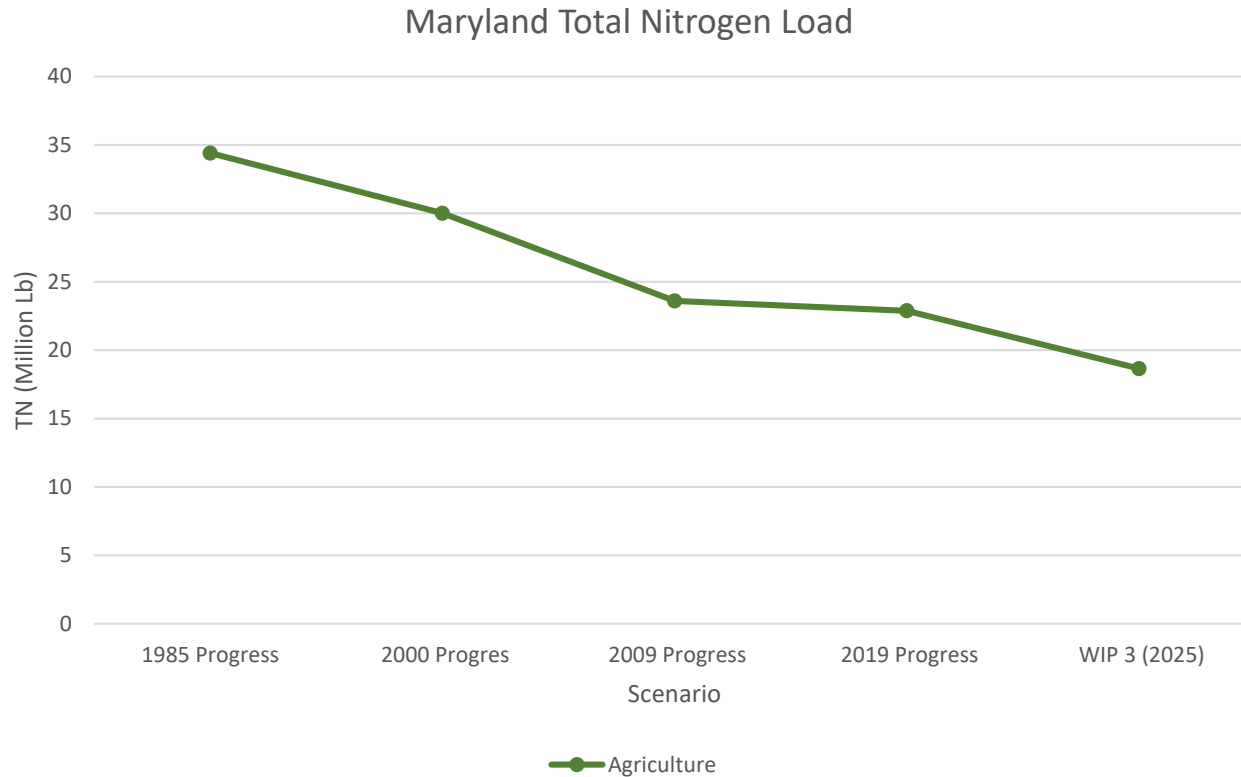
Bay Watershed: TN Wastewater Loads



All Loads computed from CAST 2019

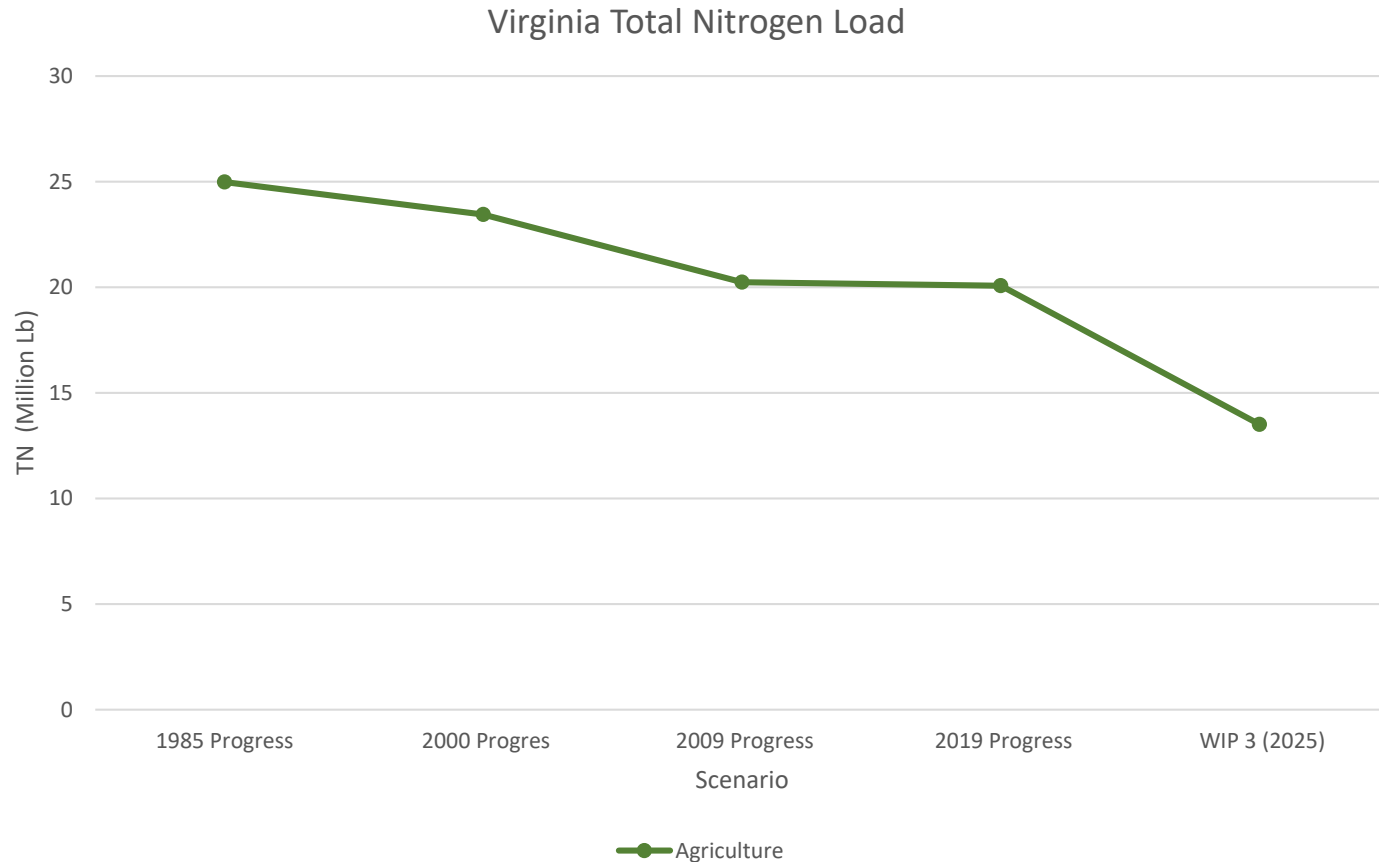


Maryland: TN Ag Loads over Time



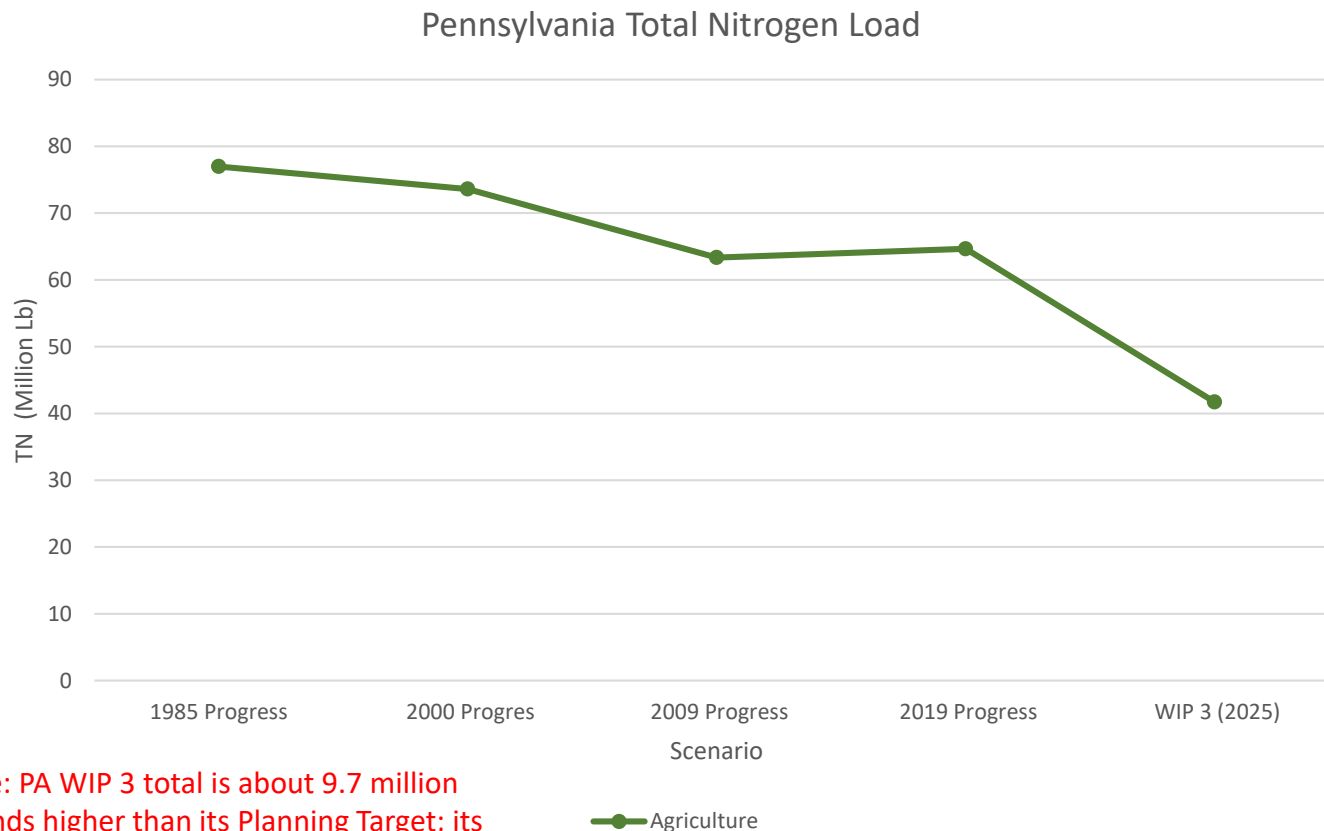
All Loads computed from CAST 2019

Virginia: TN Ag Loads over Time



All Loads computed from CAST 2019

Pennsylvania: TN Ag Loads over Time



Note: PA WIP 3 total is about 9.7 million pounds higher than its Planning Target; its WIP 3 also does not include reductions needed for climate change or Conowingo WIP

All Loads computed from CAST 2019



Conclusions

- Success in meeting the 2025 TMDL targets for nitrogen will depend on ag sector reductions, especially in PA
- The task is even more difficult because:
 - The Phase III WIPs do not fully achieve the TMDL target loads: shortfalls in PA (9.7 million pounds) and NY (1 million pounds)
 - Most of the Phase III WIPs do not include additional reductions to address climate change (about 5 million pounds)
 - The draft Conowingo draft WIP would require an additional 6.7 million-pound N reduction (91% from PA)
 - Opportunities for trading P reductions for N reductions will be limited