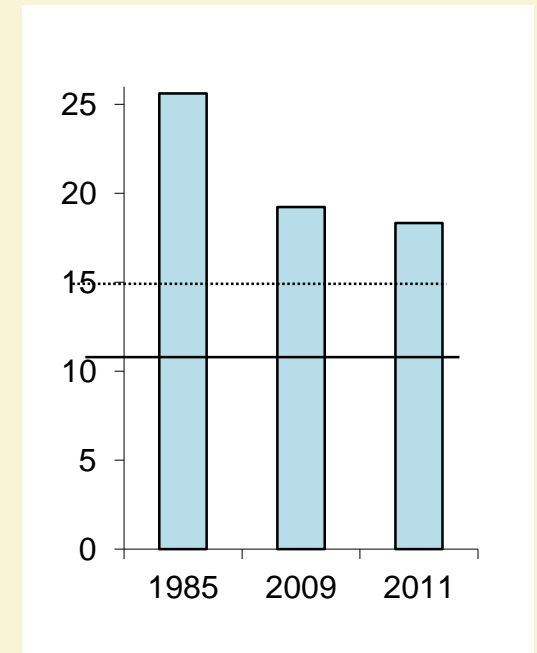
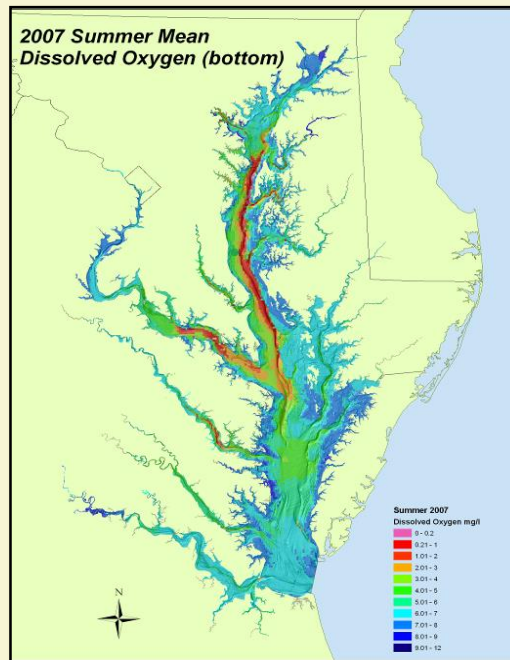


Urban Sector TMDL Confessional for the Chesapeake Watershed *



Norm Goulet
Tom Schueler

** The views expressed are solely from two old geezers who may have caused the problems and won't be around to solve them!*



Our Progress Reviewed in 7 Slides

- How Badly Did We Miss our Load Reduction Targets?
- Why the Job Probably Couldn't Be Done in 15 Years
- Why (perhaps) our Sector Should be Forgiven
- What our Sector Can Do to Get Back on Track
- Where You Think We Should Focus our Future Bay Management Efforts



How Bad Did We Miss Our Targets?

After 15 years, we missed real bad for N loads, sort of bad for P loads and sediment was about a draw

We missed even after:

- many states moved urban load reduction goal posts back
- Our watershed accounting model was revised several times
- very generous BMP classification and reporting
- On a unit area (per acre) basis we may have “held the line” or even made some minor incremental reductions
- We did marginally worse than our ag sector brethren *

Modeled Nitrogen Loads to the Chesapeake Bay (1985-2021) ▲

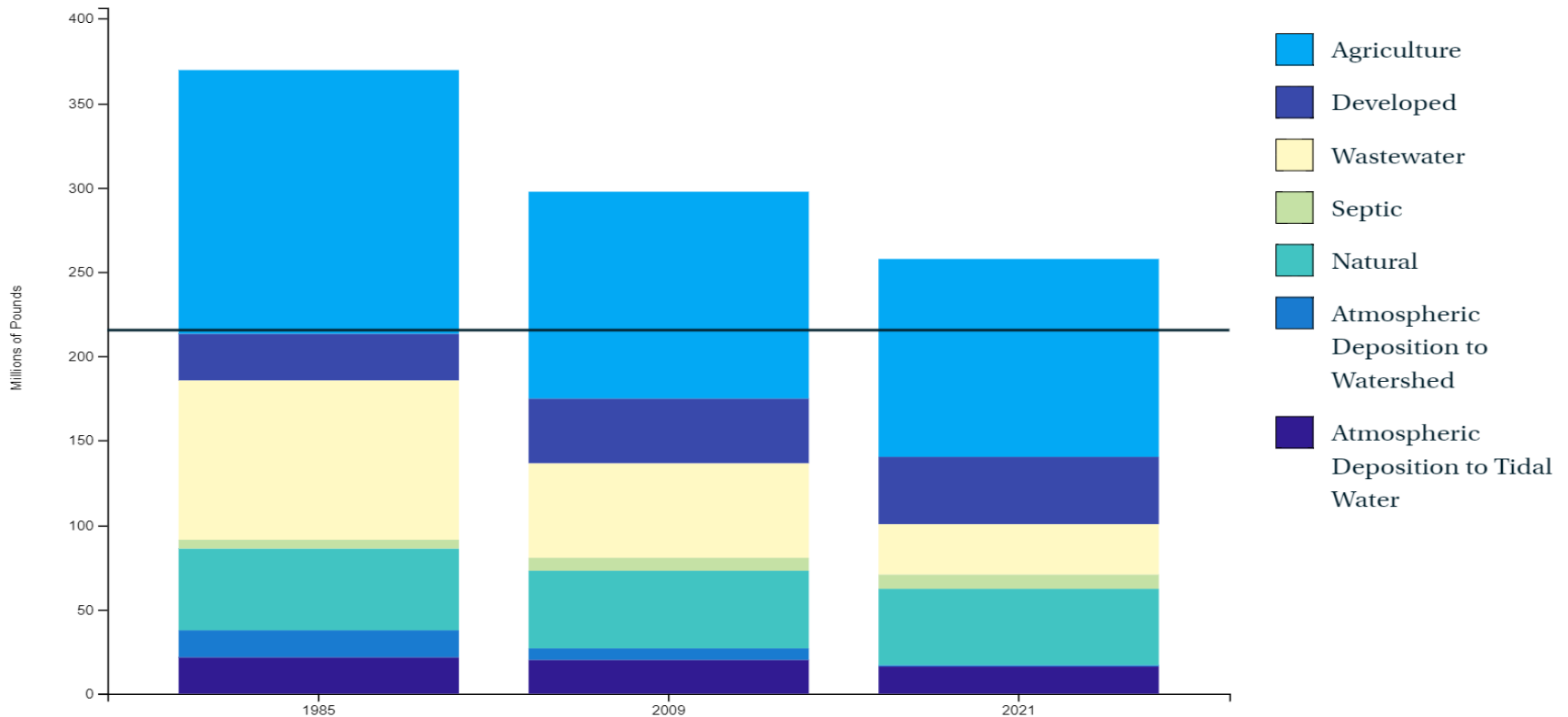
Loads simulated using CAST19 and jurisdiction-reported data on wastewater discharges. *The natural sector includes, in part, forests and wetlands which are preferable land use types with the lowest loading rates among sources.

[VIEW CHART](#)

[VIEW TABLE](#)

Loads by Source

Loads by Jurisdiction



Modeled Nitrogen Loads to the Chesapeake Bay (1985-2021) ▲

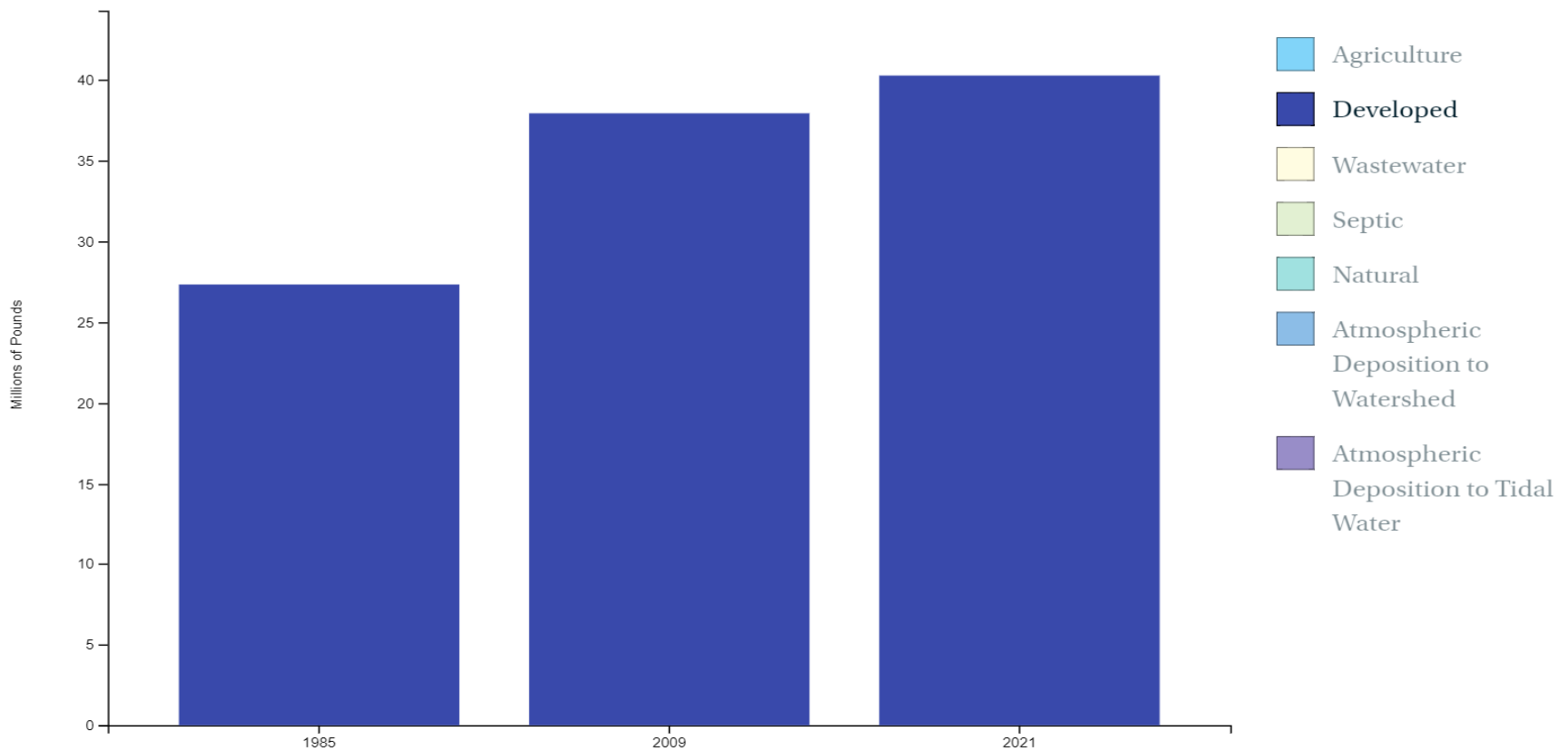
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Loads by Source

Loads by Jurisdiction



Why it probably couldn't have been done

- Our sector continued to grow in area and load over the last 15 years
- Major urban N inputs (fertilizer and atmo dep) are difficult for locals to control
- About 50% of development area before 2010 not served by BMPs
- About 50% of development area after 2010 not regulated by MS4 permits
- BMPs are just not effective in removing N or P
- Pre-2000 BMPs “vanish” due to lack of maintenance or verification

Why (perhaps) we should be forgiven

- Urban nutrient reduction math was not even invented until 2010
- Most expert BMP panels were not approved until 2015
- Most states had trouble developing effective systems to report, track and verify local BMPs
- Most communities had to develop staff capacity, financing and retrofit delivery mechanisms from scratch
- No new urban BMP “moonshot” technology developed over the last decade (possible exception: stream restoration)
- We had a suburban MS4 bias and missed opportunities to get things done in under-served highly urban communities and un-prepared exurban ones
- The urban sector silos: We didn’t cross sectors to find cost-effective BMP solutions and trading in other sectors in the Bay watershed
- We wasted a lot of local time pretending that MS4 permits were like a sewage treatment plant and deserved the same level of bean counting.

What we can do to get back on track after 2025

- Move the goalposts further back or devise simpler BMP implementation metrics (e.g., IC acres treated, runoff reduction achieved, urban habitat acres).
- Give more local credits for reductions in nutrient inputs to our sector (N-fertilization, air deposition, leaf-fall)
- Cooperate with other sectors to restore stream corridors, plant buffers and restore wetlands at the best sites in the watershed
- Convene a Bay-wide stormwater summit to share the best research and implementation ideas and recommit to our restoration job
- Fix pollution trading so that it actually works for small and mid-sized communities
- Develop credits for communities doing the right thing when it comes to wise land use planning, natural area conservation, buffers and smart growth.