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Nutrient Reductions Trigger Legal “Mooooing” Around the Chesapeake Bay....

Paul Calamita



Presentation Overview

- **Background on the Bay TMDL**
- **Why this TMDL Matters to Your Utility**
 - Things the Bay POTWs did well in the TMDL
 - The need to protect the POTW gains
- **The Bay TMDL Litigation brought by the “Mooo” sector**

Background on EPA's Chesapeake Bay TMDL

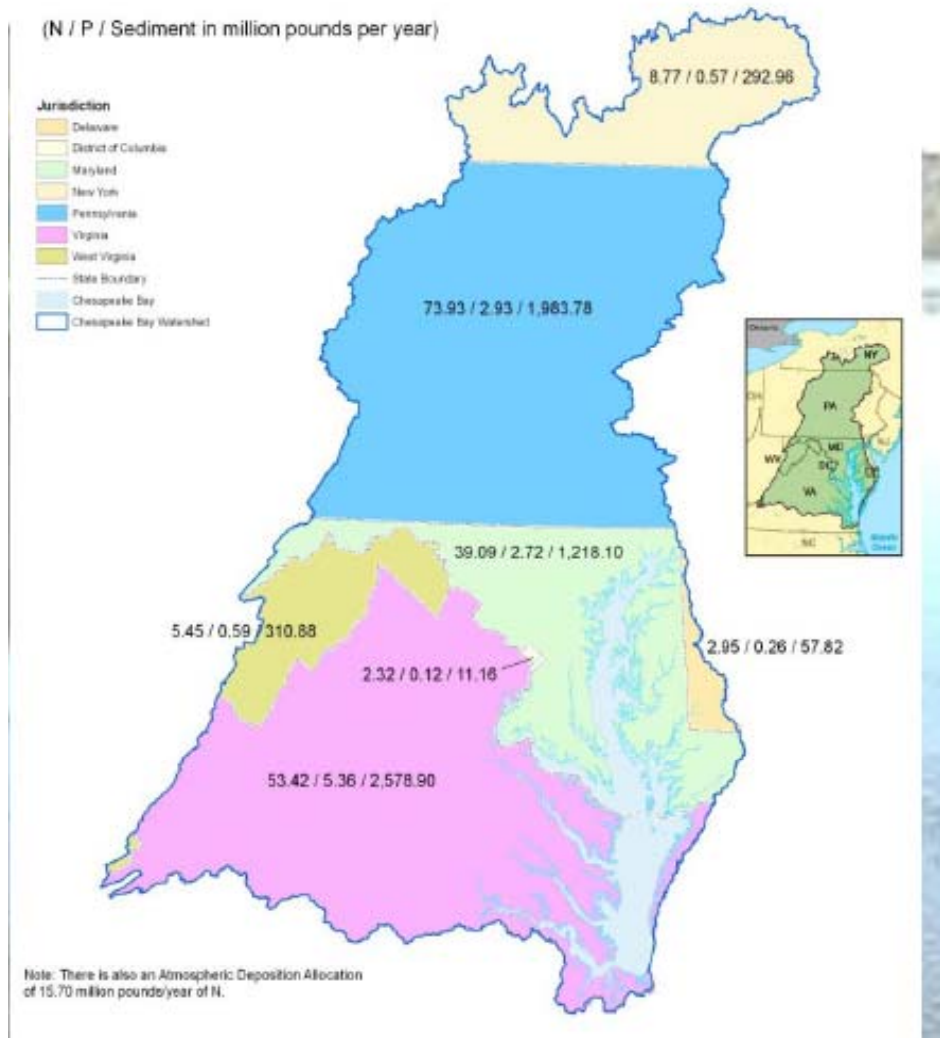
- Issued by EPA Regions 2, 3 and HQ in Dec., 2010
- EPA set Nitrogen, Phosphorus and Sediment allocations at the Basin level for each State
 - Ex: VA-Potomac, MD-Potomac, DC-Potomac, etc.

TMDL Scope

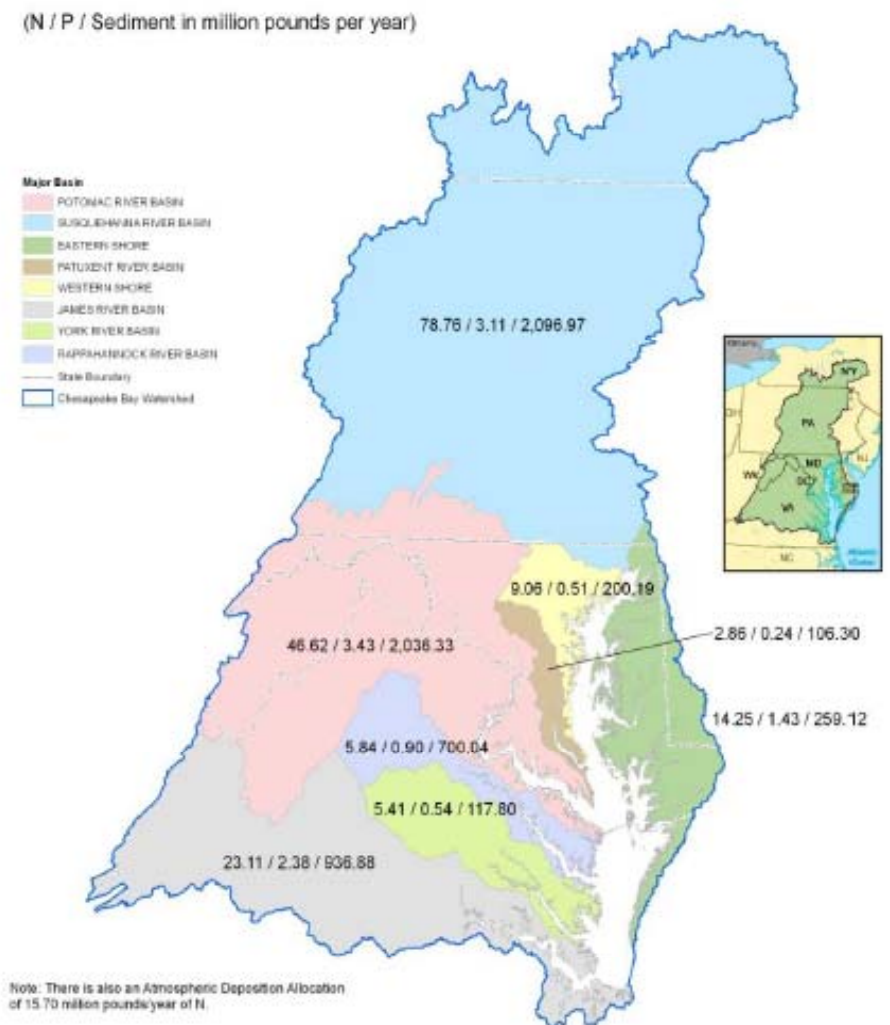
- **Watershed encompasses 64,000 square miles**
- **Includes 6 states and District of Columbia**



...by State



...by River



Source Sector Contributions to Total Nitrogen in the Chesapeake Bay Watershed

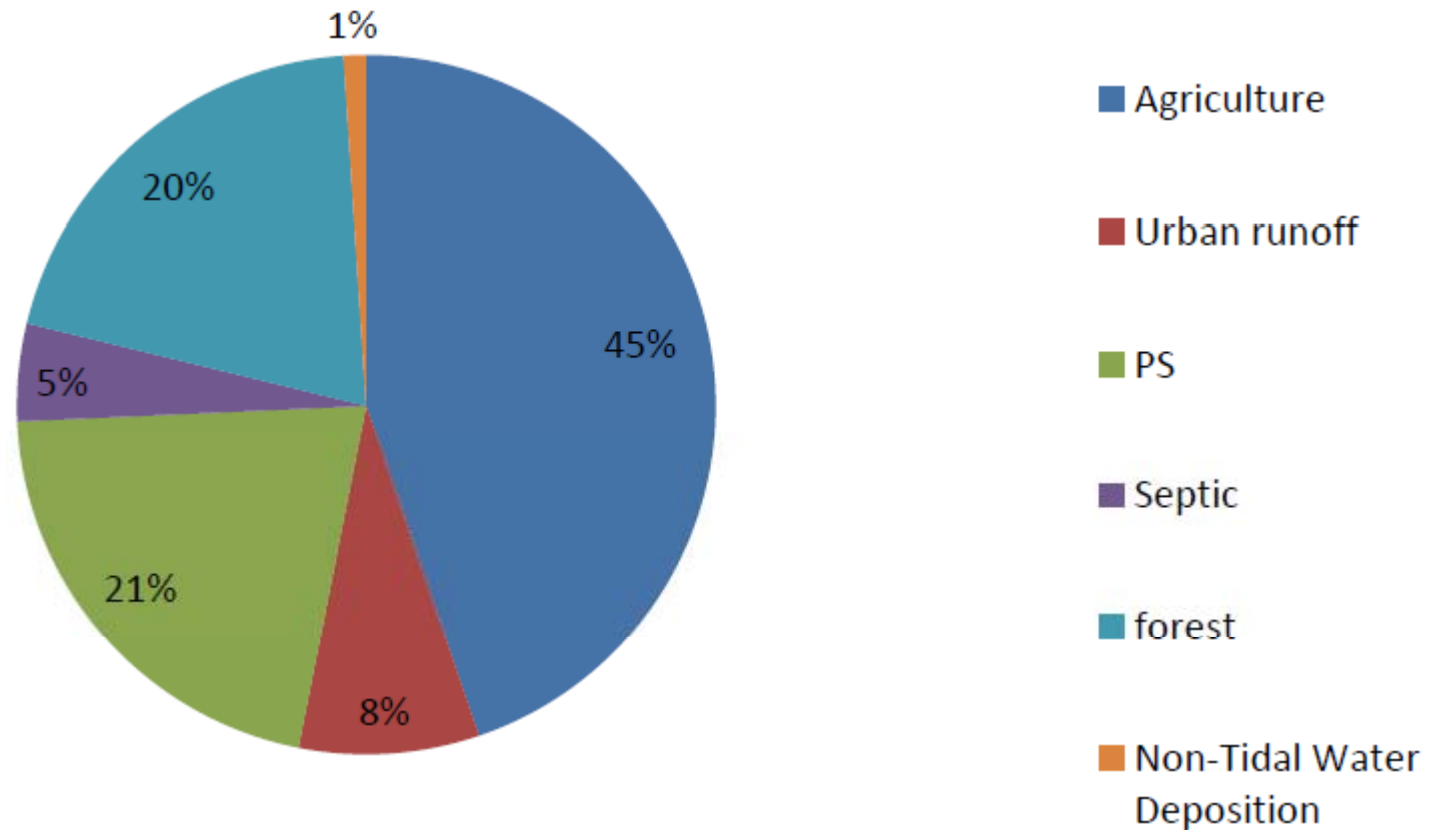


Figure 2. Source Sector Contributions to Total Nitrogen in the Chesapeake Bay Watershed.

Source Sector Contributions to Total Phosphorus in the Chesapeake Bay Watershed

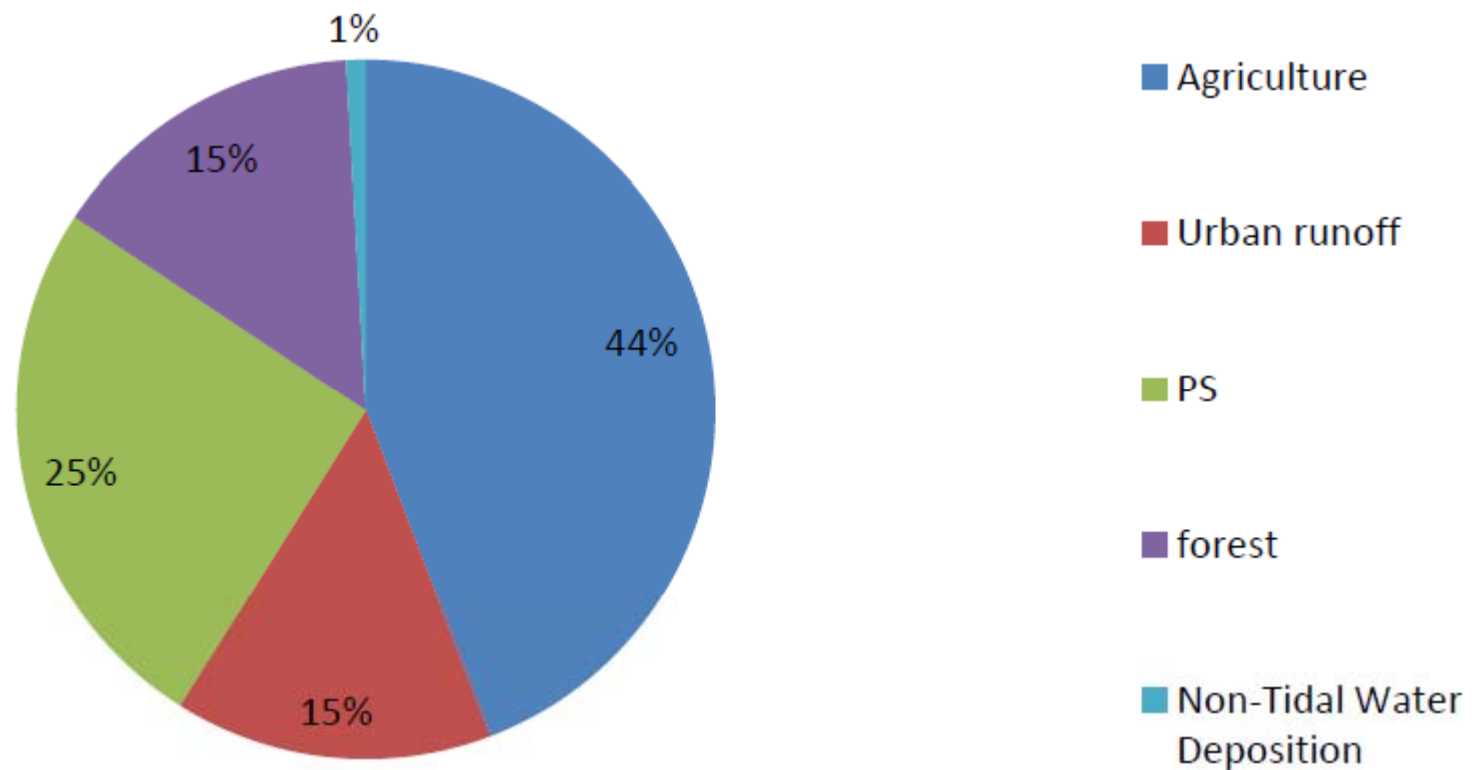


Figure 3. Source Sector Contributions to Total Phosphorus in the Chesapeake Bay Watershed.

Source: District of Columbia Final WIP (Nov., 2010)

Source Sector Contributions to Sediment in the Chesapeake Bay Watershed

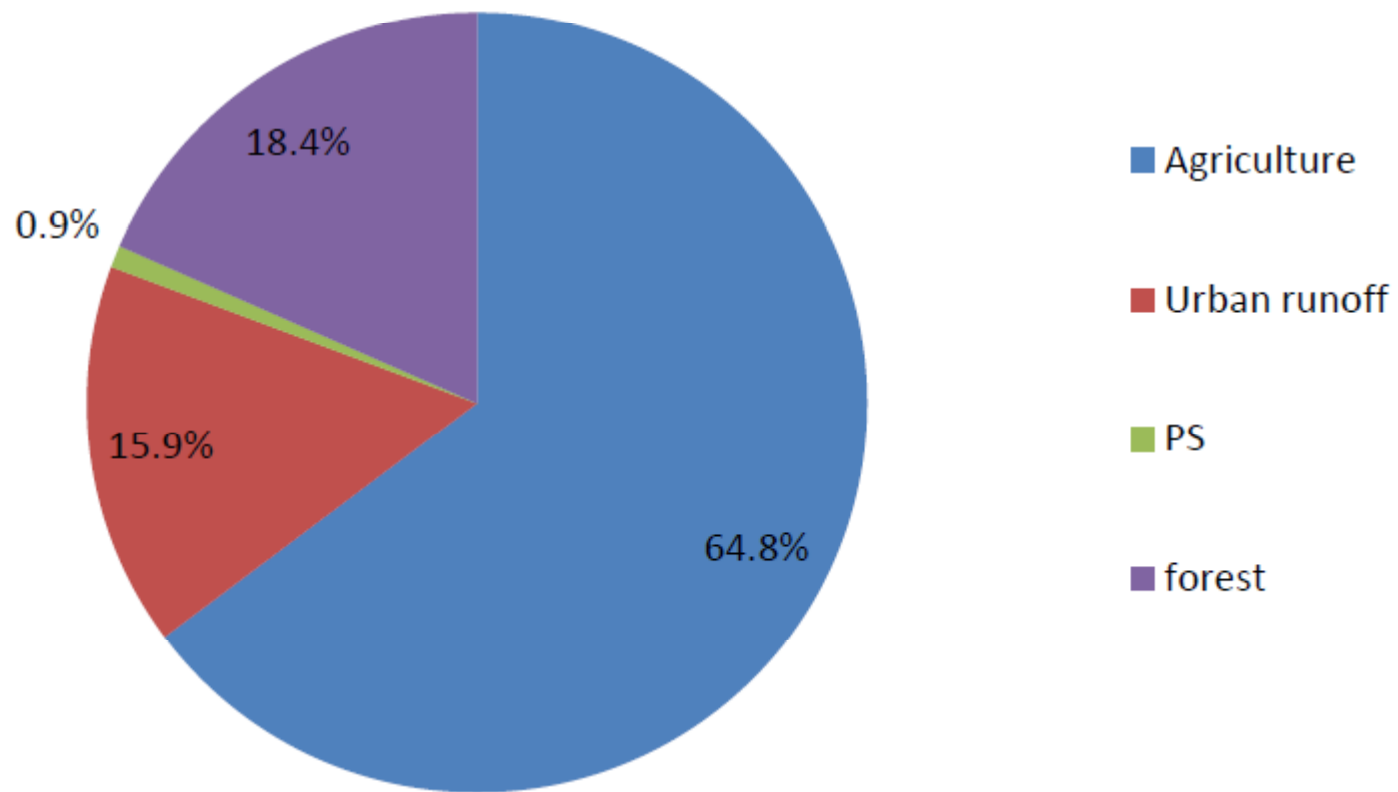
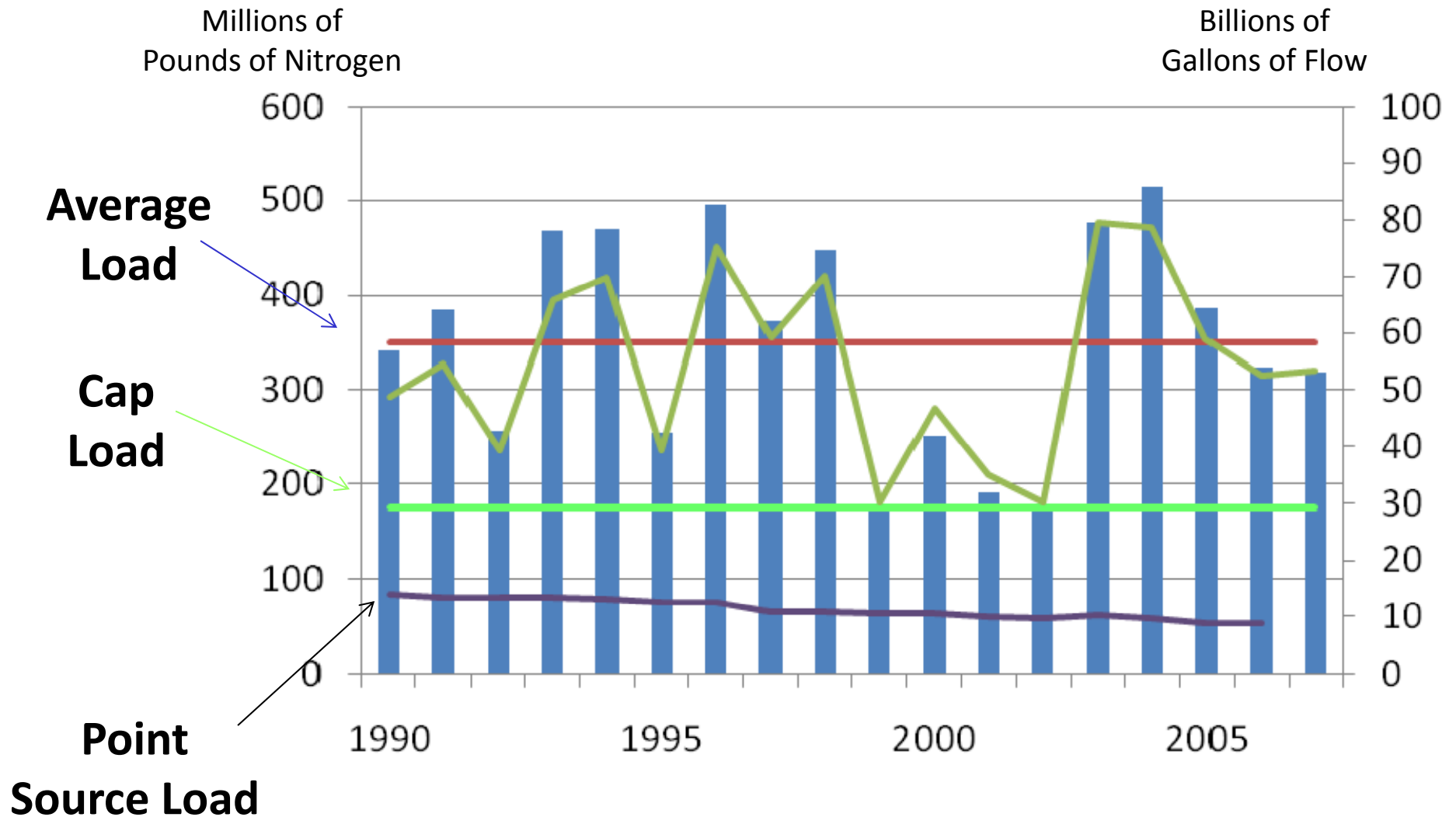


Figure 4. Source Sector Contributions to sediment in the Chesapeake Bay Watershed.

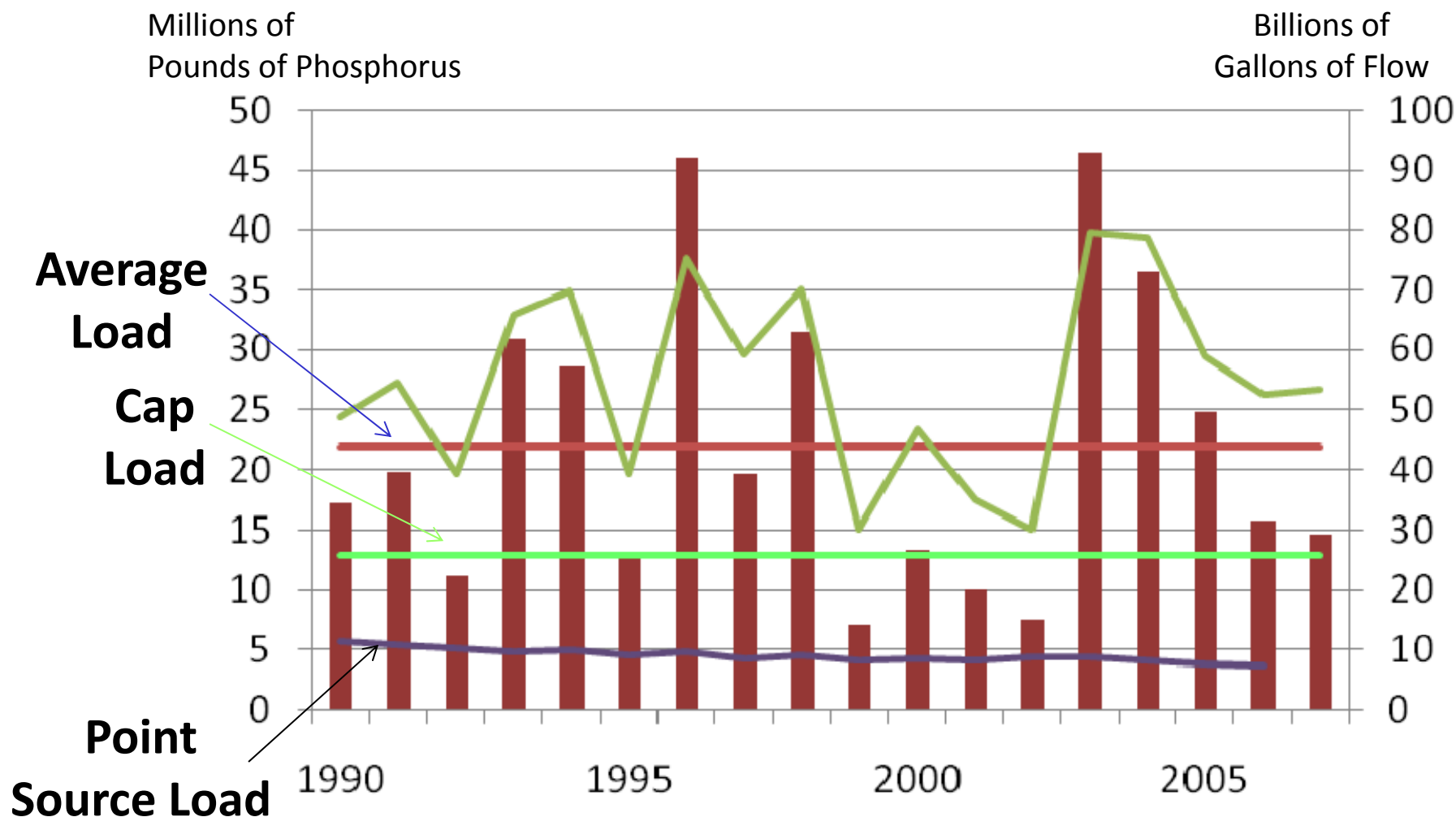
Source: District of Columbia Final WIP (Nov., 2010)

Nitrogen Loads to the Bay Still Above the 175 Million Lbs Basinwide Loading Cap



Monitoring-based estimates for major rivers and below fall-line wastewater treatment facilities plus model-based estimates for coastal plain portion of watershed.

Phosphorus Loads to the Bay Still Above the 12.8 Million Lbs Basinwide Loading Cap



Monitoring-based estimates for major rivers and below fall-line wastewater treatment facilities plus model-based estimates for coastal plain portion of watershed.

Frolic and Detour:

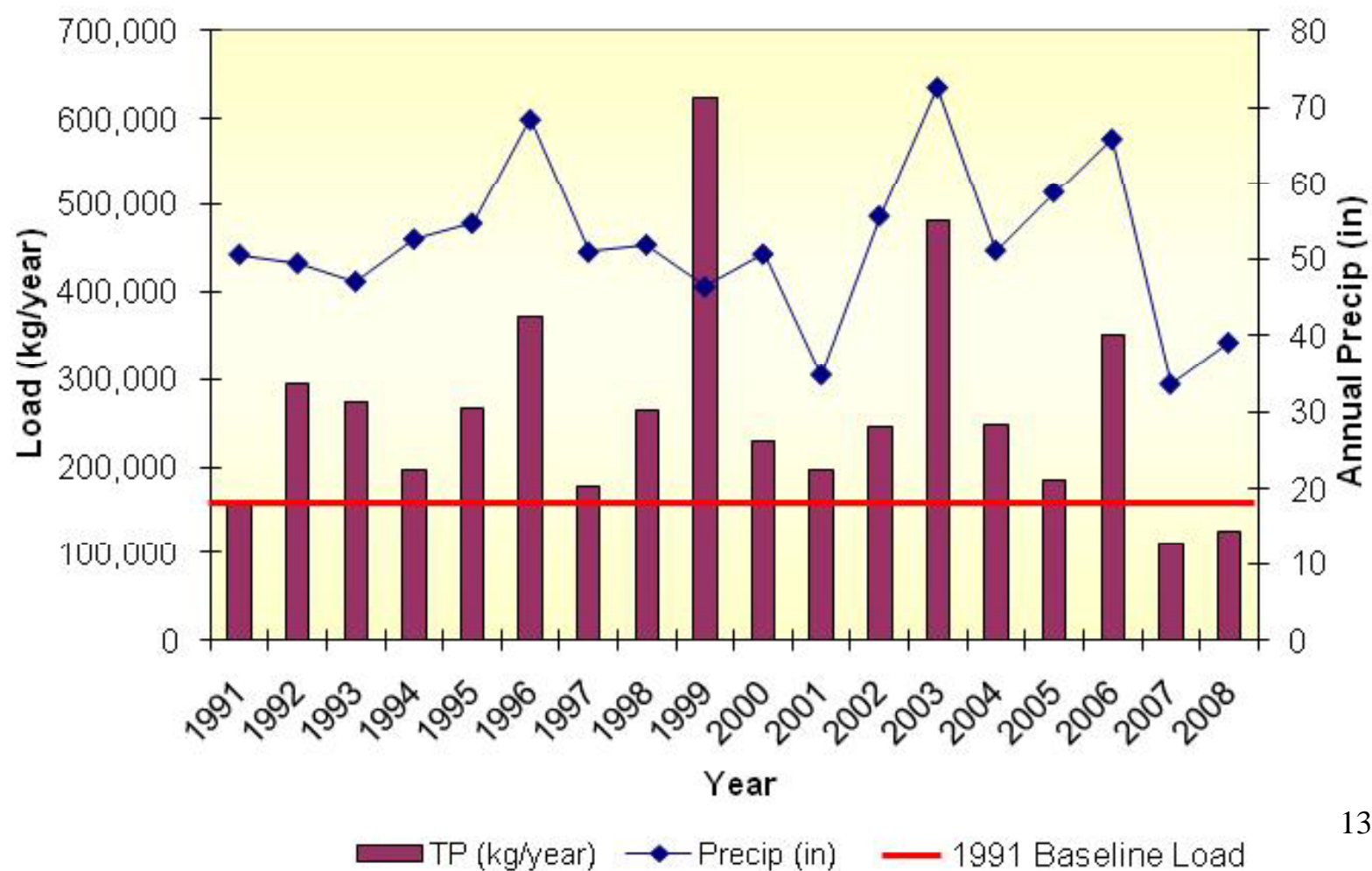
NPS Issues Almost Always Control the Outcome (or lack thereof)

- Consider the Tar Pamilico in NC
 - 3 State of NC slides follow
- Same for Neuse
 - Despite \$250 mm in PS investment and 70% loading reduction....
- Same for most estuaries and other water bodies

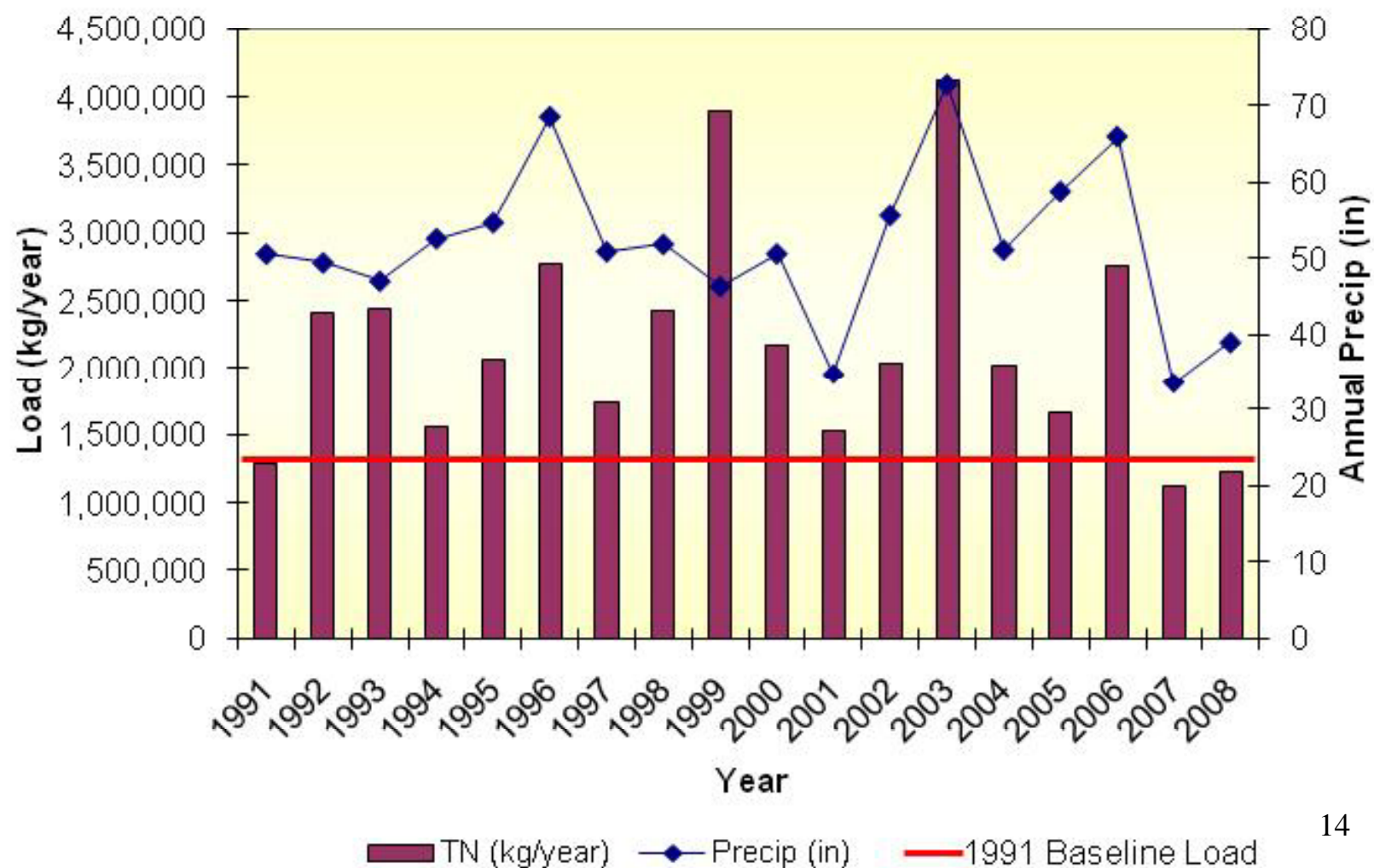
Trends

	1991-2008
<u>Constituent</u>	<u>Concentration</u>
TP	No trend
TN	No trend
Ammonia	Decreasing
NO2+NO3	Decreasing
TKN	Increasing

Estimated Tar Pam TP Annual Load (kg/yr) Station O650 - Grimesland



Estimated Tar Pam TN Annual Load (kg/yr) Station O650 - Grimesland



Back to the Moo heard around the Bay....

Significant vs. Non-Significant WWTPs

Table 4-4. Jurisdiction-specific definitions of significant municipal and industrial wastewater discharge facilities

Jurisdiction	Municipal wastewater facilities (million gallons per day)	Industrial wastewater facilities (estimated loads, pounds per year)
Delaware	Design flow ≥ 0.4	$\geq 3,800$ total phosphorus or $\geq 27,000$ total nitrogen
District of Columbia	Blue Plains WWTP	
Maryland	Design flow ≥ 0.5	
New York	Design flow ≥ 0.4	
Pennsylvania	Existing flow ≥ 0.4	
Virginia	Design flow $\geq 0.5^a$ Design flow $\geq 0.1^b$ New facilities $\geq 0.04^c$	
West Virginia	Design flow ≥ 0.4	

Source: USEPA 2010b

Notes: a. Above the fall line/tidal line; b. Below the fall line/tidal line; c. Also includes expansion of flows ≥ 0.04 mgd.

WWTPs in Bay Watershed

Table 4-5. Significant and nonsignificant municipal and industrial wastewater discharging facilities by jurisdiction as of December 2010

Jurisdiction	Significant facility			Nonsignificant facility			Total Facilities
	Municipal	Industrial	Total	Municipal	Industrial	Total	
DC ^a	1	0	1	1	9	10	11
DE	3	1	4	1	1	2	6
MD	75	12	87	163	477	640	727
NY	26	2	28	26	45	71	99
PA	183	30	213	1246	409	1655	1868
VA	101	24	125	1618	639	2257	2382
WV ^b	13	7	20	125	23	148	168
Total	402	76	478	3180	1603	4783	5261

Source: Facilities identified in the final phase 1 WIPs

Notes:

a. Blue Plains WWTP serves DC and parts of MD and VA, but is only counted once.

b. Multiple facilities (4) share one NPDES permit in West Virginia.

But Some Key Differences

- **Scope: Large & Stringent**
 - Watershed Spans 6 States & District of Columbia
- **Schedule: Short & Fixed**
 - All Work Done by 2025 (except MD-2020 [maybe....])
- **EPA's "Accountability Framework"**
 - "Reasonable Assurance" review of Watershed Implementation Plans (WIPs)
 - Two-Year Milestones from now until 2025
 - Threatened Consequences (primarily against PS if overall loadings are not met)

Why the Bay TMDL Matters to Your Utility

- Many things POTWs did well in this TMDL
- Those things are threatened by litigation brought by the agricultural sector
- Litigation also threatens upheaval in the TMDL process as we know it
 - Devil you know....

POTWs Did Well in the Bay TMDL

- As explained below, Bay POTWs have gone about this in the right way
 - Excellent precedent and many good takeaways for utilities nationwide
 - Many tough obstacles hurdled; others remain
- Smart POTW program is indirectly being challenged by pending litigation from the Ag sector (the “haves”) and homebuilders (the “have nots”)

Bay POTWs have gone about this in the right way

- POTWs were organized and effective from the get go
 - Stopped at the very last minute a MD attempt more than a decade ago to unilaterally issue a TMDL for MD's Bay
 - Since then, helped to establish the statutory, regulatory, policy, and financial foundation for what has evolved into today's regional Bay program
 - Secured legal and technical assistance on a regional basis
 - Including UAA for Bay DO

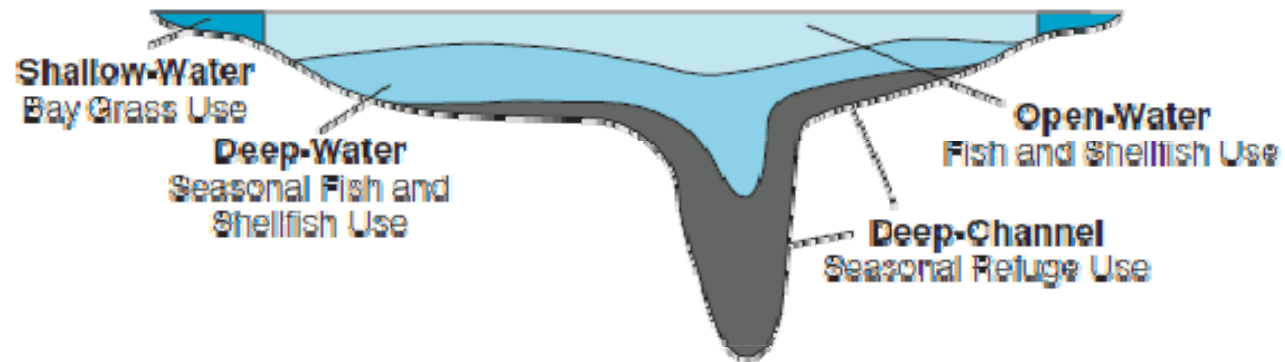
Why the Bay TMDL Matters to Your Utility

- Rather than challenge EPA's authority and the technical aspects of the Bay restoration effort, POTWs decided to help create a sustainable POTW program within the Bay Restoration effort and then lead the restoration effort.
 - POTWs took the moral high ground
 - But, insisted on several core principles

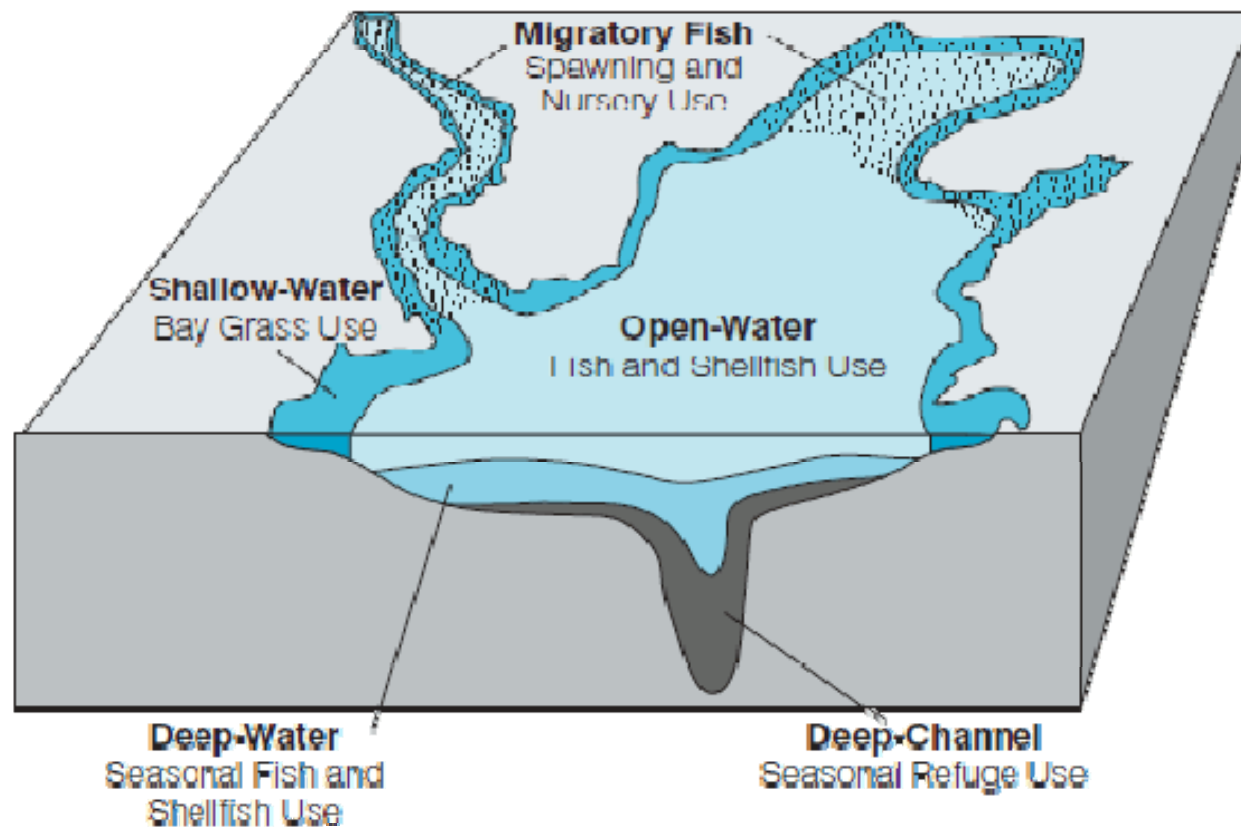
Bay POTWs have gone about this in the right way

- Good science
 - UAA to establish tailored DO levels in place of “5”
 - Upper, middle, trench numbers; near shore & open water
 - Annual average loading limits for TN and TP
 - EPA HQ memo rolled this concept out
 - Right critical year (avoided another 25 MPY TN and 2.2 MPY TP reduction due to initial agency use of a critical period that was too wet)
 - States determine intrastate nutrient allocations
 - One-size-fits-all for some and tributary-by-tributary requirements for others based upon cost-effectiveness

A. Cross-Section of Chesapeake Bay or Tidal Tributary



B. Oblique View of the Chesapeake Bay and Its Tidal Tributaries



Bay POTWs have gone about this in the right way

- Trading a key to cost-effective compliance
 - VA Nutrient Credit Exchange
 - POTW led State statutory entity to facilitate POTW compliance with Bay loadings
 - Other states have programs as well, especially PA, which features advanced agricultural credit purchases

The right way

- State grant funding programs
 - VA: Water Quality Improvement Fund (general fund and % of annual budget surplus)
 - More than \$650 million in grants already
 - POTW Grant % ranges (note \$107 mm shortfall)
 - MD: 100% grant for ENR via “Flush Fee”
 - Previously 50% GF grant for BNR
 - Approx \$1.3 billion in grants
 - Note \$537 mm shortfall in “flush fee”
 - WV: 50% grant for BNR from lottery revenue
 - \$180 million in grants

The right way

- Critical for State to have skin in the game
 - State \$ is an important Gatekeeper against non-cost-effective POTW requirements

Bay POTWs have gone about this in the right way

- Adequate POTW loadings
 - Based upon public investment in facility design capacity
 - Ensure upgraded POTWs can support smart growth
- No congressional involvement
 - Especially to limit program flexibility
 - Schedule extension & UAA options retained

The Right Way

- Lead the restoration effort
 - Rather than being dragged along
 - On our terms:
 - Good Science
 - State grant \$\$\$ (and lots of it)
 - Adequate POTW loadings
 - Trading
 - Avoid congressional “solutions”
 - Avoid judicial take-over....

Risks to POTWs

- Program targets MS4s for the first time
 - Alas, for many of us, in many ways, they are “us”
 - Or will be “us”
- Really going after Agriculture for the first time at the federal level
- Really going after growth at the single lot level for the first time

Risks to POTWs

- No allowance for growth so trading is a must
 - But, few trades available while everyone is scrambling to meet sector allocations
- Serious efforts to address failing septics and restrict new septics
- Annual fee (MD) for every septic system owner

Risks to POTWs

- Aggressive 3-tier implementation planning
- 15 years overall (2025)
 - 60% complete within 7 years (2017)
 - Every 2-years update Watershed Implementation Plans to ensure we are on track
 - Like Greek austerity measures?
- Aggressive federal inspection/enforcement
 - MS4, POTW, agriculture

Risks to POTWs

- Other sectors (Ag or MS4) won't meet their allocations
 - EPA is threatening to squeeze POTWs to force State action on Ag
 - POTWs have resisted being a tool to regulate Ag but are adamant that there must be equity across sectors contributing to the problem
 - Light is shining brighter than ever on Ag
 - BMP accounting under scrutiny
 - Nutrient Management Plans available for public review

Risks to POTWs

- Other sectors (Ag or MS4) won't meet their allocations
 - MS4 loadings are small
 - MS4s were not organized until the very end
 - Most programs funded by general fund....
 - Economy is too weak for retrofits through normal redevelopment to carry the day
 - MS4s unlikely to meet reductions within 15 years unless given trading flexibility

Risks to POTWs

- Homebuilders want allocations
 - No allocation for future growth
 - Other than implicitly in POTW allocations
 - Attack on septic systems with MD evaluating banning new septics in most cases....
 - Home builders have limited options unless public sewer is available

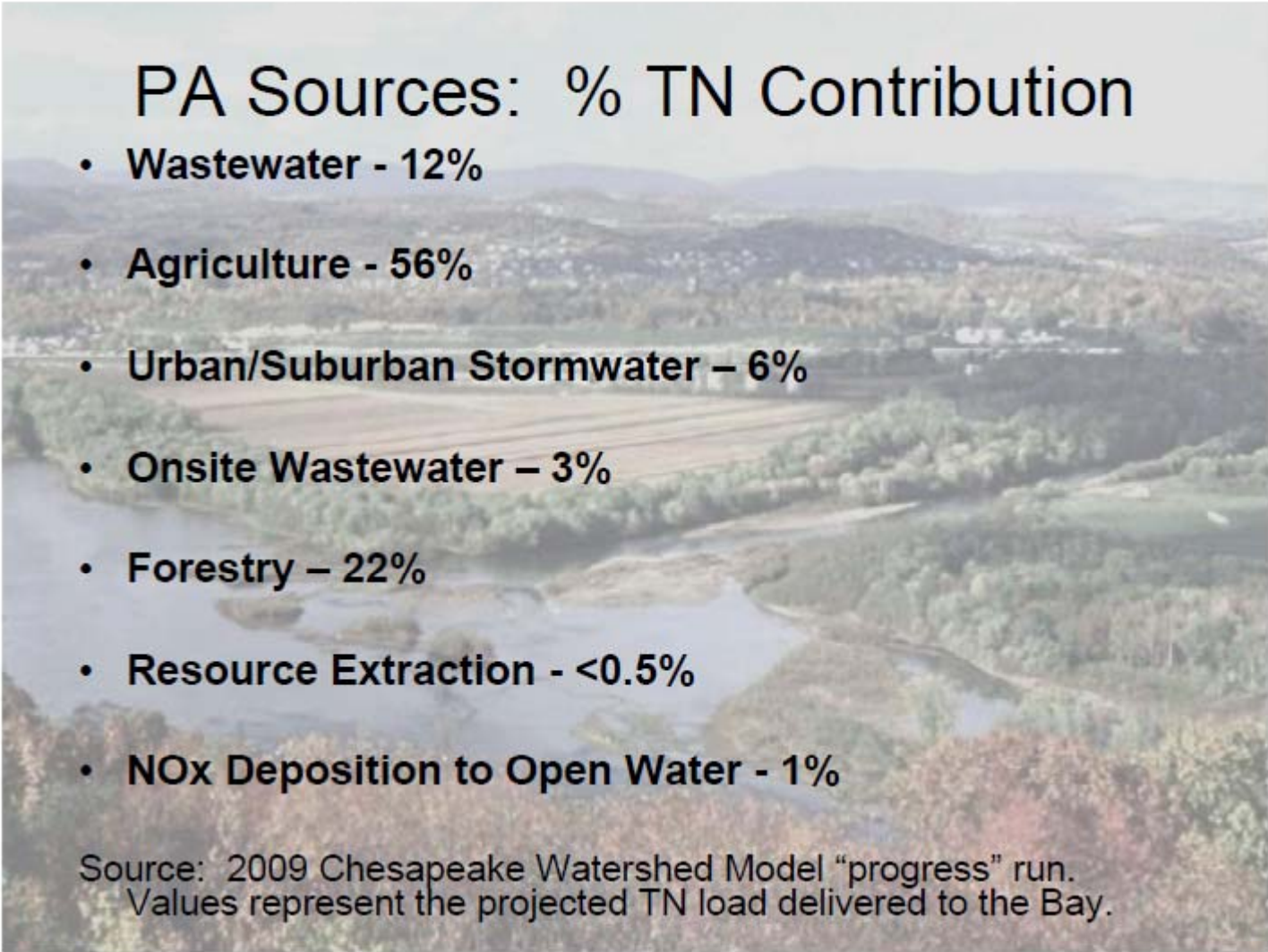
- The pot is full of water
- The heat has been turned up & the lid slammed in place
 - POTWs, Ag, MS4, and Air are all feeling the heat
- EPA is watching the pot closely, ready to pounce on the “usual” suspects

Consequences Threatened for Failed Expectations

- **EPA's "Consequences" letter (Dec., 2009)**
- **Several could impact POTWs**
 - Object to permits and increase federal oversight
 - Reduce allocations for existing point sources
 - Require offsets "plus" for new or increased discharges
 - Increase enforcement efforts
- **EPA may even impose on POTWs if other sectors don't meet their loadings**
 - **POTW leverage - UAA**

An aerial photograph of the United States, with the eastern half of the country highlighted in a solid blue color. The text "LITIGATION & NONPOINT SOURCE ISSUES" is overlaid in large, bold, black capital letters on the blue-shaded area.

LITIGATION & NONPOINT SOURCE ISSUES



PA Sources: % TN Contribution

- **Wastewater - 12%**
- **Agriculture - 56%**
- **Urban/Suburban Stormwater – 6%**
- **Onsite Wastewater – 3%**
- **Forestry – 22%**
- **Resource Extraction - <0.5%**
- **NOx Deposition to Open Water - 1%**

Source: 2009 Chesapeake Watershed Model “progress” run.
Values represent the projected TN load delivered to the Bay.

Bay TMDL Appeals

- **In Jan., Ag filed for judicial review of TMDL**
 - American and PA Farm Bureaus
 - NB: PA farmers
 - Middle District of PA (Harrisburg, PA)
 - Can't see the Bay from there....
 - PA agriculture is the largest Ag target (90% of PA loadings)
 - In April, 6 more agricultural organizations joined
- **In June, National Association of Home Builders (NAHB) filed too**
- **Ag and NAHB cases consolidated**

Legal Claims

- **TMDL Violates CWA and EPA regulations**
 - EPA has no authority to act unless delegated state fails to do so or violates CWA
 - Neither EPA nor a State has authority under the TMDL program to establish allocations for upstream water segments in other states
 - Must be done through upstate NPDES permitting, not downstate TMDLs
 - Implementation plans are not subject to EPA approval
 - EPA has no authority to issue individual WLAs to point sources
 - EPA has no authority to demand “reasonable assurance” of NPS implementation

Legal Claims (cont.)

- **TMDL is arbitrary and capricious**
 - EPA's model uses "erroneous assumptions"
 - EPA's model was not properly calibrated or validated
- **TMDL Failed to Provide Adequate Notice and Comment**
 - EPA provided inadequate access to modeling
 - EPA continued to change "vital" information after close of public comment period
- **TMDL is ultra vires**
 - Catch-all claim that EPA has exceeded its authority

Issues

- **Suit threatens holistic “watershed approach”**
 - TMDLs are “zero sum game”
 - Could lead to revised sector allocations and/or allocations for future growth outside of POTWs (if homebuilders succeed)
 - Threatens “cooperative” (NB: this is an omelet, eggs were broken) regional TMDL with state-specific MD, VD, DC TMDLs....
- Challenges EPA’s TMDL authority
- Challenges TMDL implementation authority

Municipal Intervention

The Players: NACWA, VAMWA, and MAMWA (jointly)

- **Limited Scope of Municipal Intervention**
 - Targeted defensive effort (with EPA)
 - Preserve watershed approach
 - Protect point source allocations
- **Municipals are not litigating**
 - Ag's challenge to technical basis for TMDL
 - Ag's challenge to EPA TMDL authority
 - Municipals made deliberate decision not to be a plaintiff

Other Groups

- **Environmental groups also filed to intervene**
 - CBF, National Wildlife Federation, Mid-Shore River Conservancy, Defenders of Wildlife, Citizens for Pennsylvania's Future, Jefferson County PSD (POTW)
- **PA Muni Authorities Assn also filed**

Litigation Status

- **Judge Rambo granted Muni Intervenor's Motion to Intervene As of Right (FRCP 24(a)(2))**
 - Also allowed the environmental coalition in
- **POTW Legally Protectable Interest:**
 - Interest in discharge of nutrients and sediments is “legally protectable interest”
 - Economic interest in plant upgrades is more than “mere attenuated economic interest”
- **Impairment of Interest:**
 - Municipal interests could be impaired as result of case

Next Steps

- 3 or 4 cases in row where federal courts went to the unusual step of granting intervention of right
- Some ongoing sparring over the record
- After record is settled, case will be decided on cross-motions for summary judgment
 - Muni Intervenors will file in support of EPA's Motion to uphold the TMDL
 - A bit of a tricky posture for the POTW coalition but we need to be in the case to minimize any collateral damage to POTW interests
 - We will supplement EPA's arguments

Final Litigation Thoughts

- Standard of review....
 - Lots of agency deference
 - But, acknowledged errors in 2010 TMDL model
- A path forward for Ag programs
 - They want what MS4s want
 - Compliance safe harbor in return for agreed BMP implementation

State “Certainty” Programs for Ag

- **State programs encourage Ag community to install BMPs**
 - As alternative to litigation?
- **Ex., Virginia legislation (HB 1830, 2011)**
 - Department of Conservation & Recreation must set up program for resource management plans (RMP)
 - Farm with an RMP is deemed in full compliance with TMDLs for all pollutants (including nutrients)
- **Ex., Michigan legislation (SB 122, 2011)**
 - Farms in compliance with state standards are addressing TMDLs
- **Work also underway in Illinois, Washington**



Questions?

Contact Lisa Ochsenhirt

Lisa@Aqualaw.com

804.716.9021 X205