

An aerial photograph of a river meandering through a landscape. The river is dark and winding, surrounded by green and brown fields. In the middle ground, there is a small industrial facility with a building and a chimney. The background shows more fields and some trees under a hazy sky.

# Prioritized Investment through the Watershed Approach

## TMDLs-R-Not-Us

**NACWA Winter Conference**

**Feb. 2, 2011**

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**Ann Arbor, MI**

# Comments

- Simplification of complex situations
- Total Maximum Daily Loads (TMDLs) are only one element of the Clean Water Act
- Everyone is trying to do the right thing
- TMDLs and the Clean Water Act may not be the solution

# Overview

- TMDL basics
- Chesapeake Bay TMDL
  - Combined Sewer Overflows (CSOs)
  - Agriculture
- Lake Champlain TMDL
- Mississippi River / Gulf of Mexico

# The TMDL program is for waterways impaired by point & nonpoint sources

- TMDL = Total Maximum Daily Load
- Sum of point source loads (WLAs)  
+ Sum of nonpoint source loads (LAs)  
+ Margin of Safety
- How much pollution can be discharged to a waterway under critical conditions and still meet water quality standards?

# If you are a point source...

- You need a WLA
- Your NPDES permit needs to be consistent TMDL assumptions



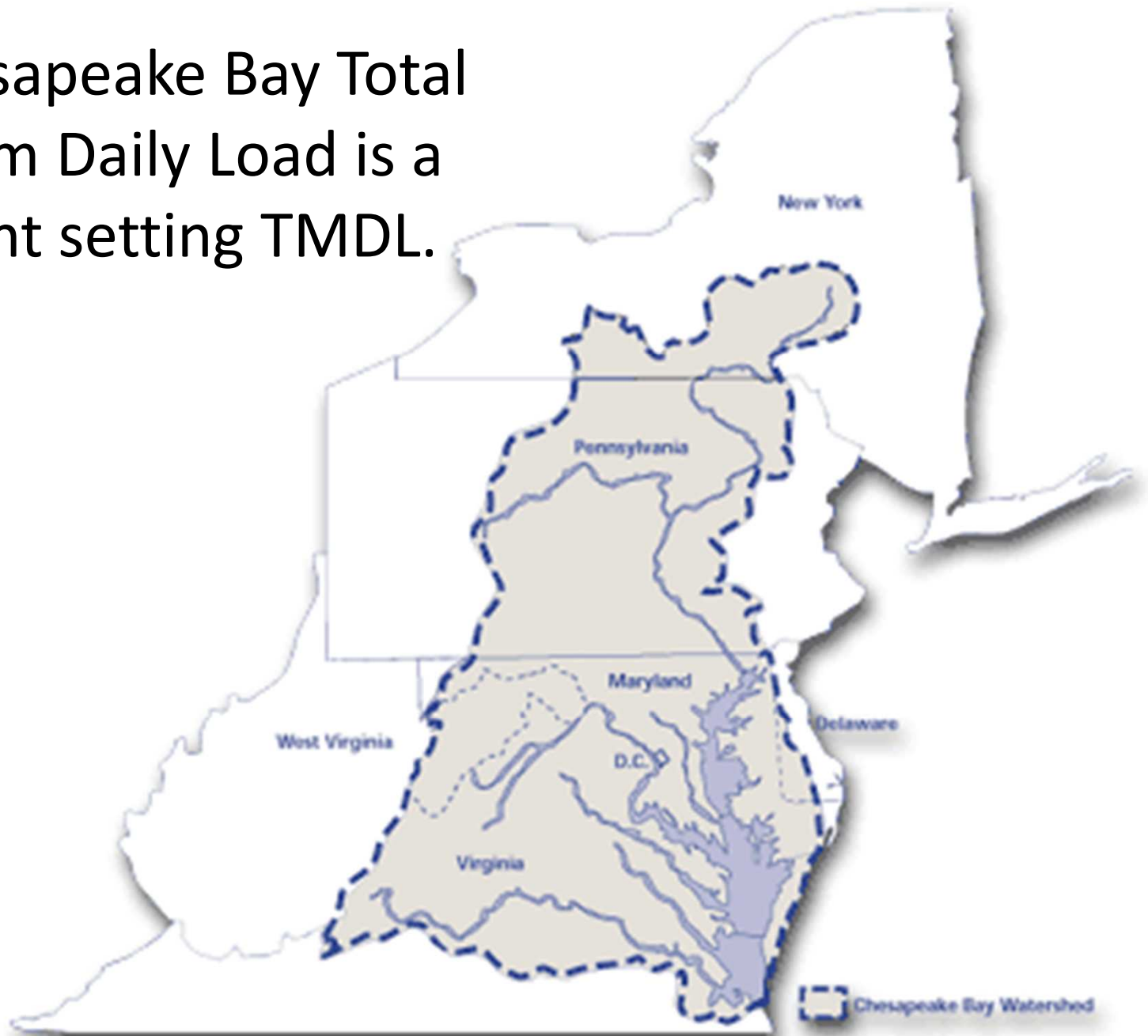
WLA = 0

Elimination-R-Us

# If you are a nonpoint source...

- EPA cannot legally require you to reduce your load
- EPA can, however, ...
  - Assign more load reduction to point sources
  - Threaten your state agencies with “federal consequences”

The Chesapeake Bay Total Maximum Daily Load is a precedent setting TMDL.



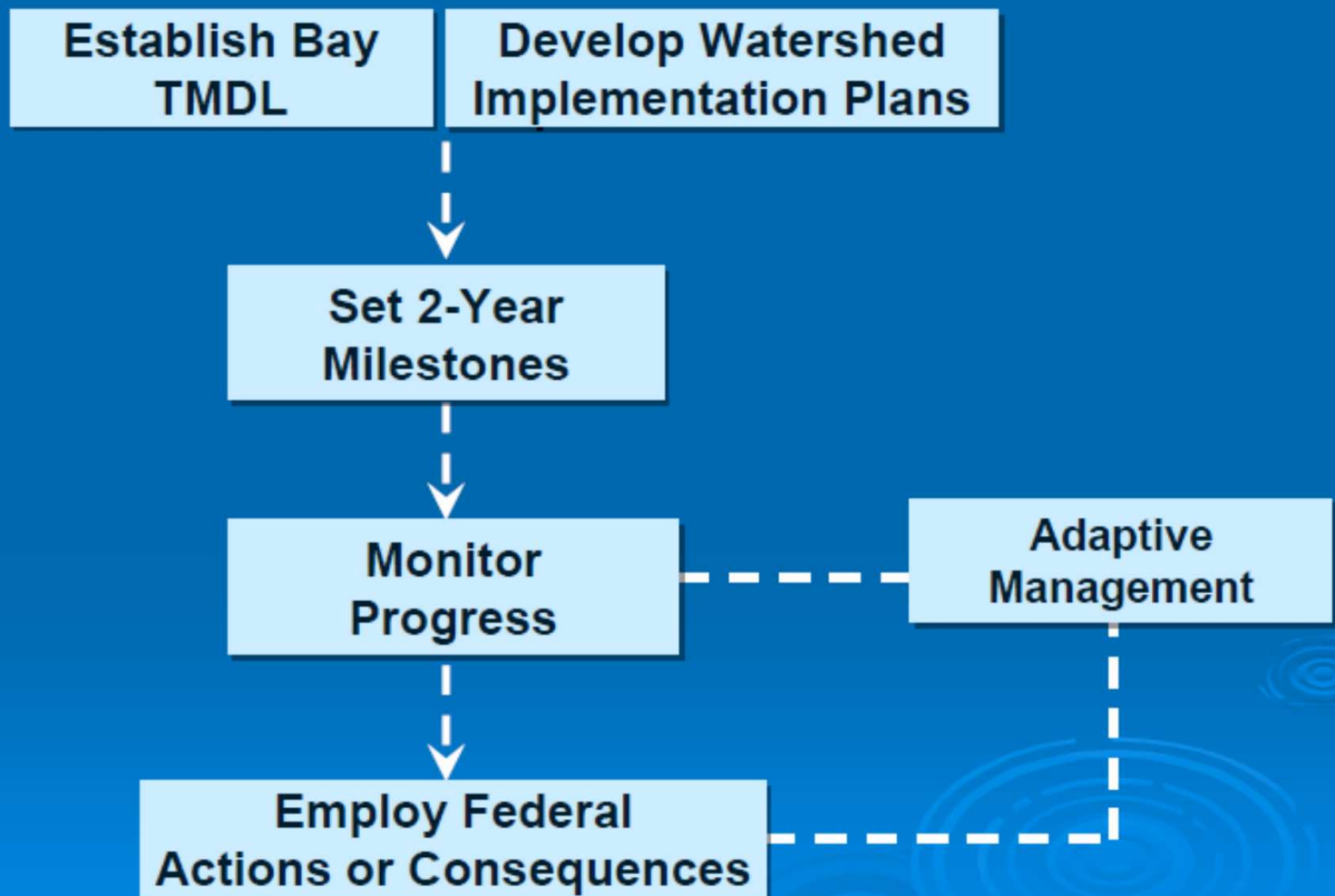
# VA Secretary of Natural Resources to Region 3 Administrator

- “Again, Virginia must state its significant concerns with the nearly absolute reliance on management by computer model. While the Bay model has seen years of development it continues to experience flaws that call its outcomes into question. We are especially concerned that level of precision expected is far beyond what the model is capable of and fails to consider the economic consequences of its actions.”

Nov. 29, 2010



# Accountability for Results



## TMDL Goals

2 year milestones

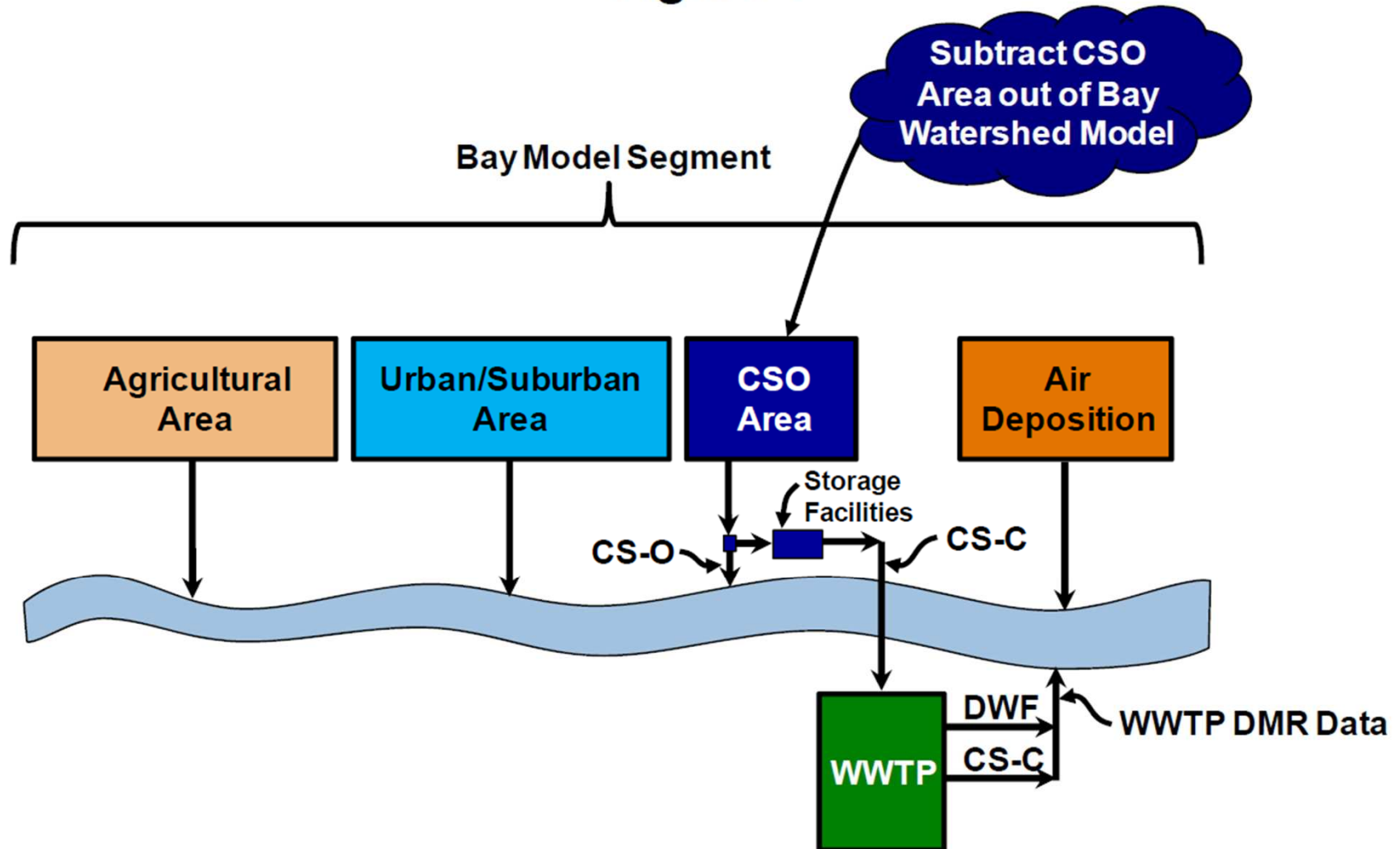
60 percent by 2017

100 percent by 2025

# CSO Communities in the Chesapeake Bay

- Of the 64 CSO communities, only DC was included in the Bay computer models
- Cities of Alexandria, Lynchburg, and Richmond, VA; Alexandria Sanitation Authority, and DC Water provided their own estimates
- VA communities had extensive discussions with VA DEQ (and later Region 3) to address permitting issues

Figure 1



# VA CSO Community Comments

- Important that the TMDL not require additional reductions in CSO
- EPA's idea about establishing CSO WLAs based on fixed design flows was flawed
- Counter to goal of the CSO Policy (maximize treatment of CSO at the WWTP)
- Fails to recognize that “wet weather happens” (firm cap load makes no sense)
- Consumes allocations from other sources

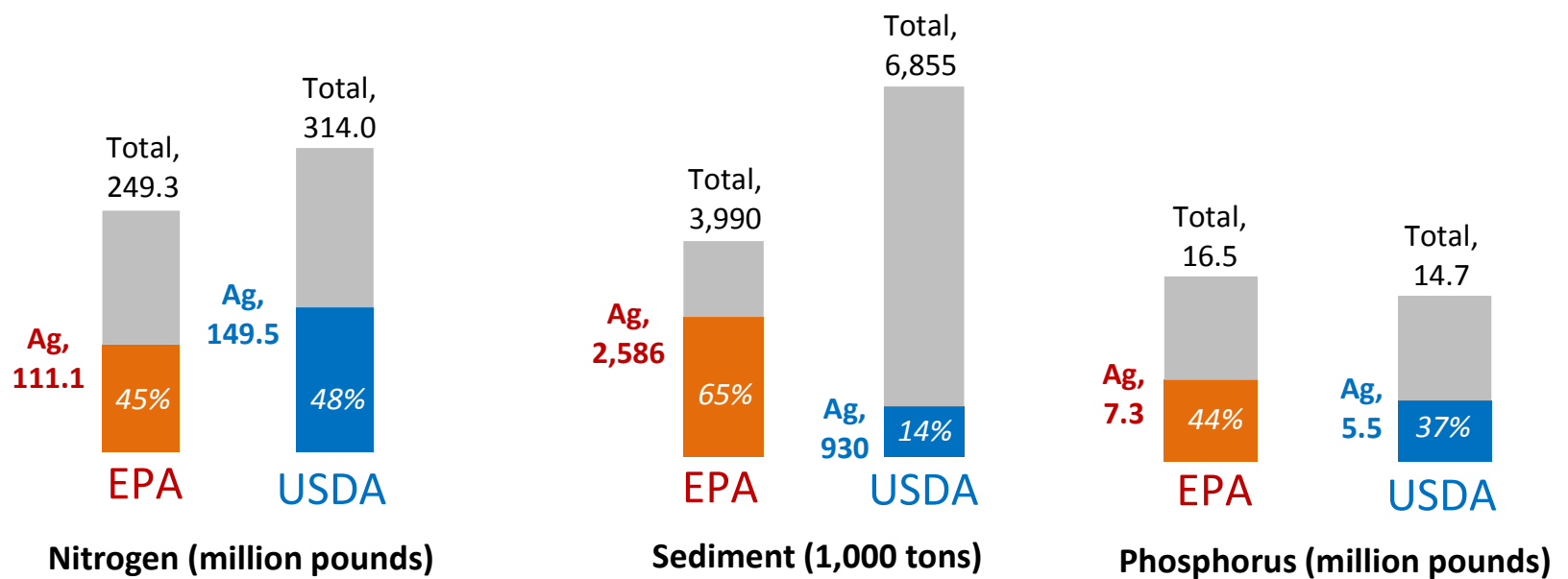
Final Comments on Draft TMDL Nov. 8, 2010

EPA Docket # EPA-R03-OW-2010-0736

# Agriculture's Concerns with Bay TMDL

- Conservation Enhancement Assessment Program (CEAP)
  - Based on statistically significant long-term monitoring
  - Provides best estimate of cultivated cropland loads in the Bay watershed
- Comparisons of EPA's draft loads with USDA's loads revealed discrepancies

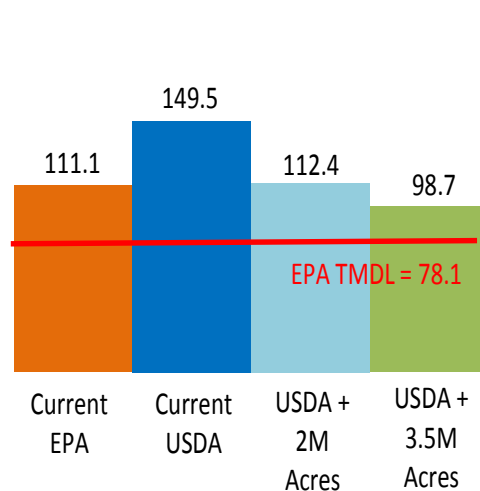
# Baseline Total Loadings for N, Sediment, and P -- All Agriculture



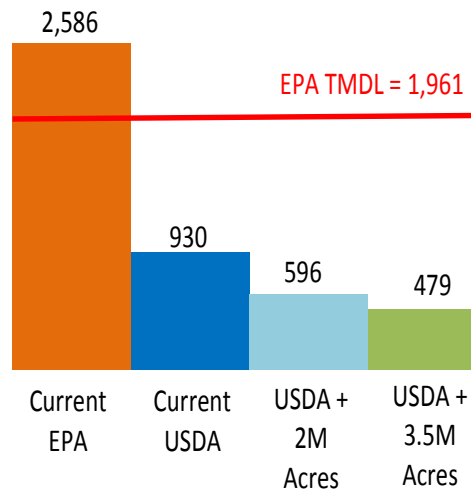
See Figure 2 from the report

# Baseline and USDA “Treated” Total Loads, N, Sediment, and P – Compared to Draft TMDL

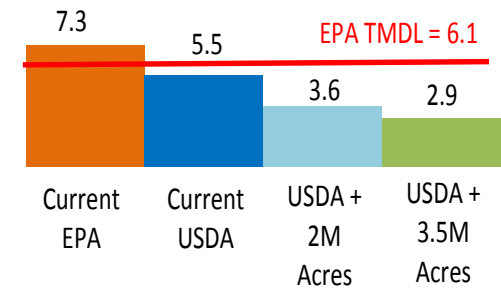
Agricultural Nitrogen  
(million pounds)



Agricultural Sediment  
(1,000 tons)



Agricultural Phosphorus  
(million pounds)



See Figure 4 from the report



# Lake Champlain Phosphorus TMDL

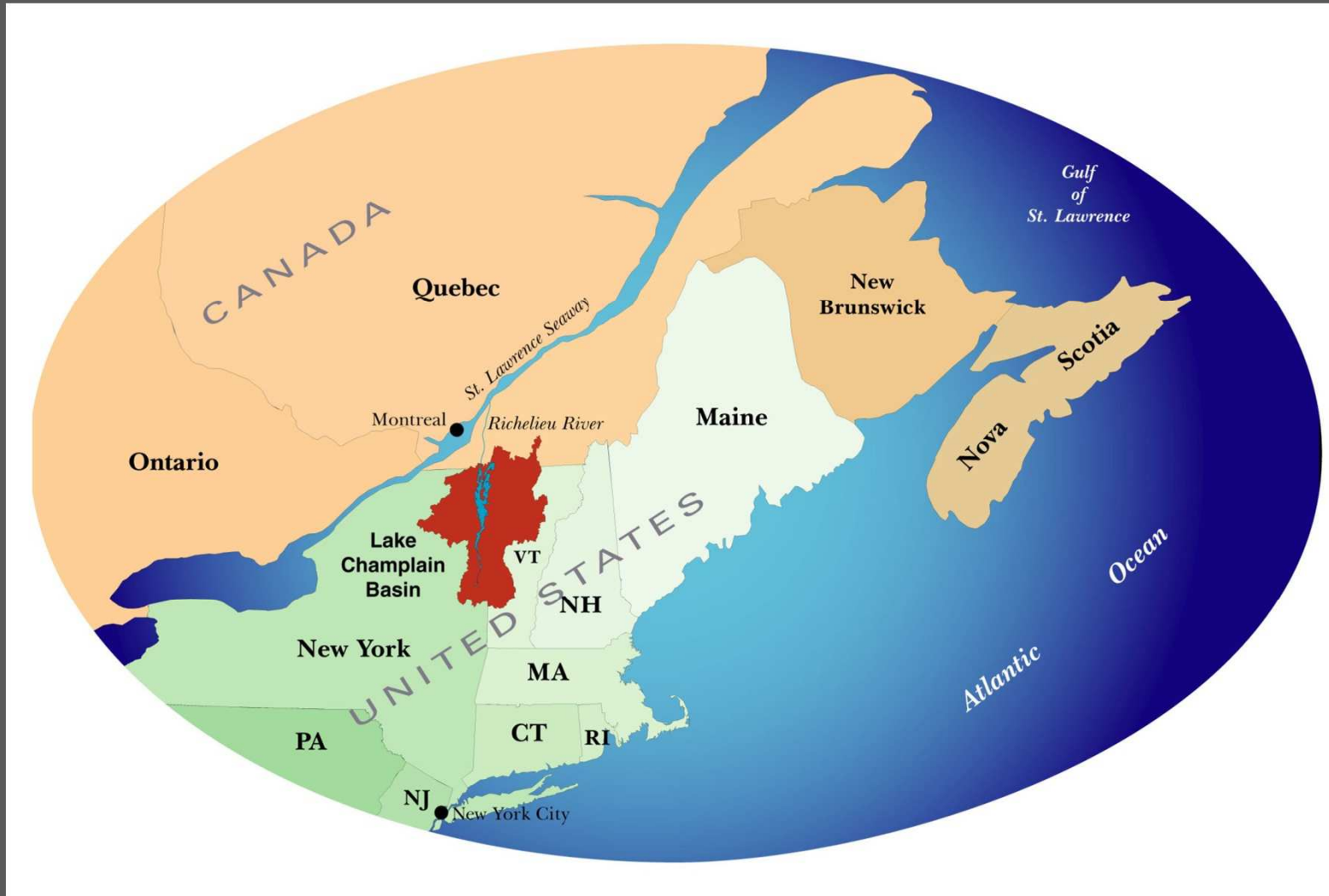
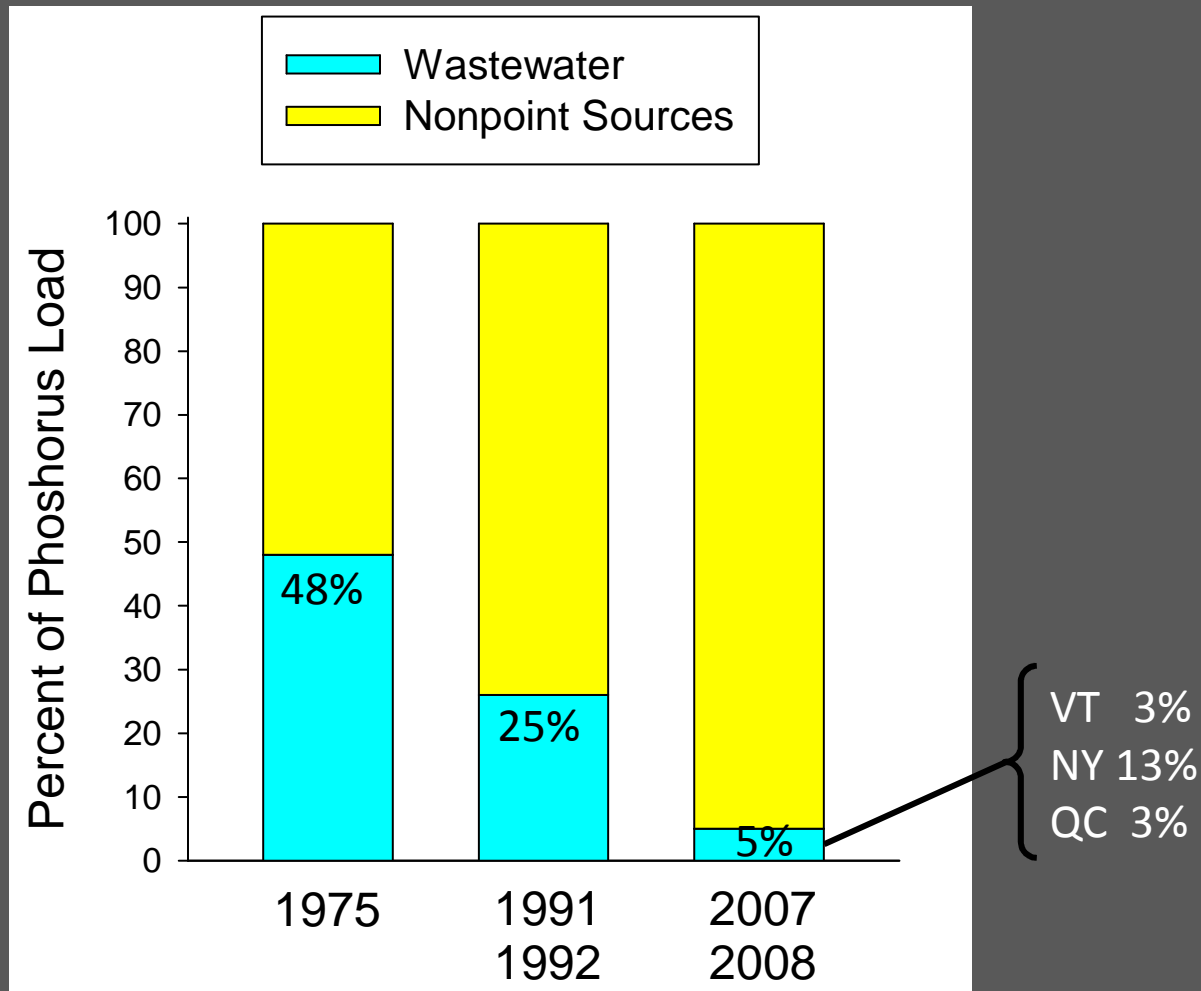


Figure courtesy of Lake Champlain Basin Program

# Wastewater Phosphorus Loads as a Percent of the Total Load to the Lake



# **VT uses TMDL to guide nonpoint source programs**

- VT-specific implementation plan
- Used during 2002 – 2009 to guide
  - Annual funding requests
  - Staffing levels
  - Program priorities
- Revised 2010 plan attracted additional state and federal resources for implementation

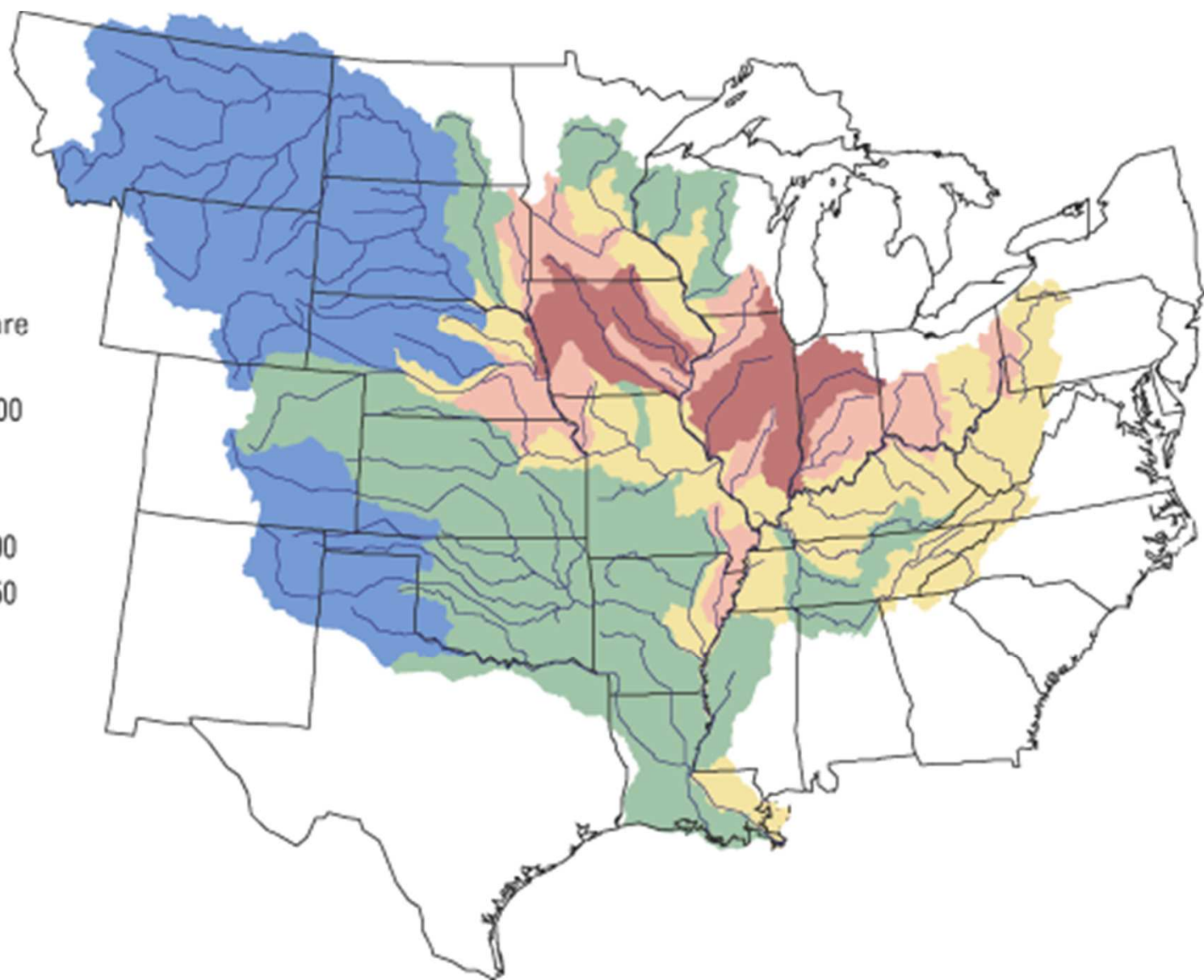
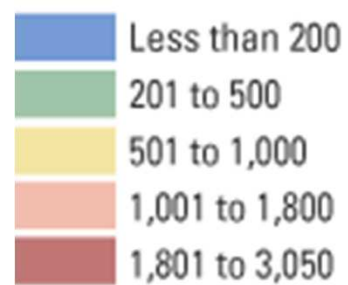


# EPA Region 1's Explanation

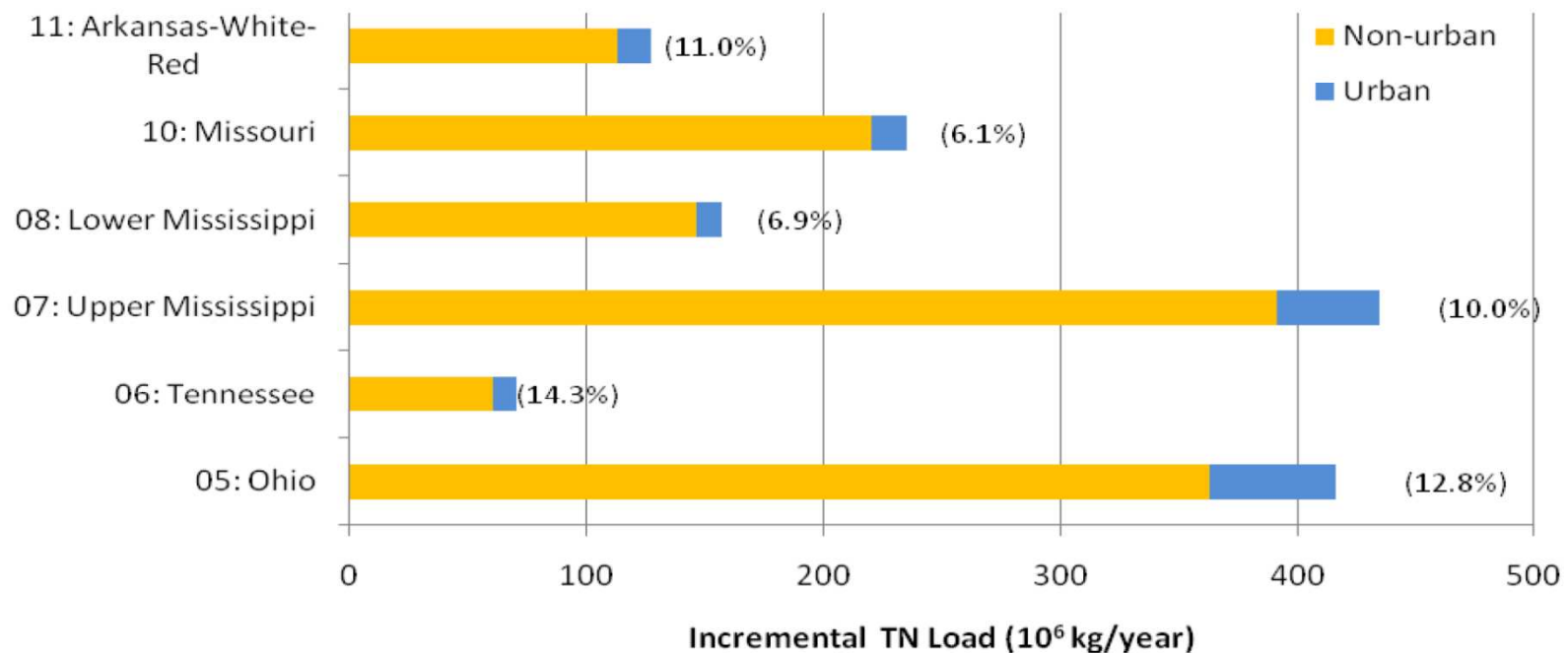
- Background:
  - Oct. 2008 lawsuit against EPA by Conservation Law Foundation over TMDL & VT wastewater plant
  - April 2010 CLF & EPA settlement agreement
- “We’ve reconsidered our 2002 approval...”
- EPA “is required to develop a new TMDL”
  - MOS is “insufficient and inconsistent with EPA regulations”
  - Reasonable assurance of nonpoint source load reductions is insufficient

### EXPLANATION

Nitrogen yield, in  
kilograms per square  
kilometer per year



**Total nitrogen load delivered to the northern Gulf of Mexico (adapted from Robertson et al., 2009).**



# EPA N-STEPS Program

- Designed to help states develop numeric nutrient criteria
- Recent contract award includes:
  - Assistance to states in Mississippi River basin for nutrient criteria
    - Including dissolved oxygen criteria in the Gulf of Mexico
  - Development of a mainstem Mississippi River model
  - Development of a Gulf of Mexico Model



# Questions?

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