National Status of Addressing Nutrients Under Clean Water Act Section 303(d) and Recent EPA Actions

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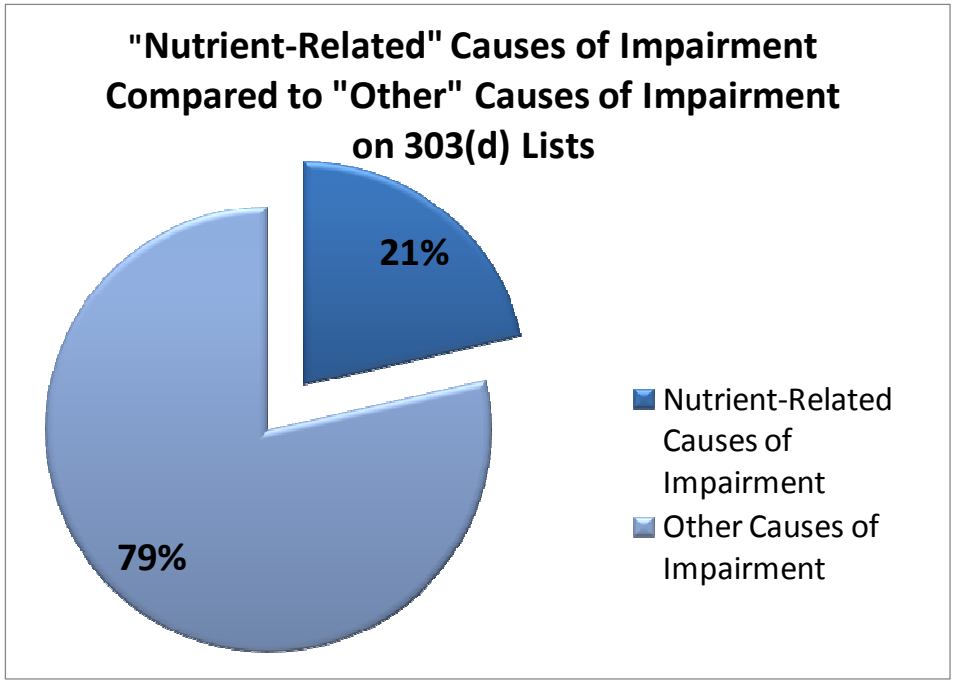
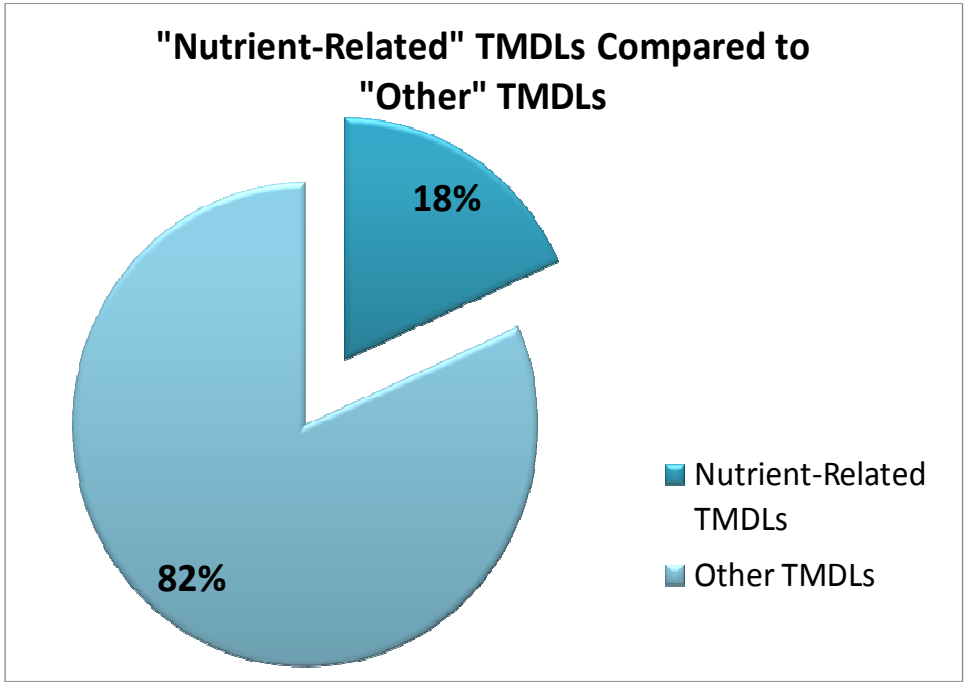
Overview

- National statistics on nutrient-related listings and TMDLs
- Ongoing CWA Section 303(d) Program nutrient activities and direction
- Recent Key Agency Actions on Nutrients

National Nutrient-related listing and TMDLs





- Of the ~71,000 waterbody-pollutant combinations listed nationally, over 15,000 (21%) can be categorized as nutrient-related (defined as 'nutrients, organic enrichment/oxygen depletion, noxious plants, algal growth, and ammonia').
- Of the ~44,000 TMDLs that have been developed nationally, over 8,000 (18%) address nutrient-related causes of impairment.

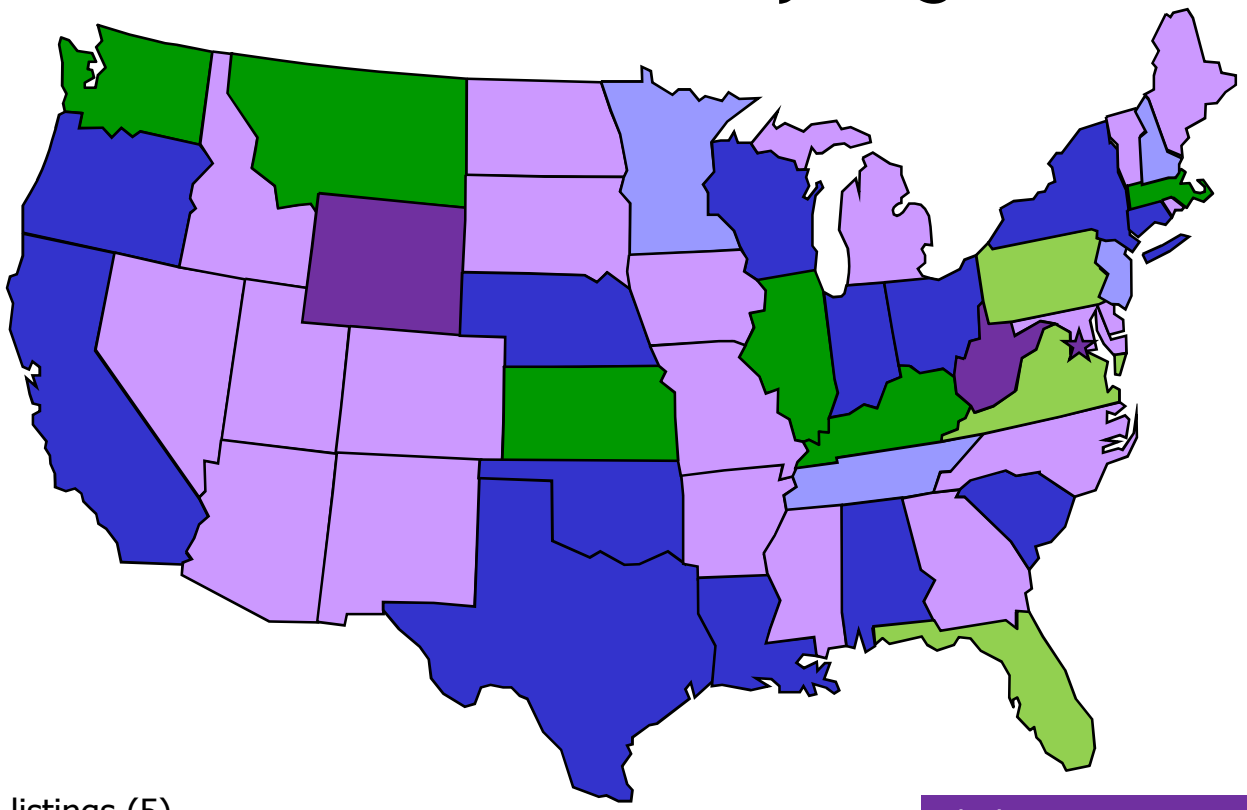
Based on 303(d) list data available in ATTAINS as of April, 2011.

Waterbody Types of Nutrient-related CWA Section 303(d) Listings & TMDLs

Waters with Nutrient-related	Streams/ Creeks/ Rivers	Lakes/ Reservoirs/ Ponds	Bays/ Estuaries	Coastal	Ocean/ Near Coastal	Wetlands	Other
Listings	7,394 (64%)	2,024 (18%)	1,242 (11%)	128 (1%)	177 (2%)	36 (<1%)	450 (4%)
TMDLs	3,049 (59%)	1,070 (21%)	85 (2%)	10 (<1%)	14 (<1%)	18 (<1%)	952 (18%)

Based on 303(d) list data available in ATTAINS as of April, 2011. http://www.epa.gov/waters/tmdl/expert_query.html

Number of CWA Section 303(d) Listed Nutrient-related Waterbody-pollutant Combinations by Region & State



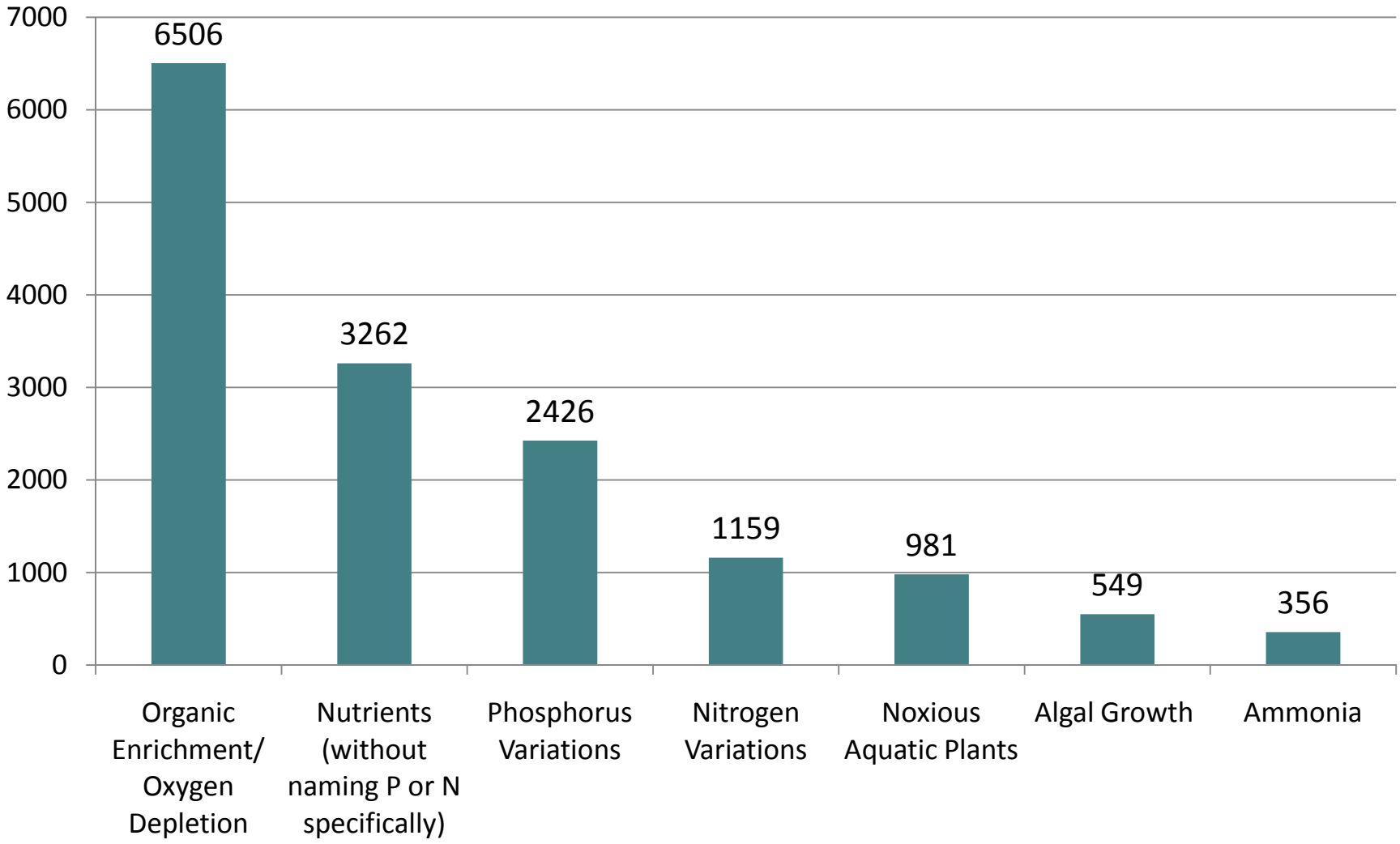
R1: 1,309 (9%)
R2: 687 (4%)
R3: 3,895 (25%)
R4: 2,564 (17%)
R5: 2,213 (14%)
R6: 720 (5%)
R7: 1,278 (8%)
R8: 740 (5%)
R9: 895 (6%)
R10: 1,004 (7%)

- 0 to 10 nutrient-related listings (5)
- 10 to 100 nutrient-related listings (23)
- 101 to 300 nutrient-related listings (14)
- 301 to 500 nutrient-related listings (5)
- 501 to 1,000 nutrient-related listings (6)
- 1,000 to 2,000 nutrient-related listings (3)

- Alaska
- Hawaii
- CNMI
- Guam
- American Samoa
- Virgin Islands
- Puerto Rico

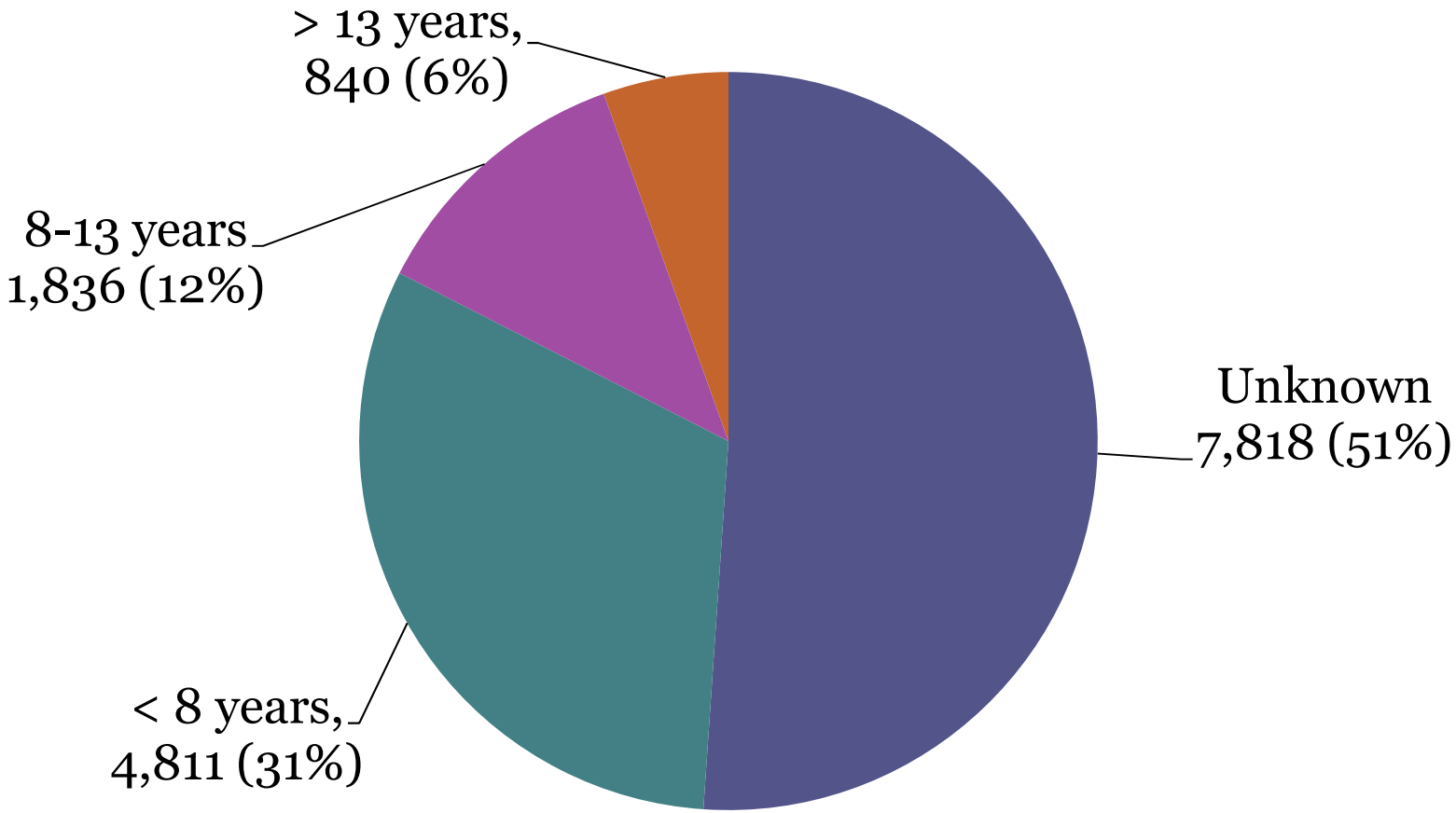
Based on the most recent 303(d) listing information available in ATTAINS as of April, 2011.

Nutrient-Related 303(d) Listings by Parent Category



* Based on 303(d) list data available in ATTAINS as of July, 2010. http://www.epa.gov/waters/tmdl/expert_query.html

Age of Initial Listing for CWA Section 303(d) Nutrient-related Impairments



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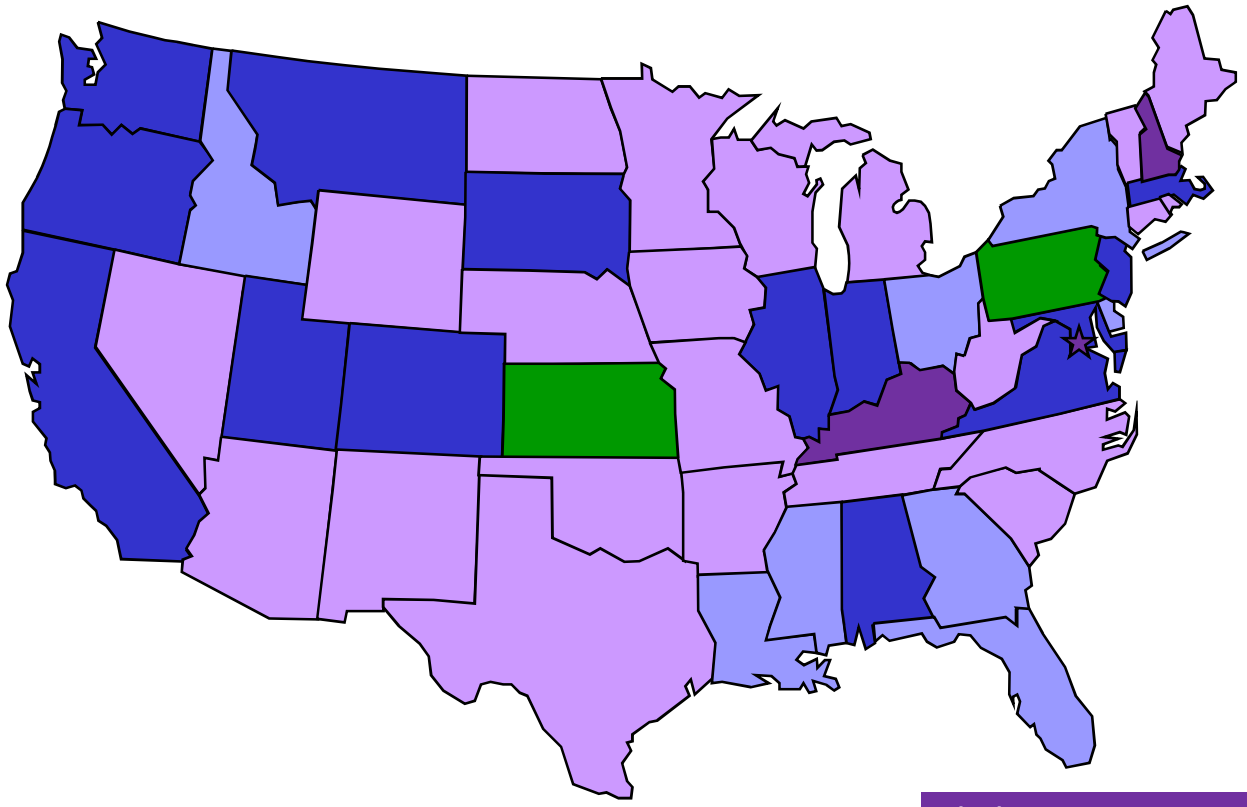
Number of CWA Nutrient-related TMDLs by State



R1: 282 (4%)
R2: 505 (6%)
R3: 1,704 (21%)
R4: 1,674 (21%)
R5: 782 (10%)
R6: 437 (5%)
R7: 753 (9%)
R8: 791 (10%)
R9: 314 (4%)
R10: 767 (10%)

- 0 to 10 nutrient-related TMDLs (8)
- 10 to 100 nutrient-related TMDLs (24)
- 101 to 300 nutrient-related TMDLs (14)
- 301 to 500 nutrient-related TMDLs (8)
- 501 to 1,000 nutrient-related TMDLs (2)

- Alaska
- Hawaii
- CNMI
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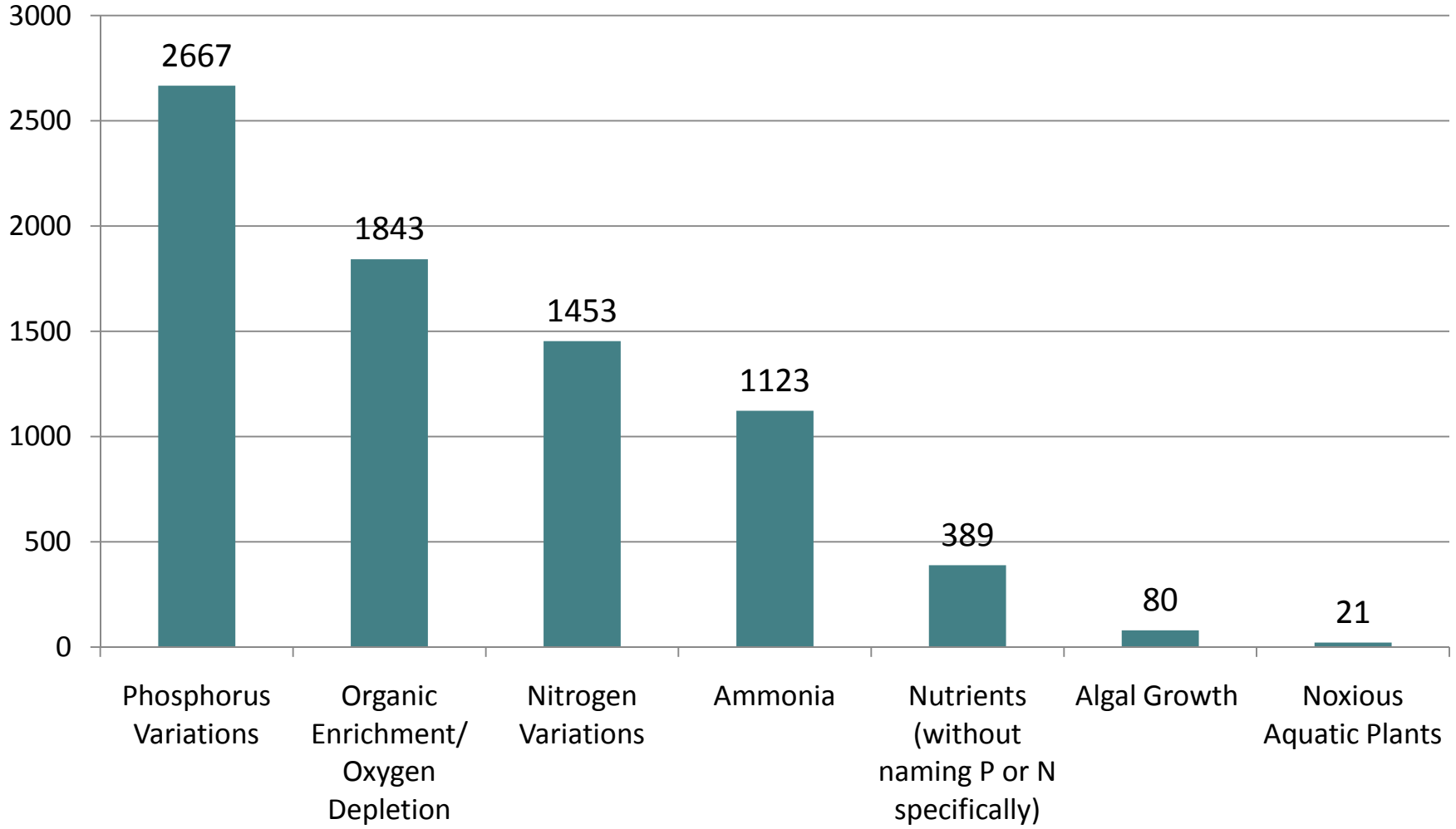
Nutrient-Related TMDLs by Parent Category



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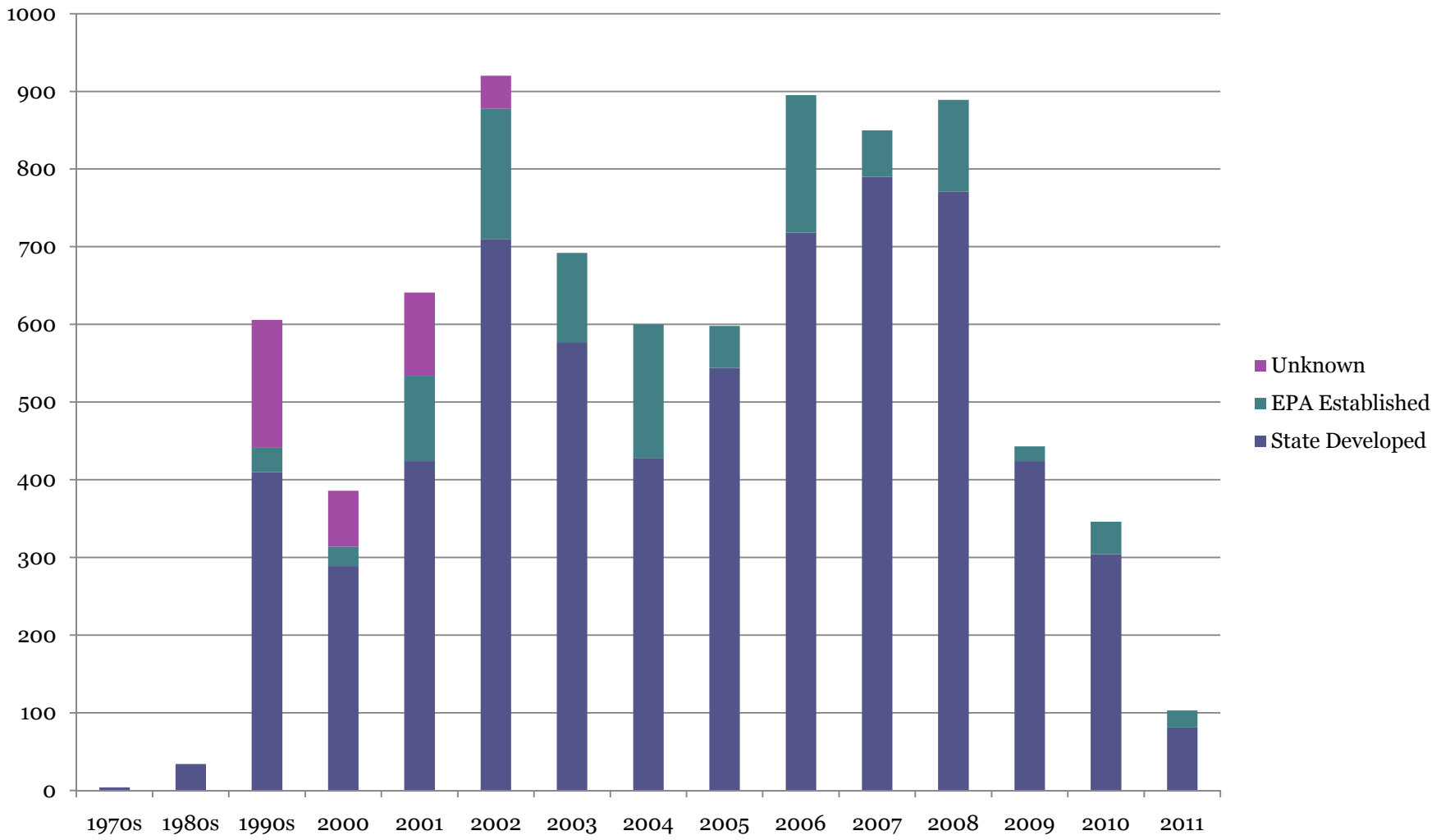
History of Nutrient-Related TMDL Development



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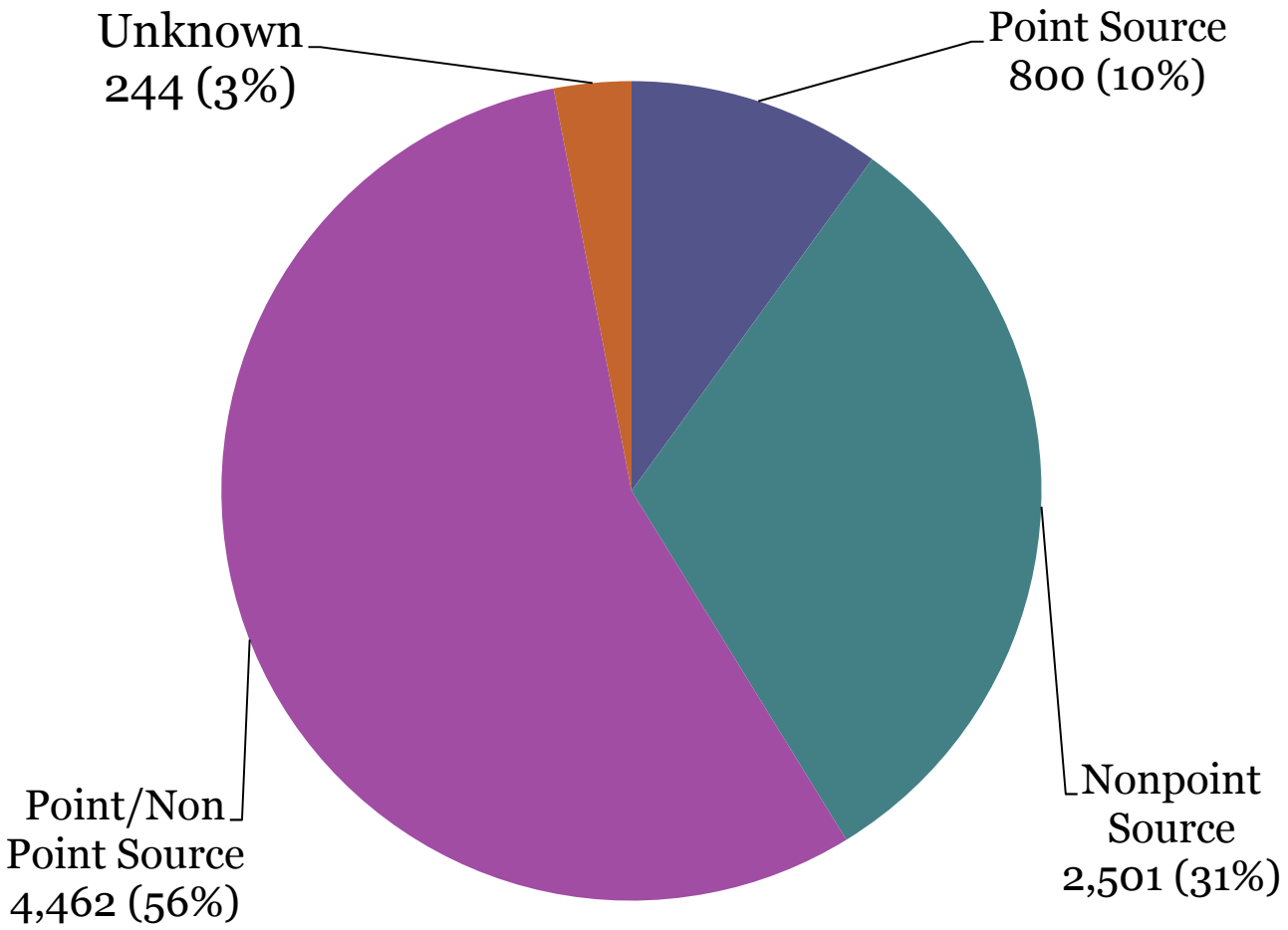
Source Categories of Nutrient-related TMDLs



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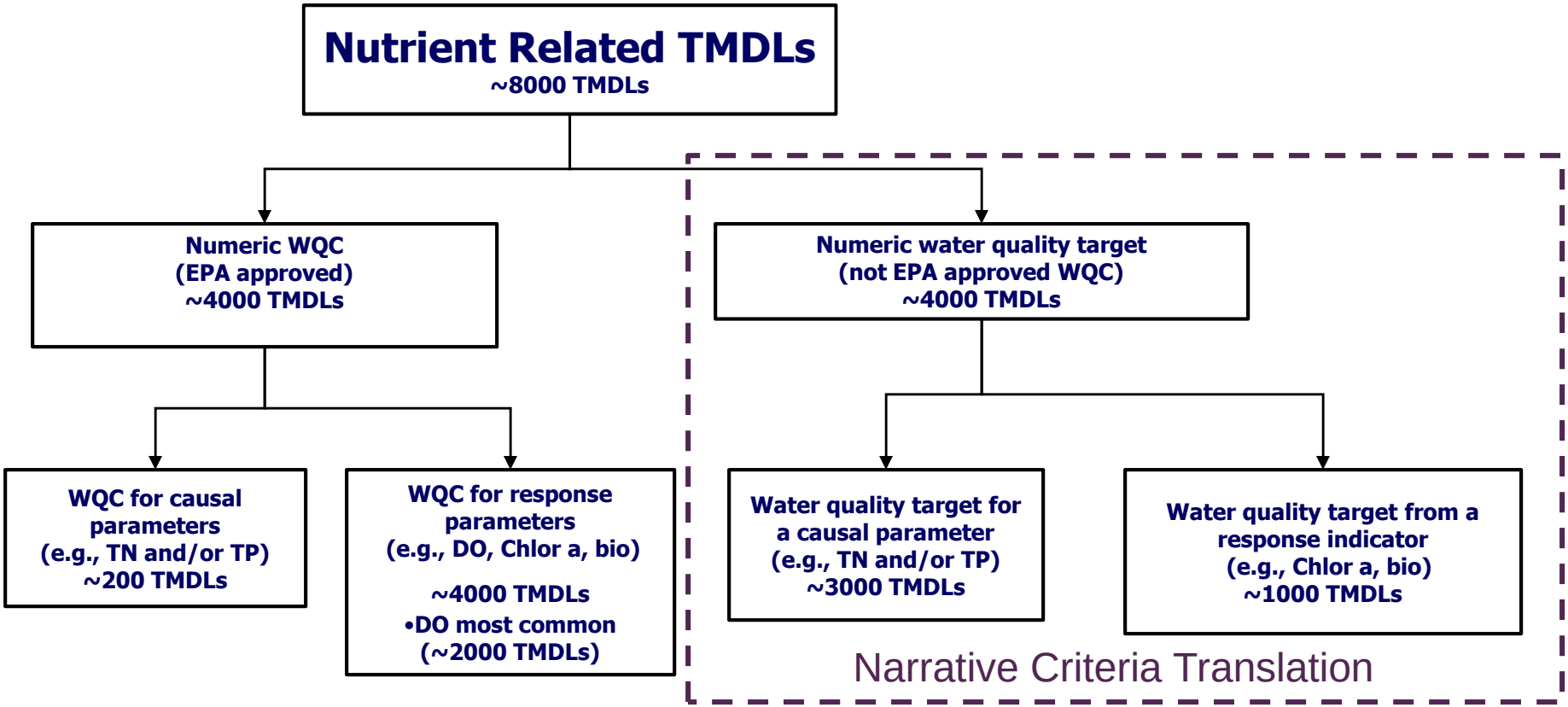
Water Quality Target in Nutrient TMDLs



Methods Commonly Used to Derive Water Quality Targets in Nutrient TMDLs (absent N/P WQC)

- EPA recommended criteria for N and/or P
- State guidance on causal and response variables
- Waterbody (site-specific) value
  - Reference waterbody condition
  - Stressor/response correlation
  - Model N and/or P water quality target from response indicator

CWA Section 303(d) Efforts Moving Forward

- Advance nutrient 303(d) program activities
  - EPA/State Nutrient TMDL Workshop held in February 2011 to provide an opportunity for technical exchange on nutrient TMDL development practices among practitioners.
  - Developing compendium of practices used in identifying nutrient impaired waters and developing TMDLs.

- TMDL Implementation
  - Develop tools for states to identify waterbodies with the highest potential for recovery
    - http://hudson.tetratech-ffx.com/RECOVERY_POTENTIAL/home.html
  - Additional emphasis on tracking waterbody restoration

Recent Key Agency Nutrient Activities

- Mississippi River Basin
  - Continued participation in the Hypoxia Task Force
  - Ongoing National Academy of Sciences advice to EPA
- EPA promulgation of numeric nutrient criteria for Florida inland waters (Nov. 2010)
- Chesapeake Bay TMDL finalized (Dec. 2010)
- Agency communicates several nutrient WQS policies in NEIWPCC and Maine response letters (February/March 2011)
  - WQS submissions to EPA must contain criteria that are scientifically defensible and protective of the designated use.
  - EPA considers state adoption of total nitrogen (TN) and total phosphorus (TP) numeric criteria, a priority.
  - State adoption of TN and TP numeric criteria are key to protecting local and downstream waters.
  - State impairment listings must be based on an independent assessment of the applicable WQS.
- Recommended elements of a state framework for managing nitrogen & phosphorus pollution (March 2011)

Activities (cont.)

Recommended elements of a state framework for managing nitrogen & phosphorus pollution

1. Prioritize watersheds on a statewide basis for nitrogen and phosphorus loading reductions
2. Set watershed load reduction goals based upon best available information
3. Ensure effectiveness of point source permits
4. Develop plans that target the most effective practices where they are needed most in agricultural areas
5. Assure N/P reductions from stormwater and septic systems
6. Assess progress in implementing and maintaining management activities and achieving load reductions goals
7. Annually report status, challenges, and progress toward meeting N/P loading reduction goals
8. Establish a work plan and phased schedule for N/P criteria development