



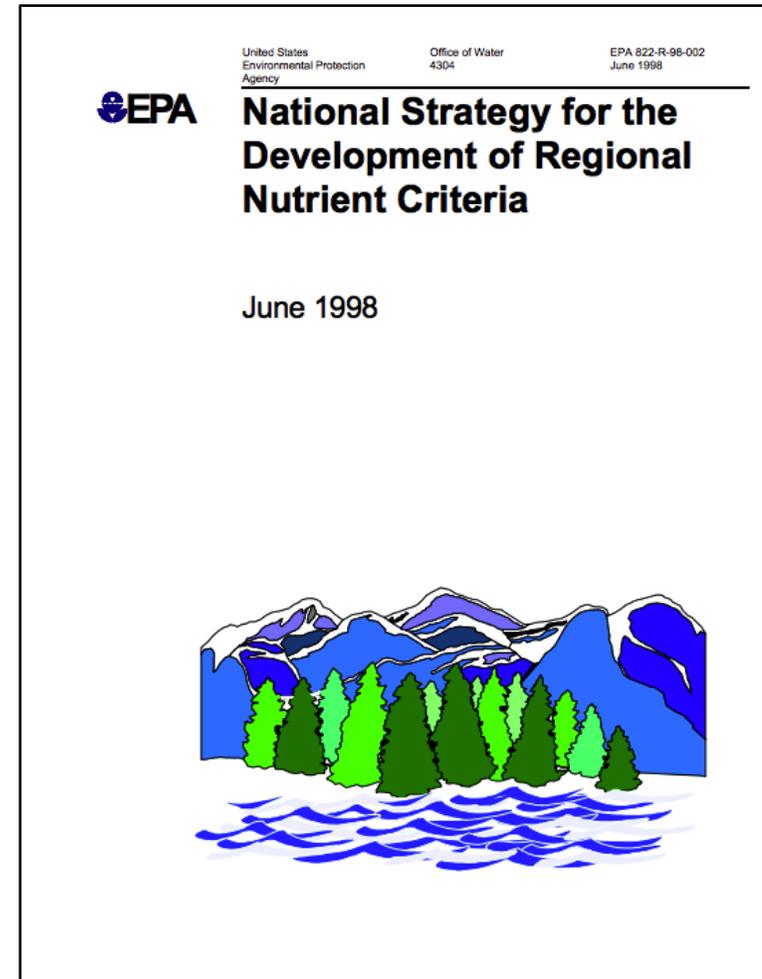
Nutrient Criteria Progress and Updates

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Nutrient Criteria Development Plan

- TCEQ Nutrient Criteria Development Plan (NCDP) was developed to comply with 1998 EPA National Nutrient Criteria Strategy.
- TCEQ submitted plans to EPA in 2001, 2006, 2014



2014 Nutrient Criteria Development Plan

- Purpose: Provide a framework for the continued development of numeric nutrient criteria for the State of Texas
- 2014 Nutrient Criteria Development Plan
 - [Nutrient Criteria Development Plan \(texas.gov\)](#)



Strategy of the 2014 NCDP

RESERVOIRS

ESTUARIES

**RIVERS &
STREAMS**

WETLANDS

**BOUNDARY
WATERS**

Strategy of the 2014 NCDP cont.

RESERVOIRS

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**RIVERS &
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**BOUNDARY
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Ongoing project: Estuaries

- Multispecies Multi-nutrient Plankton Model (MUMPS) in development
- Multi phase contract which started in 2017
- May be used for the evaluation of complex stressor-response relationships in San Antonio, Copano/Aransas, Baffin and Matagorda Bays



MUMPS SABS Model Simulator

A MODELING TOOL FOR THE PREDICTION OF
ALGAL BIOMASS AND DISSOLVED OXYGEN IN
TEXAS BAYS

Sierra Cagle^a, Daniel Roelke^a, Joydeb Bhattacharyya^b,

^a*Marine Biology, Texas A&M University, Galveston*

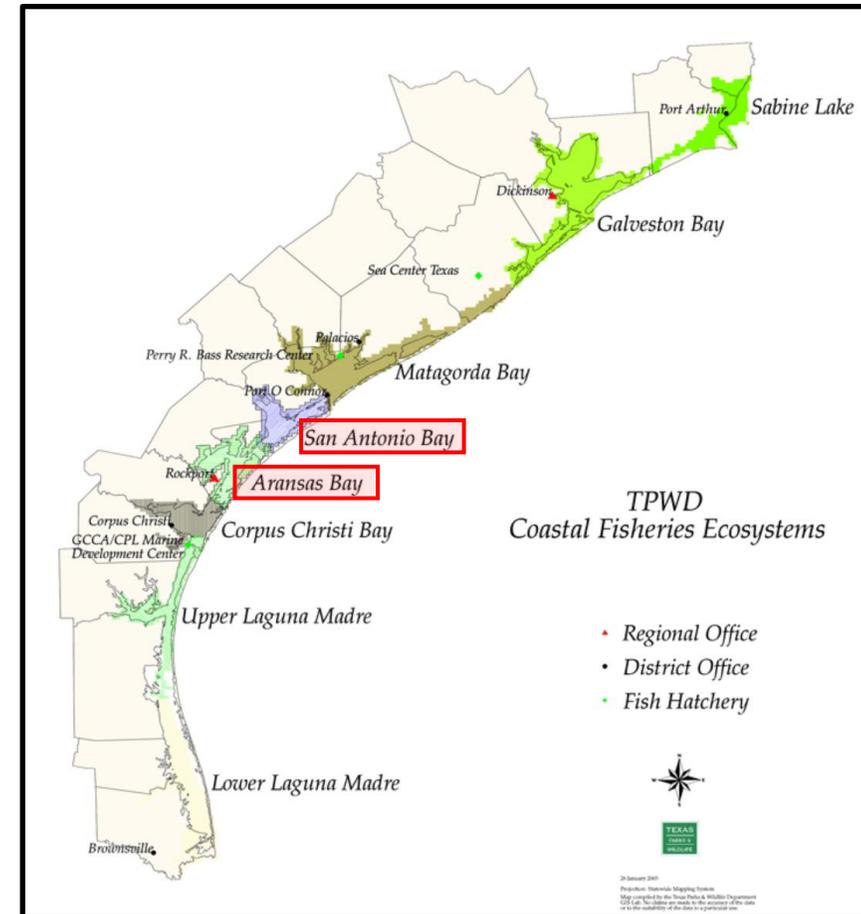
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TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

Moving forward: Estuaries

- MUMPS final phase
- Expand into upper and lower parts of Texas coast

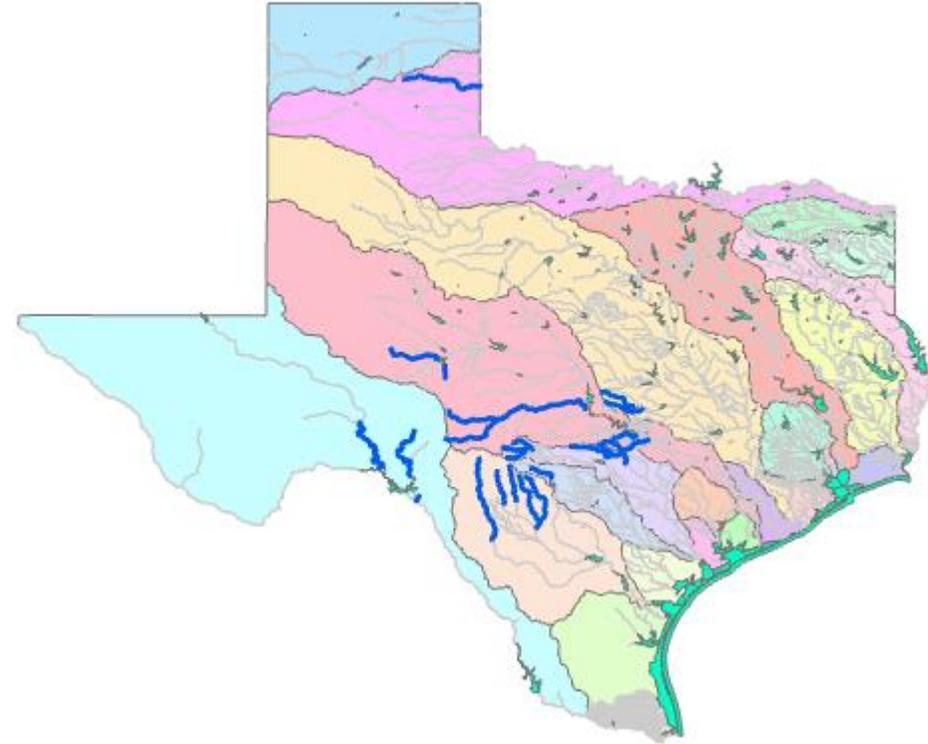


Moving forward: Reservoirs

- Coordinating with EPA and Tetra Tech through the N-STEPS program
- Focus on 75 reservoirs proposed in the 2010 TSWQS
- Goal:
 - Develop nutrient criteria for Total Phosphorus (TP), Total Nitrogen (TN), and Chlorophyll *a* (Chl *a*) for the 36 reservoirs with disapproved Chl *a* criteria
 - Develop TN and TP criteria for the 39 reservoirs with approved Chl *a* criteria

Moving forward: Rivers and Streams

- 22 Nutrient sensitive streams
- Background concentration for TP < 0.01 mg/L



Moving forward: Rivers and Streams cont.

- Limitation: TP data mostly reported at LOQ (0.02 mg/L)
- Question: Can we reliably measure down to 0.01 mg/L for TP?
- CRP laboratory study to address limitation

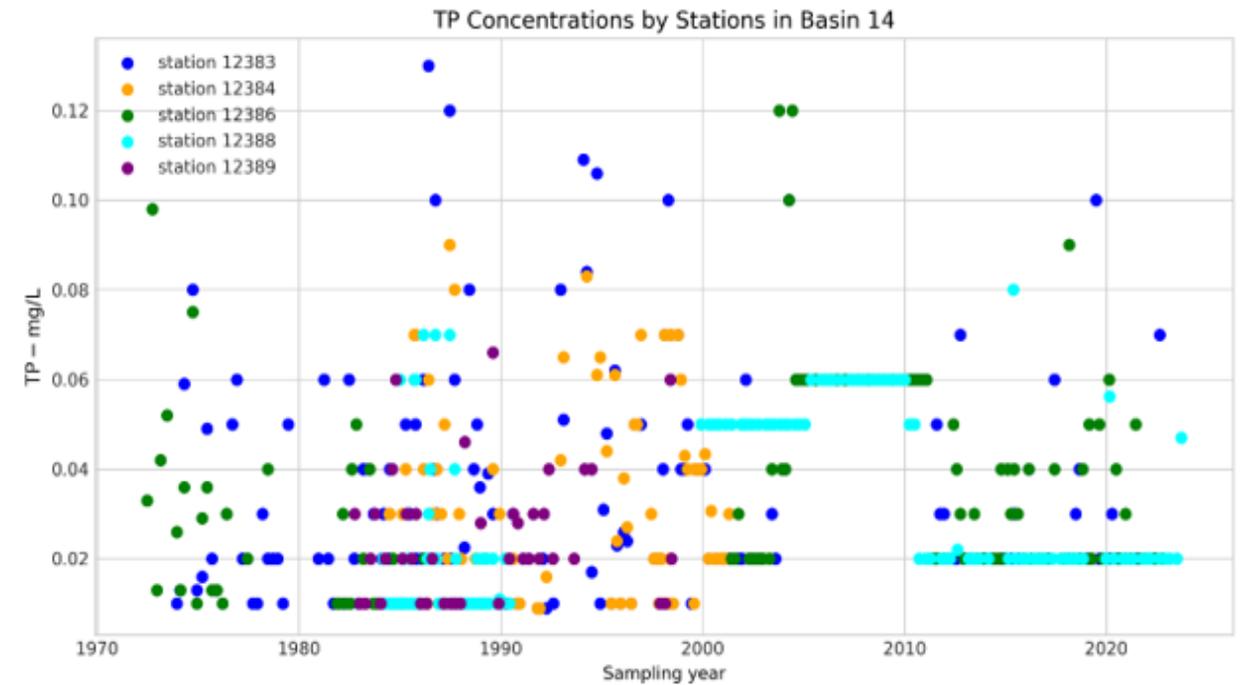


Figure 11: Total phosphorus concentrations for stations 12383, 12384, 12386, 12388 and 12389 located on the Llano River.

Moving forward: Rivers and Streams cont..

- Why does it matter?
 - studies show ecological impacts at TP concentration of 0.01 mg/L for these types of streams
 - first step for the WQS program towards establishment of protective thresholds and development of TP numeric criterion

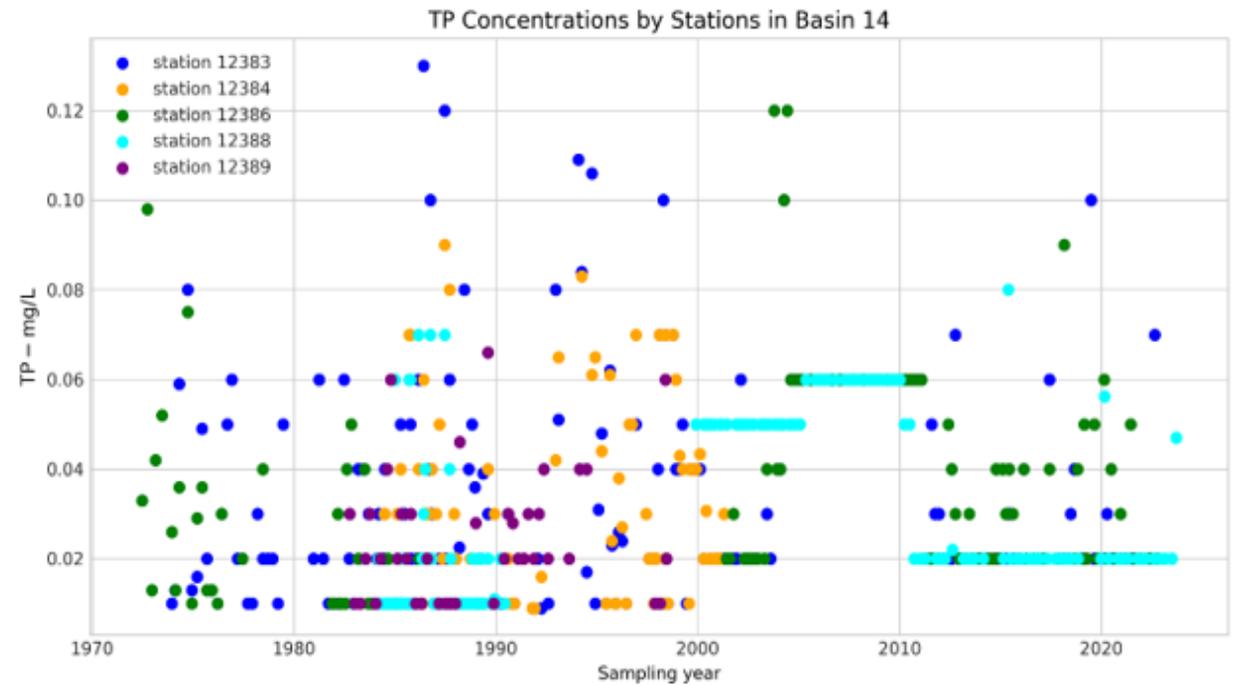


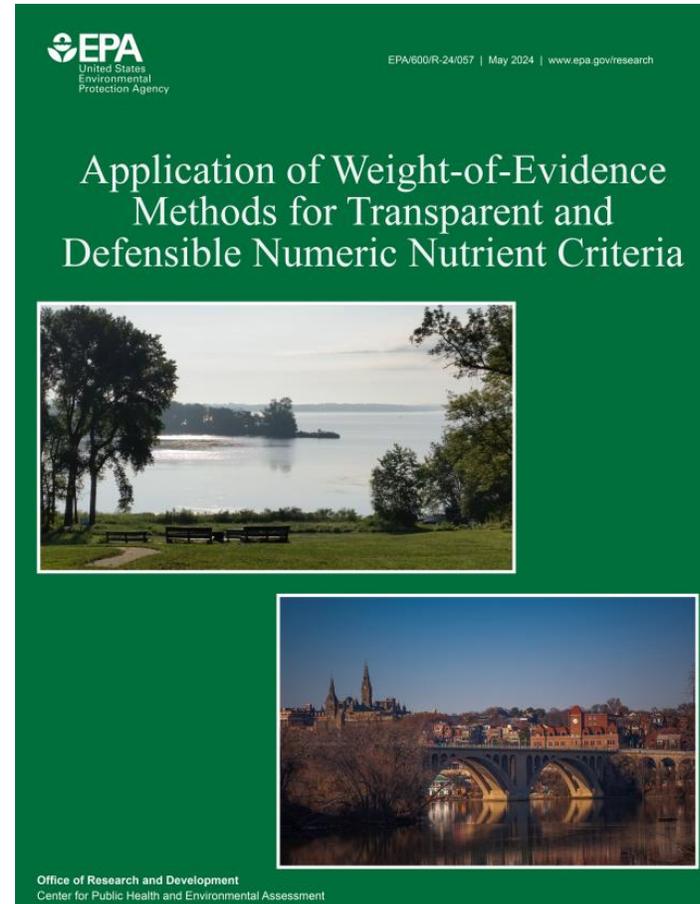
Figure 11: Total phosphorus concentrations for stations 12383, 12384, 12386, 12388 and 12389 located on the Llano River.

Federal Updates: NNC

- EPA 05/24 Application of Weight-of-Evidence Methods for Transparent and Defensible Numeric Nutrient Criteria

Purpose:

- Describe the core principles and essential steps of the basic WoE framework and how the framework aligns with the phases of criteria development.



How to Participate

Nutrient Criteria Advisory Workgroup

- Sign up for email notifications
- Email List:

[Texas Commission on Environmental Quality
\(govdelivery.com\)](http://www.govdelivery.com)



Website:

https://www.tceq.texas.gov/waterquality/standards/stakeholders/nutrient_criteria_group.html



Questions?

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