

Nutrient Management Strategy for the Delaware River Estuary

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Water Quality Advisory Committee & Model
Expert Panel Meeting
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Background



Status

- ✓ Elevated nutrient loadings & concentrations (5x-10x Chesapeake)
- ✓ Absence of worst nutrient symptoms (hypoxia, Harmful Algal Blooms, fish kills)

Nutrient Criteria Process

- Nutrient concentrations to maintain “uses” & ecological health
- U.S. EPA Priority (National Nutrient Strategy - 1998; Stoner Memo - March 2011)
- DRBC Lead for Delaware Estuary & Delaware River
- Nutrients and/or “Nutrient-Related” Parameters (D.O., Chl *a*)
- Two Main Approaches
 - i. “Reference Condition”
 - ii. “Effects-Based” ← *only option for Delaware Estuary*

Background

History

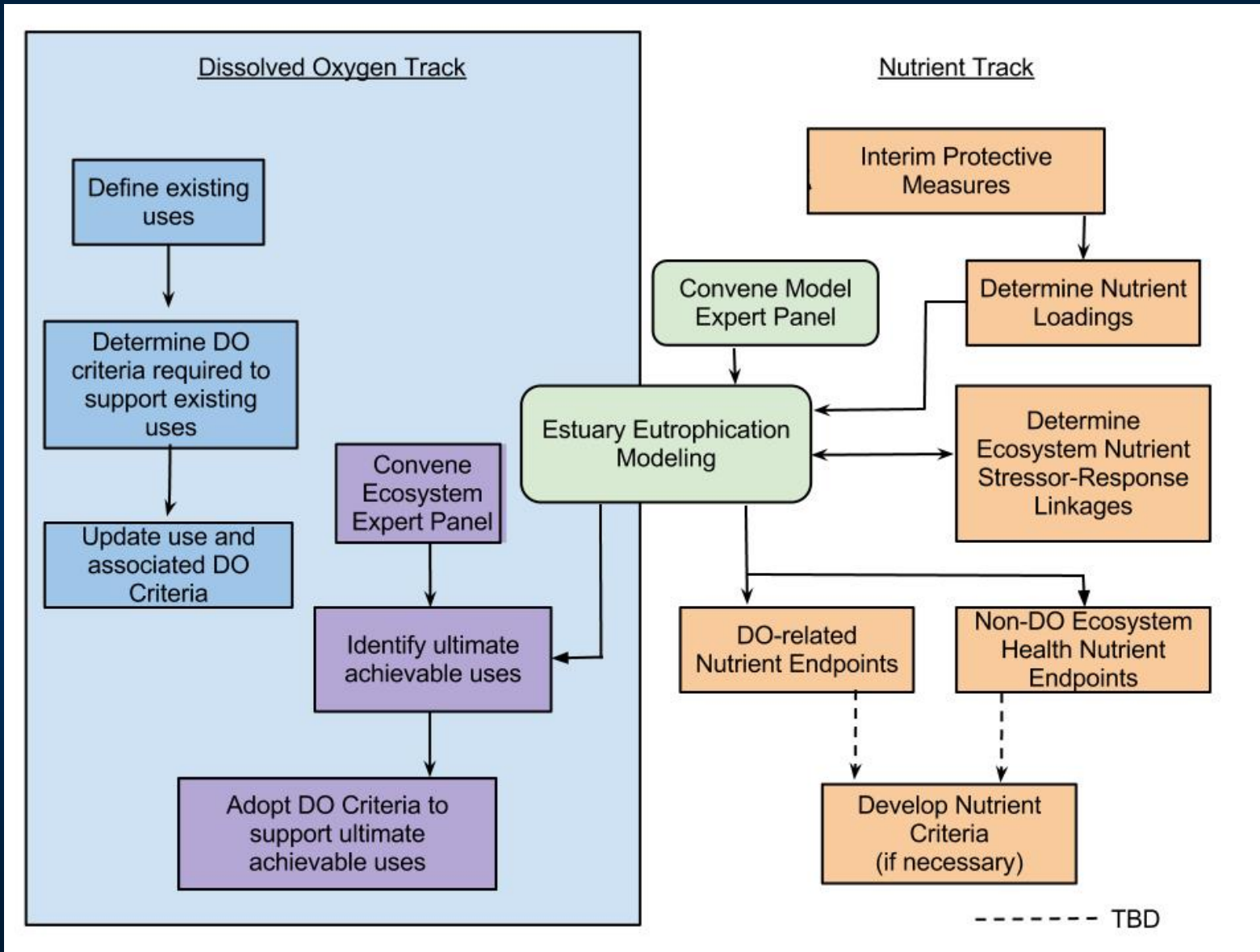
- 2007 - 2008: DRBC staff prepares Nutrient Criteria Strategy for discussion by Water Quality Advisory Committee (WQAC).
 - Strategy focused on the Special Protection Waters existing water quality (EWQ) as initial management approach.
 - Estuary approach focused on developing numerical values to protect existing water quality.
- July 2008: WQAC forms Nutrient Management Subcommittee to develop management options.

WQAC Discussions



- ❑ Discussions at the WQAC and MAC centered on the need for DRBC to develop and adopt interim criteria for nutrients for the estuary given the lack of controls on nutrients.
- ❑ Considerations of interim protective measures recognized persistent DO issues that need to be addressed along with nutrient endpoints.
- ❑ A dual track approach was recommended to address both issues.

Need For Dual Tracks



Phased Approach

- ❑ In 2009, the WQAC recommended initial measures to address nutrients.
 - ✓ **Interim Protective Measures** - measures that could be implemented in the short term to address the current uses of the estuary and provide data to assess the need for nutrient criteria.
 - ✓ Two key elements of these measures are monitoring of point source and non-point sources.
- ❑ July 2010: Commission authorizes two year monitoring program for point sources.

Ongoing Initiatives



- ❑ Nutrient Strategy Document: December 2012
- ❑ Point Source Monitoring: Fall 2011 to 2014
- ❑ Non-point Source Loading Assessment: planned for first half of 2013.
- ❑ New Eutrophication Model for the Estuary
 - ✓ Model Expert Panel
- ❑ DRBC and ACOE staff are collaborating on the evaluation of estuary salinity models for use with reservoir operation scenarios.

Questions?

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