Criteria Assessment Protocol Workgroup Workplan Overview

Tish Robertson, Matt Stover, Peter Tango, Amanda Shaver
Criteria Assessment Protocol Workgroup Leadership
Clean Water Goal Team Meeting
June 23, 2026

The Susquehanna River flows through New York and Pennsylvania to deliver half of the Chesapeake Bay's fresh water near Havre de Grace, Maryland.

Clean Water

Clean water is the foundation of healthy fisheries, habitats, farmla communities across the watershed. However, excess nitrogen, phos sediment and toxic contaminants can degrade our waterways, harr and pose risks to human health. Changes in the landscape and envi conditions may exacerbate these impacts. Chesapeake Bay Progra use a variety of tools to reduce excess nitrogen, phosphorus and se address toxic contaminants and monitor progress toward achievin quality standards. These actions support sustainable economies that depend on a healthy Bay and watershed.

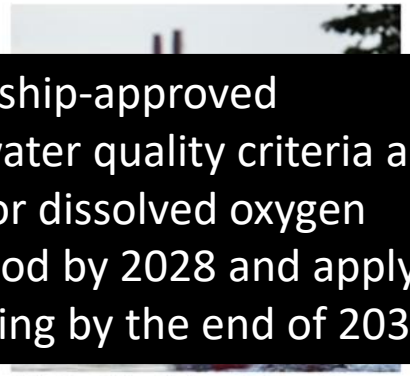
Outcomes

Reducing Excess Nitrogen, Phosphorous & Sediment

Implement and maintain practices and controls to reduce nitrogen, phosphorus and sediment. These reductions are necessary to achieve the applicable water quality standards, as described in the Bay TMDL. Those water quality standards support living resources and protect human health, as required by the Clean Water Act.

- Through 2030, signatories will continue to accelerate completion of all interim water quality planning targets through implementation of Chesapeake Bay Watershed Implementation Plans, two-year milestone commitments and other innovative strategies to achieve and maintain reduced levels of nitrogen, phosphorus and sediment.
- By December 31, 2030, revise the planning targets approved by the Principals' Staff Committee for nitrogen, phosphorus and sediment, incorporating the latest watershed modeling, monitoring data and research findings, and develop new or amended Watershed Implementation Plans to meet the updated targets by 2040.
- Demonstrate net reductions in nitrogen, phosphorus and sediment through multiple lines of evidence, including modeling and monitoring data.

Toxic & Emerging Contaminants



Students paddle on the Anacostia River, where partners are working to clean up contaminants.

Target: Develop and expand partnership-approved approaches for assessing whether water quality criteria are being met for all designated uses. For dissolved oxygen criteria, establish an approved method by 2028 and apply the method for data analysis and reporting by the end of 2030.

Water Quality, Standards Attainment & Monitoring

Measure changing water quality conditions by maintaining monitoring networks and our collective progress toward achieving clean water throughout the Chesapeake watershed.

- Maintain full core monitoring network operations (i.e., nontidal water qu SAV, tidal water quality, benthic and community science) annually to support analysis an communication of water quality loads, trends and criteria attainment.
- Develop and expand partnership-approved approaches for assessing whether water quality criteria are being met for all designated uses. For dissolved oxygen criteria, establish an approved method by 2028 and apply the method for data analysis and reporting by the end of 2030.
- Maintain or exceed the rate of improvement in the water quality standards attainment indicator relative to the ~~1985-~~2022 baseline.
- Analyze and report status/loads, trends and factors affecting those trends for nontidal and tidal water quality.

Criteria Assessment Protocol Workgroup Priorities

Assess all applicable designated uses in the Chesapeake Bay and its tidal tributaries

- Per the WQSAM Outcome, we are charged with having an approved method by 2028 and applying the method for analysis and reporting by the end of 2030.

- VA and MD are aiming to include these methods in their upcoming 305b/303d Integrated Reports

Chesapeake Bay Dissolved Oxygen Water Quality Criteria

Designated Use	Criteria Concentration/Duration	Protection Provided	Temporal Application
Migratory fish spawning and nursery use	7-day mean ≥ 6 mg/L (tidal habitats with 0-0.5 salinity)	Survival/growth of larval/juvenile tidal-fresh resident fish; protective of threatened/endangered species	February 1-May 31
	Instantaneous minimum ≥ 5 mg/L	Survival and growth of larval/juvenile migratory fish; protective of threatened/endangered species	
	Open-water fish and shellfish designated use criteria apply		June 1-January 31
Shallow - water bay grass use	Open–water fish and shellfish designated criteria apply		Year-round
Open-water fish and shellfish use[1]	30-day mean ≥ 5.5 mg/L (tidal habitats with ≤0.5 salinity)	Growth of tidal-fresh juvenile and adult fish; protective of threatened/endangered species	Year-round
	30-day mean ≥ 5 mg/L (tidal habitats with >0.5 salinity)	Growth of larval, juvenile and adult fish and shellfish; protective of threatened/endangered species	
	7-day mean ≥ 4 mg/L	Survival of open-water fish larvae	
	Instantaneous minimum ≥ 3.2 mg/L	Survival of threatened/endangered sturgeon species[1]	
Deep-water seasonal fish and shellfish use	30-day mean ≥ 3 mg/L	Survival and recruitment of bay anchovy eggs and larvae	June 1-September 30
	1-day mean ≥ 2.3 mg/L	Survival of open-water juvenile and adult fish	
	Instantaneous minimum ≥ 1.7 mg/L	Survival of bay anchovy eggs and larvae	
	Open-water fish and shellfish designated-use criteria apply		October 1-May 31
Deep channel seasonal refuge use	Instantaneous minimum ≥ 1 mg/L	Survival of bottom-dwelling worms and clams	June 1-September 30
	Open-water fish and shellfish designated use criteria apply		October 1-May 31

1. When water column temperatures are greater than 29 ºC, an open water dissolved oxygen criterion for the instantaneous minimum of 4.3 mg/L is applied to protect habitat for survival of shortnose sturgeon.

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Currently assessed using 3D Interpolator

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Criteria Assessment Protocol Workgroup Priorities

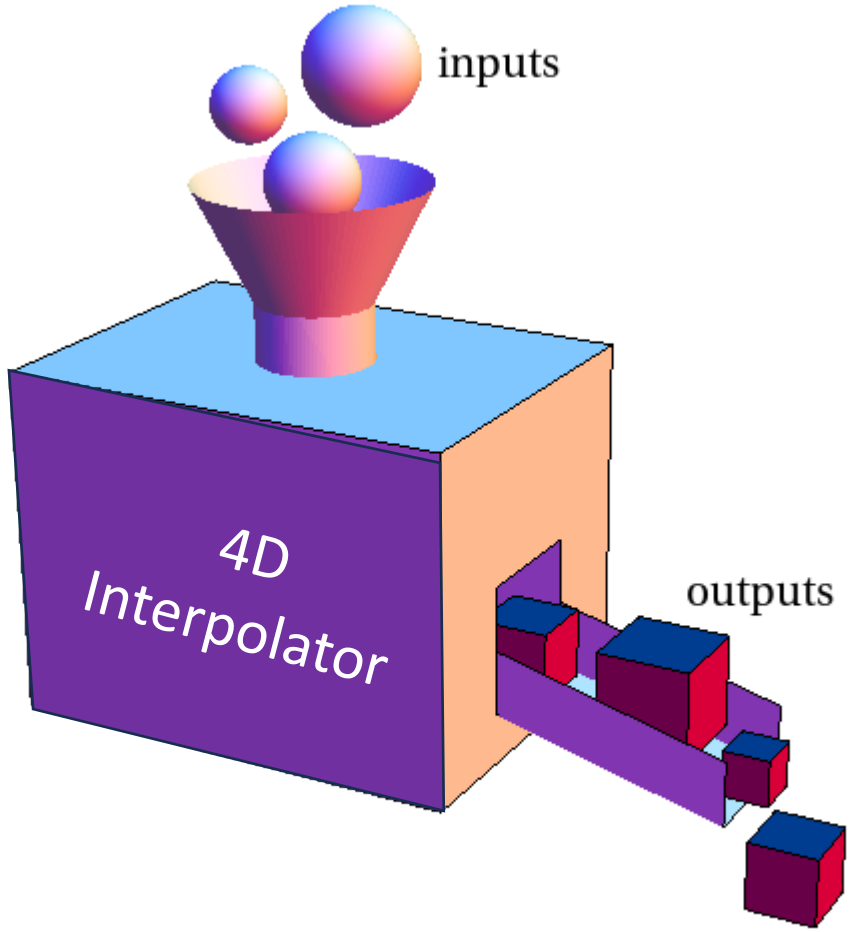
Decision rules to use with tools intended for DO criteria assessment

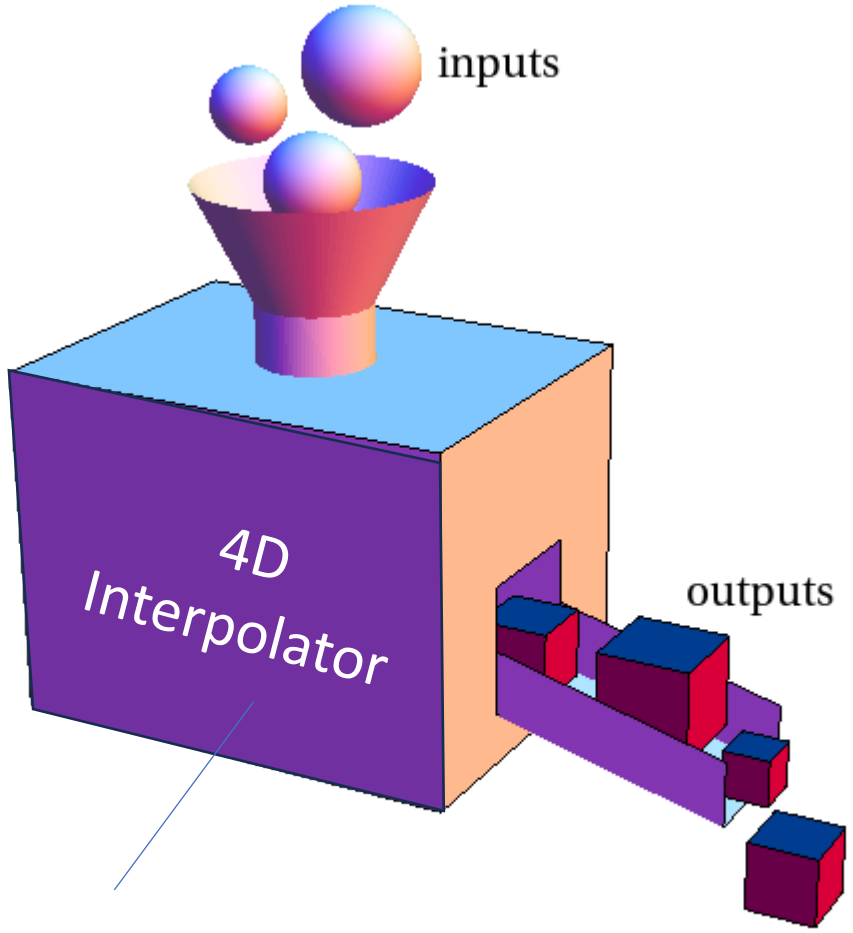
- Chesapeake Bay Partnership 4-D Interpolator
- States' Multiple-Lines-of-Evidence (SMLE) Approach

  -Results from existing CBP tool(s) would be combined with results produced through other analytical techniques utilized by States.

The goal is to have some consistency in the rules used in these tools.

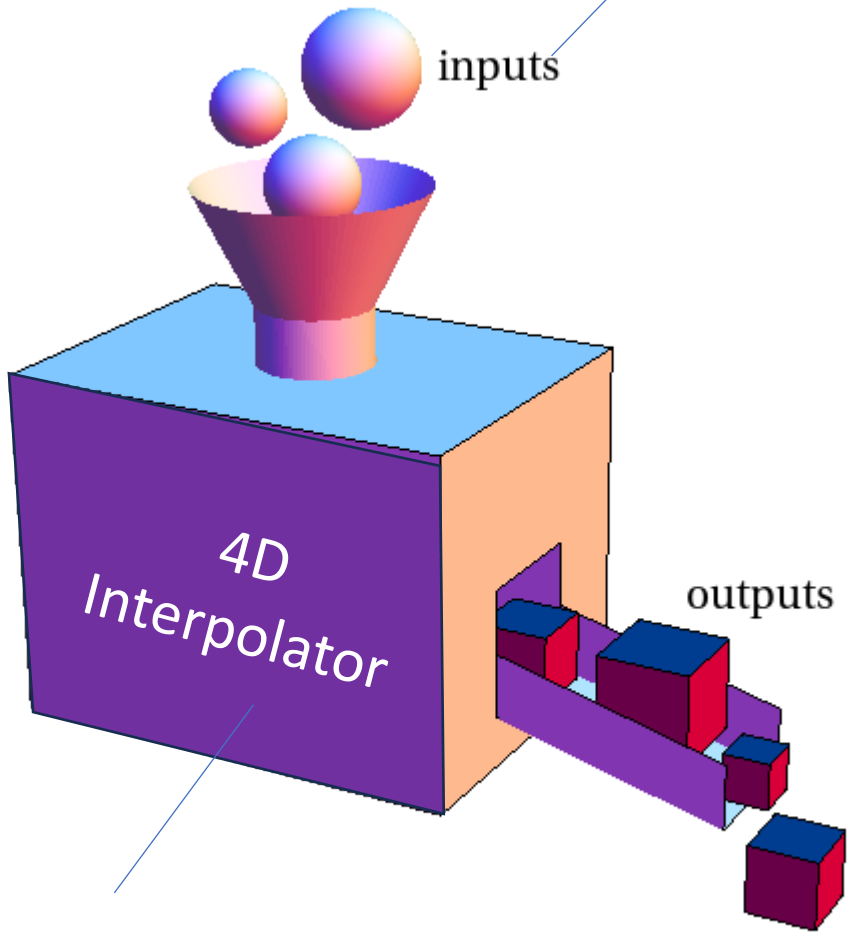
Members of the Criteria Assessment Protocol Workgroup have a long history of developing assessment methods and decision rules used by the jurisdictions to determine the attainment of Chesapeake Bay water quality criteria in tidal waters.


inputs
4D
Interpolator
outputs



Statistical models based on existing monitoring data that describe the spatial and temporal variability of Bay DO, salinity, and temp

New monitoring data



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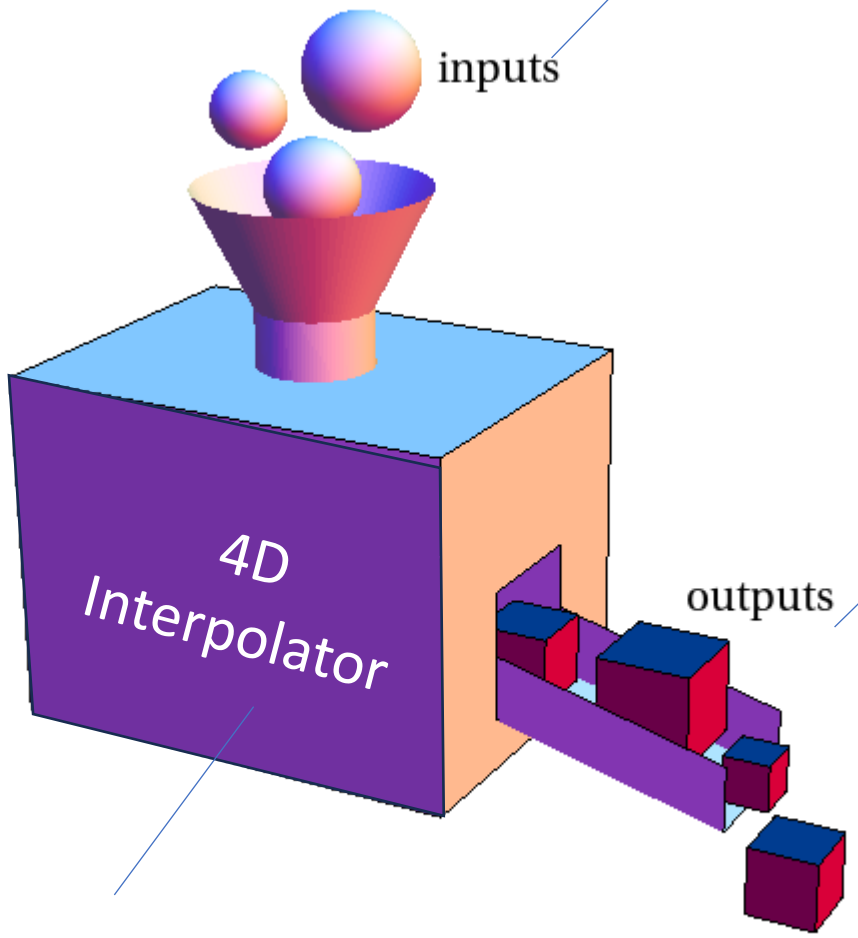

Hourly DO,salinity, and temperature estimates for each Interpolator cell in the tidal Bay waters

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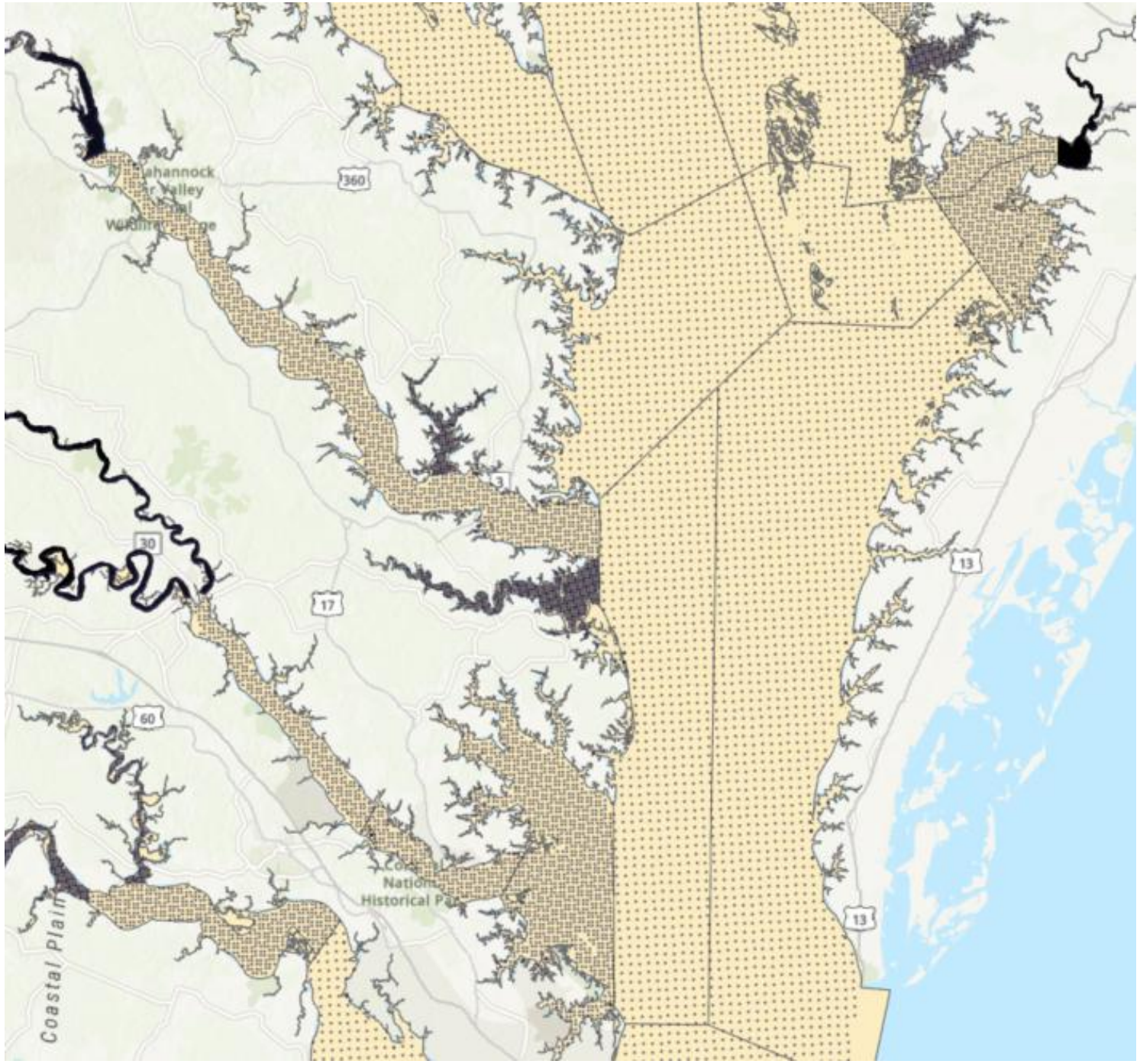


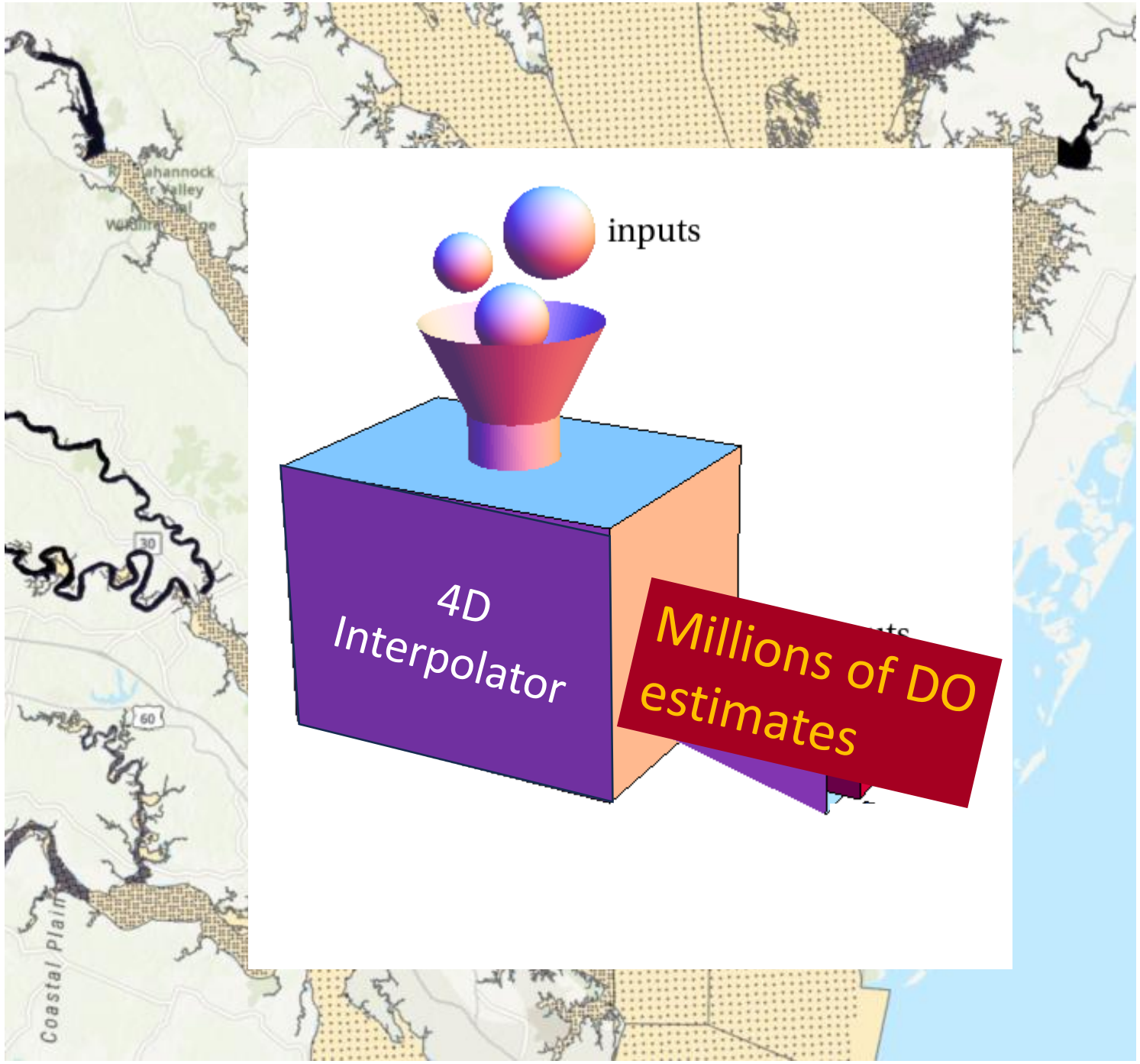
~330,000 Interpolator cells

x

8,760 hours in a year

x

A three-year assessment period



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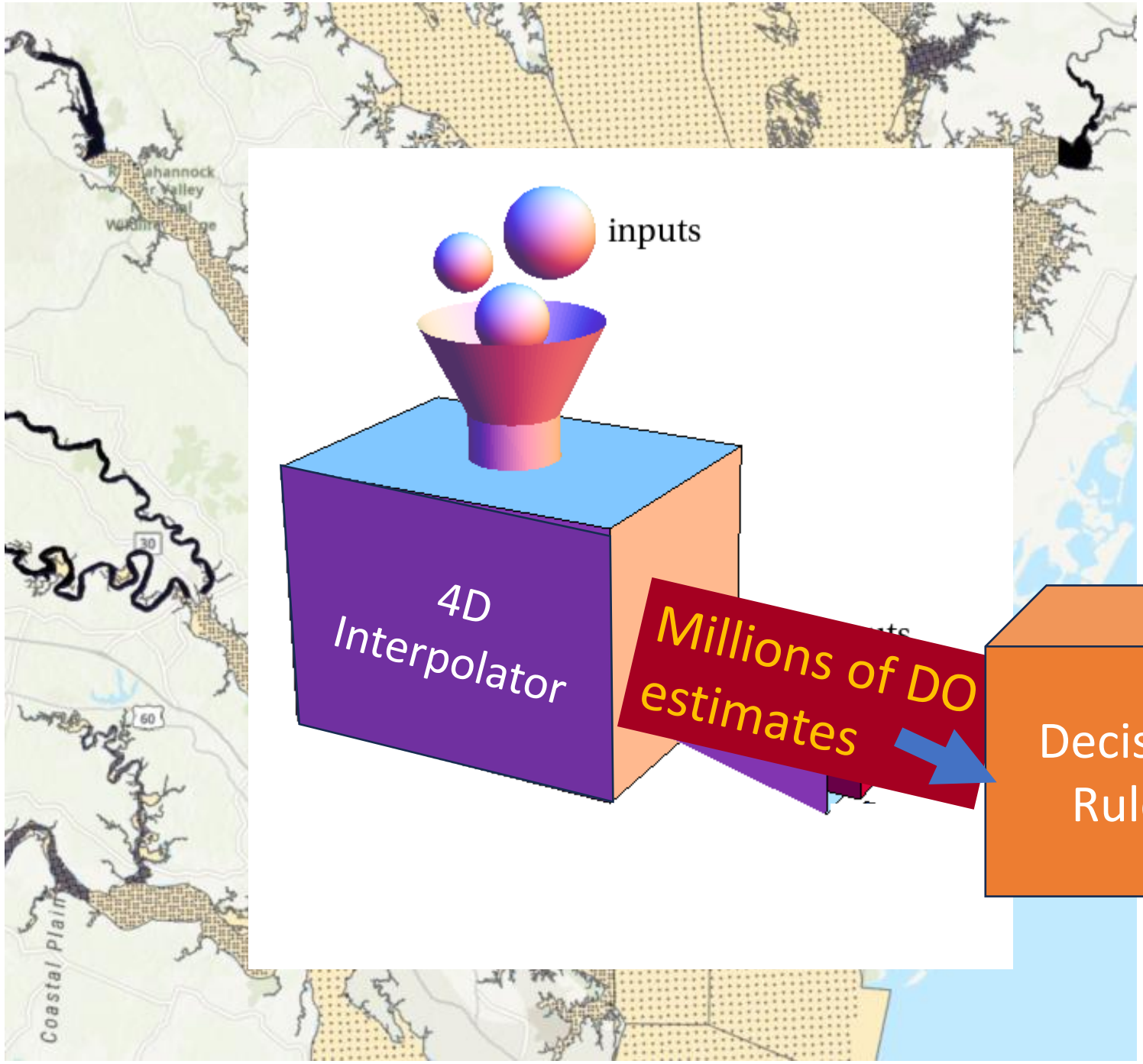

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4D Interpolator Decision Rules

CFD Selection From Multiple Realizations

Allowable exceedance frequency

Designated Use Determination

General Decision Rules

- Bay Segmentation Scheme
- Averaging period for IM criteria
- Delineation of periods (high frequency data only)
- Minimum temporal coverage (high frequency data only)
- Significant Figures
- Pycnocline Depth Determination

SMLE Decision Rules

Data requirements in different habitats

Low-Frequency Data Stipulations

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How different lines of evidence are to be integrated

SMLE = States' Multiple-Lines-of-Evidence

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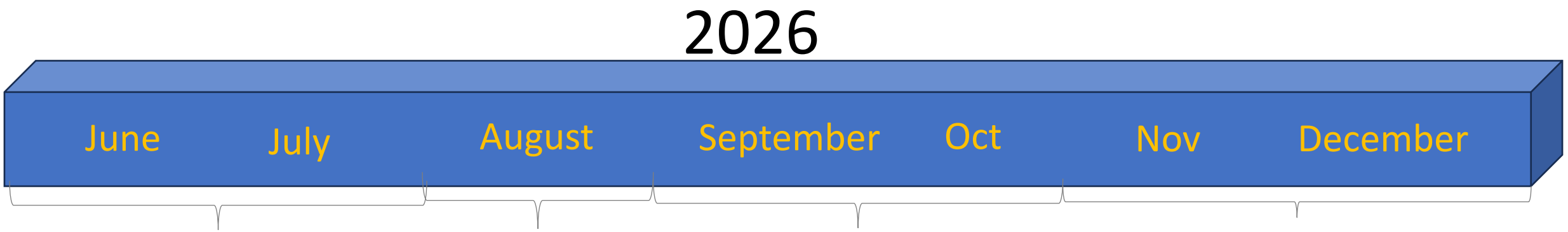
Priority for 2026

SMLE = States' Multiple-Lines-of-Evidence

Guiding principles of criteria assessment methods:

- Scientific soundness
- Protectiveness
- Regulatory defensibility
- Consistency with existing state assessment policies/procedures
- Transparency and ability to communicate methods
- Reproducibility

Timeline for Decision Rule Development for the 4D Interpolator



Presentation/ discussion of proposed decision rules at July CAPWG meeting.

The decision rules are shared with the BORG.

The BORG presents the CAPWG with results of the 4D Interpolator using the proposed rules.

CAPWG leadership decides whether to recommend implementation of the decision rules with the 4D Interpolator to the CWGT.

The decision rules are described in a technical memo reviewed by the CAPWG.

Presentation to the CWGT.

STAC review of the 4D Interpolator ahead of its planned use as the post-processing tool of Phase 7.

Criteria Assessment Protocol Workgroup Proposed Project Timeline