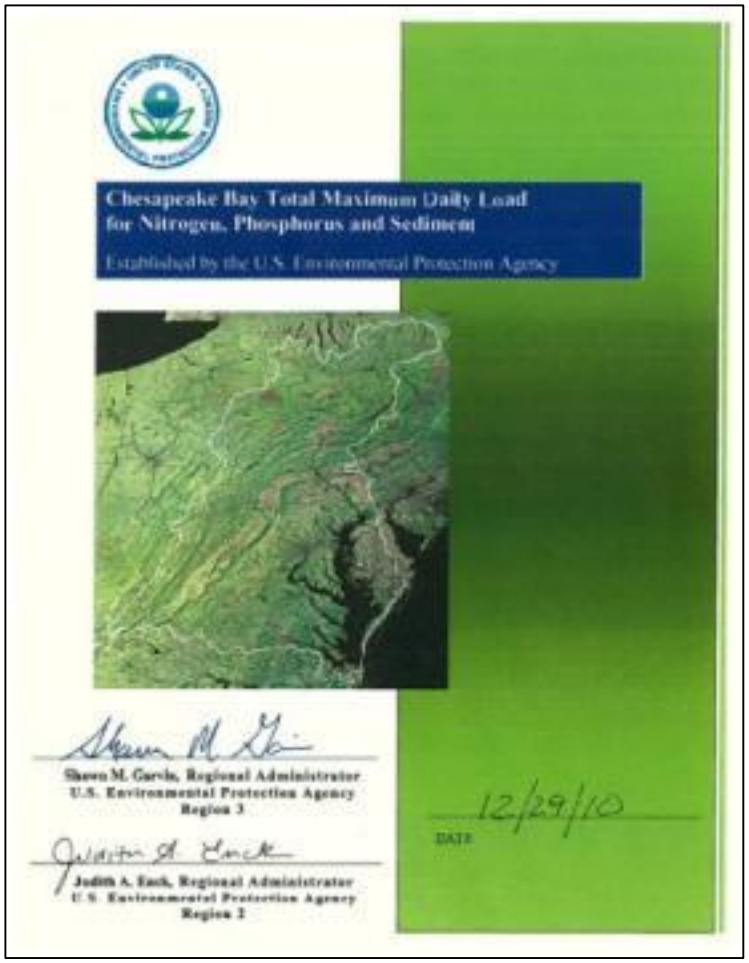
Chesapeake Bay Program
STAC
Climate Change
Workshop


DO NOT
ENTER

CHESAPEAKE

WATERSHED

AGREEMENT



- Sustainable Fisheries
- Vital Habitats
- Water Quality
- Toxic Contaminants
- Healthy Watersheds
- Stewardship
- Land Conservation
- Public Access
- Environmental Literacy
- Climate Resiliency

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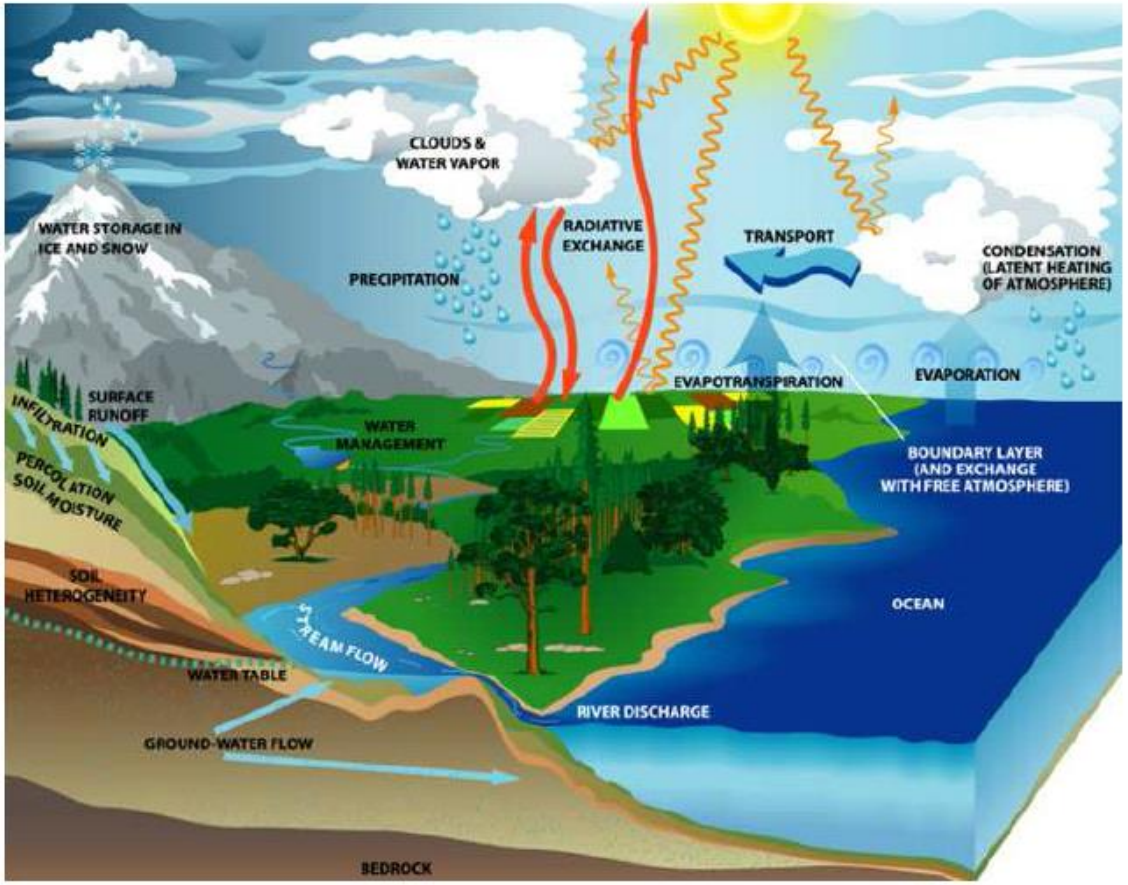
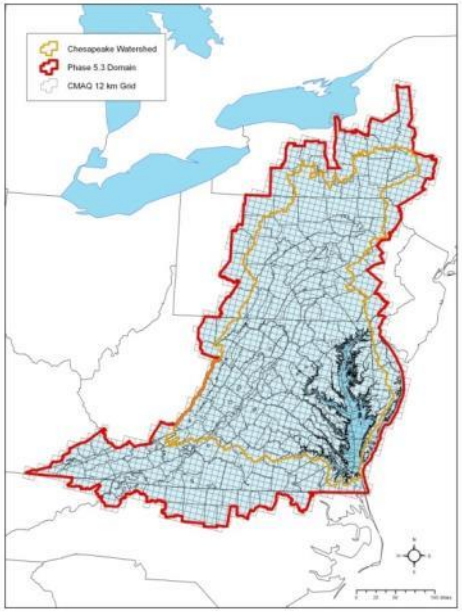
Quantifying the Direct Expressions of Climate Change…



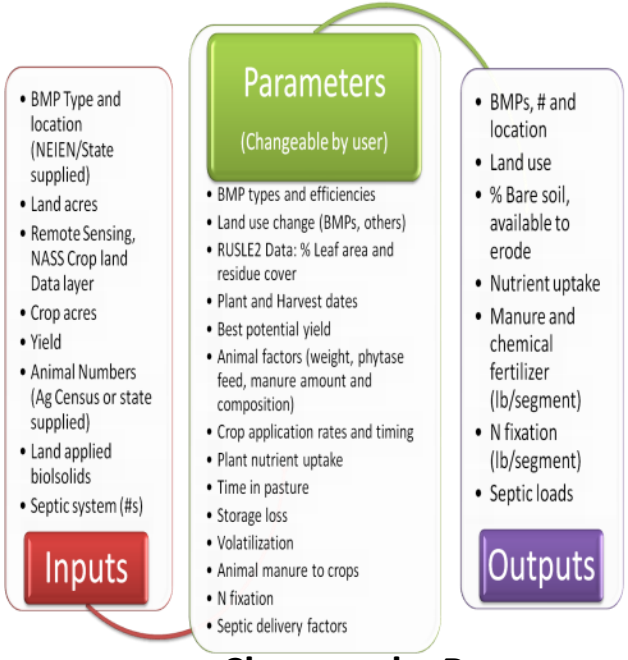
- Estuarine water temperature
- Sea level rise
- Wetlands inundation
- Wind
- Stratification
- Oxygen saturation
- Solar radiation
- Stream temperature
- Stream flow
- Precipitation
- Evapotranspiration
- Surface runoff
- Infiltration
- Groundwater flow
- Snow pack
- …and the list continues

…in terms of the Resultant Changes to Watershed/Estuarine Processes, Habitats and Resources

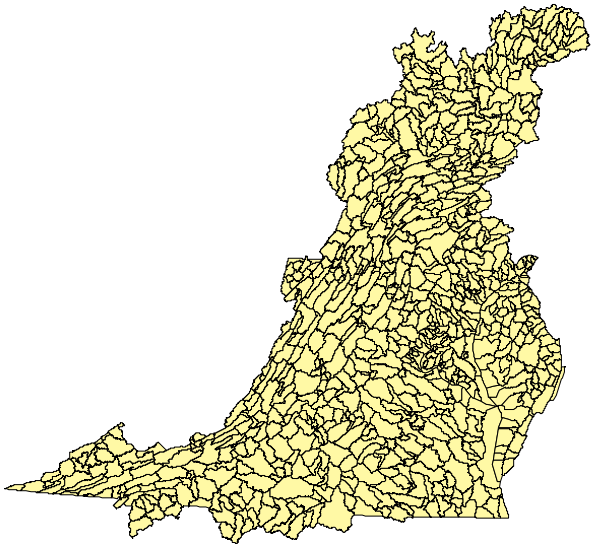


Chesapeake Bay Airshed Model

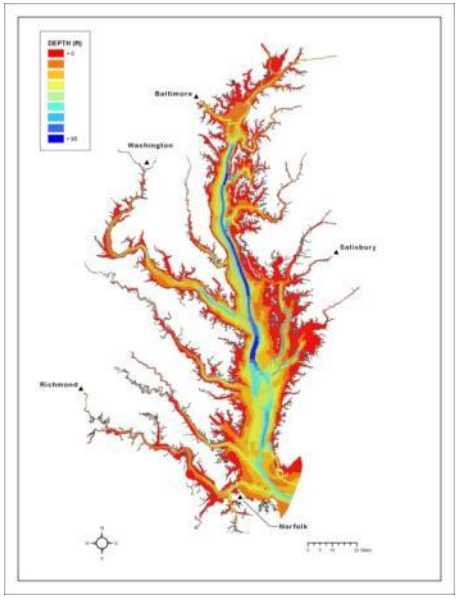
Chesapeake Bay Land Change Model



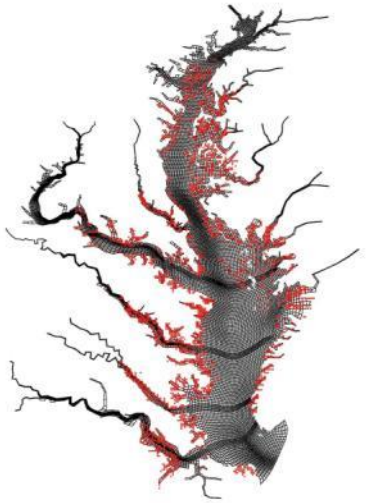
Chesapeake Bay Scenario Builder



Chesapeake Bay Watershed Model



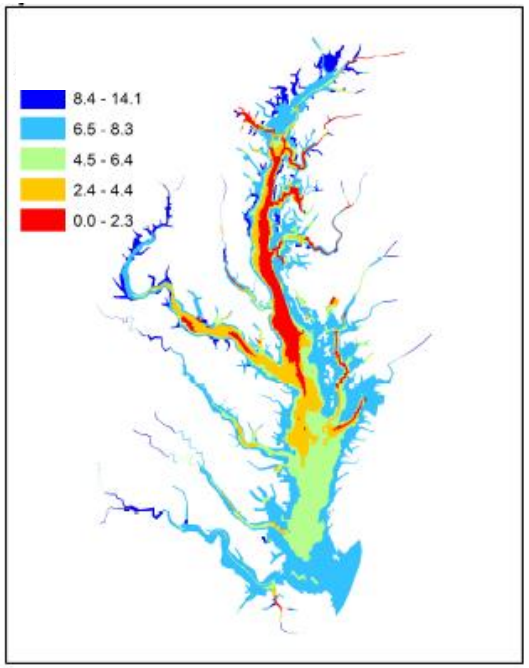
Chesapeake Bay Water Quality and Sediment Transport Model



Chesapeake Bay Filter Feeder Model

2050 Estimated Temperature Increase and Deep Channel Dissolved Oxygen Decrease

Current Temperatures



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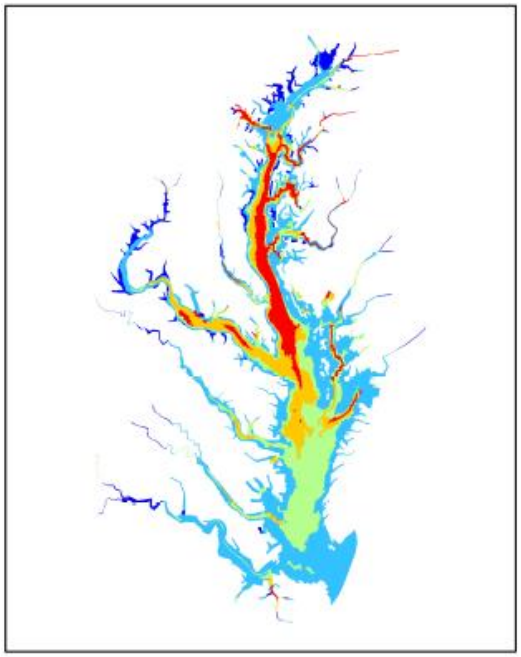
2050 Estimated Temperatures



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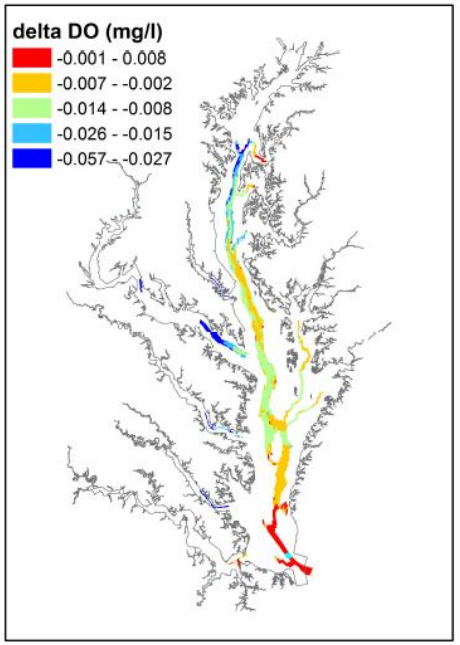
Changes in Deep Channel Dissolved Oxygen



During Each Presentation, Ask

- How does what they are presenting inform what we need to build into an overall climate change assessment framework for use by the Partnership?
  - Variables of most concern, key characteristics
  - GCMs, downscaling, use of historical observations
  - Selection of climate change scenarios
  - Management application of the framework

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Constraints We Must Work With

- 2025 scenario for short range climate change planning and adaptation
- Future scenario, like 2050, to set the far edge of the planning horizon
- Scenario approach delivered within the next 6 months using the models and other assessment tools at hand


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Questions?

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