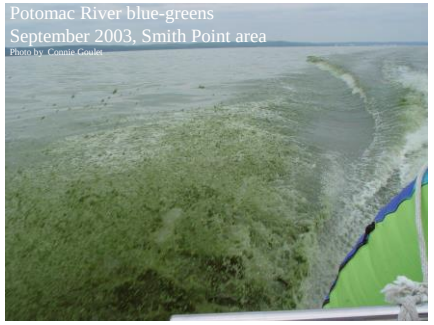
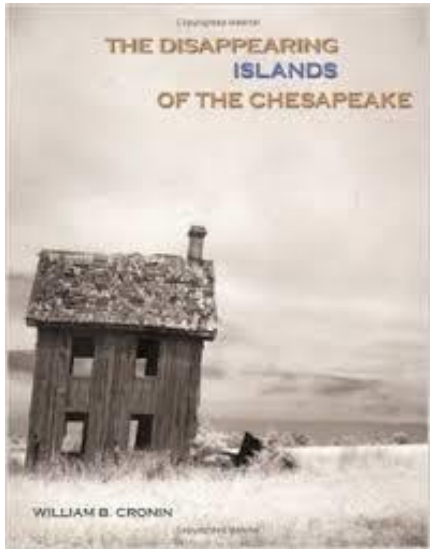
January/February 2017

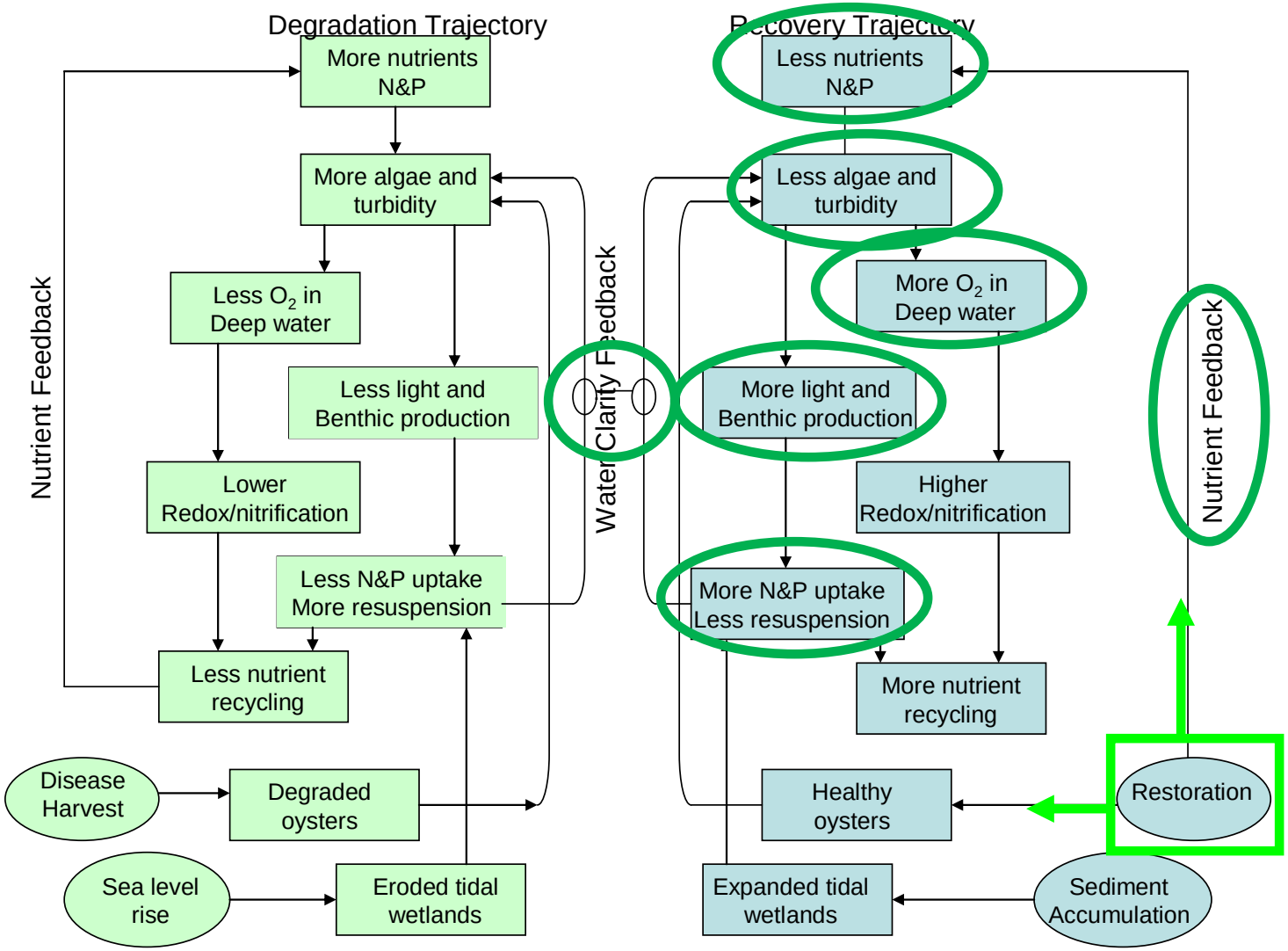
TBD

Understanding and Explaining 30+ Years of Water Clarity Trends



Credit: UMCES





Conceptual model of Chesapeake Bay degradation and recovery. Page 21 *in* Kemp et al. 2005. Eutrophication of Chesapeake Bay: Historical trends and ecological interactions. Mar. Ecol. Prog. Ser. 303:1-29.

Credit: Bay Journal

Credit: UMCES

Credit: CBF

Conceptual Model of the Chesapeake Bay Ecosystem and Response Trajectories

Pre-Workshop Presentations Development

- Basic trends in Water Clarity
- State of Science on Sediment Delivery Processes in the Watershed (Gellis USGS)
- Components of relative influence affecting water optical properties (Gallegos – retired)
- Conceptual watershed-bay linkage model of water clarity (Kemp et al)

Analyses ahead of time to support the workshop

- Spatial and temporal patterns of
  - Secchi
  - Kd
  - Secchi/kd relationship
  - Suspended sediment
  - Algal biomass

- Trends in loads
    - Suspended sediment (and other relevant parameters)
      - Above fall line and below fall line
- Insights from Conowingo

- 1-2 Pre-workshop meetings/calls to look at linking watershed and bay trends

Agenda

- Day 1. Presentations on the science
  - Includes Water clarity and SAV trends
    - What are the gaps to explaining the trends we are seeing?
- Day 2. Breakout groups
  - Can we make connections upstream?
  - Can we make connections to in-bay processes (physical, chemical and biological) and water clarity trends?
  - What are the eutrophication influences on the trends

  - Closing: What are the prospects for seeing improvements in the Bay with management actions?