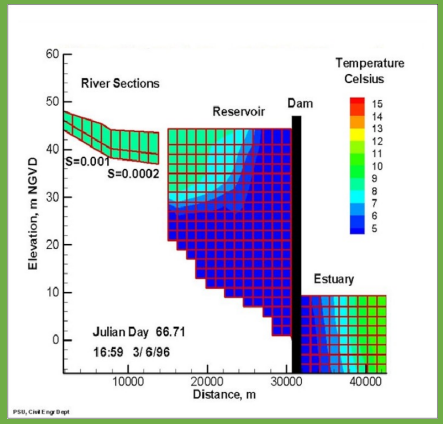
Purpose

To better predict future HAB outbreaks and to develop management strategies, a predictive planning tool needs to be developed to assess current environmental conditions and future climate scenarios as they relate to HAB creation, occurrence, distribution, extent, and timing, and to evaluate mitigation strategies to reduce or eliminate HAB growth.

Products



- Technical Report documenting literature review
- Technical Note documenting the design plan
- Updated CE-QUAL-W2 with HAB simulation capabilities
- Validated CE-QUAL-W2 HAB model
- Observed data and model outputs posted to Mendeley Data
- Demonstration study and validated model application
- Journal paper describing the new capabilities and case study
- CE-QUAL-W2 HAB Webinar

Payoff

- Updated version of CE-QUAL-W2 model with HAB simulation capabilities
- Enables USACE to
  - Assess current environmental conditions that contribute to the occurrence, distribution, timing, growth, transport, and decay of harmful algal blooms.
  - Better evaluate mitigation scenarios and coordinate landscape mitigation strategies with other watershed stakeholders.
  - Evaluate how future climate change may affect HAB development
  - Develop mitigation strategies to address any adverse impacts due to climate change.