GIT Funding 2021: Project Ideas

The GIT team has compiled potential project ideas for EPA/CBT 2021 GIT-funding from the various outcome workgroups and subject matter experts. Initial internal rankings were assigned, but are subject to change based on Executive Committee input. We will incorporate feedback into the project concepts to be officially ranked and endorsed at our September meeting.

Priority 1: Development of Forage Habitat Suitability Indicator

- Outcome: Forage Fish
- Project Concept: Forage fish indicators provide information on the health of the Chesapeake Bay food web and is another step towards achieving sustainable fisheries through ecosystem-based fisheries management. Production of some forage fishes has been shown to be limited by available habitat in Chesapeake Bay through backwards-looking habitat suitability models. However, models that provide estimates of contemporary forage production using real-time habitat models would be more valuable to resource managers and stakeholders. This requires validation of the real-time hydrodynamic models to estimate available habitat and subsequent production of forage fish.
- Estimated Cost: $100,000

Priority 2: Blue Crab Population Simulation Model for Management Strategy Evaluation

- Outcome: Blue Crab Management
- Project Concept: Blue crab management in Chesapeake Bay is based on an annual assessment of stock status relative to reference points for adult female abundance and harvest. Comprehensive, accurate stock assessment models are therefore necessary to ensure a sustainable and productive blue crab population and fishery. This project would involve development of a spatially-explicit blue crab population simulation model that can be used to evaluate stock assessment model performance under various hypotheses. For example, differential catchability and/or natural mortality between the sexes may explain the bias in the assessment model that leads to the over- and underestimation of male and female blue crab abundance. By running various scenarios (based on well thought out hypotheses) through the simulation model and comparing to the current stock assessment model, we can identify factors that are introducing bias and correct for them in the stock assessment model. Results of this project could confirm the robustness of the current management framework or identify the need to adjust the framework through a benchmark stock assessment. The blue crab population simulation model has a direct link to management by providing a better understanding of our current assessment model assumptions and a foundation for management strategy evaluation to ensure that we are using the best framework to manage the Chesapeake Bay blue crab population.
- Estimated Cost: $80,00