

**Pathways of connectivity between the coastal ocean and the Chesapeake Bay estuary: Atlantic Menhaden and recruitment variability**

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# Hypotheses

- Changes in physical forcing affect **circulation** and **productivity** in coastal waters that in turn control population dynamics of menhaden by **altering the location and timing of spawning by adults and the transport of eggs and larvae to the Chesapeake Bay**.
  - H1. Spawning habitat of Atlantic menhaden is determined by physical processes that cause shifts in space and time in favorable spawning conditions.
  - H2. Physical processes are determinants of connectivity between coastal spawning locations and estuarine nursing grounds.
  - H3. Variability in connectivity between coastal and estuarine habitats can be a bottleneck for recruitment to estuarine nurseries.



