

# **Phase 7 Watershed and Tidal Water Model Boundaries**

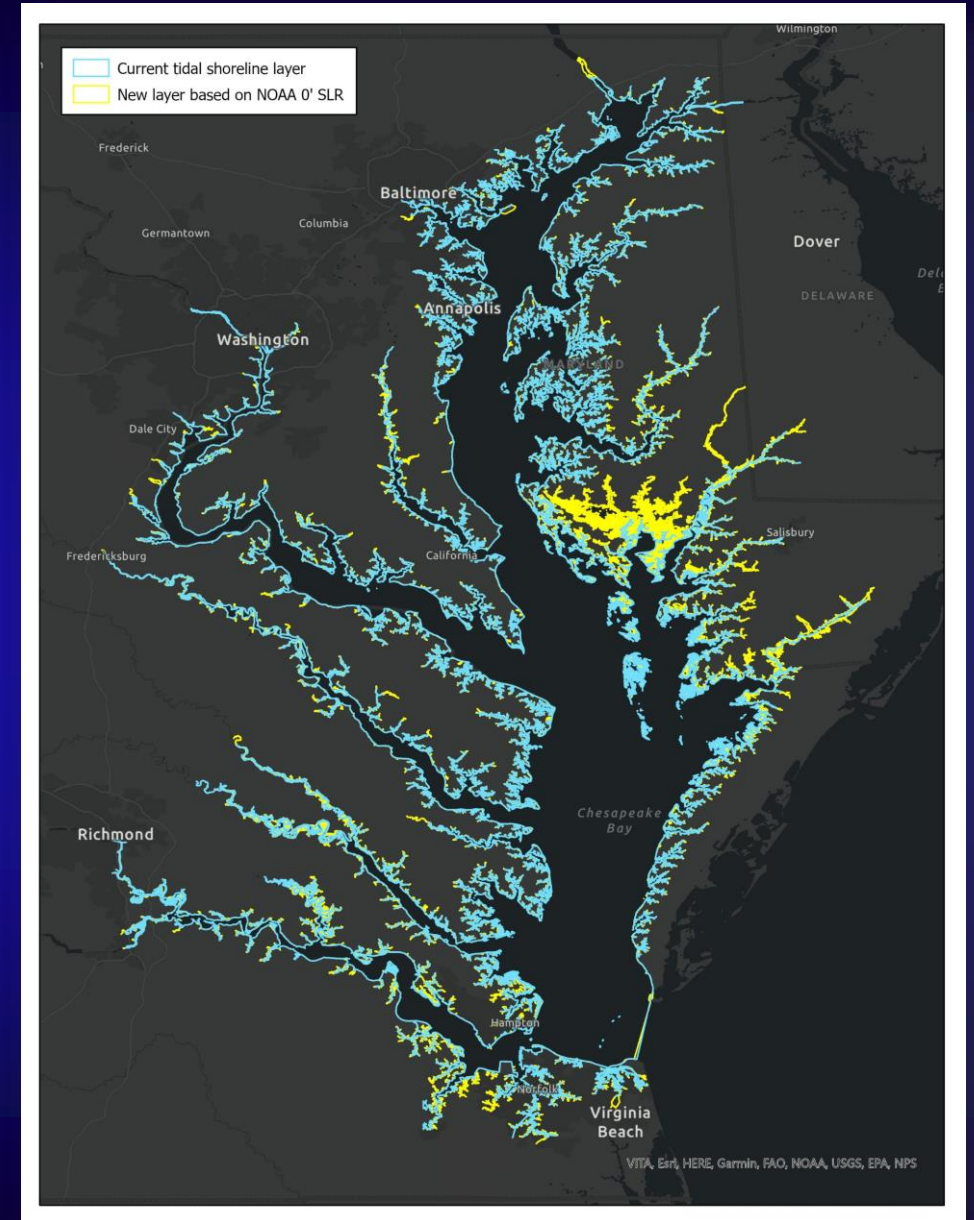
**Modeling Workgroup Quarterly Review**

**April 5, 2022**

**Andy Fitch - USGS VA-WV WSC / Chesapeake Bay Program**

# Previous Actions and Decisions

- The decision was made to use the NOAA 0' (Mean Higher High Water) Sea Level Rise dataset. This layer is much more accurate, extensive, and highly detailed than the current tidal shoreline layer, with better documentation.
- We had originally planned to combine tidal wetlands with the shoreline area, but it was decided NOT to do this in order to separately account for tidal wetlands (as is currently done with Phase 6).



# Improved Accuracy and Resolution

- Higher resolution and much more accurate through most of the estuary.
- Correctly delineates inlets and jetties, and excludes ponds narrowly separated from the bay.





# Improved Accuracy and Resolution

- More up-to-date
- Includes new shorelines, accurately delineates those that have retreated and excludes those that have disappeared

Hart-Miller Island



Tangier Island



# NOAA Sea Level Rise dataset issues

- In low-lying, flat areas, the MHHW shoreline covers many wetlands and some areas that are clearly not water, due to the accuracy limitations of the underlying elevation data. Some areas may be inundated at high tide, but others appear not to be.
- The linework complexity in these areas will likely create challenges for modeling and GIS processes.
- The CBP GIS Team recommended exploring possible improvements using the 2017 land use data.

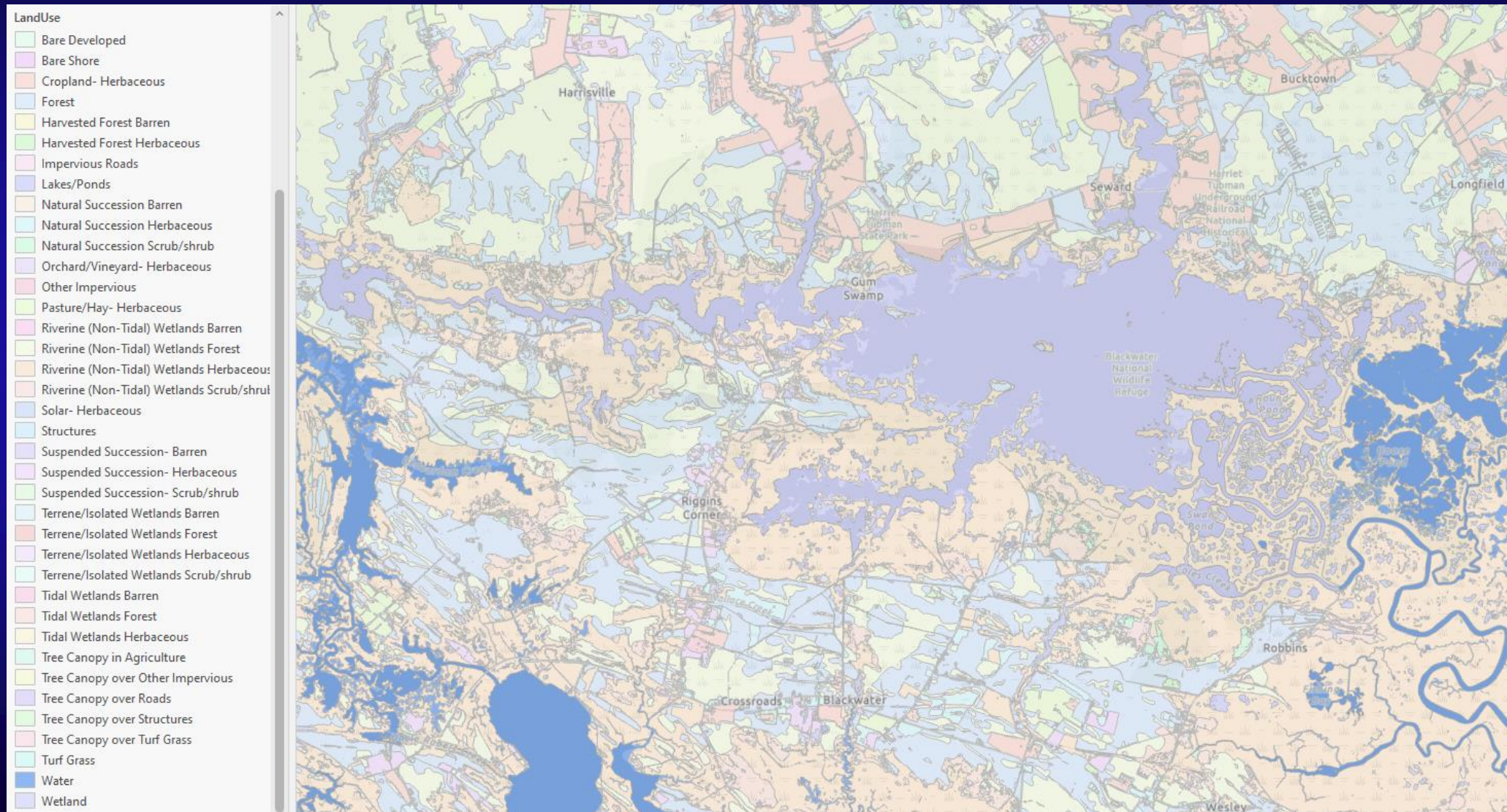
MHHW shoreline in Blackwater NWR





# 2017 Land Use Dataset

2017 V1 Land Use for Dorchester County, MD





## Modified Tidal Shoreline example



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## Modified Tidal Shoreline example

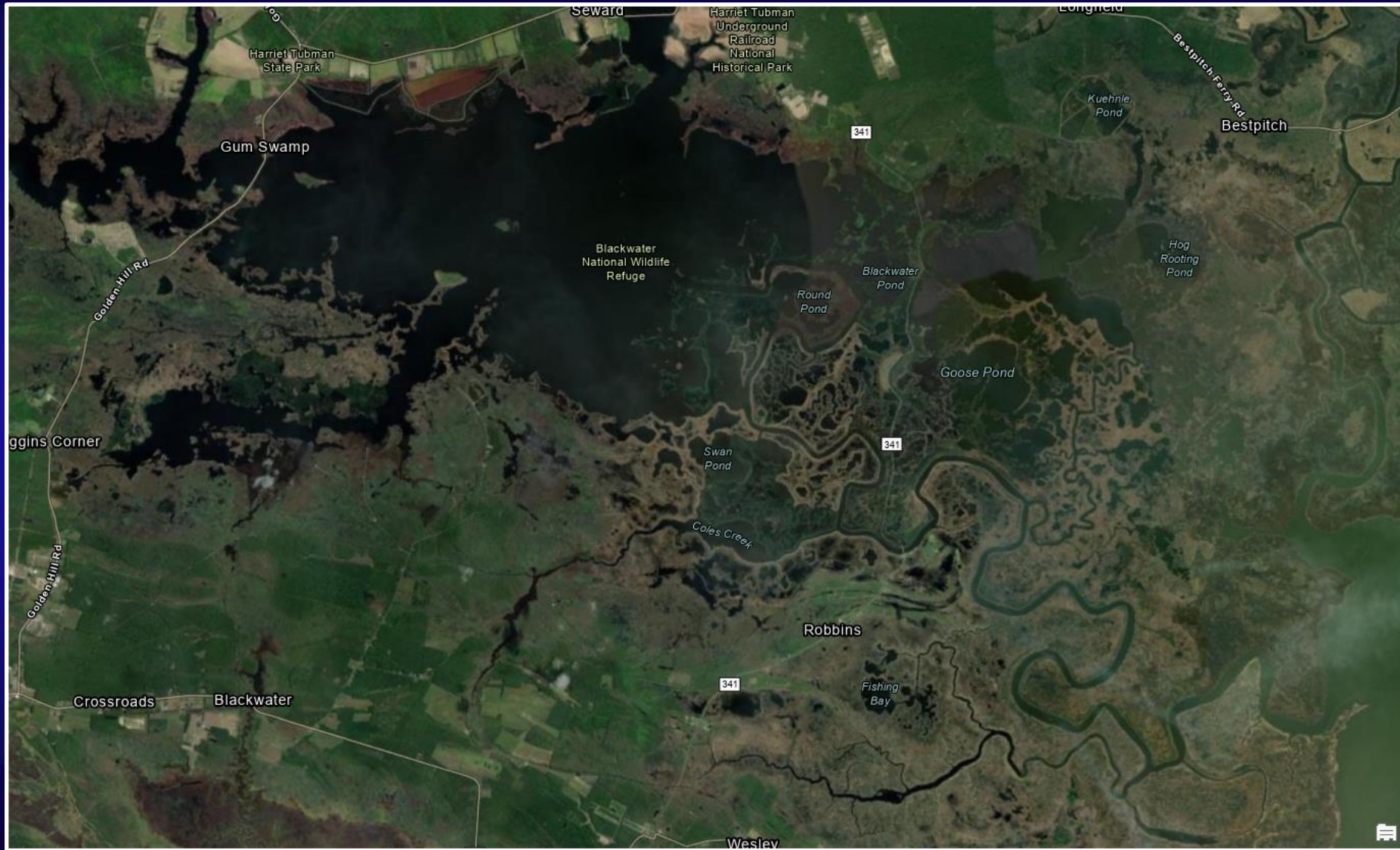


# Removing Specific Land Use Classes from Shoreline in Dorchester Pilot

- Classes removed:
  - Tidal Wetlands (Barren, Forest, and Herbaceous)
  - Riverine (Non-tidal) Wetlands (Barren, Forest, Herbaceous, Scrub/shrub)
  - Wetland
  - Forest
  - Suspended Succession (Herbaceous)
  - Natural Succession (Scrub-shrub)
- The number of classes in this list may increase, especially after examining V2 land use for all counties
- The new tidal shoreline represents the remaining \*contiguous\* shoreline area - lakes surrounded by wetlands or other removed land use classes are removed from the layer

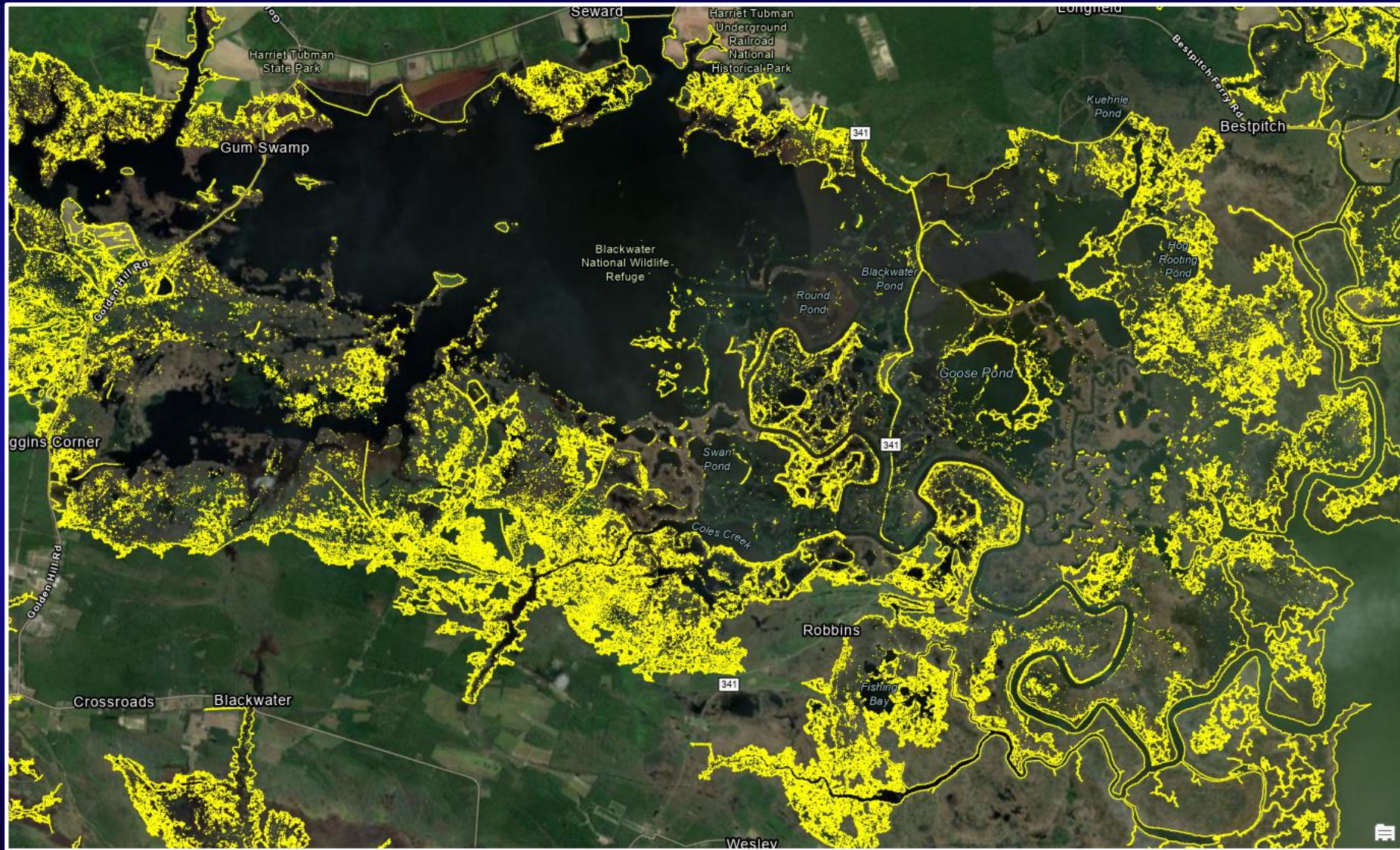


# Modified Tidal Shoreline in Blackwater area



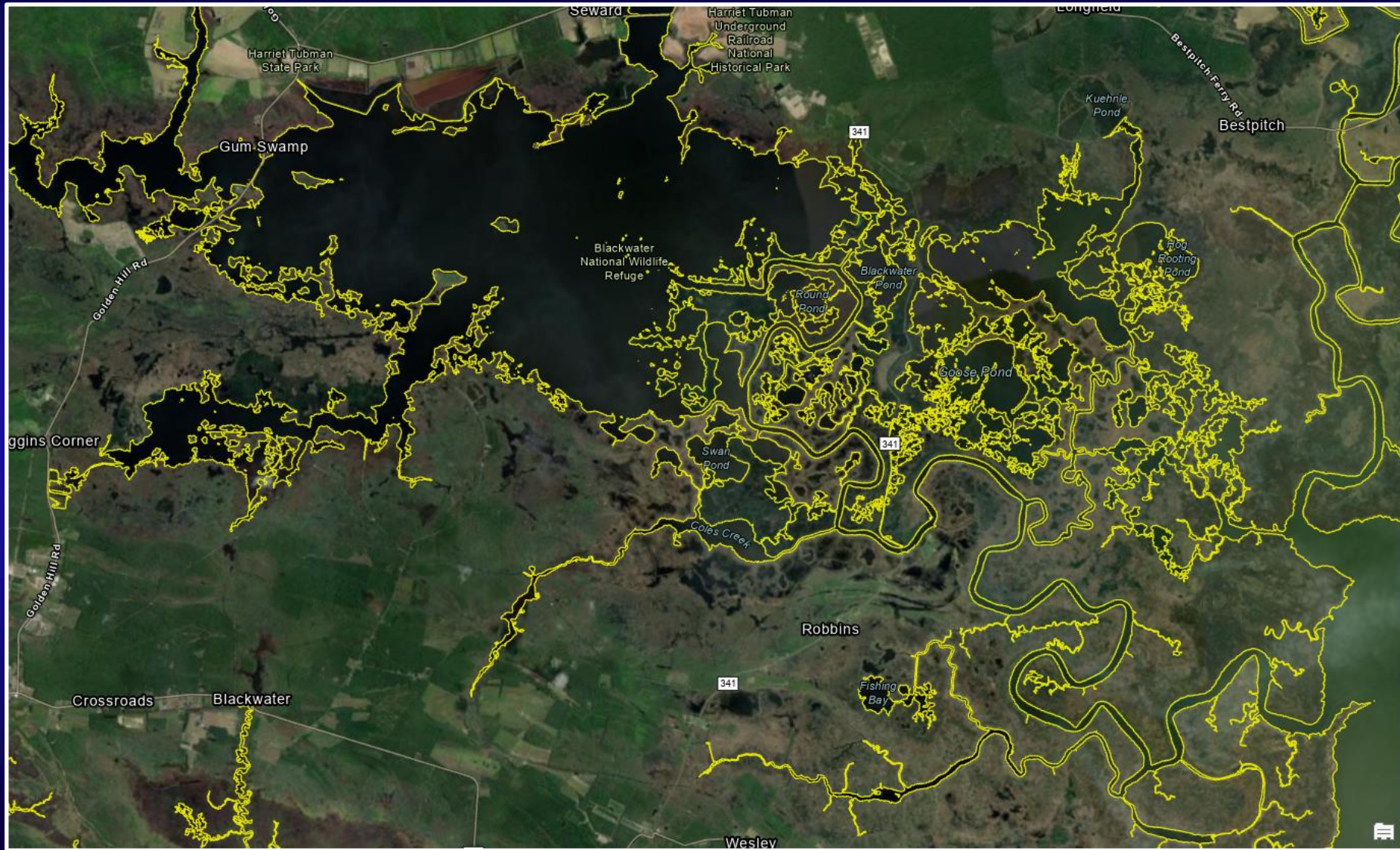


# Modified Tidal Shoreline in Blackwater area





# Modified Tidal Shoreline in Blackwater area



# Contact

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