

# Information Gathering and synthesizing subcommittee:

## Aquaculture Lease Area Siting



Oyster Aquaculture Tiger Team

# GIS Planning Goals

- Decrease user conflicts, improve planning and regulatory efficiencies and decrease costs and delays, and preserve critical ecosystem services
  - Reduce conflicting Interests
    - High Boat use regions and pathways would be primary conflicting use.
    - High density hard clam areas would consist of a conflicted use area.
    - Conflicting uses would be exclusion areas for aquaculture.
    - Optimally aquaculture lease areas would be located in areas with low conflicted interests or highly compatible uses.
- Places science-based information at the heart of decision-making.
- Emphasizes stakeholder and public participation.

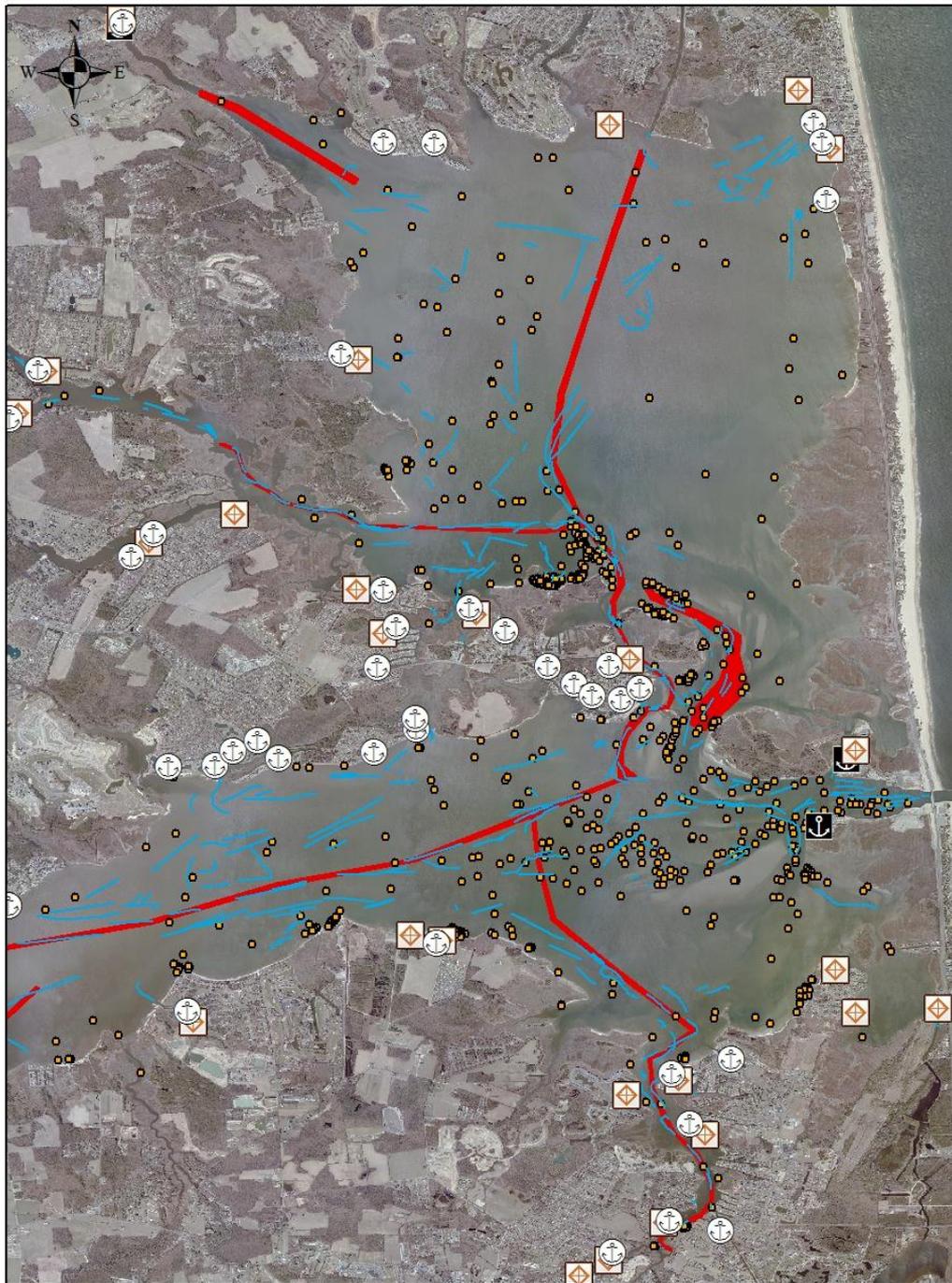


# Current Data

- Human-Use Considerations
  - Navigational Channels
  - Historic Channel dredging
  - Marinas, public and private boat ramps, high use boat slip regions
- Physical Data
  - Bathymetry
  - Bottom sediment data
    - DNREC Clam Abundance Surveys
    - Chrzastowski (1986)
- Ecological Data
  - Clam abundance and potential habitat
  - Seasonal important Bird Habitat
  - Shellfish Closure Zones

# Data (GIS) collection and synthesizing subcommittee

- Determine what data has been collected and what data is still needed to form a Commercial oyster aquaculture suitability map (GIS layer).
- Synthesize data into a GIS layer showing optimal oyster aquaculture areas.
  - Overview reported to team at June 5<sup>th</sup> meeting
  - First draft potential oyster aquaculture product presented to team
  - Second draft product presented to team at July 3<sup>rd</sup> meeting



## Human-Use Data

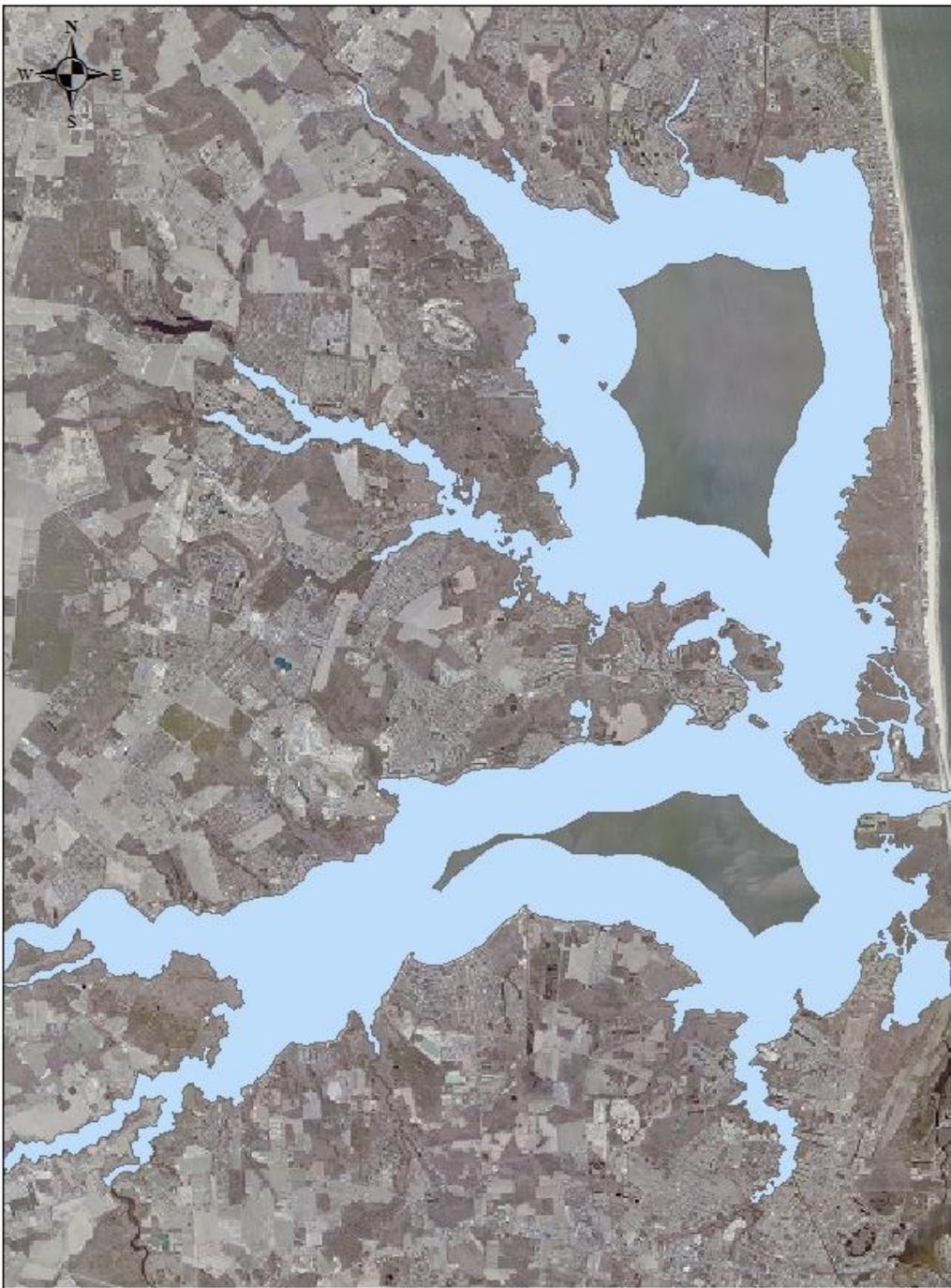
### Legend

-  High Density Boat Slips
-  Public/Private Boat Ramps
-  Marinas
-  Navigational Channels
-  Stationary Boats
-  Boats in Motion



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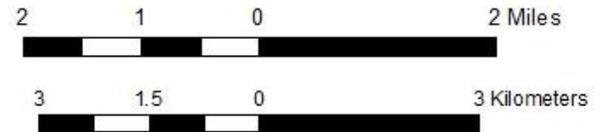
# Exclusion Areas



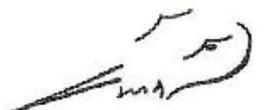
## Current Regulatory 1000 ft Exclusionary Shoreline Buffer

### Legend

 1000ft Shoreline Buffer



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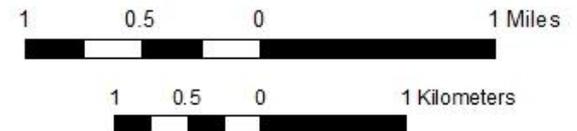




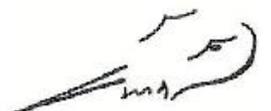
## Proposed Buffer Regulations (State of Maryland Buffers): Rehoboth Bay

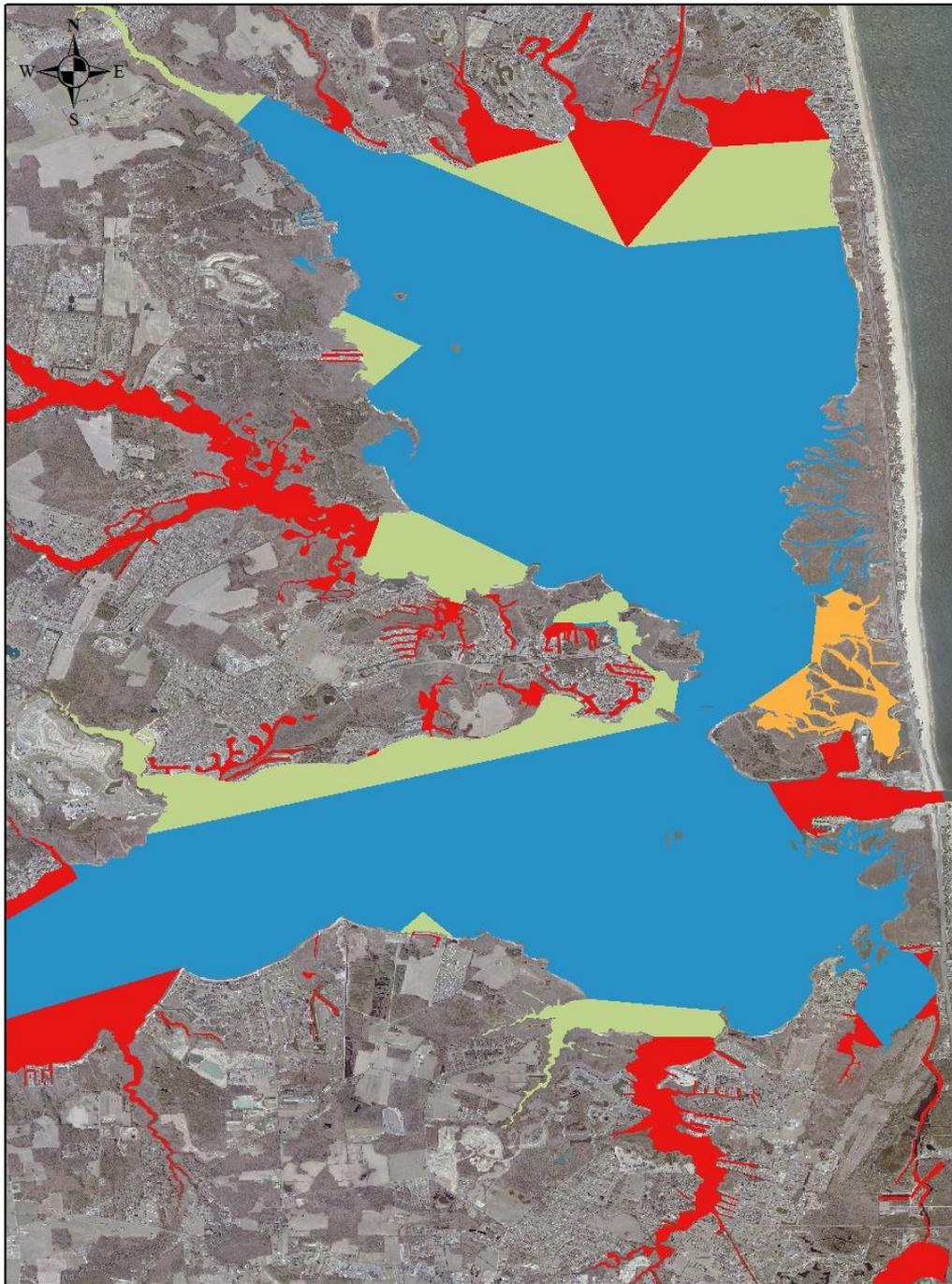
### Legend

-  Shoreline 50 ft Buffer
-  Navigational Channels
-  Navigational Channel 150 ft Buffer



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# DNREC Clam Harvest Closures

## Legend

### Working 2010 Shellfish Harvesting Areas STATUS

-  Prohibited
-  Prohibited (Hatchery)
-  Seasonal Closures
-  Open



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# Barren Bottom Classification

- Rhode Island considers  $>3$  clams per square meter to be the dividing line between productive vs. barren bottom suitable for aquaculture use.
- New Jersey considers  $> 2.2$  clams per square meter the dividing line between productive vs. barren bottom.
- Virginia does not have any specific shellfish density standard
  - Use public verses lease designation
- Maryland does not have any specific shellfish density standard

# Potential Aquaculture Lease Areas

## Version 4



# Rehoboth Bay Potential Aquaculture Lease Area

**Legend**

 Potential Aquaculture Lease Area v4

**Total Area:**  
**166 Acres**  
**2.8% of the total Rehoboth Bay area**



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# Indian River Bay Potential Aquaculture Lease Area

## Legend

 Potential Aquaculture Lease Area v4

**Total Area:**

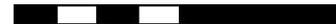
**166 Acres**

**1.8% of the total Indian River  
Bay area**

1 0.5 0 1 Kilometers



1 0.5 0 1 Miles



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# Little Assawoman Bay Potential Aquaculture Lease Area

## Legend

 Potential Aquaculture Lease Area v4

**Total Area:**

**409 Acres**

**17% of the total Little Assawoman  
Bay area**

0.8 0.4 0 0.8 Kilometers



0.8 0.4 0 0.8 Miles



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# Rehoboth Bay Aquaculture Leased Area Example

## Legend

 Example Squares

**Total Area:**

**56 Acres**

**0.6% of the total Rehoboth Bay area**

1 0.5 0 1 Kilometers



1 0.5 0 1 Miles



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# Indian River Bay Aquaculture Leased Area Example

**Legend**

 Example Squares

**Total Area:**  
**39 Acres**  
**0.6% of the total Indian River Bay area**



## Oyster Aquaculture Tiger Team

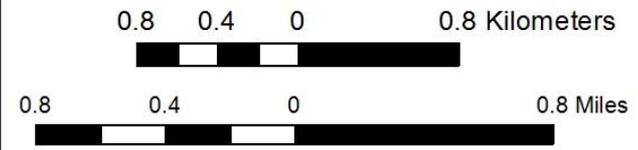


# Little Assawoman Bay Aquaculture Leased Area Example

**Legend**

 Example Squares

**Total Area:**  
**65 Acres**  
**2.7% of the total Little Assawoman Bay area**



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