Information Gathering and synthesizing subcommittee:

Oyster 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.

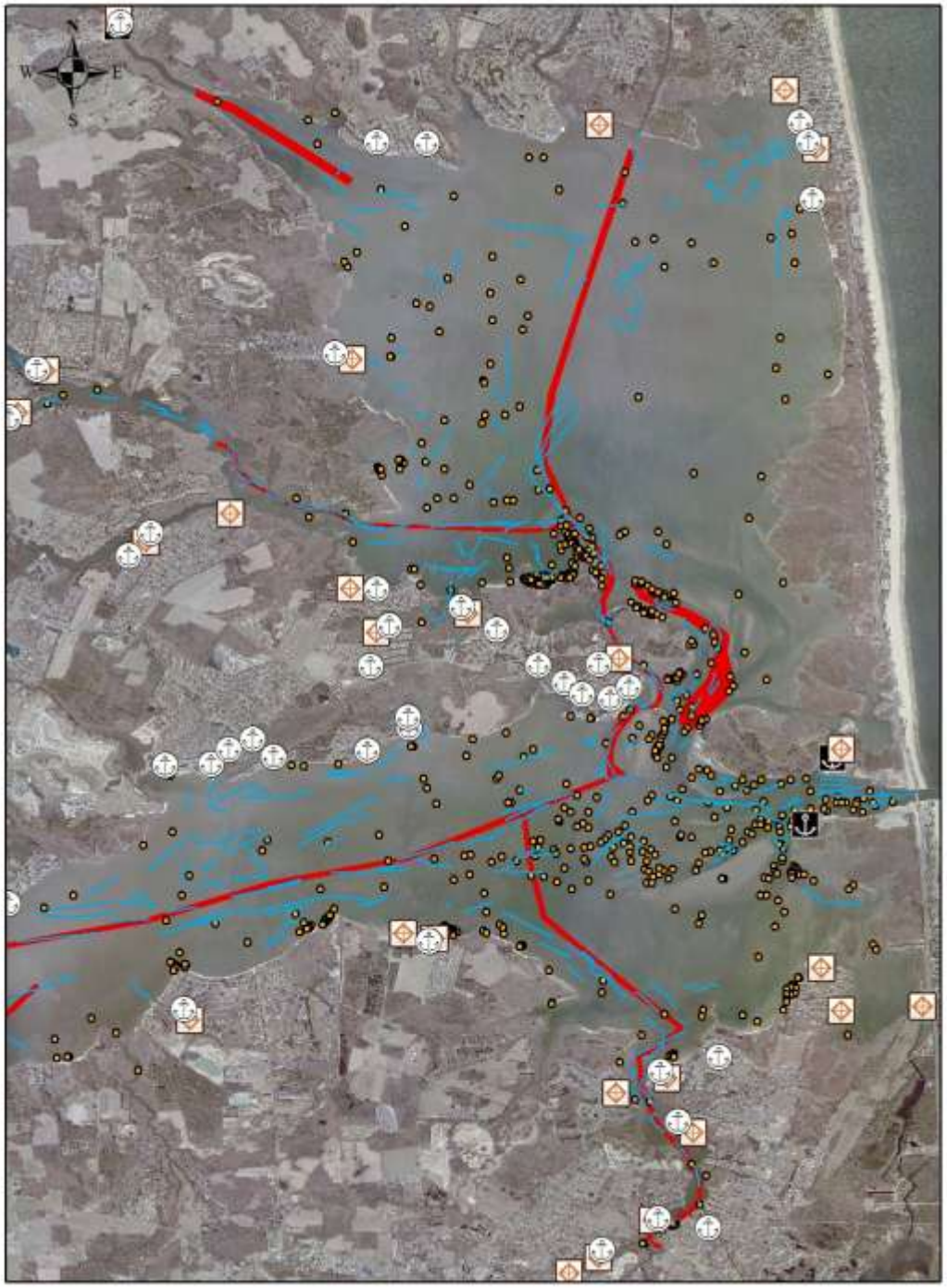
Current Data

- 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 5th meeting
  - First draft potential oyster aquaculture product presented to team
  - Second draft product presented to team at July 3rd meeting



Human-Use Data

Legend

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

2 1 0 2 Miles

3 1.5 0 3 Kilometers

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Exclusion Areas

Current Regulatory 1000 ft Exclusionary Shoreline Buffer

Legend

1000ft Shoreline Buffer

2 1 0 2 Miles

3 1.5 0 3 Kilometers

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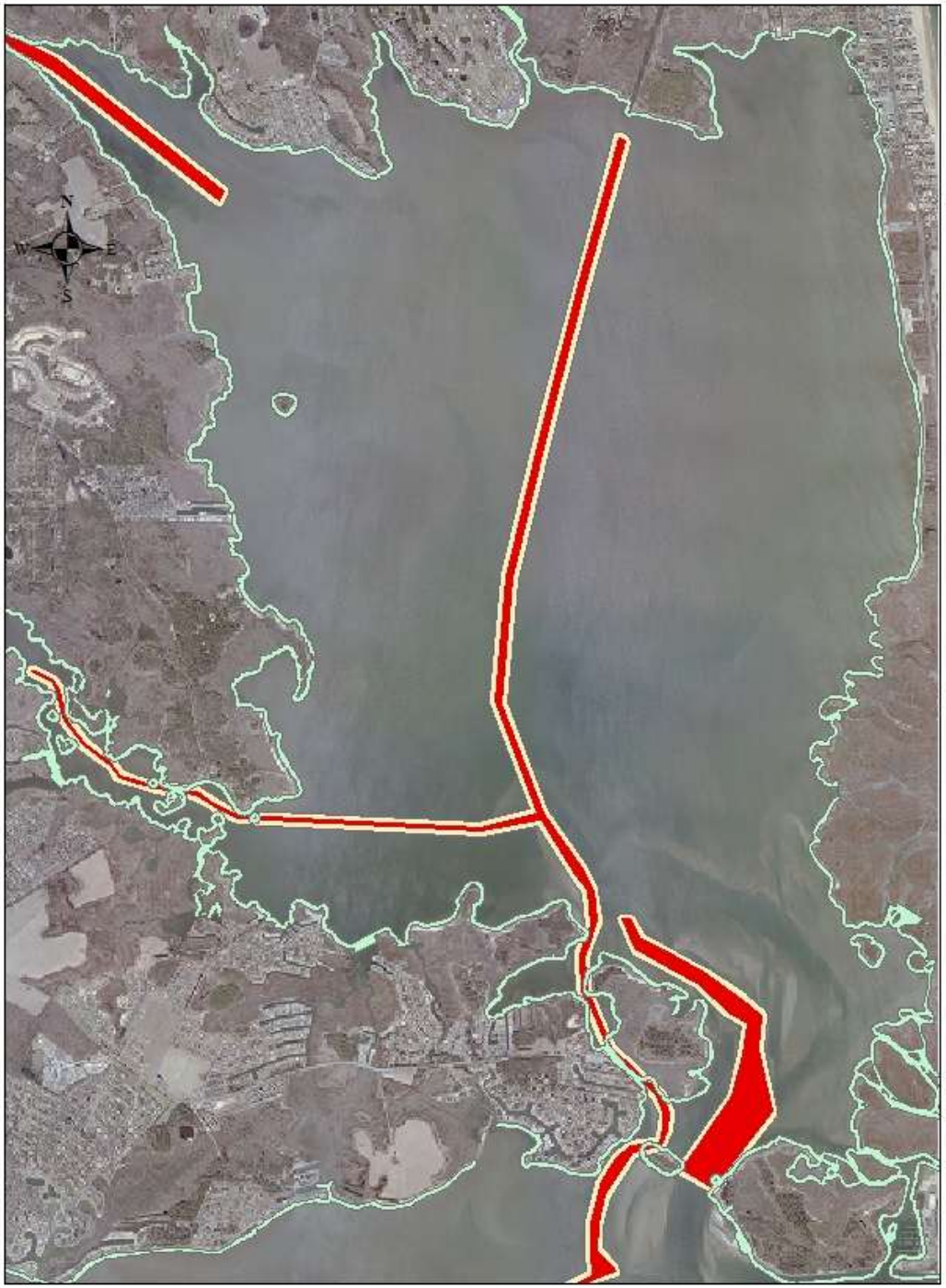

Proposed Buffer Regulations (State of Maryland Buffers): Rehoboth Bay

Legend

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

1 0.5 0 1 Miles

1 0.5 0 1 Kilometers

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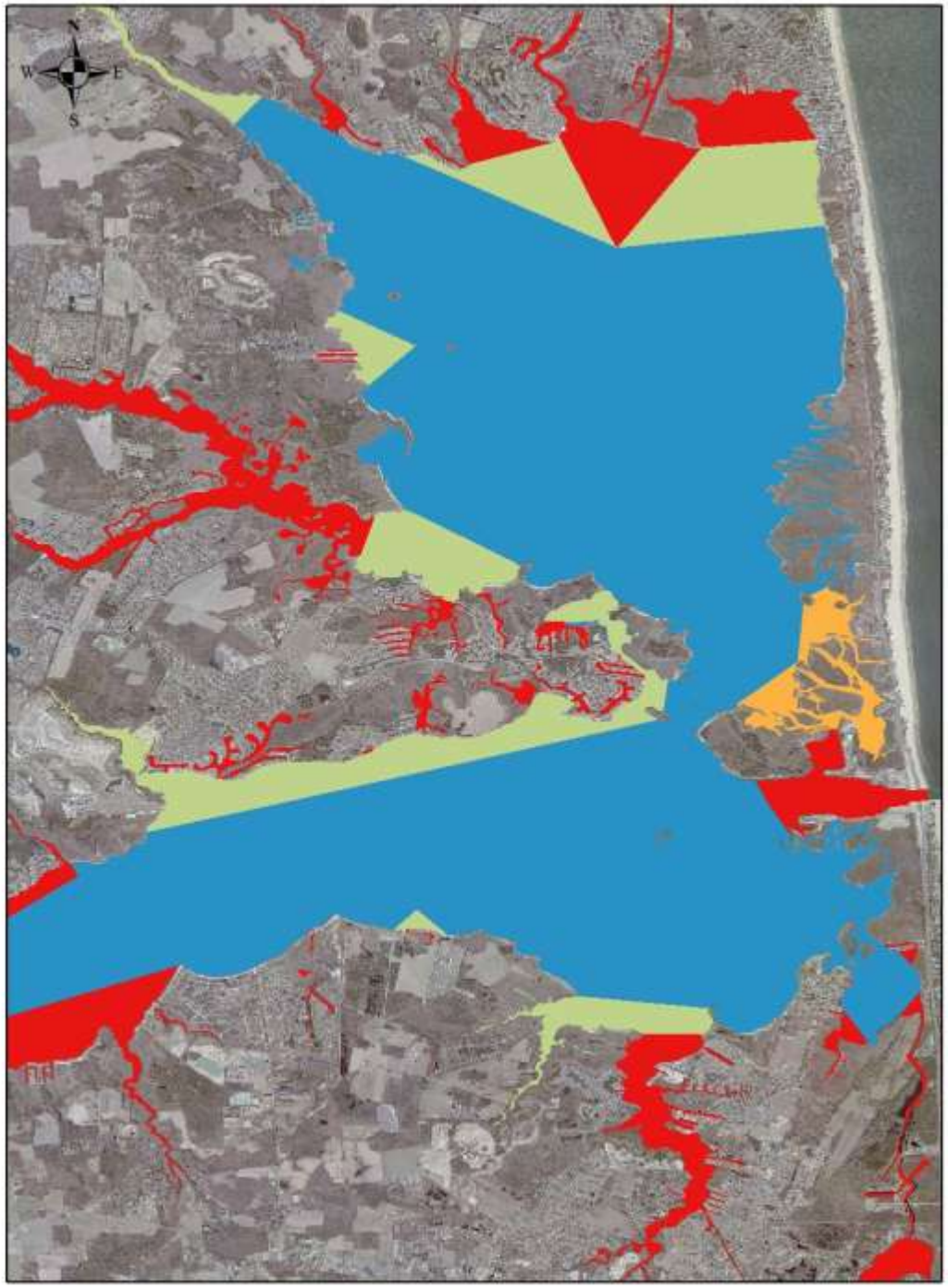

DNREC Clam Harvest Closures

Legend

Working 2010 Shellfish Harvesting Areas

STATUS

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

2 1 0 2 Miles

3 1.5 0 3 Kilometers

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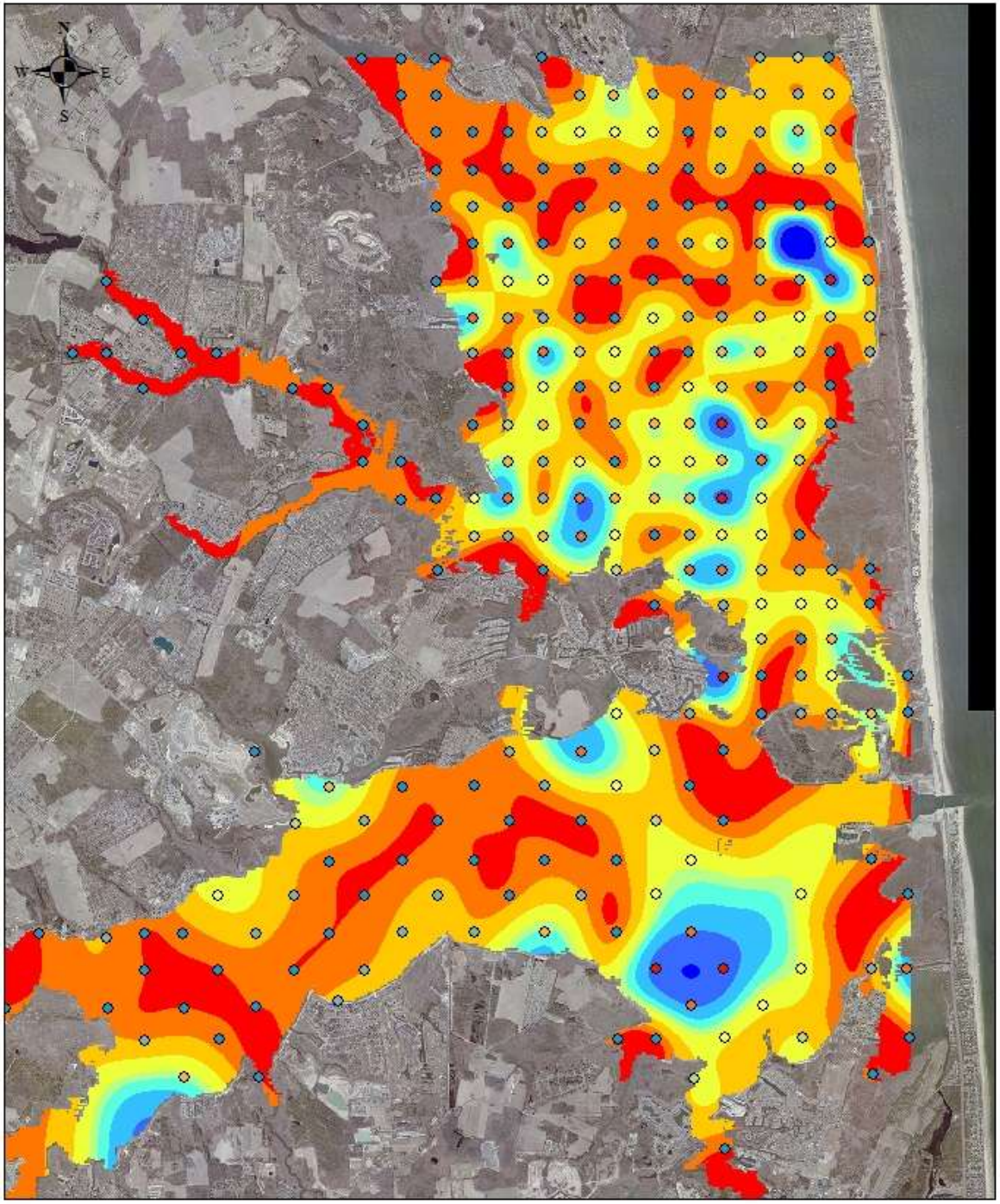
Barren Bottom Classification

- 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 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



Clam Density and Sample Locations

Legend

Inland Bay Clam Density

Quantative Count (clam/meter sq)

- 0
- 1 - 2
- 3 - 5
- 6 - 8
- 9 - 10
- 11 - 12
- 13 - 16
- 17 - 22
- 23 - 30

Inland Bays Clam Samples

Number of Clams

- 0 - 1
- 2 - 3
- 4 - 5
- 6 - 7
- 8 - 10
- 11 - 16
- 17 - 19

2 1 0 2 Kilometers

1 0.5 0 1 Miles

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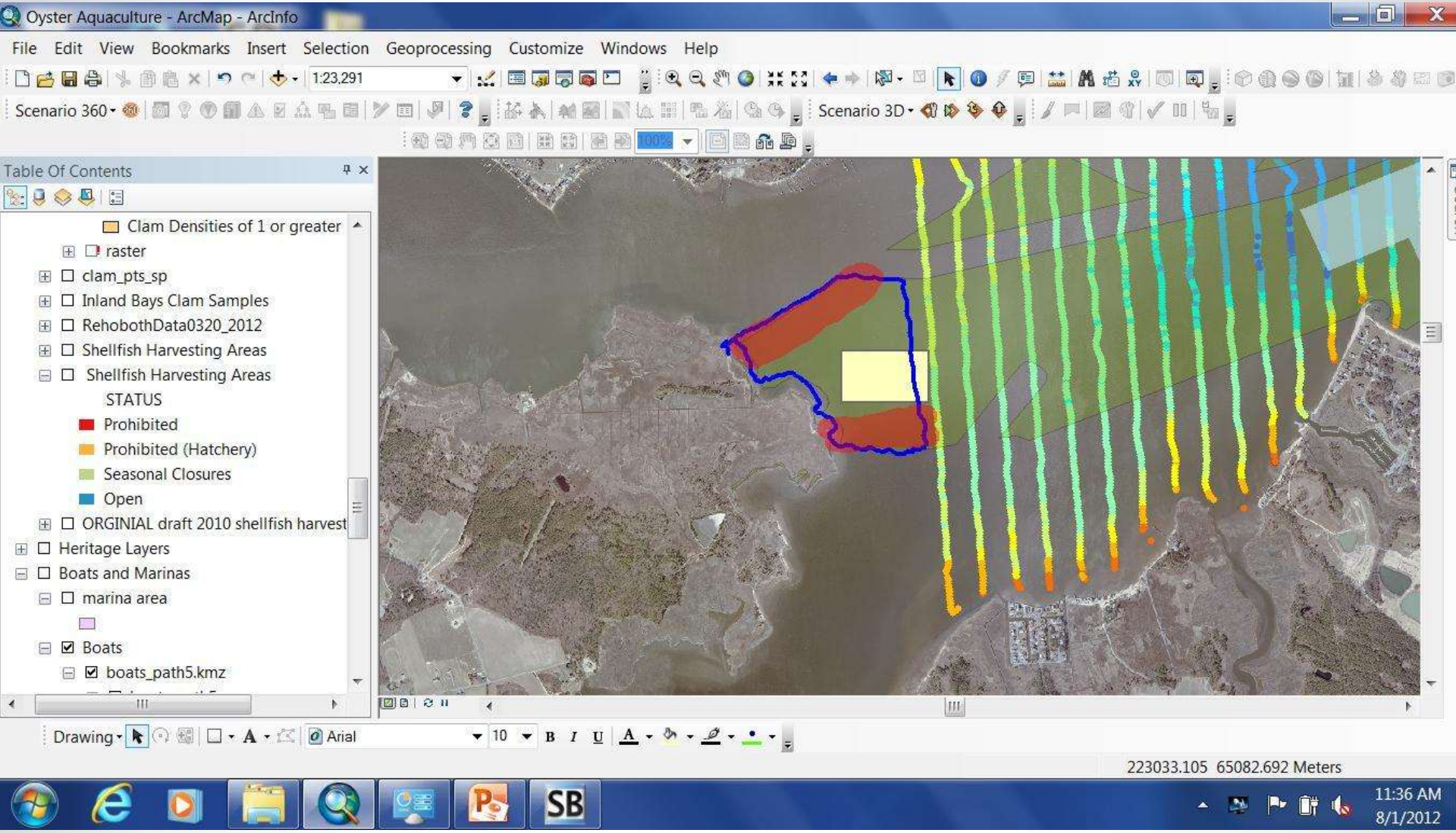
August 1st : GIS Sub-Committee Results


Oyster Aquaculture - ArcMap - ArcInfo
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Scenario 360
Scenario 3D
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Clam Densities of 1 or greater
raster
clam_pts_sp
Inland Bays Clam Samples
RehobothData0320_2012
Shellfish Harvesting Areas
Shellfish Harvesting Areas
STATUS
Prohibited
Prohibited (Hatchery)
Seasonal Closures
Open
ORGINIAL draft 2010 shellfish harvest
Heritage Layers
Boats and Marinas
marina area
Boats
boats_path5.kmz
Drawing
Arial
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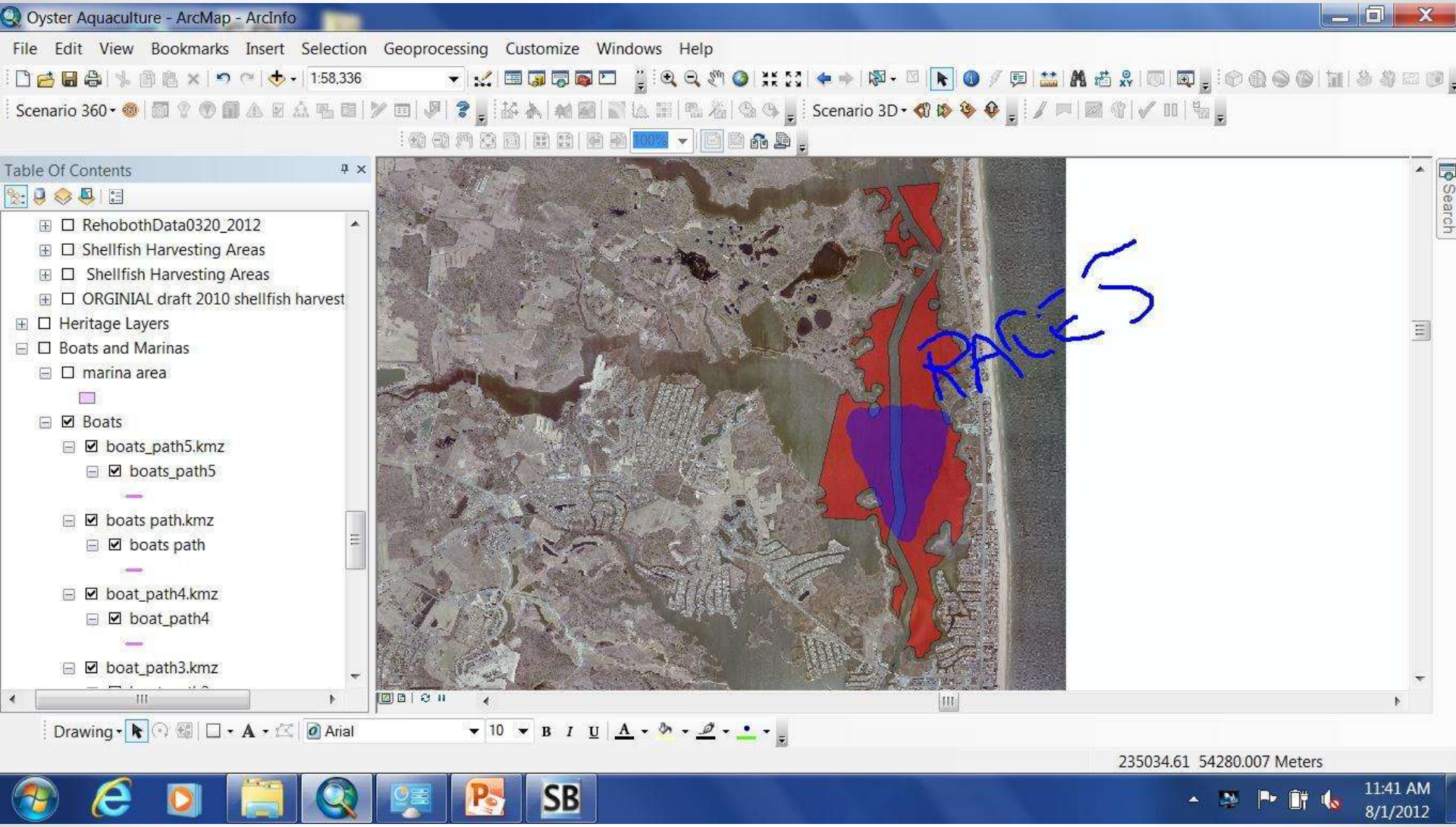
8/1/2012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Scenario 360
Scenario 3D
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Shellfish Harvesting Areas
ORGINIAL draft 2010 shellfish harvest
Heritage Layers
Boats and Marinas
marina area
Boats
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boats_path5
boats path.kmz
boats path
boat_path4.kmz
boat_path4
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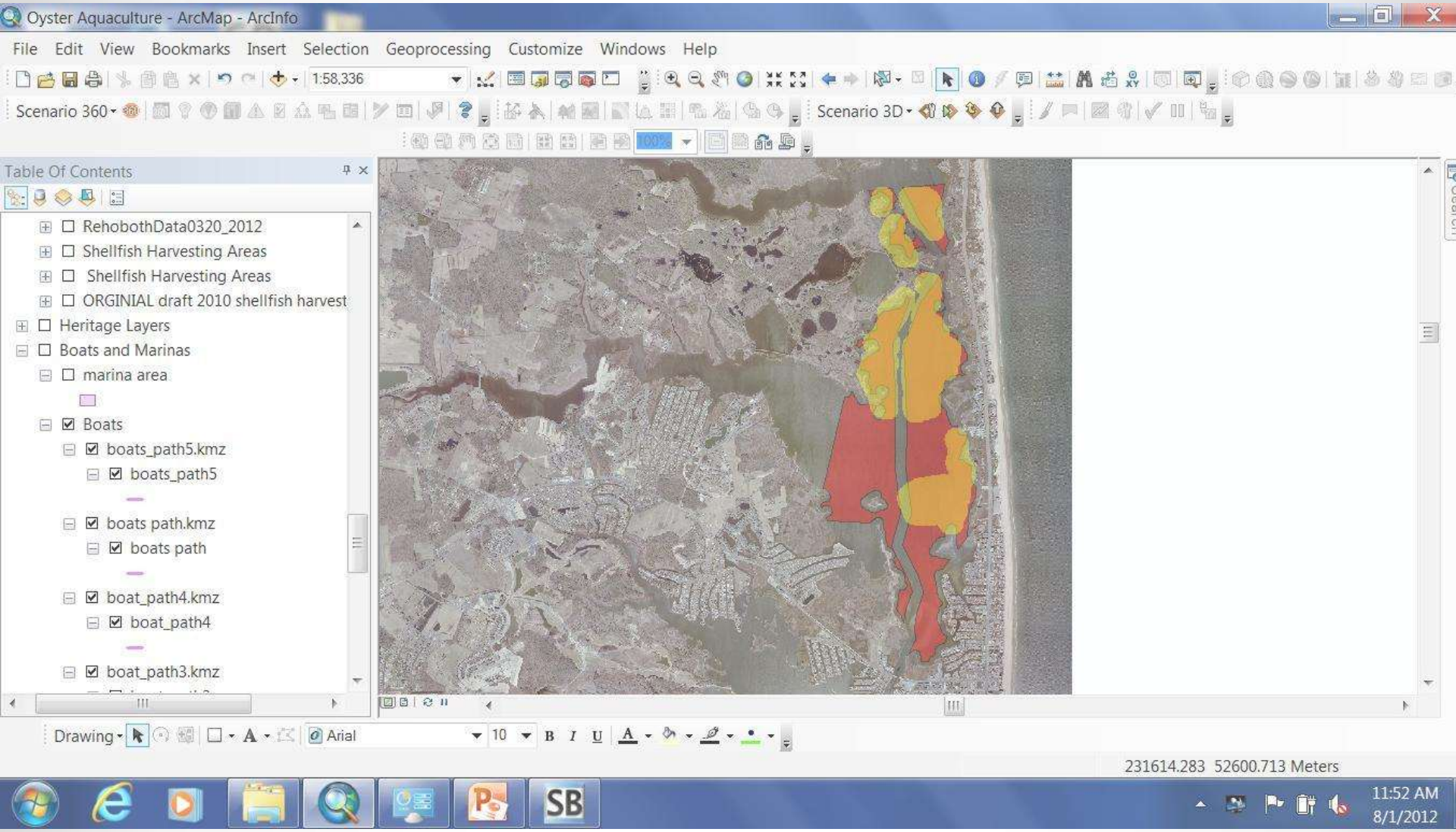
8/1/2012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Scenario 360
Scenario 3D
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Shellfish Harvesting Areas
Shellfish Harvesting Areas
ORGINIAL draft 2010 shellfish harvest
Heritage Layers
Boats and Marinas
marina area
Boats
boats_path5.kmz
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boats path
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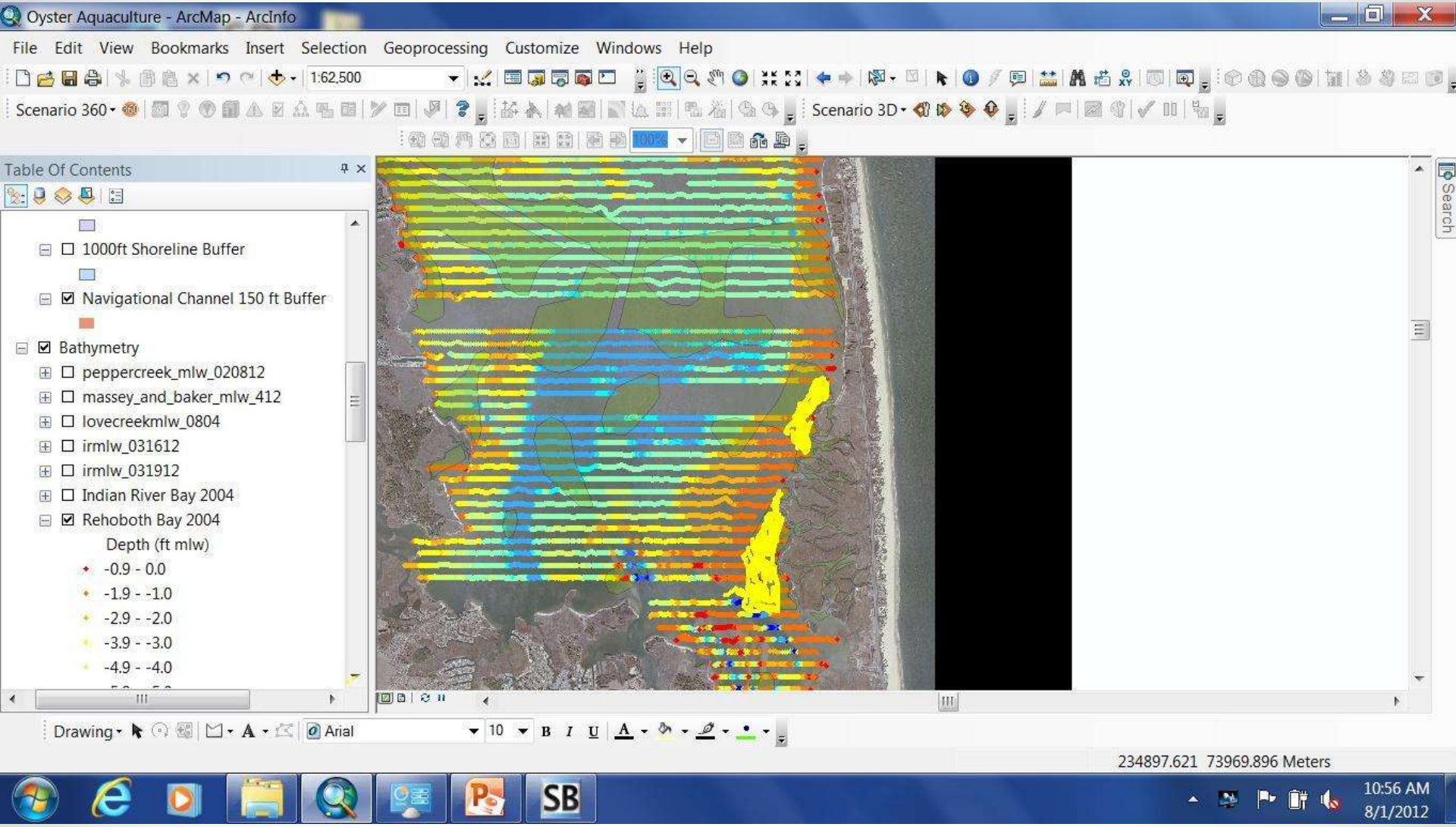
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Scenario 360
Scenario 3D
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1000ft Shoreline Buffer
Navigational Channel 150 ft Buffer
Bathymetry
peppercreek_mlw_020812
massey_and_baker_mlw_412
lovecreekmlw_0804
irmlw_031612
irmlw_031912
Indian River Bay 2004
Rehoboth Bay 2004
Depth (ft mlw)
-0.9 - 0.0
-1.9 - -1.0
-2.9 - -2.0
-3.9 - -3.0
-4.9 - -4.0
Drawing
Arial
10
234897.621 73969.896 Meters
10:56 AM
8/1/2012

Rehoboth Bay Potential Aquaculture Lease Area

Legend

Potential Aquaculture Lease Area v3

0.5 0.25 0 0.5 Kilometers

0.5 0.25 0 0.5 Miles

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Rehoboth Bay Potential Aquaculture Lease Area

Legend

Potential Aquaculture Lease Area v3

0.5 0.25 0 0.5 Kilometers

0.5 0.25 0 0.5 Miles

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Indian River Bay Potential Aquaculture Lease Area

Legend

Potential Aquaculture Lease Area v3

0.7 0.35 0 0.7 Kilometers

0.6 0.3 0 0.6 Miles

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Indian River Bay Potential Aquaculture Lease Area

Legend

Potential Aquaculture Lease Area v3

0.7 0.35 0 0.7 Kilometers

0.6 0.3 0 0.6 Miles

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Sloughs Gut Potential Aquaculture Lease Area

Legend

Potential Aquaculture Lease Area v3

0.0.05 0 0.1 Kilometers

0.1 0.05 0 0.1 Miles

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Sloughs Gut Potential Aquaculture Lease Area

Legend

Potential Aquaculture Lease Area v3

0.0 0.05 0 0.1 Kilometers

0.1 0.05 0 0.1 Miles

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Little Assawoman Potential Aquaculture Lease Area

Legend

Potential Oyster Aquaculture v3

0.6 0.3 0 0.6 Kilometers

0.5 0.25 0 0.5 Miles

Oyster Aquaculture Tiger Team

Little Assawoman Potential Aquaculture Lease Area

Legend

Potential Aquaculture Lease Area v3

0.5 0.25 0 0.5 Kilometers

0.5 0.25 0 0.5 Miles

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Area Available for Oyster Aquaculture: Rehoboth Bay

Legend

Areas outside of the OA exclusions

Total Area:

4,299 Acres

45.6% of the total Rehoboth Bays area

1 0.5 0 1 Kilometers

0.9 0.45 0 0.9 Miles

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