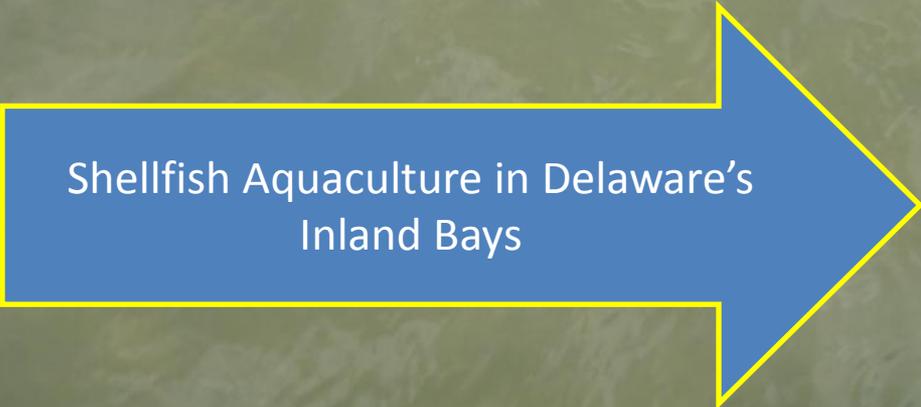


# Proposed Regulations and Proposed SADA for Shellfish Aquaculture in Delaware's Inland Bays



# Shellfish Aquaculture Leases in Delaware's Inland Bays

- Walk through the leasing process
  - Both potential aquaculturists and other users will get a good idea of what/how the Inland Bays will be affected by shellfish aquaculture.

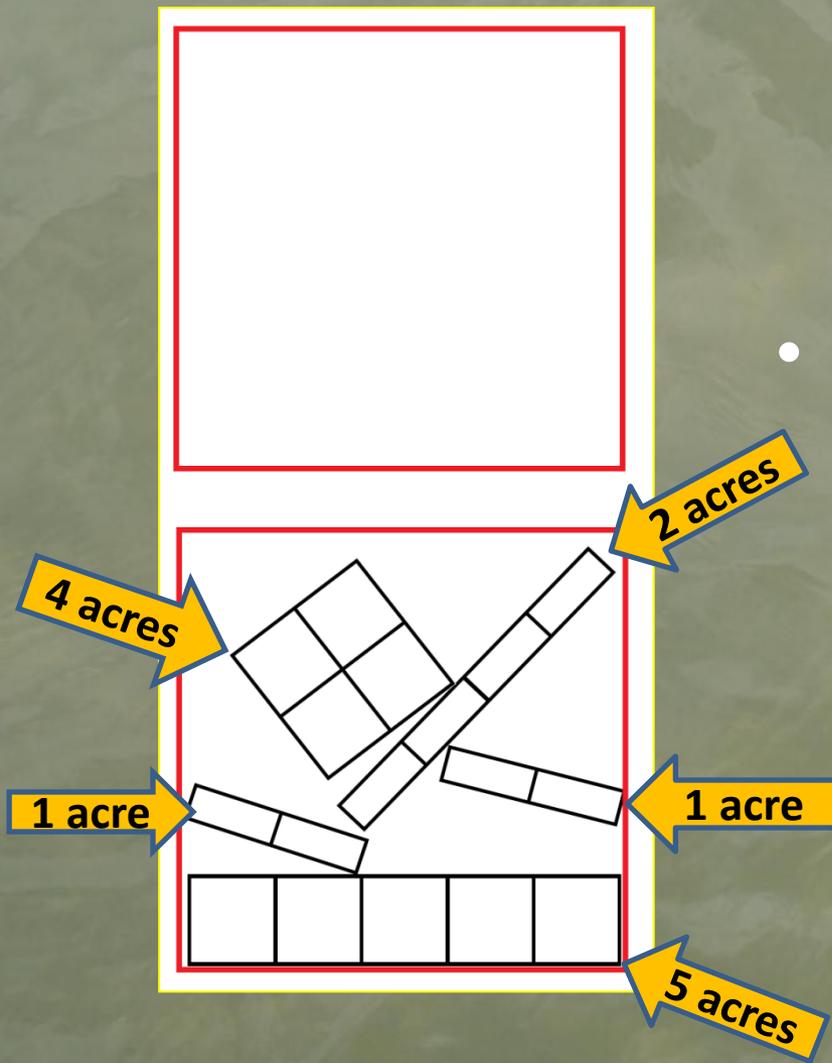


Shellfish Aquaculture in Delaware's  
Inland Bays

# Shellfish Aquaculture Development Areas (SADA)

- Lease up to 5% of Rehoboth and Indian River Bays and up to 10% of Little Assawoman Bay
  - SADA areas:
    - Seasonally closed or prohibited shellfishing area constrictions mean that the SADA must be located in the main part of bay, and the impact of 5%-10% is greater in the concentrated space.
- Will discuss the SADA locations later.
- Legislation: 7 Del C. §2006 (a) *“All leases shall be granted in minimum increments of 1 acre...All leases will be in a general rectangular shape.”*

## Hypothetical 25 acre SADA

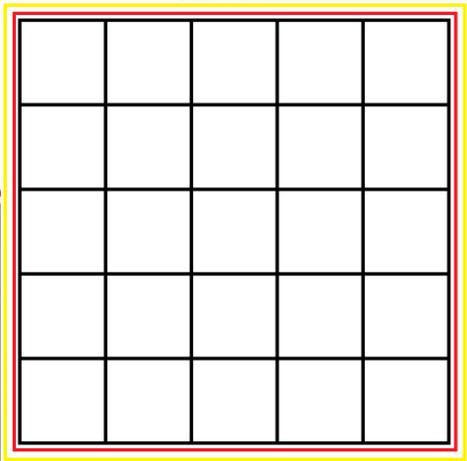


13 acres used

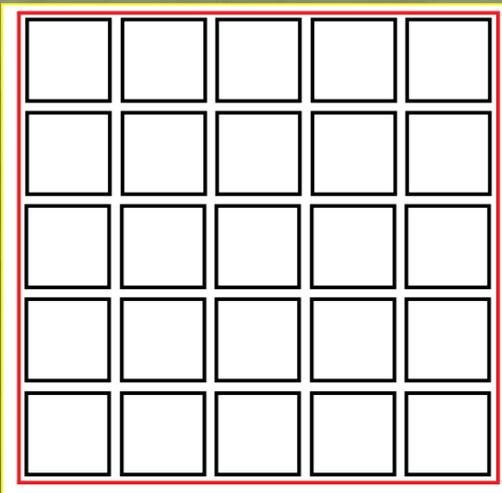
- The SADA are limited
- Comments expressed concern about the total amount of acreage that would be available.
- Allowing applicants to place their acreage in multiple directions and size configurations would result in unleaseable SADA space.
  - Possible some lessees blocked from their lawful lease.

## Hypothetical 25 acre SADA

- SADAs are divided into 1 acre square plots
  - This pre-division allows for more leasable land
    - No odd shape/size parcels left
  - Almost double the acreage in this scenario.
- Addition of 20 foot navigational corridors
  - Allows all leaseholders to be able to access their leases.
  - Allows other bay users to be able to cross SADA without interfering with gear and work on lease.
  - Reduces boundary conflicts between neighboring leases.



25 acres used



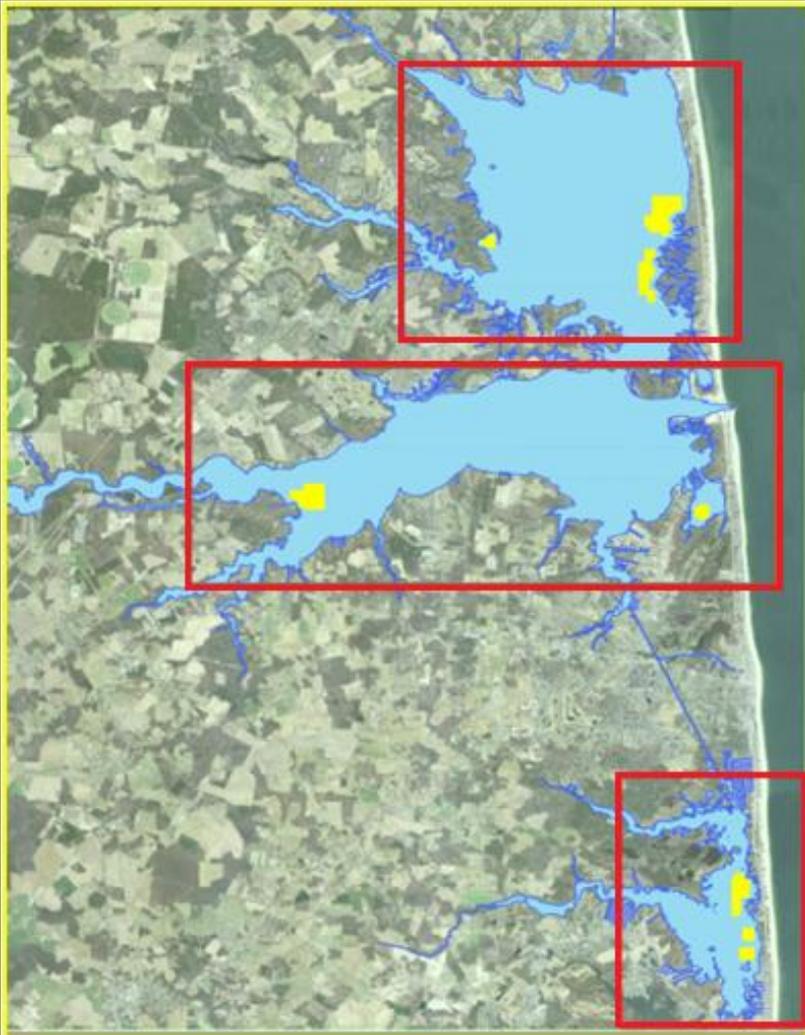
29 acre footprint  
with 20 ft corridors

# The SADA—Shellfish Aquaculture Development Areas



- Will allow potential leaseholders to “scope out” acreage.
  - Not all areas suitable for all gear/growing all species.

# Potential Lessees (SADA)



- Examine available acreage.
  - Determine which acres would work best with their planned operation.
- In the SADA will need (3.0):
  - Application
  - Field assessment
  - Performance bond
  - Liability coverage
  - Army Corps permit
  - Application and lease fees

# Potential Leases Outside of the SADA

- Leases may be permitted outside of the SADA (5.0)
- The applicant will need:
  - Application
  - Field assessment
  - Performance bond
  - Liability coverage
  - **Army Corps permit (obtained independently)**
  - **Individual permitting thru Wetlands & Subaqueous Lands.**
  - Application and lease fees

# The Application Process

- Department-provided application
- Fill out application
  - Operations plan (4.3):
    - describe which lease area(s) interested in,
    - the species (if in Little Assawoman, otherwise oyster (13.2)),
    - the method & gear type,
    - describe how proposed lease will fit in with the existing uses,
    - the safety equipment and boundary markings.



- Application--the business plan (4.4):
  - the anticipated timeline of the project,
  - description of facilities and equipment,
  - where shellfish will likely be obtained/estimated cost of stocking
  - financial capabilities description
  - resume or description of technical experience.
    - New aquaculturists are not excluded.

# The Next Step

- Department evaluation and acceptance or rejection of application (4.6).
- Upon acceptance of a complete application, the Department shall perform a field assessment.
  - The Department will determine the mean density of hard clams in the proposed acreage (6.0).
    - Delaware one of the last states on the East coast with viable natural hard clam population.
    - Committed to accurate assessment of hard clam population.

# Field Assessment: 2 or more hard clams/square yard/acre

- Potential lease sites where the Department determines the mean density of hard clams is 2 or more clams per square yard within each acre proposed for lease will not be leased (6.2.1.1).
  - Applicants in the SADA can modify their operations plan and acreage (provided they do not add acreage) and re-submit within a year of the first application (6.5).



# Field Assessment: Under 2 hard clams/square yard/acre

- The Department will continue with the lease process (6.3).
  - Submit applicant's permit application to Army Corps
- The Applicant then needs to:
  - Secure a performance bond of \$2,000/acre & provide evidence of such to the Department (7.1).
  - Secure liability insurance as specified in (7.2) & provide evidence of such to the Department.
  - Provide evidence of Army Corps permit (3.2.4) to the Department.



# The Lease Is Issued— Boundary Survey

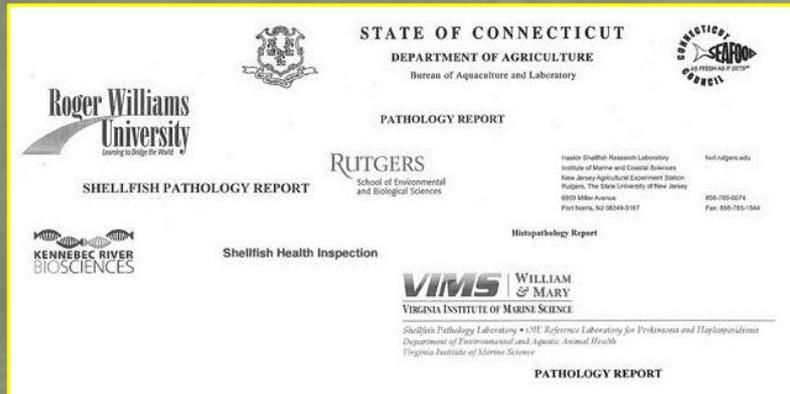
- Before any gear or shellfish may be placed on the lease, the applicant must have the boundaries of the lease surveyed (14.0).
  - The applicant may hire a professional land surveyor to complete the boundary survey
  - Or the applicant may request that the Department complete the survey
    - This service will be provided as time & resources allow—which may take 6+ months.

# Boundary Marking

- The lessee must place boundary markings, which the surveyor certifies as correct (14.1.1).
- Each corner of each leased acre must be marked with a PVC pole at least 6" in diameter, that extends at least 5' above the water's surface at mean high water (14.2).
- The leaseholder must then affix an orange 12"x12" diamond reflective placard to each corner pole. Placard must bear lease number (14.3).
- Each corner pole must also be marked with 24" of white or orange reflective material and lease number (14.3.1, 14.3.2).
- Markings must be maintained by the leaseholder throughout the lease (14.5).

# After the Lease is Marked—Shellfish Import

- May bring shellfish and gear onto the lease site.
  - may not harvest wild stock for aquaculture without permission (12.1).
- Shellfish for aquaculture may be imported with permission from the Department (12.3).
  - The Department will supply a form to the leaseholder.
  - The leaseholder supplies disease test results to Department.
- Active lease requirements—100,000 shellfish/acre after 2 full years (16.3), and enough to meet production requirement in the first 2 years (16.4).



# Culturing Shellfish

- Leaseholders are responsible for providing labor and materials to culture shellfish on their lease.
- There are no seasonal restrictions—aside from *Vibrio* restrictions-- on planting, tending, or harvesting cultured shellfish (15.2.1).



# Shellfish Aquaculture Gear

- Most types of gear may be used on a lease
  - Oysters must be in a container (23.2).
  - Oysters must be held at least 4 inches off of the bottom (11.4).
  - An individual piece of gear may not exceed 70 cubic feet in volume (11.8).
- All gear must be marked with the lease number (11.2).
- Each individual container (or vertical stack) must be marked with an individual 3"x3"x3" white buoy with the lease number (11.5).



# Gear Maintenance

- The leaseholder is responsible for marking and maintaining their shellfish aquaculture gear (11.1).
- Gear or equipment shall not be on a lease site if it is not currently housing live shellfish (11.9).
- Gear in the water may be cleaned only with hand tools that are non-electric or hydraulic (11.10).
- Gear cleaned while in the Inland Bays, must be cleaned on own lease site (11.11).

# Working the Shellfish Lease

- Each leaseholder will receive a harvester license in their name when the lease is issued (10.1).
- Individuals 16 years of age or over may apply for harvester licenses (10.2).
- While work is taking place on the lease site, someone on that lease must have a harvester license & written permission to work the lease in their possession 7 Del C. §2009(b),(c).

# Harvesting Cultured Shellfish

- It is unlawful to use mechanical gear (except winches for raising/lowering cages) to harvest shellfish on a lease.(15.1)
- Oysters of any size may be lawfully harvested (15.3).
- Clams may be harvested at 1.5 inches (7 Del C. §2401).
  - *“It shall be unlawful for any person to possess hard clams taken from the waters under the jurisdiction of the State which measure less than 1 ½ inches.”*
- Active Use requirement: After the first 3 years of the lease, the leaseholder must provide proof of sale for at least 10 bushels of oysters or 5,000 clams per acre/year (16.3.2).



# Reporting Requirements for Shellfish Aquaculture Lease

- The leaseholder is responsible for filing monthly reports (or null reports) of any planting or harvest and farm gate price (17.0).
- The leaseholder will answer a yearly questionnaire (17.2).



# Shellfish Hatcheries/Nurseries

- Any shellfish hatcheries/nurseries on land fall under Department of Ag.
- Shellfish Nursery Structures, including upwellers, downwellers, and raceways may be used in DE's Inland Bays –must be permitted as Shellfish Nurseries (9.1).
- The Nursery Structures may be operated outside of a shellfish aquaculture lease site, and in prohibited, seasonally closed, or open waters (9.4).
  - Nursery Structures in the Inland Bays located outside of an approved lease site fall under Wetlands & Subaqueous Lands regulatory authority (9.2.1).
  - Shellfish Nursery permit from Fisheries issued after Wetlands & Subaqueous Lands approval, and an operations plan (9.2.2).
  - Import of shellfish for nursery requires Department approval (12.3)
  - Shellfish must be moved to an approved lease site by the time the oysters reach 25mm, and the clams are 15mm (9.5).
- Nurseries file yearly reports of species grown/sold (17.3)



# Subaqueous Land Lease Renewal

- Leaseholders need to meet all criteria for leasing (18.1.1).
- Submit annual lease fee and form by Dec. 31 of current year's lease (18.1).



# Lease Transfer

- Leases may not be sold or subleased, but leases may be transferred, provided that the aquaculture operation remains the same (19.1).
  - The operations plan may be altered by providing written notice for the authorization of the Department (8.1, 8.2)
  - Sale of equipment and stock can be privately arranged.
- The party accepting the transfer needs to arrange (19.2, 19.3):
  - A complete application
  - A boundary survey
  - Evidence of performance bond and liability insurance, and full payment of application and lease fees.

# Other Lease Circumstances (20)

- Lease Surrender (20.1):
  - A leaseholder may surrender the lease whole or in 1 acre increments to the State at any time during the lease.
- Lease Termination (20.2)
  - The Department may terminate a Shellfish Aquaculture Lease when the Department determines that the lease does not serve the public interest of the State.

# Contesting the Department's Decision

- Applicants or leaseholders may contest the Department's decision on acceptance or rejection of application, or termination of lease by requesting a review by the Environmental Appeals Board within 30 days of the Department's decision (20.3.1).



# Condemnation/Emergency Leasing

- Shellfish lease sites could be closed to harvest by Delaware Shellfish and Recreational Waters Program (21.1).
  - If the lease is in an area that is closed for longer than a short episodic closure, then the Delaware Shellfish and Recreational Waters Program will consider relay (moving shellfish) or harvest on a case-by-case basis (21.1.2).
- Applicable if a lease site is in imminent danger, and an immediate change in location could save the shellfish (22.1).
  - The Department will determine if this is a possibility with leaseholder application (22.1.1).

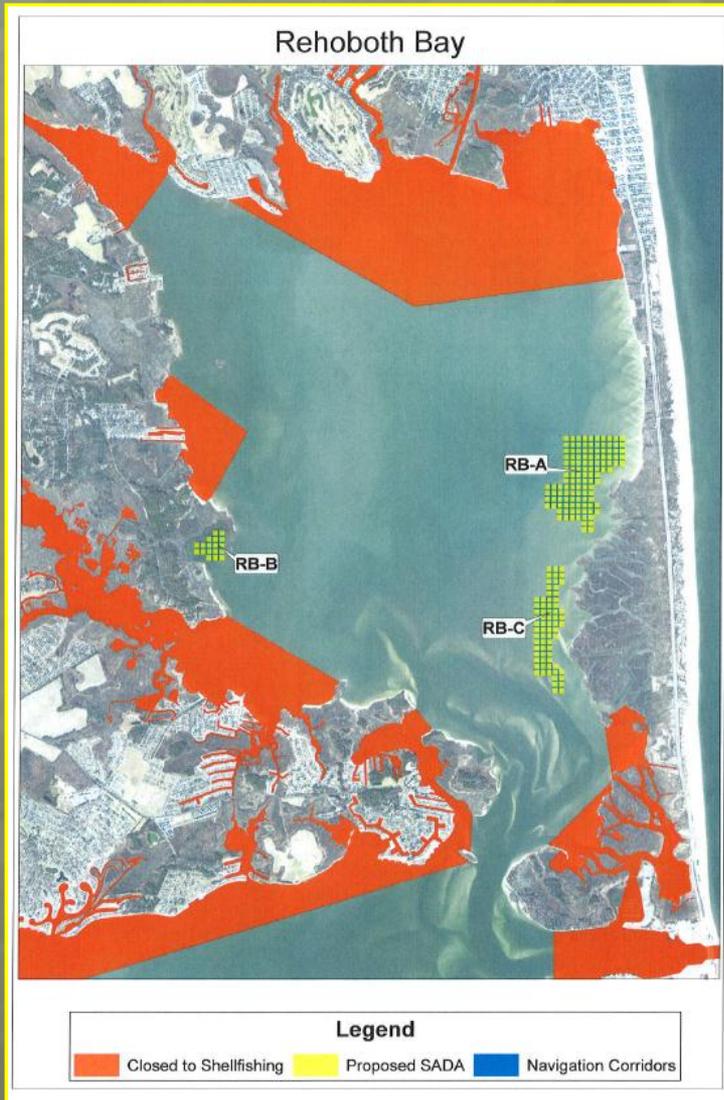
# Prohibited Activities (23.0)

- No alteration of existing condition (adding/removing fill, shell, etc.) without Department approval.
- Wild bivalve shellfish may not be harvested from permitted lease sites or navigation corridors.
- May not prevent the public from traversing or hook & line fishing in a lease area.
- Boats traversing a marked navigation corridor or lease must adhere to a slow-no-wake speed.
- Unlawful to interfere with the lawful tending or harvest of a lease.
- Unlawful for boats, other than those operated by leaseholder/employees to anchor within a lease site or tie off to gear or boundary markings.

# Prohibited Activities (23.0) Continued

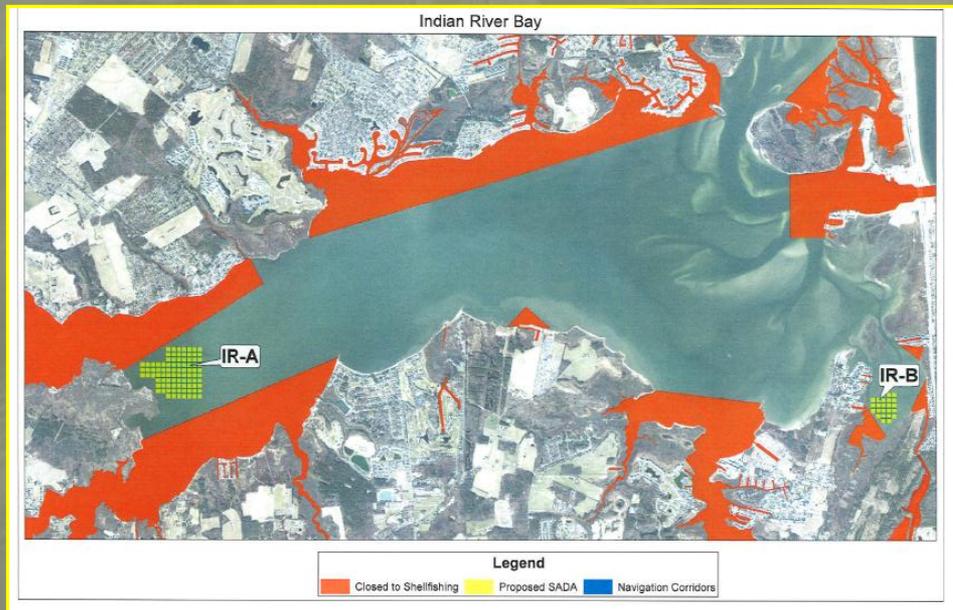
- Non-native species may not be cultured.
- No boats may anchor within a navigation corridor.
- Anyone culturing more than 1,000 shellfish must be operating under an aquaculture lease or shellfish nursery permit.
- Any fishing or crabbing within a lease or navigation corridor must be done by hook & line or hand line.
- May not use canopy predator nets, or barrier netting out of the water on a lease or nursery structure.
- May not use supplemental algae to culture shellfish.

# SADA Locations—Rehoboth Bay



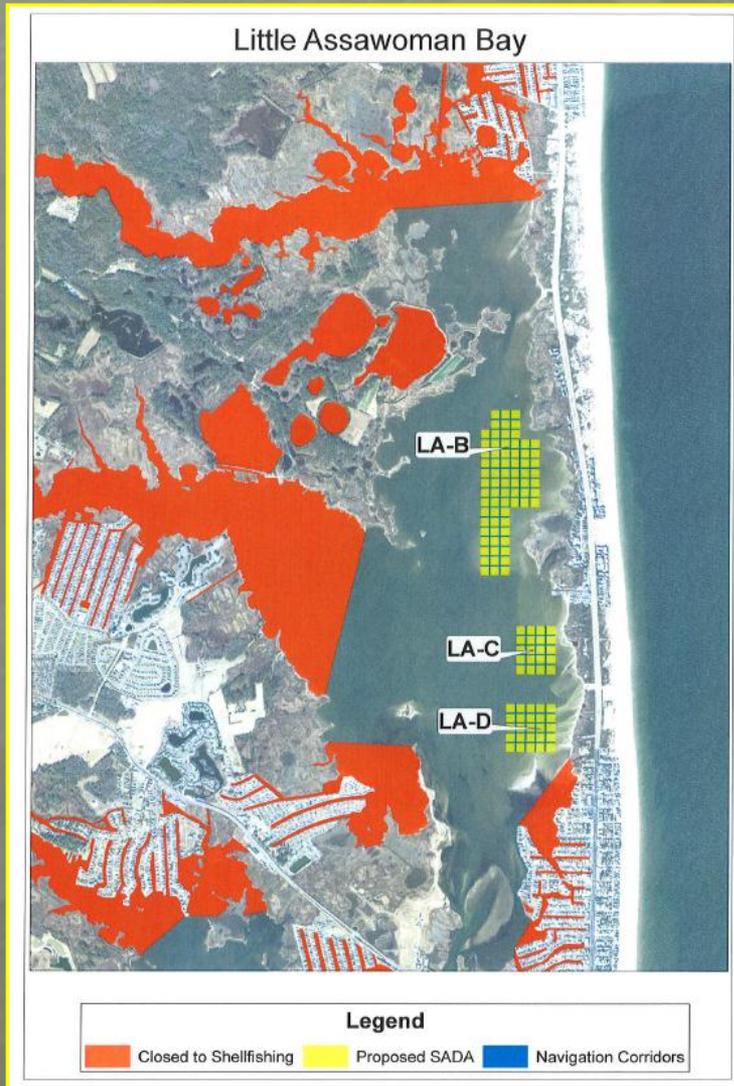
- Rehoboth Bay SADA leasable acres (not counting navigation corridors): 209 acres
- SADA % of total acreage: 2.108%
- SADA % of open acreage: 3.289%
- RB-A acres = 120
- RB-B acres = 18
- RB-C acres = 71

# SADA Locations-Indian River Bay



- Indian River Bay SADA leasable acres (not counting navigation corridors): 115 acres
- SADA % of total acreage: 1.156%
- SADA % of open acreage: 2.018%
- IR-A acres = 91
- IR-B acres = 24

# SADA Locations-Little Assawoman Bay



- Little Assawoman Bay SADA leasable acres (not counting navigation corridors): 118 acres
- SADA % of total acreage: 4.68%
- SADA % of open acreage: 8.657%
- LA-B acres = 73
- LA-C acres = 20
- LA-D acres = 25

# Breakout Session

- Examine maps
- Prepare for comment period