

Consolidated Strawman Management Plan Proposal

Proposed changes to current oyster
management areas

2/13/2017

Draft Version 1

Presentation to the
Oyster Advisory Commission

By

Maryland Department of Natural Resources

Goal of Consolidated Strawman Management Plan Proposal:

- Bottom line goal = more oysters in the water
- Oysters in sanctuary and public fishery areas are a public resource managed by the State through DNR. All stakeholders can provide input on how oysters are managed.
- Solicited County Oyster Committees and Environmental Groups for proposals regarding changes to the current oyster management areas
- Department developed a strawman proposal based on the consolidation of these proposals, and OAC comments and deliberations
- Tried to develop a fair and balanced strawman proposal for all oyster stakeholder groups
- Look at big picture holistically to address values and concerns while staying true to guidelines and criteria

Guidelines for Proposed Changes:

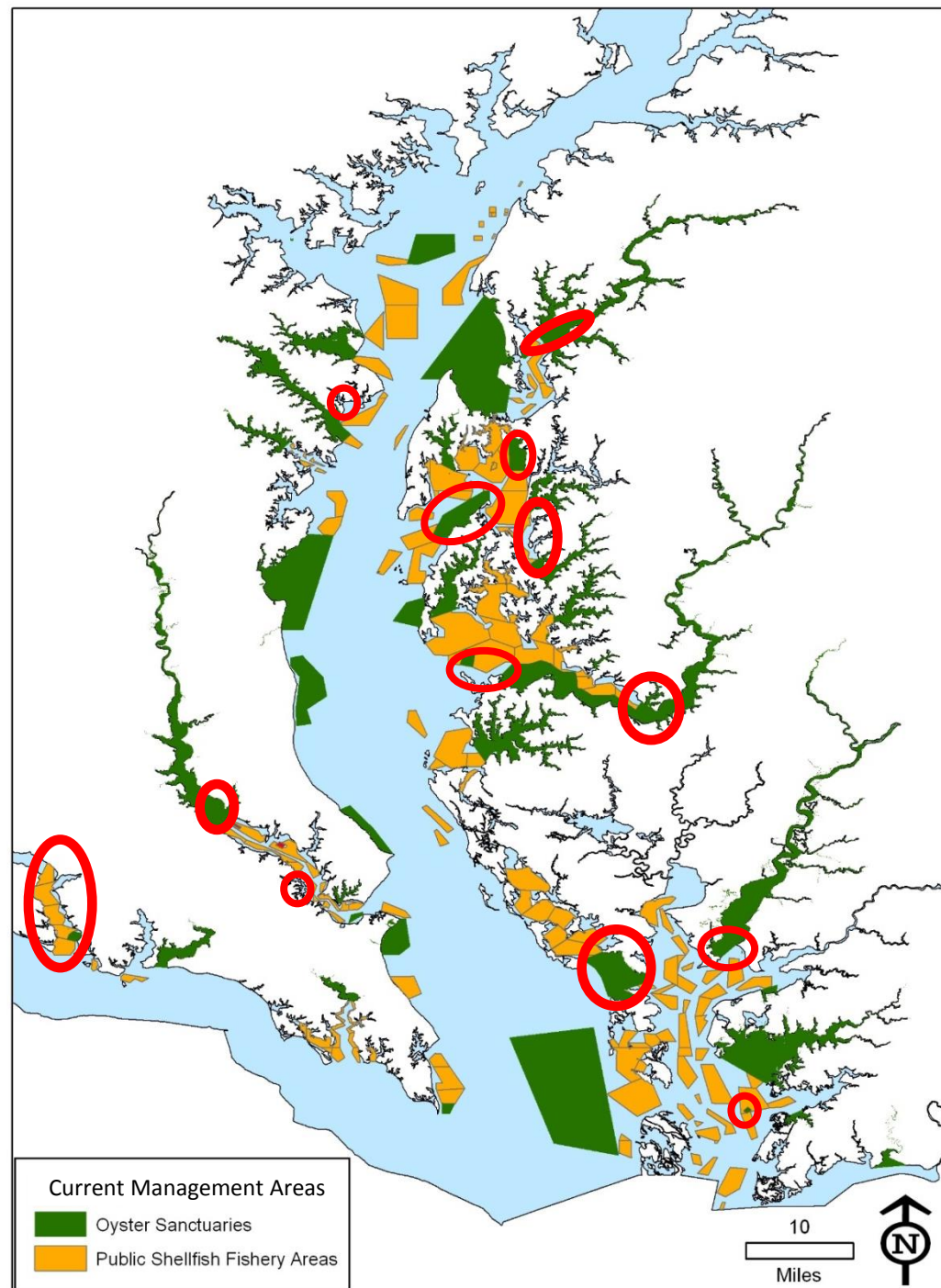
- Maintain 20-30% of estimated productive oyster bottom within sanctuaries (estimated productive oyster bottom as defined in the 2009 PEIS)
- No changes to the three restoration partnership sanctuaries selected towards meeting the 2014 Chesapeake Bay Agreement (Harris Creek, Little Choptank River, or Tred Avon River)
- New sanctuary areas must have an restoration management plan
- Minimize smaller sanctuaries that are hard to enforce
- No declassification of a small portion of a sanctuary located in the middle of a sanctuary due to enforcement issues
- Create 4-6 rotational harvest and planting areas – areas that could be successful if invested in
- Require a detailed, specific management plan for each proposed rotational harvest area. Examples of information to be included in the plan: How long an area will be opened & closed (areas will be closed for at least 3 years prior to opening to harvest); Areas must have shell and/or seed planting prior to reopening to harvest; Determine annual shell/seed planting density and amount to be planted; Determine methods to groundtruth to ensure only planting on good bottom; etc...
- Harvest gear types will not be changed
- Will work with County Oyster Committees to determine final boundaries of the 3-4 zones within each rotational harvest area within the guidelines listed above

Types of Proposed Changes:

1. Create rotational harvest/planting areas
2. Create new sanctuary areas
3. Expansion of current sanctuary areas
4. Current sanctuaries to potentially receive state-funded restoration
5. Declassified sanctuaries to be managed under current public fishery regulations
6. Selection of the 4th and 5th sanctuary becoming a restoration partnership sanctuary towards meeting the 2014 Chesapeake Bay Agreement

Areas in strawman with proposed changes:

- Upper Chester River
- Miles & Wye Rivers
- Upper Choptank River
- Hooper Straits
- Wicomico River West
- Upper Patuxent River
- Lower Patuxent River – 2 locations
- Whitehall Bay
- Eastern Bay – 2 locations
- Lower Choptank River
- Nanticoke River
- Somerset Sanctuary

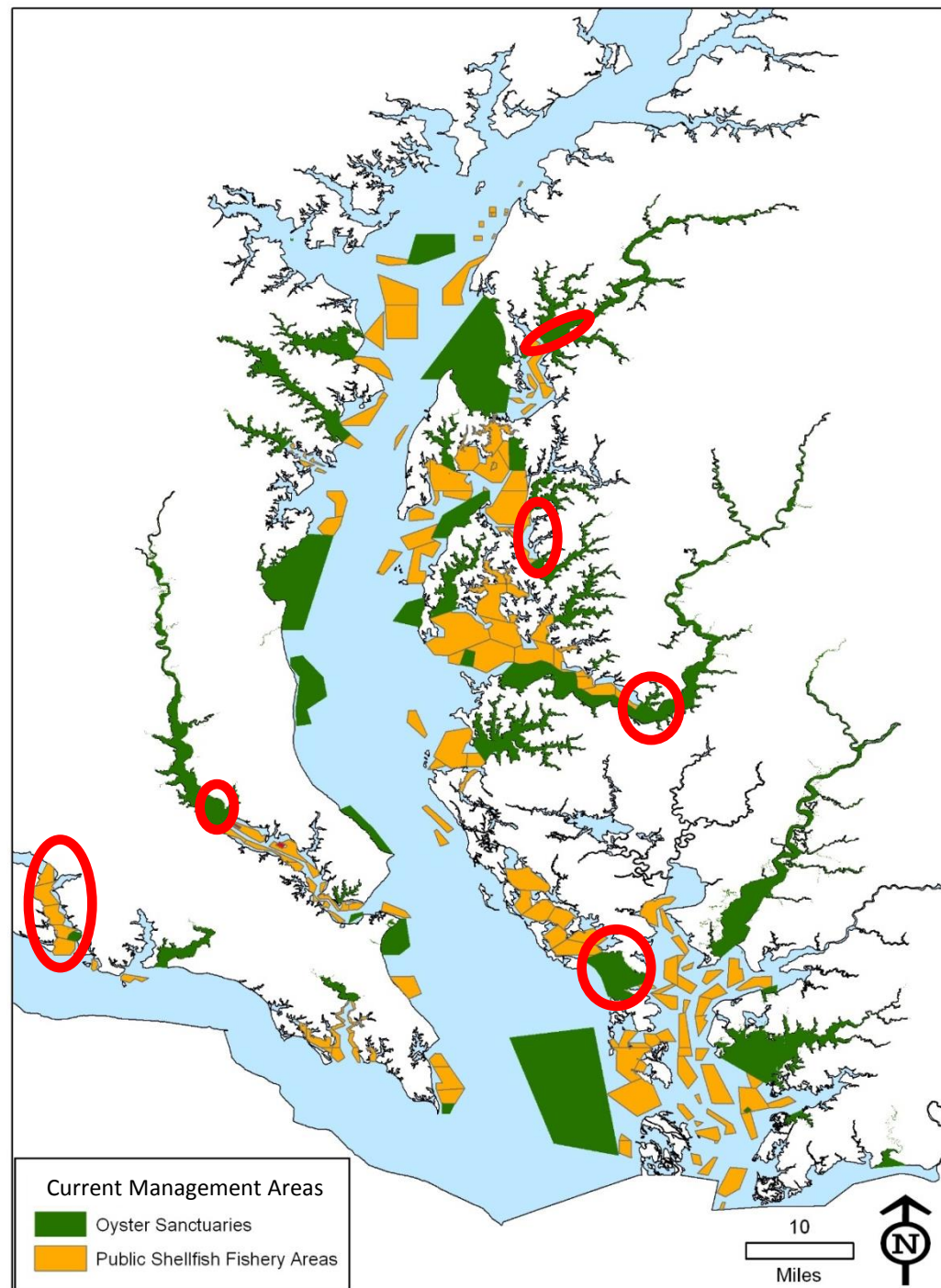


Proposed Rotational Harvest Areas :

- Upper Chester River
- Miles & Wye Rivers
- Upper Choptank River
- Hooper Straits
- Wicomico River West
- Upper Patuxent River

Proposed Guidelines:

- Create 4 to 6 areas
- Located throughout the bay



Upper Chester River Proposal

Upper Chester River Sanctuary

Tier: 1A (sanctuary contains 2 older USACE sanctuaries but they are not located in proposed area)

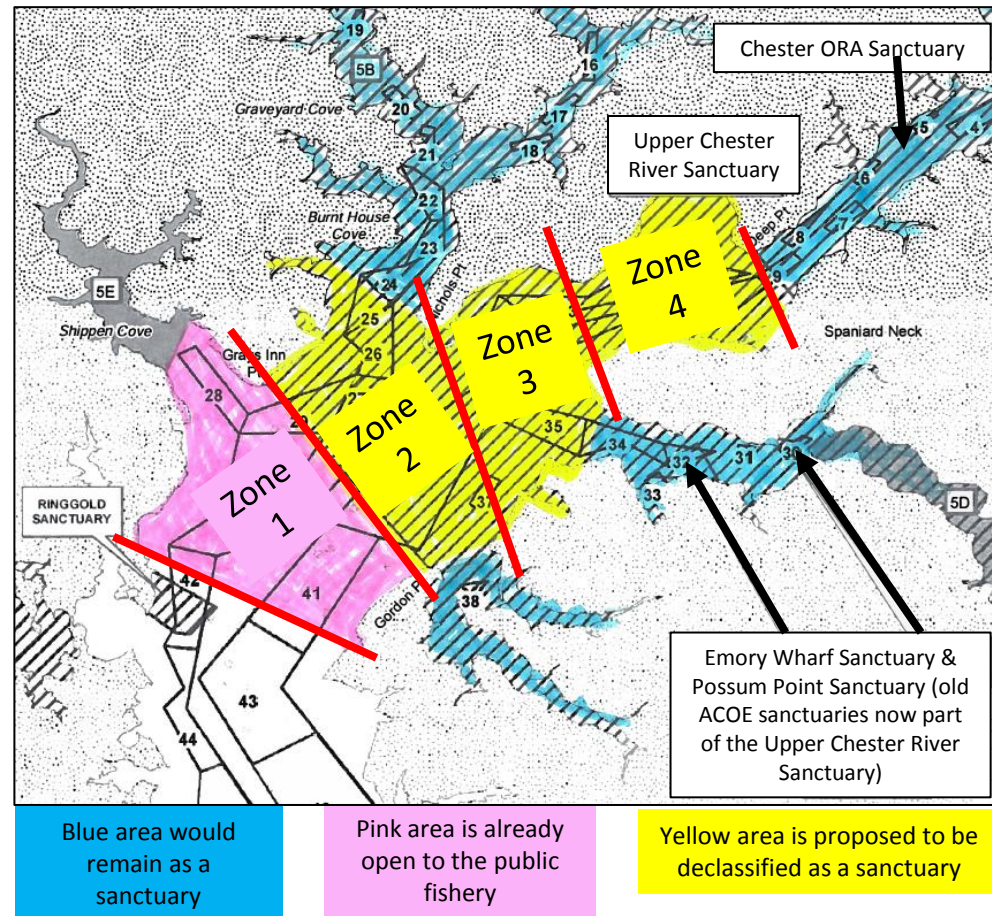
Total Acres Declassified : 2,286

Total Historic Charted Bottom Declassified : 1,917

Total EIS Productive Bottom Acres Declassified : 502

Declassify portion of sanctuary and change to rotational harvest area

- Sanctuary has low productivity due to low recruitment. Would need major investment and continual investment to become productive.
- Blue areas on map to remain as sanctuary
- Create a rotational harvest area out of the pink (already in public fishery) and yellow (currently a sanctuary) areas
- Work with County Oyster Committees on exact boundaries for 4 zones within the area
- Open each zone once every 4 years
- Seed and/or substrate planting needs to occur prior to a zone reopening to harvest due to low recruitment rates in the area
- Kent and Queen Anne's COC will plant at least 1 million seed in remaining sanctuary area annually
- Create a detailed, specific management plan
- Use current harvest gear types in area (Hand Tong and Diving)



Pink colored public fishery area is approximately 1,197 acres of historic charted bottom

Miles and Wye Rivers Proposal

Miles River and Wye River sanctuaries

Tier: Miles River Sanctuary = Tier 2; Wye River Sanctuary = Tier 1

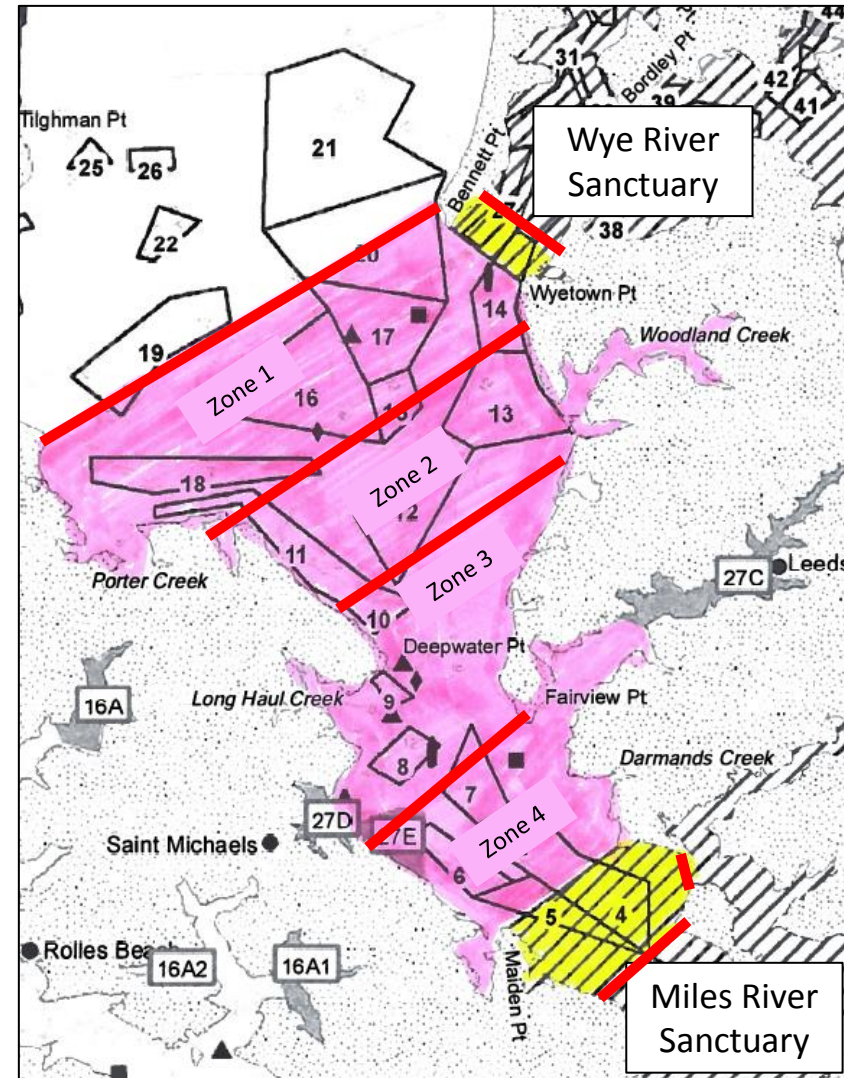
Total Acres Declassified : 219

Total Historic Charted Bottom Declassified : 244

Total EIS Productive Bottom Acres Declassified : 24

Declassify portion of sanctuary and change to rotational harvest area

- Propose to declassify a portion of Wye and Miles sanctuaries
- Create a rotational harvest area in the pink (already in public fishery) and yellow (currently a sanctuary) areas
- Work with County Oyster Committees on exact boundaries for 4 zones within the area
- Open each zone once every 4 years
- Seed and/or substrate planting needs to occur prior to a zone reopening to harvest due to low recruitment rates in the area
- Create a detailed, specific management plan
- Use current harvest gear types in area (Hand Tong and Diving)



Pink area is already
in public fishery

Yellow area is proposed to be
declassified as a sanctuary

Upper Choptank River Proposal

Upper Choptank River Sanctuary

Tier: 1A (sanctuary contains older USACE sanctuary but it is not located in proposed area)

Total Acres Declassified : 2,014

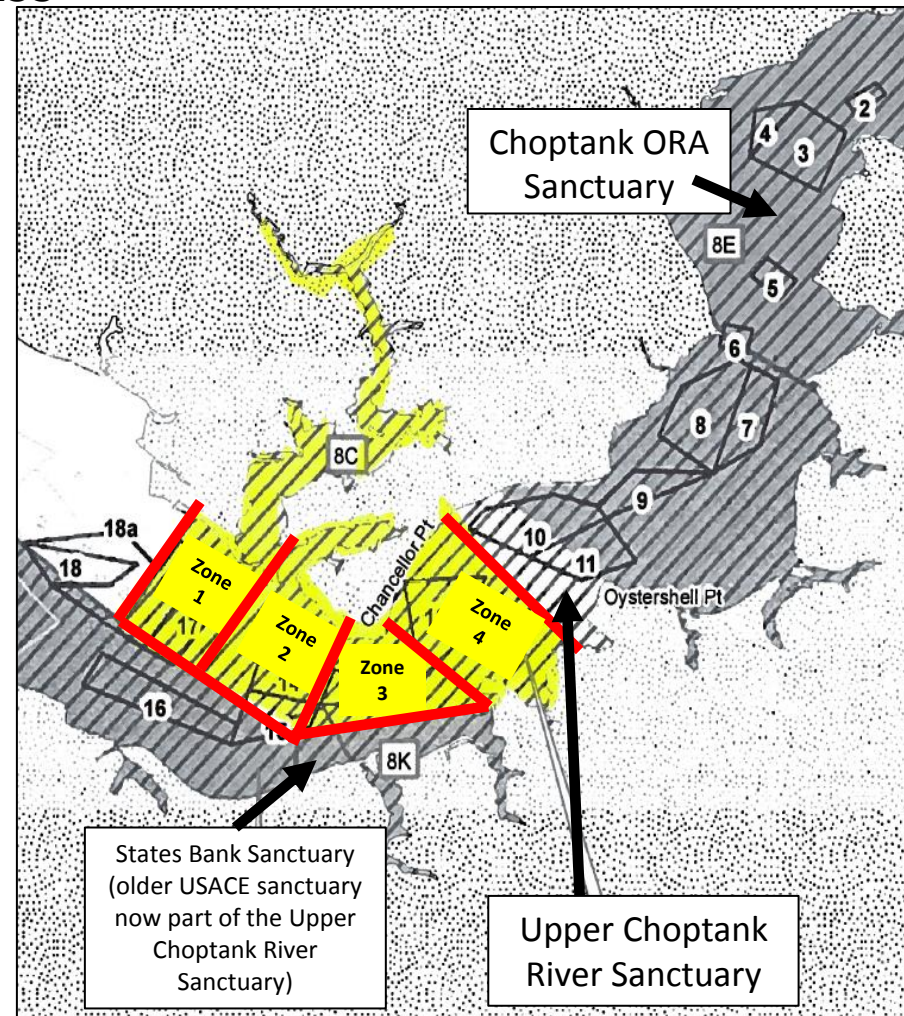
Total Historic Charted Bottom Declassified : 545

Total EIS Productive Bottom Acres Declassified : 153

Declassify portion of sanctuary and change to rotational harvest area

- Propose to declassify a portion of Upper Choptank River Sanctuary
- Create a rotational harvest area in the yellow (currently a sanctuary) areas
- Work with County Oyster Committees on exact boundaries for 4 zones within the area
- Open each zone once every 4 years
- Seed and/or substrate planting needs to occur prior to a zone reopening to harvest due to low recruitment rates in the area
- Create a detailed, specific management plan
- Use current harvest gear types in area (Hand Tong and Diving)
- This area is surrounded by and directly adjacent to large areas of restricted waters on two sides and conditional waters on a third side. MDE will need to be consulted.

Yellow area is proposed to be declassified as a sanctuary



Hooper Straits Proposal

Hooper Straits Sanctuary

Tier: 1

Total Acres Declassified: 7,307

Total Historic Charted Bottom Declassified : 5,300

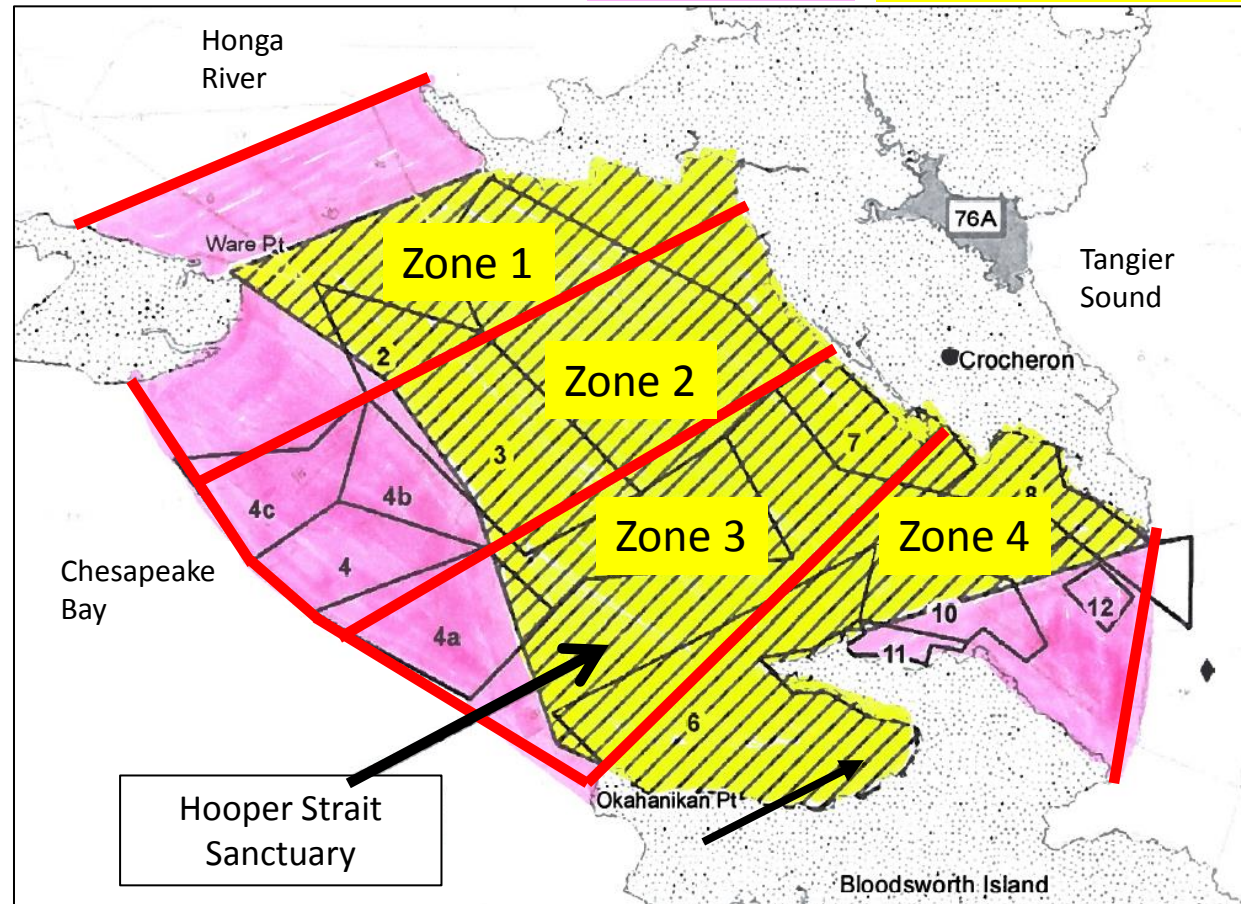
Total EIS Productive Bottom Acres Declassified : 150

Declassify whole sanctuary and change to rotational harvest area

- Propose to declassify Hooper Straits Sanctuary
- Create a rotational harvest area in the pink (already in public fishery) and yellow (currently a sanctuary) areas
- Work with County Oyster Committees on exact boundaries for 4 zones within the area
- Open each zone once every 4 years
- Seed and/or substrate planting needs to occur prior to a zone reopening to harvest
- Create a detailed, specific management plan
- Use current harvest gear types in this area. (Hand Tongs and Diving. In a small portion of Zone 1 and Zone 4 (north and south of the sanctuary, respectively) power dredging would also be permitted.)

Pink area is already in public fishery

Yellow area is proposed to be declassified as a sanctuary



Pink colored public fishery area is approximately 2,603 acres of historic charted bottom

Patuxent River Proposal

Upper Patuxent River Sanctuary

Tier: Upper Patuxent River Sanctuary = Tier 1A

Total Acres Declassified: 4,036

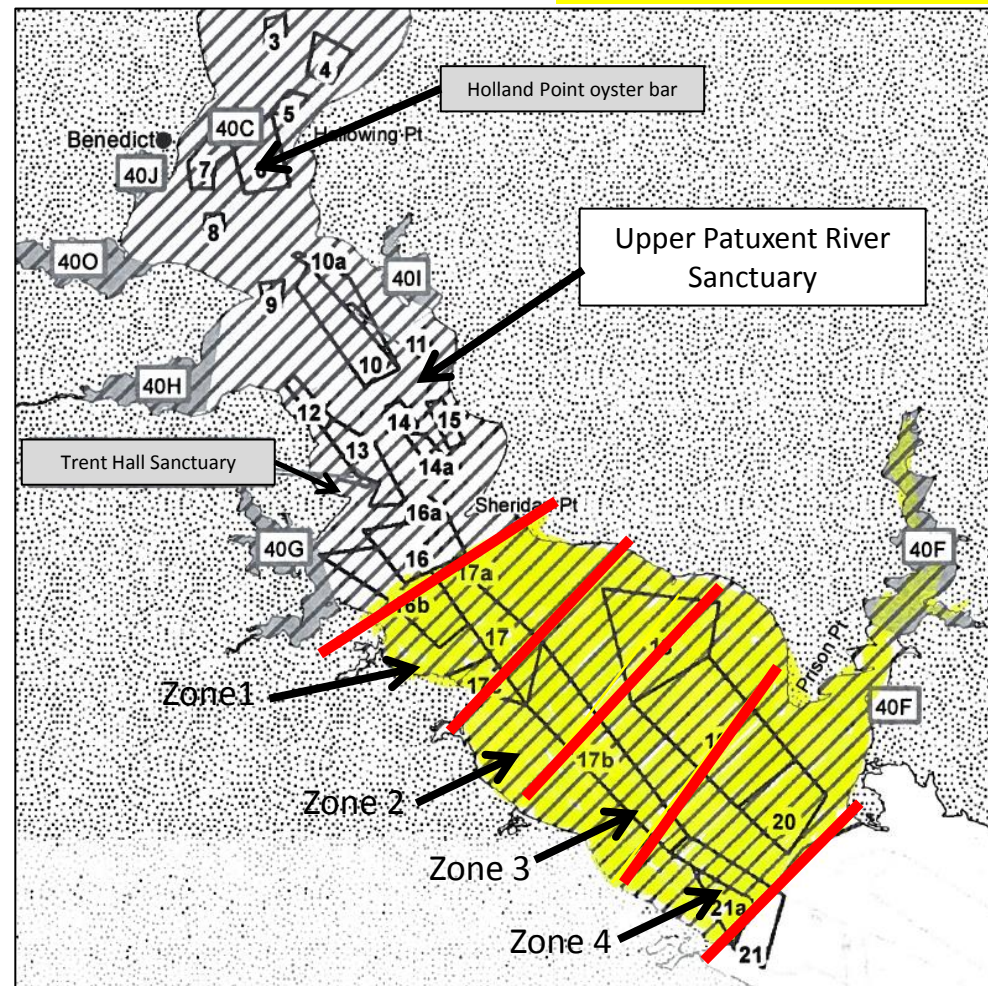
Total Historic Charted Bottom Declassified : 1,413

Total EIS Productive Bottom Acres Declassified : 380

Yellow areas are proposed to be
declassified as a sanctuary

Declassify portion of sanctuary and change to rotational harvest area

- Propose to declassify a portion of Upper Patuxent River Sanctuary
- Create a rotational harvest area in the yellow (currently a sanctuary) areas
- Work with County Oyster Committees on exact boundaries for 4 zones within the area
- Open each zone once every 4 years
- Seed and/or substrate planting needs to occur prior to a zone reopening to harvest
- Create a detailed, specific management plan
- Use current harvest gear types in this area (Hand Tongs and Diving)

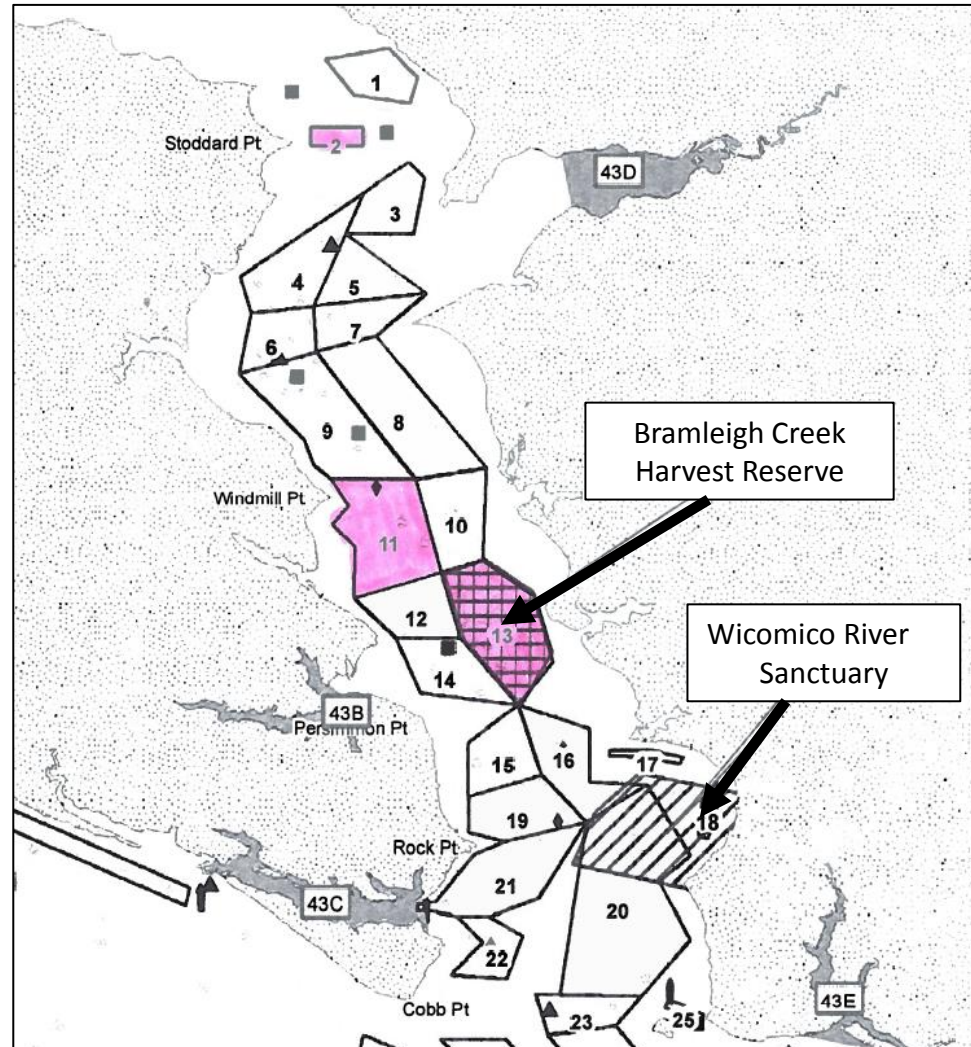


Wicomico River West Proposal

No change to management area boundaries or acres

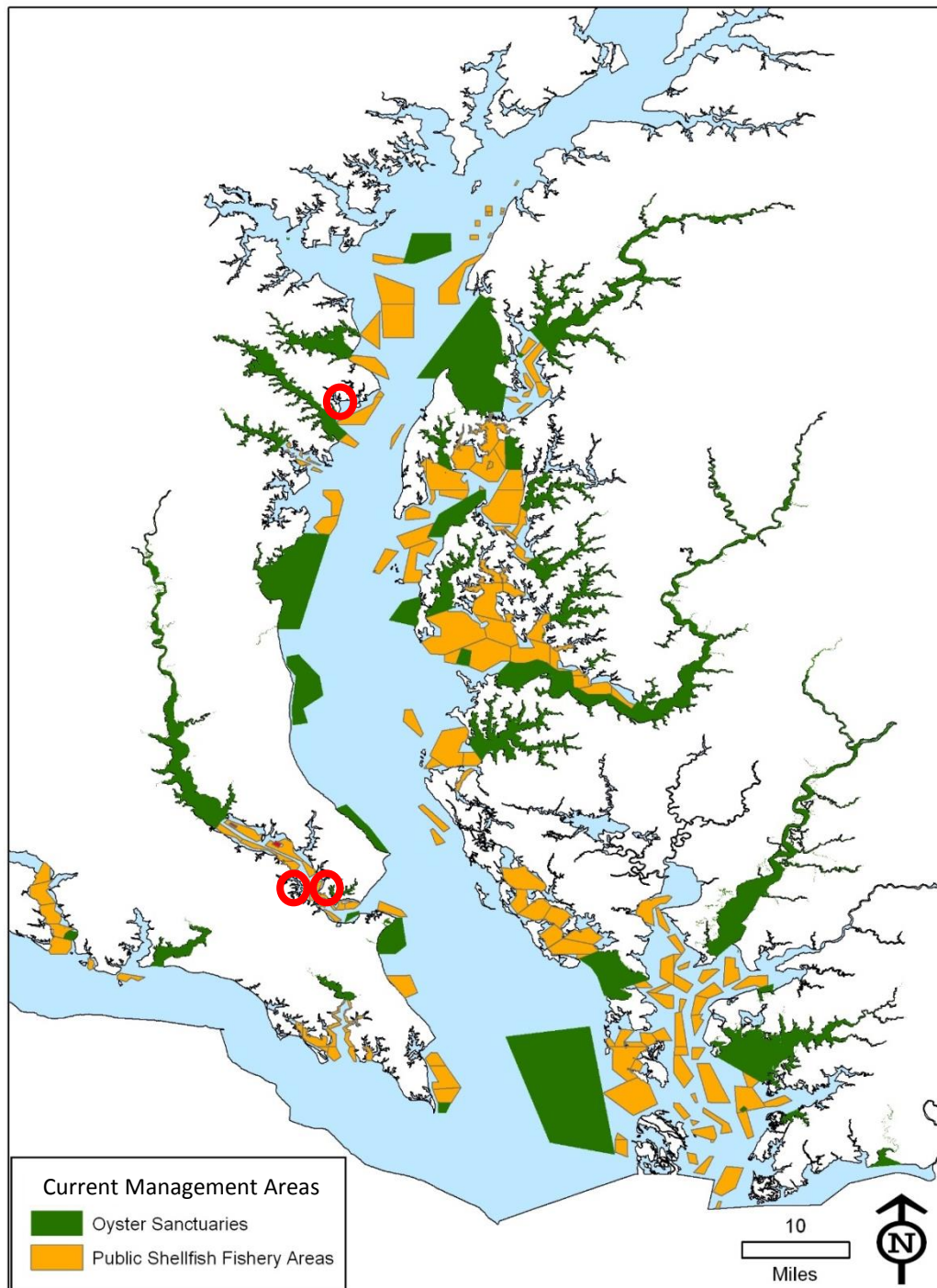
- Previous plan as submitted may have enforcement issues and logistic and regulatory/administrative issues – smaller, separate areas.
- Alter plan to have 3 or 4 larger rotational zones within the area
- Work with County Oyster Committees on exact boundaries for 3 or 4 zones
- Open each zone once every 3 or 4 years
- Seed and/or substrate planting needs to occur prior to a zone reopening to harvest
- Create a detailed, specific management plan
- Use current harvest gear in this area

Pink area is already in a rotational harvest plan



Proposed New Sanctuary Areas:

- Lower Patuxent River – 2 locations
- Whitehall Bay



Lower Patuxent River Proposal

New sanctuary

Total Acres : 175

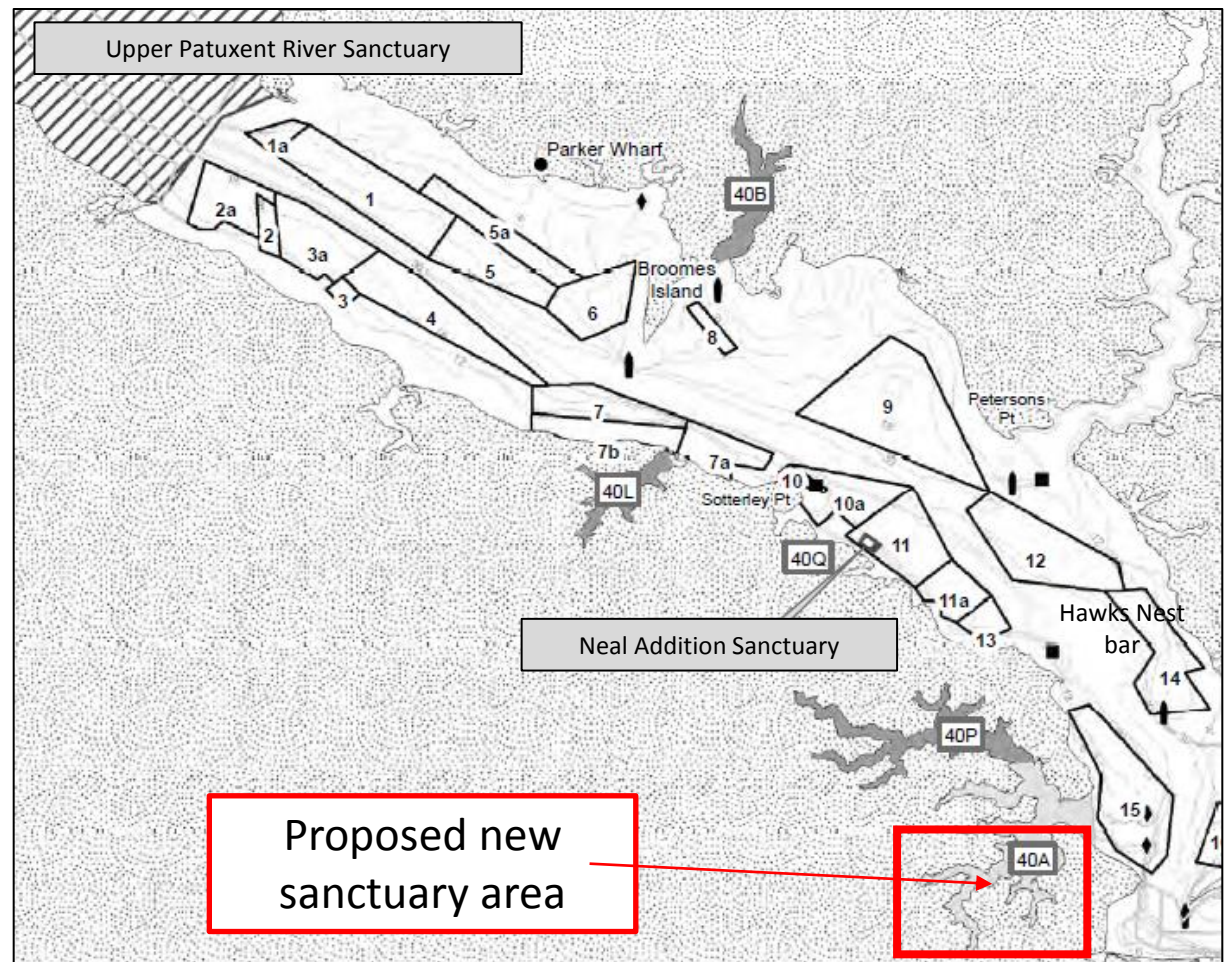
Total Historic Charted Bottom : 0

Total EIS Productive Bottom Acres : 0

Develop a specific management plan for this area that determines exactly where the oysters would be planted = conducting bottom surveys.

Determine MGO financial backing into the future

Expand the current MGO to nearby communities so that multiple areas within the proposed area could be planted



Area is a MDE Shellfish Area closed for human health risks.

Lower Patuxent River Proposal

New sanctuary

Total Acres : 2.3

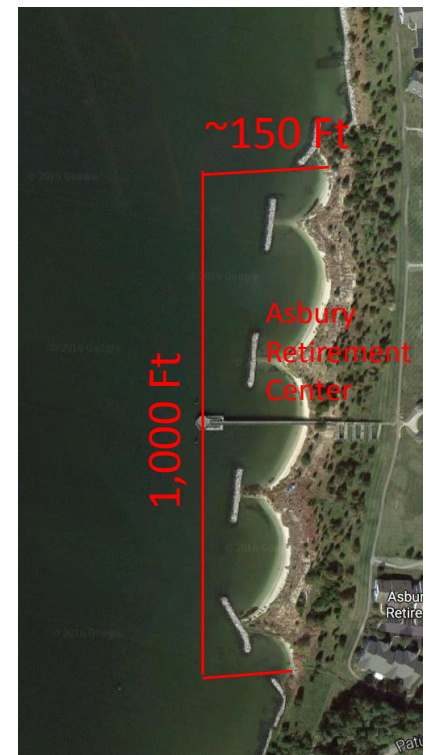
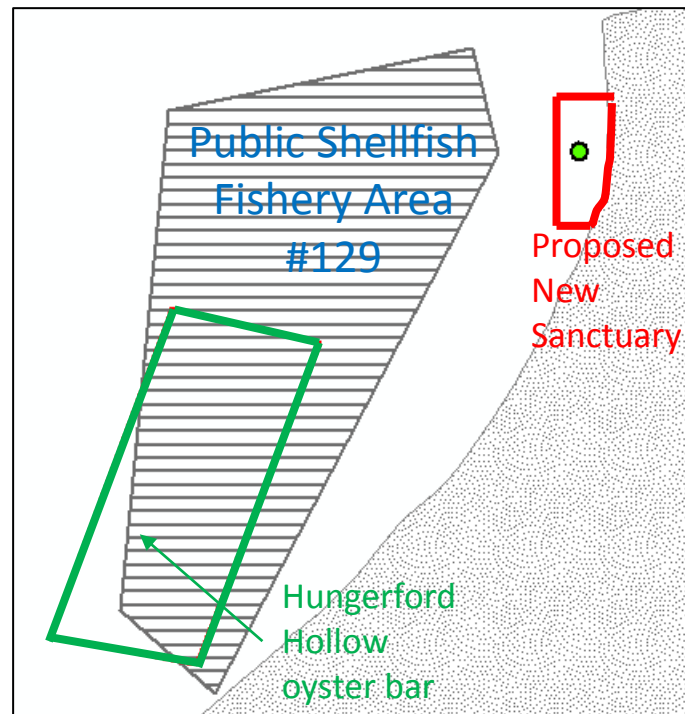
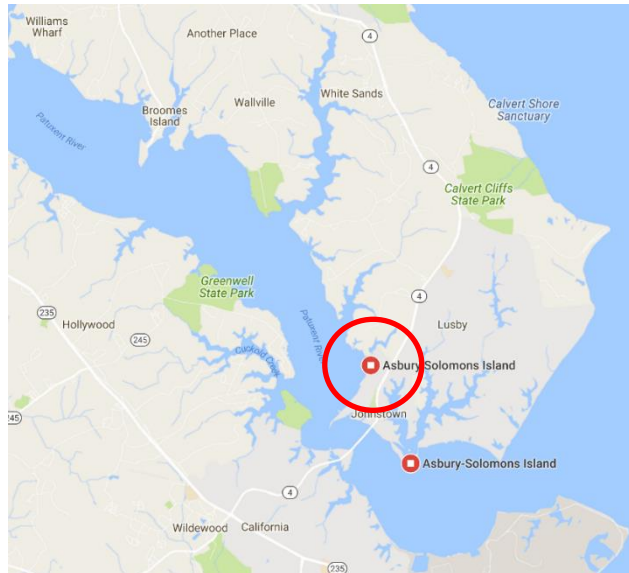
Total Historic Charted Bottom : 0

Total EIS Productive Bottom Acres : 0

Develop a specific management plan for this area that describes the project details (seed source, planting plan).

Determine MGO financial backing into the future

May need to change area slightly. Go ~40 ft off each breakwater instead of 150 ft off shoreline. Keep length the same.



Whitehall Bay Proposal

New sanctuary

Total Acres : 620

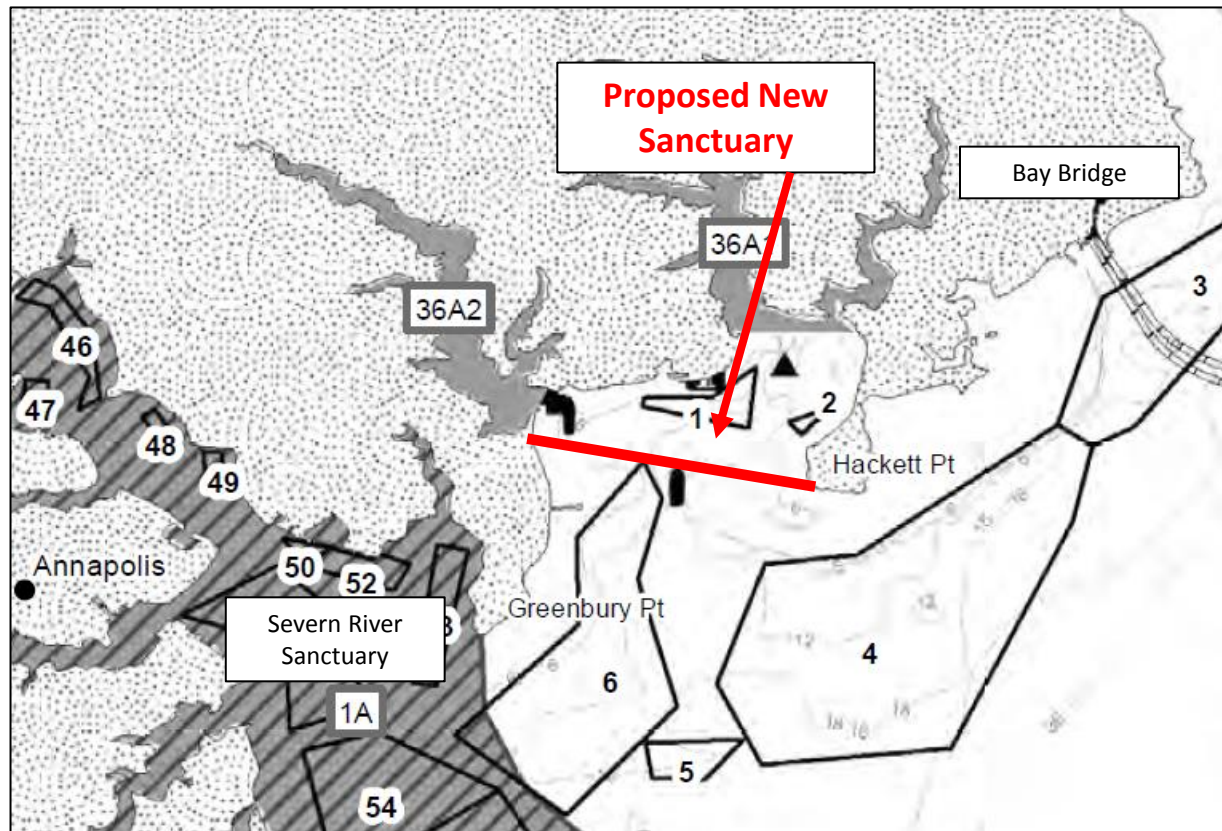
Total Historic Charted Bottom : 52

Total EIS Productive Bottom Acres : 0

Develop a specific management plan for this area that determines exactly where the oysters would be planted = conducting bottom surveys.

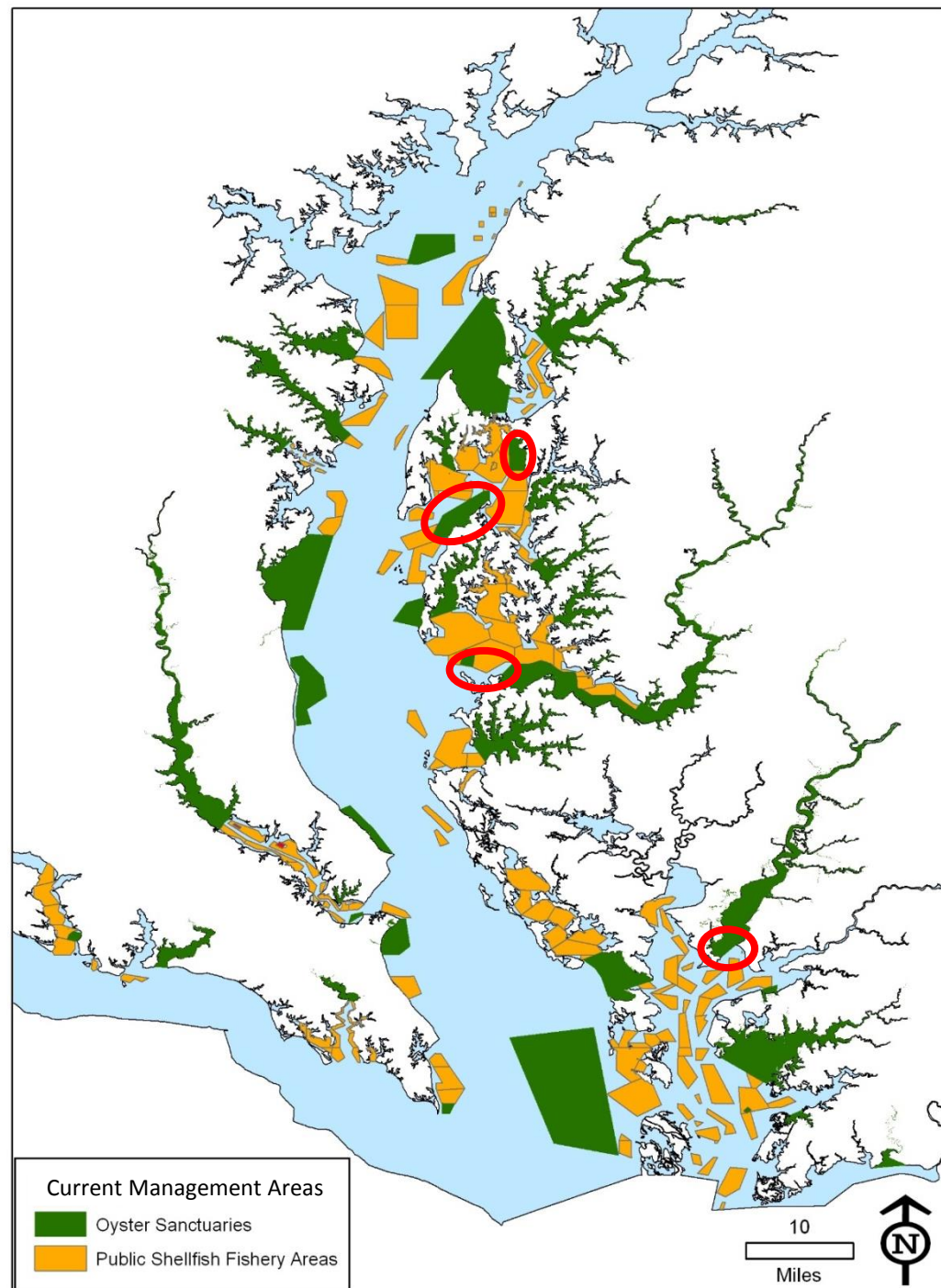
Determine MGO financial backing into the future

DNR to reach out to local watermen to determine if impact. There has been no harvest reported from this area.



Proposed Expanded Current Sanctuary Areas:

- Eastern Bay – 2 locations
- Lower Choptank River
- Nanticoke River



Mill Hill – Prospect Bay Sanctuary Proposal

Tier: Mill Hill = Tier 1A, Prospect Bay (Tier 2), Cabin Creek (Tier 3)

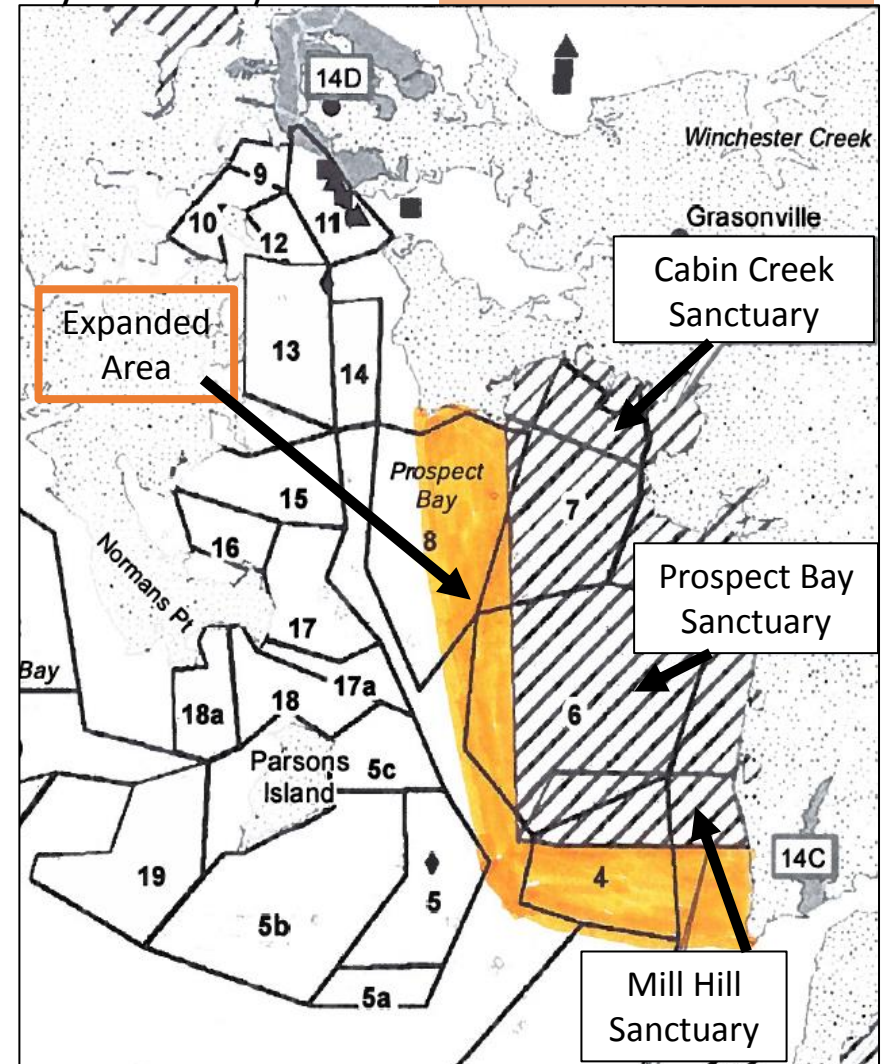
Total Acres : 3,205 (expanded by 1,134 acres)

Total Historic Charted Bottom : 2,134 (expanded by 757 acres)

Total EIS Productive Bottom Acres : 154 (expanded by 36 acres)

Orange area is proposed expanded area of existing sanctuary

- These sanctuaries are being invested in by ACOE, UMD, CBF, and other groups.
- Expand the boundary of these sanctuaries as by the orange area
- Allows for expansion of oyster restoration activities by various organizations
- Expansion is the equivalent bottom exchange for declassification of sanctuaries
- Confer with groups working in existing area to see how they will expand their work into the new area
- Develop a plan for restoration substrate and seed plantings potentially using state funding sources



Annual average harvest in orange area over past 6 years is approximately 135 bushels per year.

Eastern Bay Sanctuary Proposal

Tier: 2

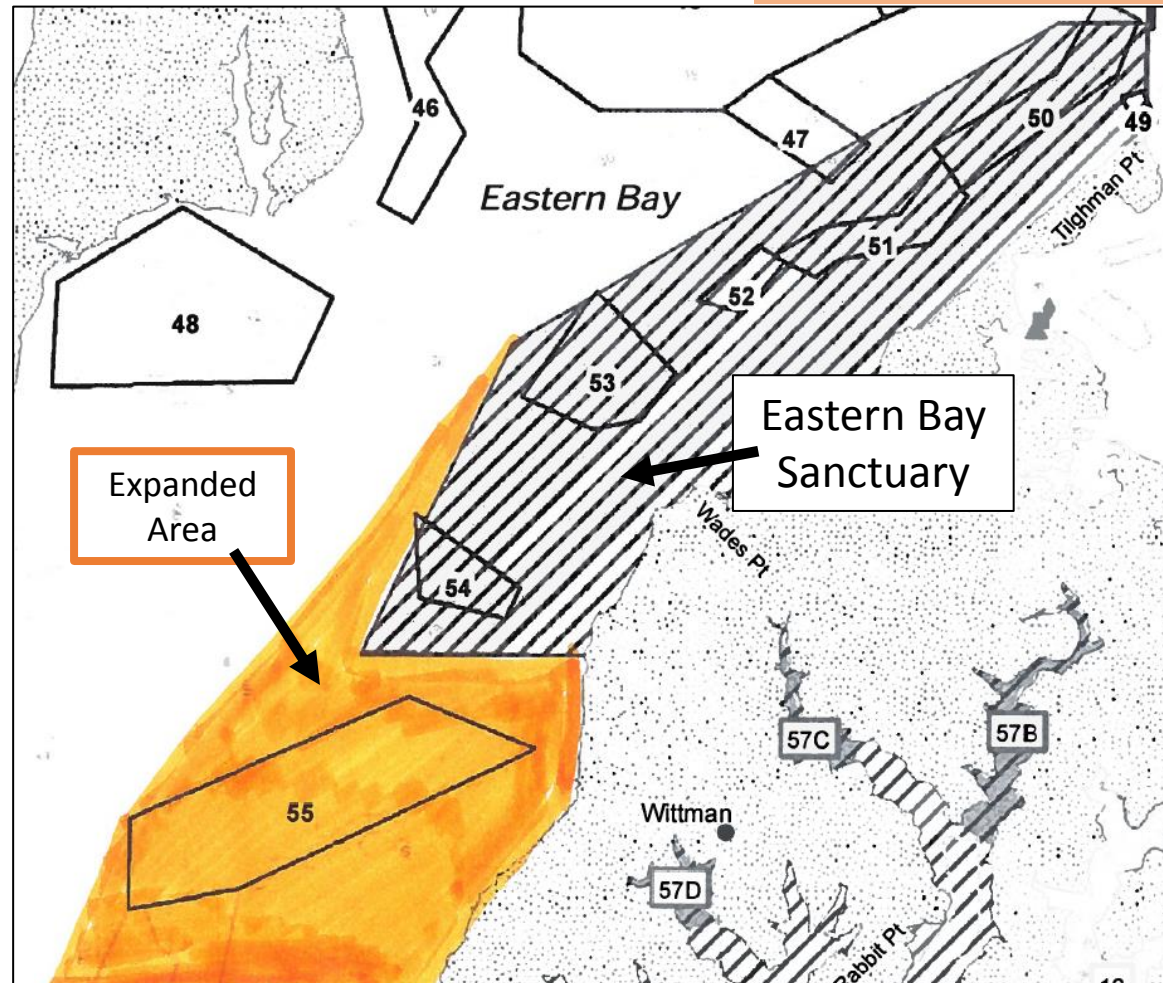
Total Acres : 8,113 (expanded by 3,592 acres)

Total Historic Charted Bottom : 5,569 (expanded by 1,048 acres)

Total EIS Productive Bottom Acres : 203 (expanded by 125 acres)

- Expand the boundary of this sanctuaries as denoted by the orange area
- Expansion is the equivalent bottom exchange for declassification of sanctuaries
- Develop a plan for restoration substrate and seed plantings potentially using state funding sources

Orange area is proposed expanded area of existing sanctuary



Annual average harvest in orange area over past 6 years is approximately 188 bushels per year.

Lower Choptank River Proposal

Tier : 1

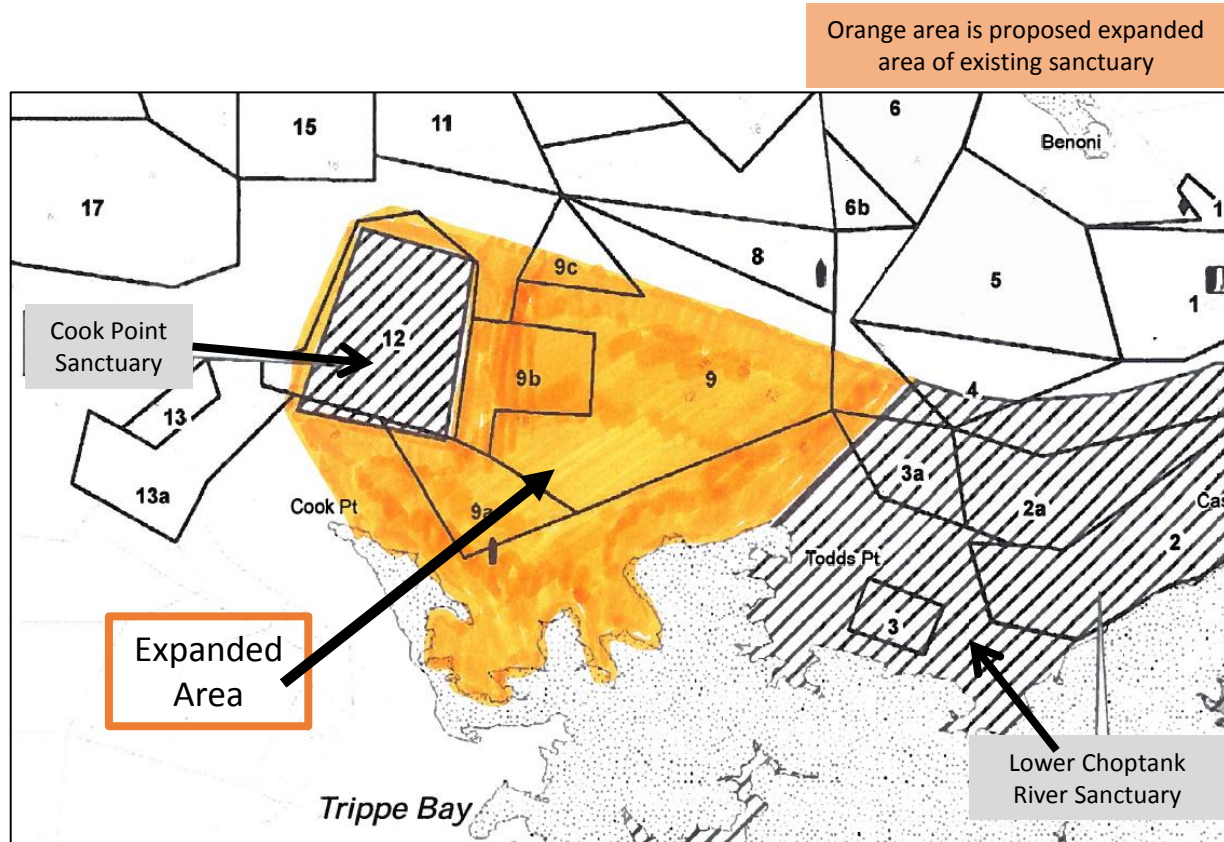
Total Acres : 12,372 (expanded by 5,200 acres)

Total Historic Charted Bottom : 6,612 (expanded by 2,395 acres)

Total EIS Productive Bottom Acres : 486 (expanded by 139 acres)

- Propose to expand the boundary of these sanctuaries as denoted by the orange area
- Expansion is the equivalent bottom exchange for declassification of sanctuaries
- Potentially increases enforcement of Cook Point Sanctuary
- Develop a plan for restoration substrate and seed plantings potentially using state funding sources

Annual average harvest in orange area over past 6 years is approximately 1,400 bushels per year.



Nanticoke River Proposal

Tier: 1

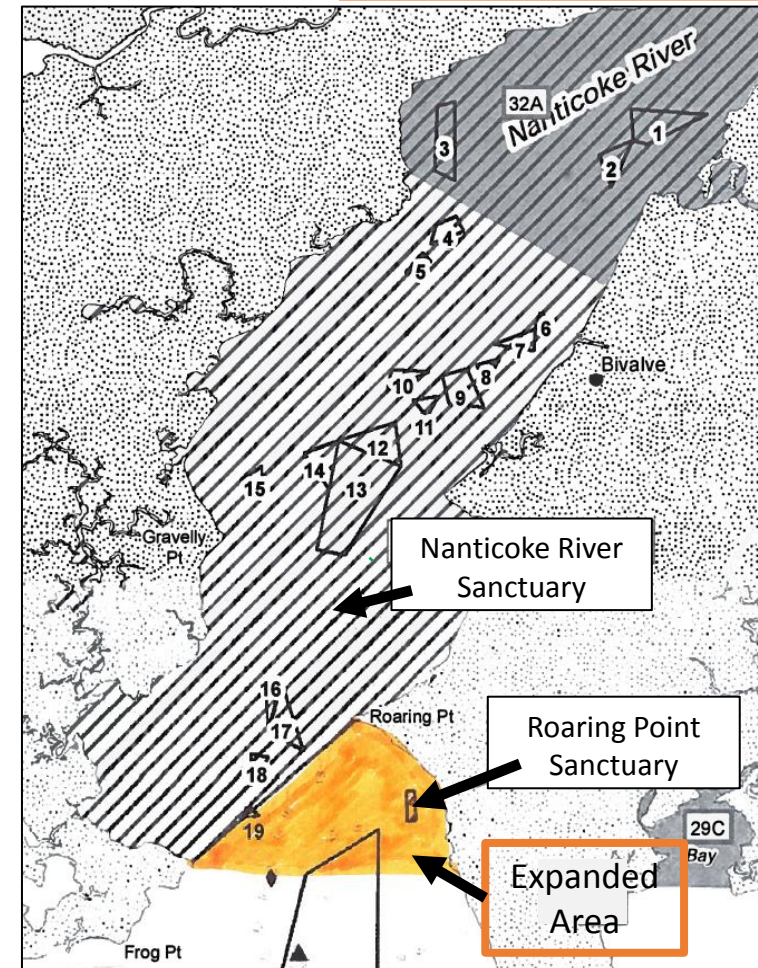
Total Acres : 17,549 (expanded by 845 acres)

Total Historic Charted Bottom : 682 (expanded by 52 acres)

Total EIS Productive Bottom Acres : 118 (expanded by 0 acres)

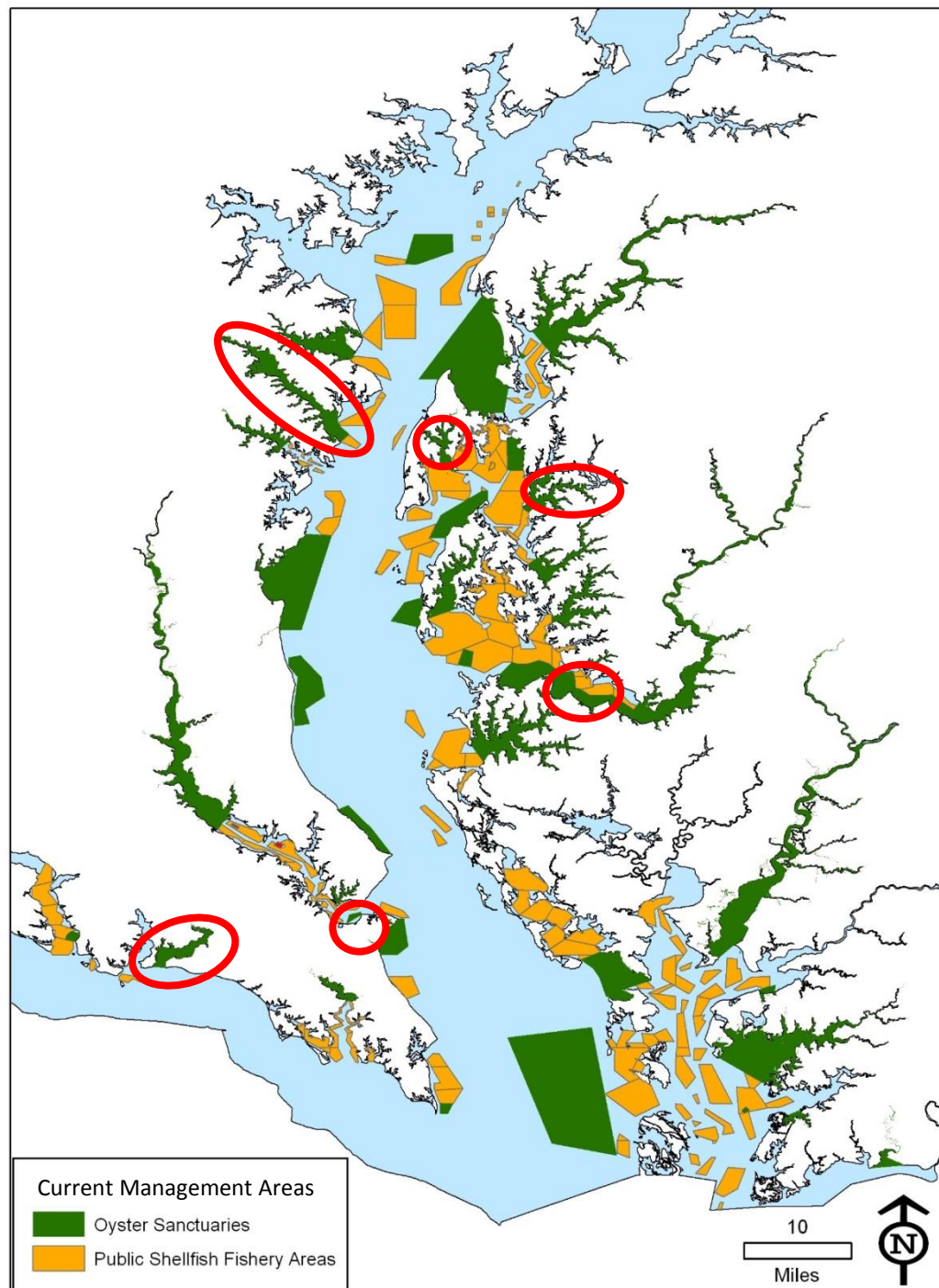
- Expansion of current Nanticoke River Sanctuary
- Expanded area would encompass Roaring Point Sanctuary – increased enforcement on current MGO and CBF planting site
- Allows for possible increase in area for MGO and CBF plantings/investment
- Expansion is the equivalent bottom exchange for declassification of sanctuaries

Orange area is proposed expanded area of existing sanctuary



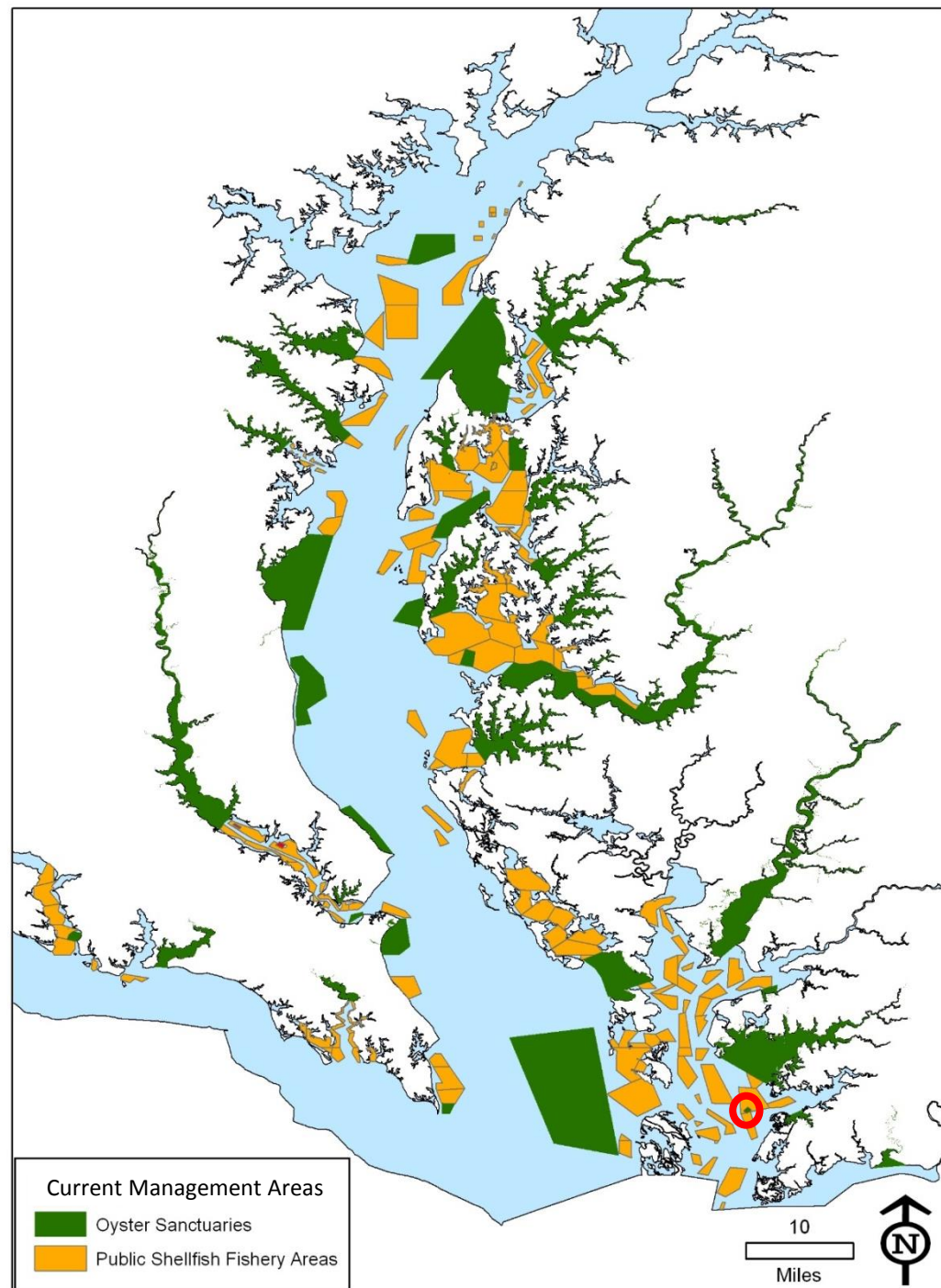
Proposed to receive state-funded investment for restoration in current sanctuaries:

- Cox Creek
- Wye River
- Middle Choptank River:
 - Sandy Hill Sanctuary – Sandy Hill bar (MGO)
 - Howell Point Beacons Sanctuary (MGO)
- Breton Bay
- Lower Patuxent River
- Severn River



Declassified sanctuary to be managed under current public fishery regulations :

- Somerset Sanctuary



Somerset Sanctuary Proposal

Somerset Sanctuary in Tangier Sound

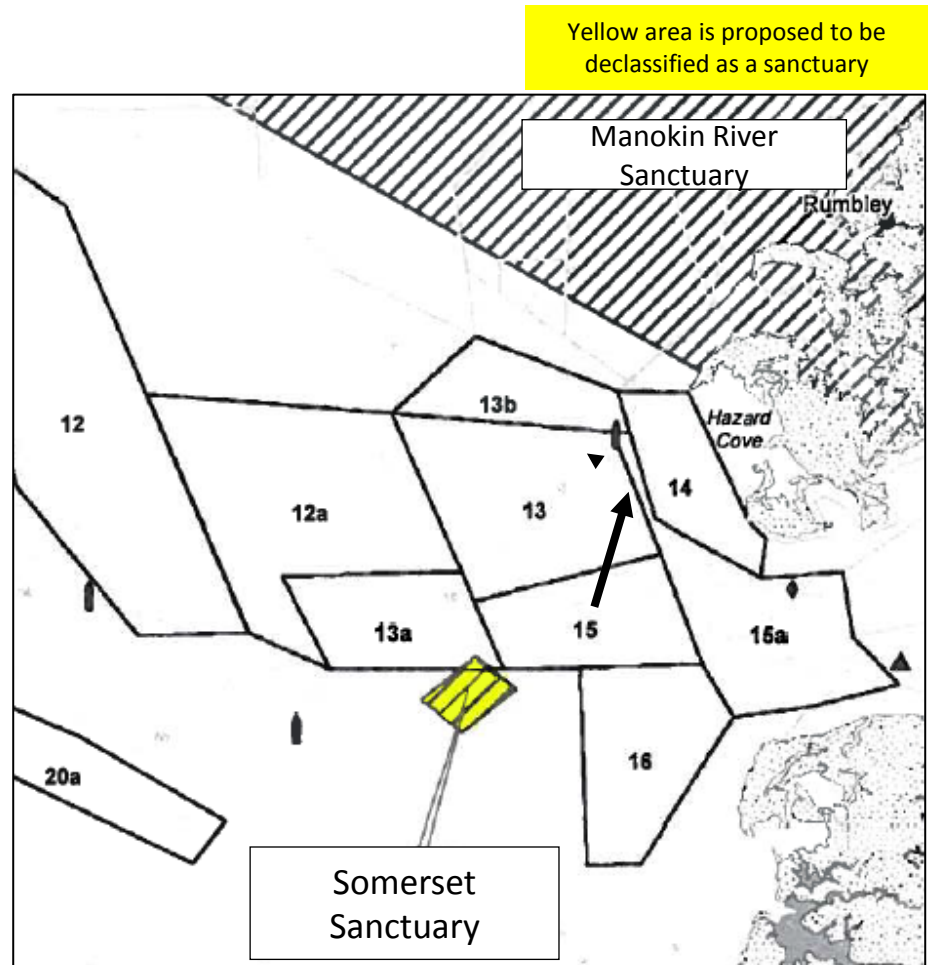
Tier: 1

Total Acres Declassified : 101

Total Historic Charted Bottom : 6

Total EIS Productive Bottom Acres Declassified : 68

- Enforcement issue with current sanctuary
- Older sanctuary created in 1999
- Declassify and open to public fishery under current fishing regulations
- Use current harvest gear types permitted in this area: hand tongs, diving, and patent tong.
- Power dredge is not permitted currently in that small area and could be an enforcement concern due to surrounding area being open to power dredging.
- 25 reef balls planted in 2003



4th and 5th large scale restoration partnership sanctuaries towards meeting the 2014 Chesapeake Bay Agreement

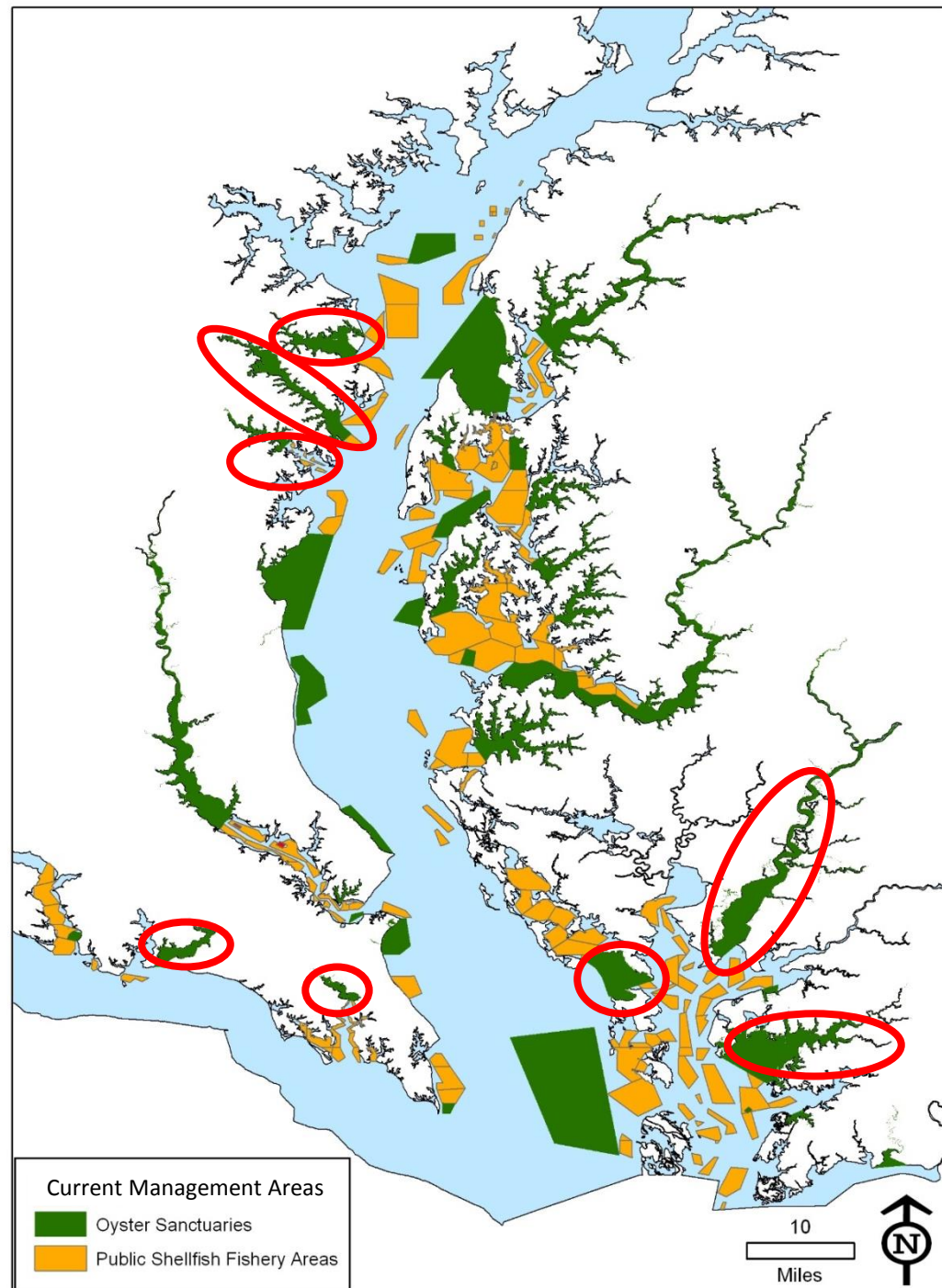
Guidelines:

- Low financial investment
- Not in close proximity to the Choptank Complex
- Approximate size – not too big or small
- Potential to restore oyster bottom
- Good chance of success

Restoration Activity

- Shell is limited – want to use it in the public fishery areas
- In 5 restoration partnership sanctuaries – use a mixture of alternative substrate and shell
- Stone will always be capped with shell

OAC “Homework” Results		
Sanctuary	Votes For	Votes Against
MANOKIN RIVER	9	3
BRETON BAY	9	0
ST MARYS RIVER	8	5
HOOPER STRAIT	8	2
NANTICOKE RIVER	7	2
MAGOTHY RIVER	6	2
SEVERN RIVER	3	3
SOUTH RIVER	3	1



Current Acres per County

County	All Historic Charted Oyster Bottom				Estimated Productive Bottom (PEIS)			
	Total Acres	Total Acres in Sanctuaries	Total Acres not in Sanctuaries	Percentage in Sanctuaries	Total Acres	Total Acres in Sanctuaries	Total Acres not in Sanctuaries	Percentage in Sanctuaries
Anne Arundel	34,112	8,723	25,389	25.6%	4,985	1,063	3,922	21.3%
Baltimore	3,058	1,803	1,255	59.0%	1,881	344	1,537	18.3%
Calvert	18,569	7,203	11,367	38.8%	1,402	654	749	46.6%
Charles	7,854	114	7,740	1.5%	1,363	45	1,318	3.3%
Dorchester	77,149	16,894	60,254	21.9%	5,631	1,681	3,950	29.9%
Kent	13,264	5,446	7,819	41.1%	2,477	910	1,567	36.7%
Queen Anne	27,951	7,986	19,965	28.6%	3,132	1,157	1,974	37.0%
St Mary's	39,219	5,900	33,320	15.0%	4,732	940	3,792	19.9%
Somerset	66,060	17,274	48,785	26.1%	4,571	792	3,779	17.3%
Talbot	39,140	7,166	31,974	18.3%	5,623	880	4,743	15.6%
Wicomico	2,188	433	1,754	19.8%	304	97	207	31.8%
Worcester	1,637	0	1,637	0.0%	0	0	0	0.0%
Total	330,200	78,941	251,259	23.9%	36,101	8,563	27,538	23.7%
	Area is based on the historic oyster bottom as charted in the Yates Oyster Survey from 1906 to 1912 plus its amendments.				Area is based on the PEIS estimate of productive oyster bottom using a reduction factor applied to the 1974-1983 Bay Bottom Survey			

PEIS = 2009 Programmatic Environmental Impact Statement for Oyster Restoration in Chesapeake Bay Including the Use of a Native and/or Nonnative Oyster. <http://dnr.maryland.gov/fisheries/Pages/eis.aspx>

Proposed Acres per County (Based on All Changes)

County	Estimated Proposed Acres In Sanctuaries			
	Total Acres of All Historic Charted Oyster Bottom	% of All Historic Charted Oyster Bottom	Total Acres of Estimated Productive Bottom	% of Estimated Productive Bottom
Anne Arundel	8,775	25.7%	1,063	21.3%
Baltimore	1,803	59.0%	344	18.3%
Calvert	6,486	34.9%	445	31.7%
Charles	114	1.5%	45	3.3%
Dorchester	13,893	18.0%	1,630	28.9%
Kent	4,610	34.8%	664	26.8%
Queen Anne	7,660	27.4%	938	29.9%
St Mary's	5,203	13.3%	770	16.3%
Somerset	17,268	26.1%	723	15.8%
Talbot	7,521	19.2%	869	15.5%
Wicomico	485	22.2%	97	31.8%
Worcester	0	0.0%	0	0.0%
Total	73,820	22.4%	7,587	21.0%

There is a total of 330,210 acres based on the historic oyster bottom as charted in the Yates Oyster Survey from 1906 to 1912 plus its amendments. There is a total of 36,101 acres based on the PEIS estimate of productive oyster bottom calculated using a reduction factor applied to the 1974-1983 Bay Bottom Survey. This is the acreage used to determine the percentage currently in sanctuaries.