



County Oyster Committee Proposals: Proposed Changes to the Current Oyster Management Areas



Background

- Meeting with County Oyster Committee chairs (9/24/2016)
- Based on the purpose of the Five Year Oyster Review Report in regulation and Task #3 for the OAC
- Guidelines to County Oyster Committees:
 - Access is viewed as limited, not a wholesale opening of sanctuaries
 - Investment is needed for opened area (seed or shell planting)
 - Rotational managed harvest is suggested
 - Maintain the overall current ratio of sanctuary areas (20%-30%)
 - Equivalent exchange of a harvest area for a declassified sanctuary area to maintain the sanctuary ratio

Charles (Proposal)

Body of Water: Wicomico River (West)

Sanctuary: None. Bars are within the current public fishery area.

Oyster Bars: Most all bars in Charles County and some in St Mary's County

Harvest Proposal: Rotationally plant and harvest oyster bars

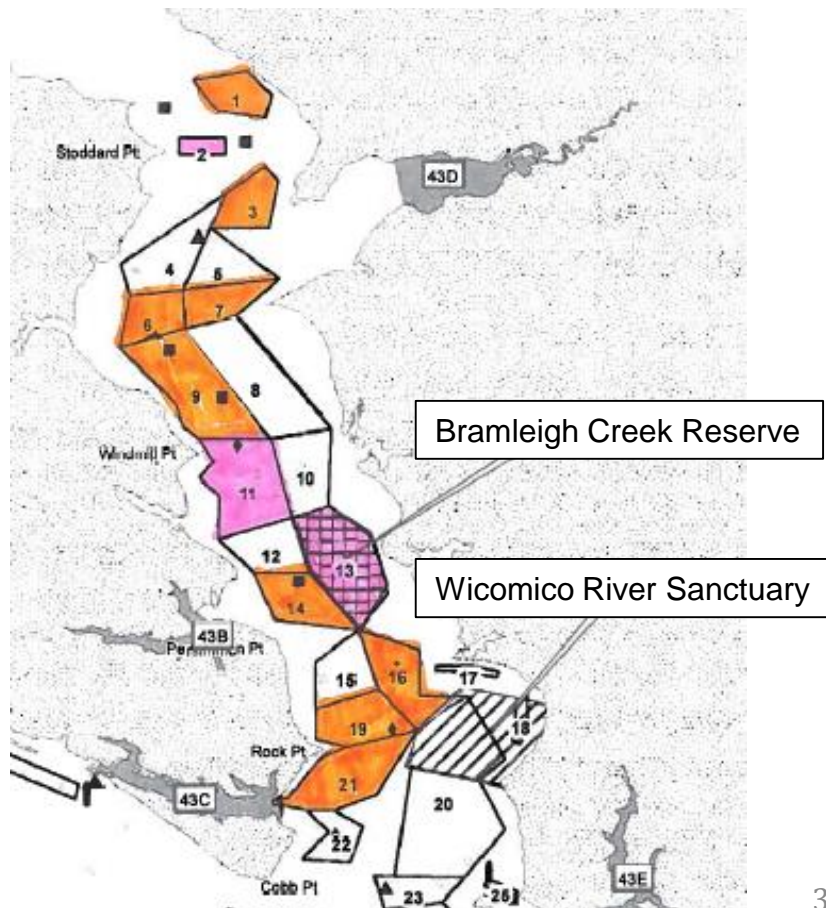
Seed or Shell Planting Proposal: Rotationally planting hatchery or wild seed annually

Bottom Exchange Proposal: None needed

Already in a rotational harvest plan

Potential future areas to be included within a rotational harvest plan

Under this proposal, 0 acres would revert back to the public fishery. 0 acres will become a sanctuary.



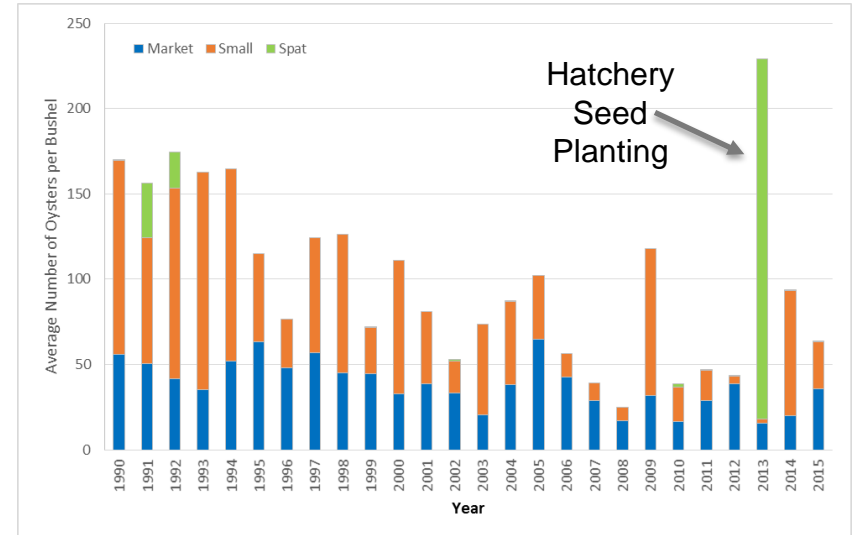
Charles County plans on working with St Mary's County to develop a rotational management plan for this river



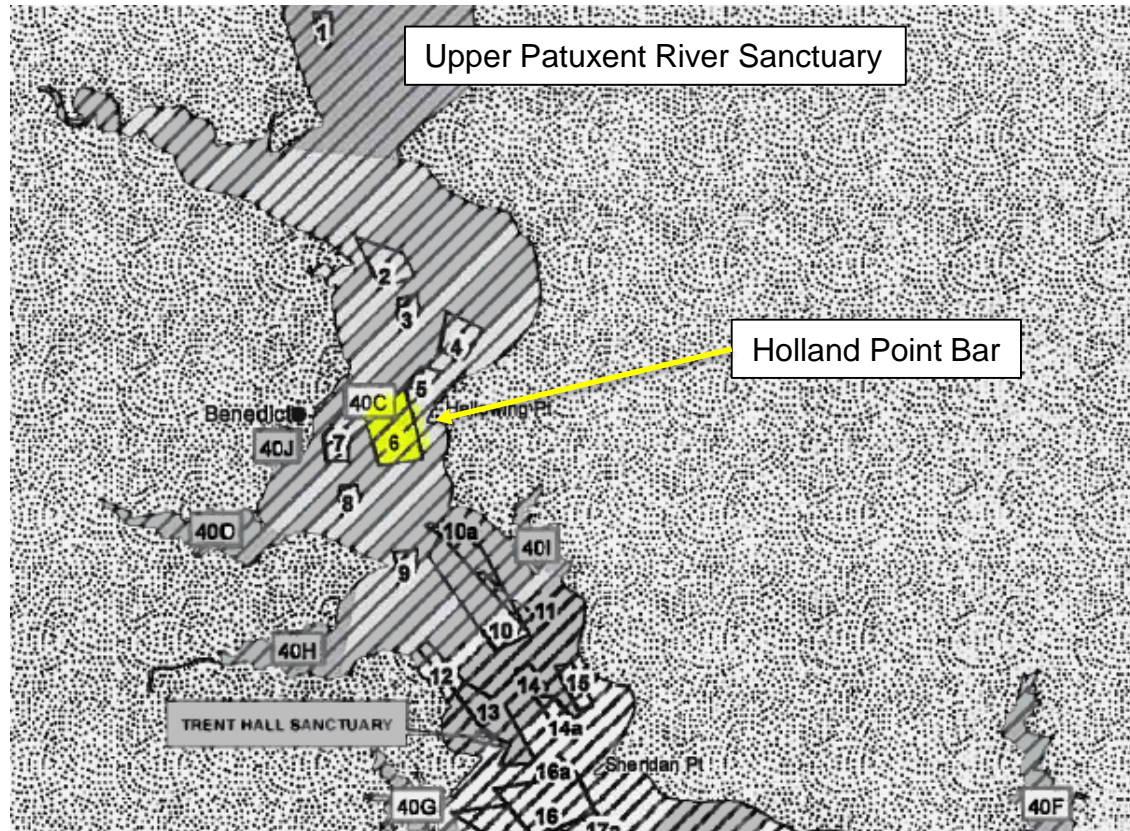
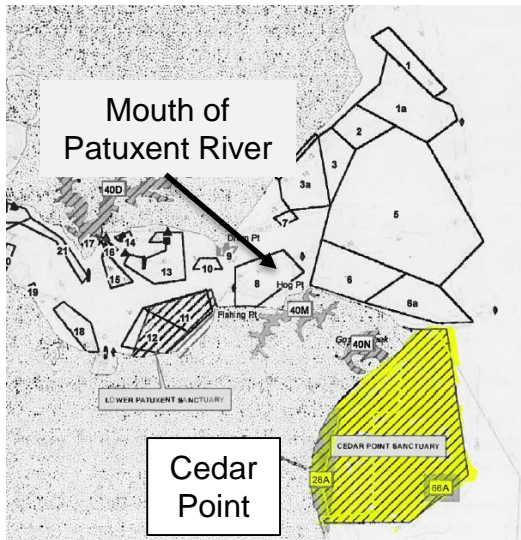
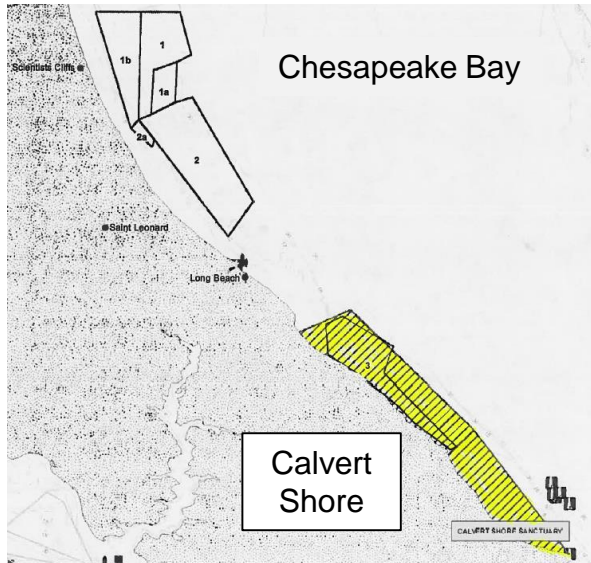
Charles (5 Year Report Info)

Wicomico River (West)

- Tier 2
- Below average mortality (average 16% mortality)
- Multiple replenishment planting for fishery in from 1900 to 2015



Calvert (Proposal)



Yellow areas are proposed to be declassified as a sanctuary



Calvert (Proposal)

Under this proposal, 267 acres of oyster bottom would revert back to the public fishery. 0 acres will become a sanctuary.

- 161 acres Cedar Point Sanctuary proposal
- 39 acres Calvert Shore Sanctuary proposal
- 67 acres Holland Point (Up Patuxent River Sanctuary) proposal

Harvest Proposal:

- Open up for annual harvest using permissible gear types prior to the implementation of Cedar Point and Calvert Shore sanctuaries
- Open up for annual harvest on Holland Bar using hand tong gear only

Seed or Shell Planting Proposal:

- Would invest a minimum 15% of annual MDOT funds, oyster surcharge funds, and bushel taxes on Holland Bar

Bottom Exchange Proposal: None proposed

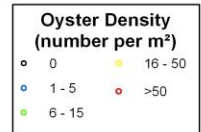
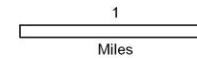
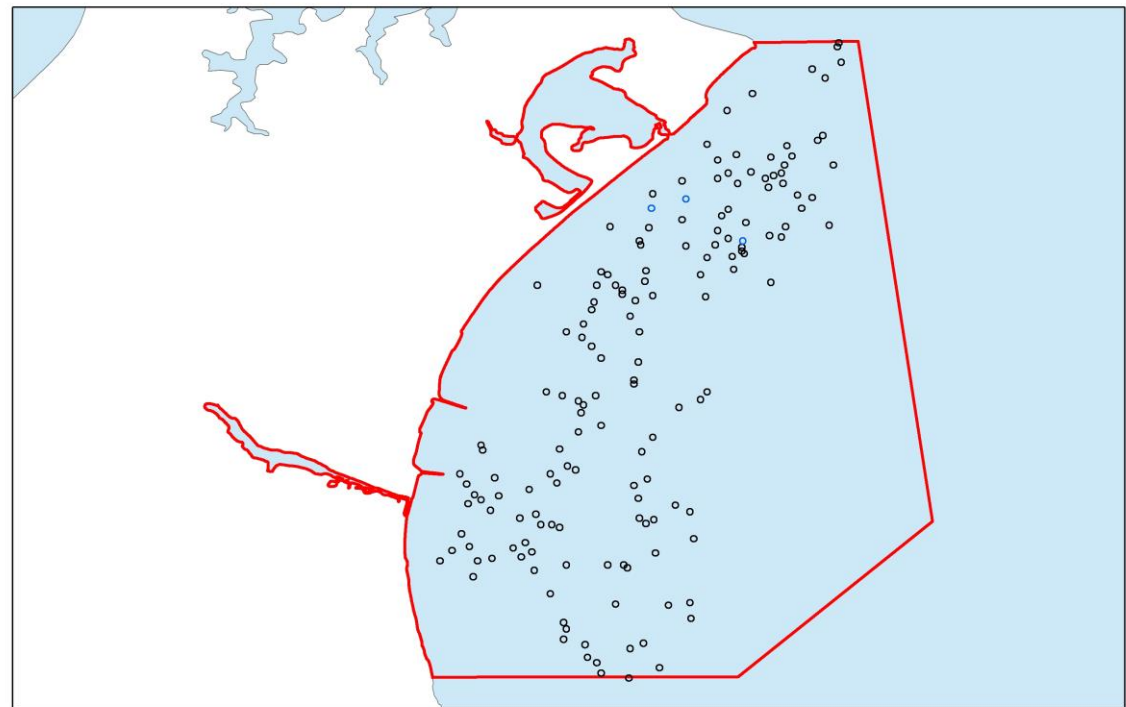
Reasoning:

- Cedar Point: Tier 3; Poor habitat; Extremely low densities or zero presence of oysters
- Calvert Shore: Received no resources; Had shell removed; Can provide economic and cultural benefits
- Holland Bar: Successful management practices historically used; Presently no hand tong areas

Calvert (5 Year Report Info)

Cedar Point Sanctuary

- Established in 2010
- Tier 3
- Medium salinity
- No replenishment or restoration plantings since 1990
- No MGO plantings
- 2013 patent tong oyster population survey
 - 98% of samples had no oysters



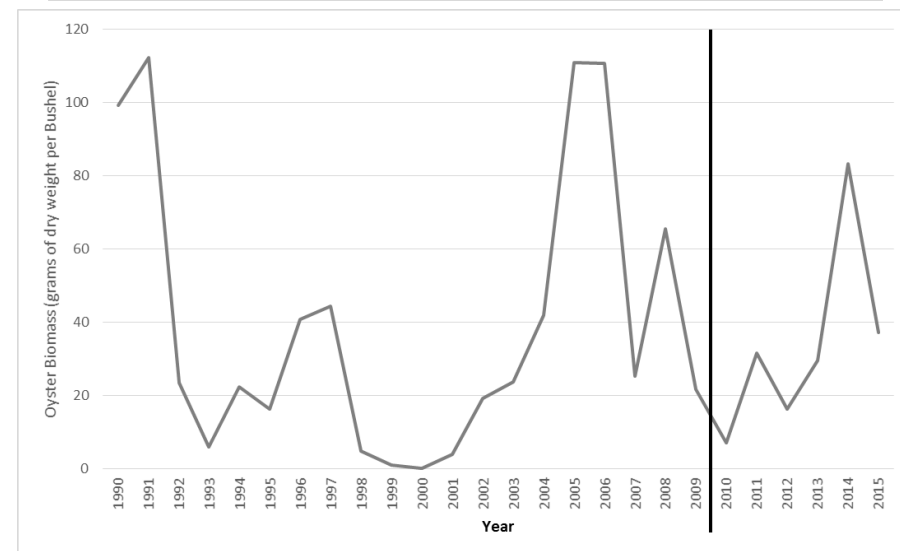
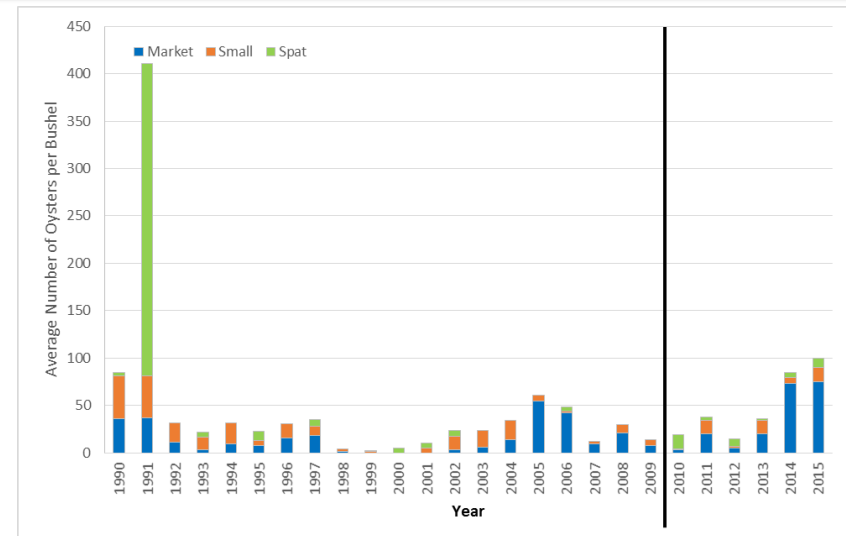
MGO = Marylander's Grow Oysters Program



Calvert (5 Year Report Info)

Calvert Shore Sanctuary

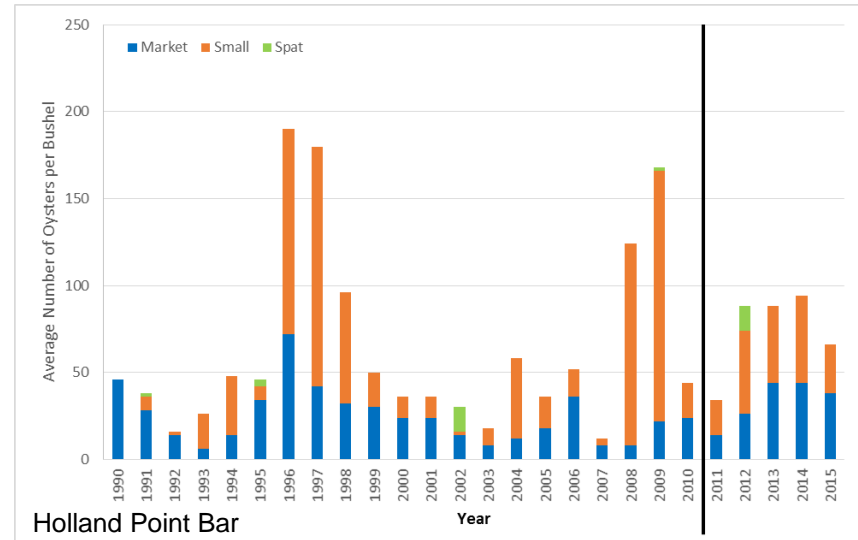
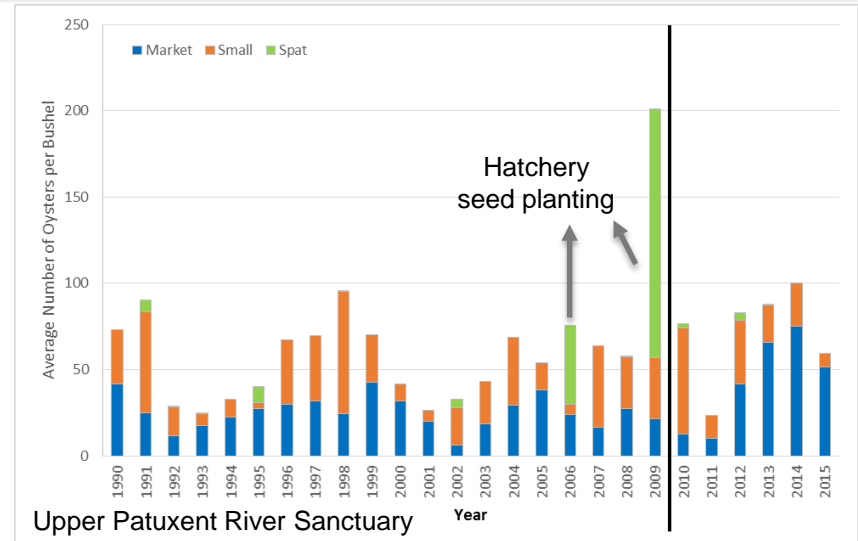
- Established in 2010
- Tier 2
- Medium salinity
- Below average mortality (average 19% mortality)
- Replenishment planting for fishery in 1999
- No restoration plantings
- No MGO plantings
- 2015 patent tong oyster population survey
 - 92% of samples had no oysters
- Removal of 25,900 bushels of shells in 2012 (shells planted in public fishery areas)



Calvert (5 Year Report Info)

Upper Patuxent River Sanctuary

- Established in 2010
- Tier 1A: contains older Trent Hall Sanctuary
- Low salinity
- Holland Point bar was a harvest reserve prior to 2010; Last opened for harvest in March 2011
- Below average mortality (average 20% mortality)
- Replenishment plantings for fishery from 1990 to 2009
- Restoration plantings in 2009 and 2010 (not on proposed bar)
- No MGO planting on proposed bar



Dorchester (Proposal)

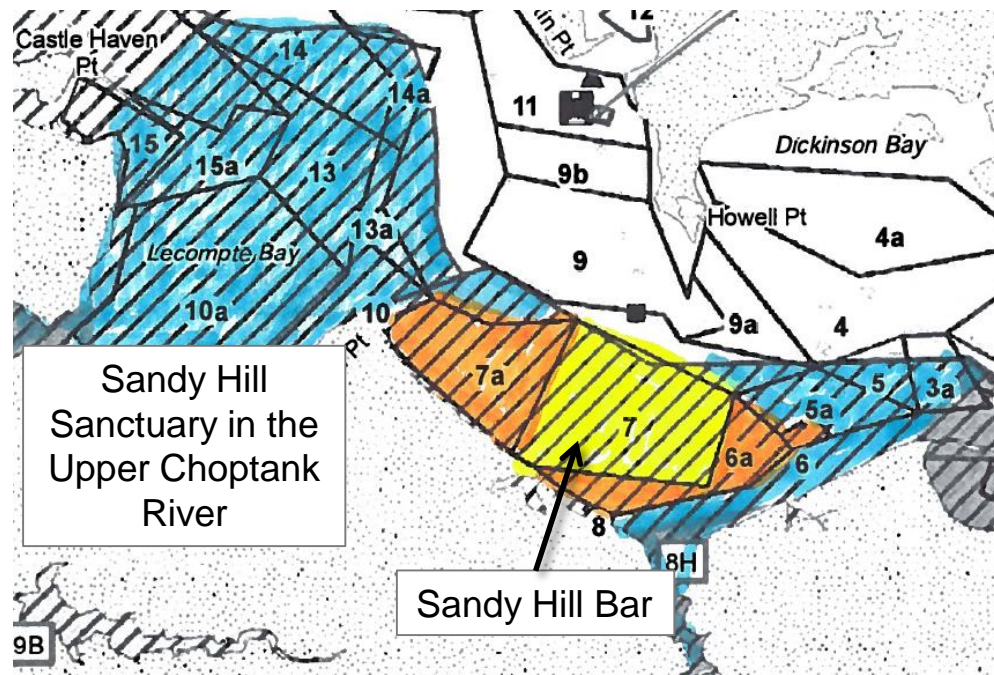
Harvest Proposal:

- Year 1 – Open for limited amount of time for harvest and then plant seed
- Year 2 and 3 – Close area
- Year 4 - Open for limited amount of time for harvest and then plant seed; continue with this rotation.
- Hand tong gear type only

Seed or Shell Planting Proposal: Plant \$5,000 of seed (~1.3 million hatchery seed)

Bottom Exchange Proposal: None proposed. Proposed investment on unfunded bar is more sufficient than an exchange of bottom.

Under this proposal, 83 acres of oyster bottom would revert back to the public fishery. 0 acres will become a sanctuary.



Would remain as a sanctuary

Proposed to be declassified as a sanctuary

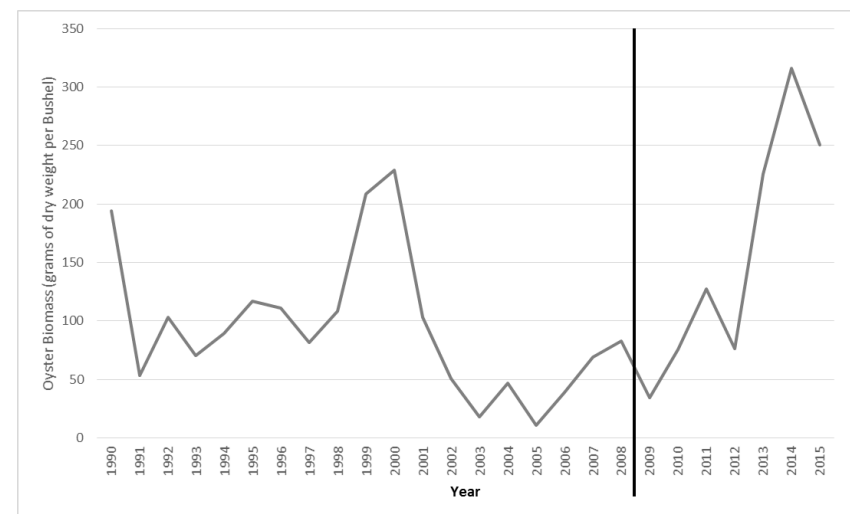
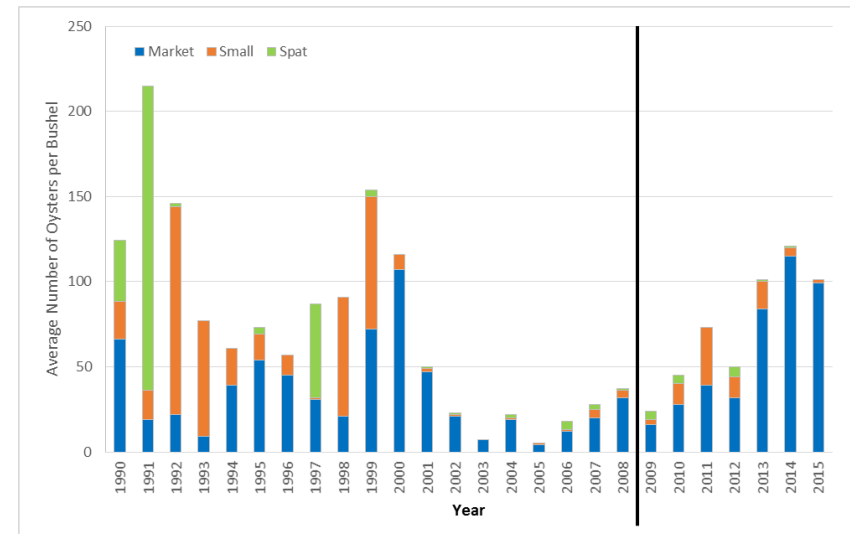
Need clarification from County if the orange area is also being proposed to be declassified as a sanctuary



Dorchester (5 Year Report Info)

Sandy Hill Sanctuary

- Established in 2009
- Tier 1A
- Low salinity
- Above average mortality (average 28% mortality)
- Replenishment plantings for fishery in 1990 and 2000
- Restoration plantings in 2009 and 2010 on Sandy Hill Bar
- No MGO planting on proposed bar
- 2015 patent tong oyster population survey
 - 58% of samples had no oysters
 - 1 sample met the minimum threshold to be considered restored



Dorchester (Proposal)

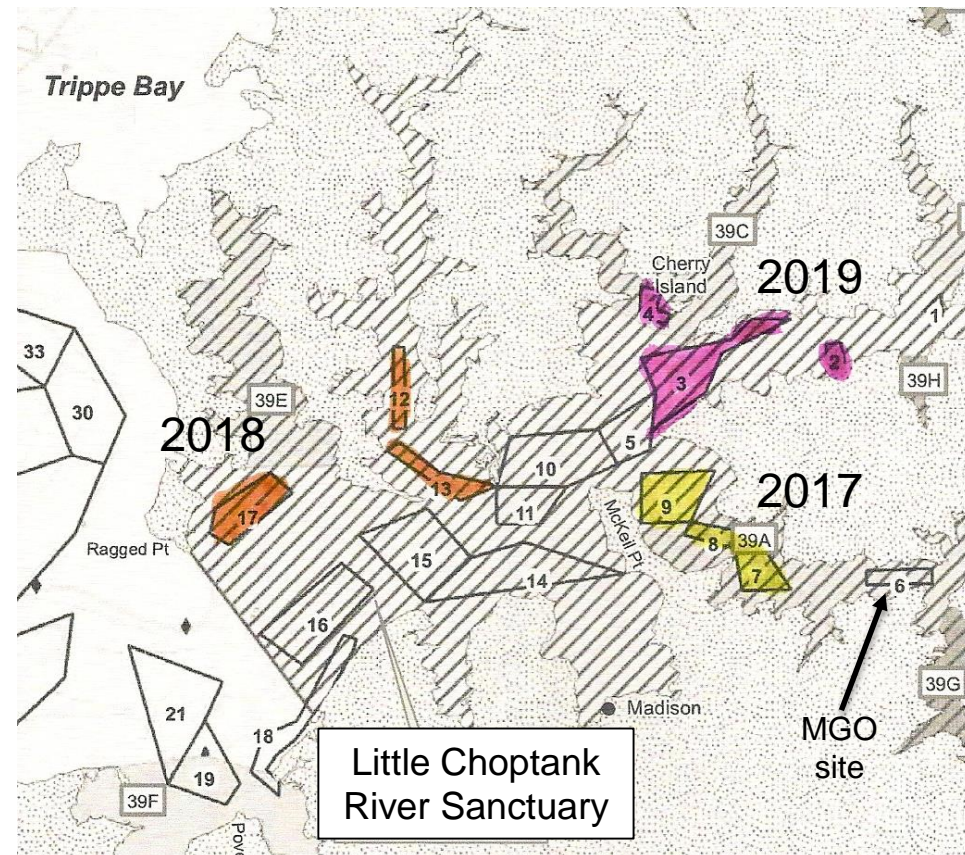
Harvest Proposal:

- Three groups of oyster bars
- For each group:
 - Open for harvest for one year
 - Plant seed on bars and then close to harvest for 3 years
 - Open to harvest in year 4

Seed or Shell Planting Proposal: Plant seed

Bottom Exchange Proposal: None proposed

Under this proposal, 86 acres of oyster bottom would revert back to the public fishery. 0 acres will become a sanctuary.



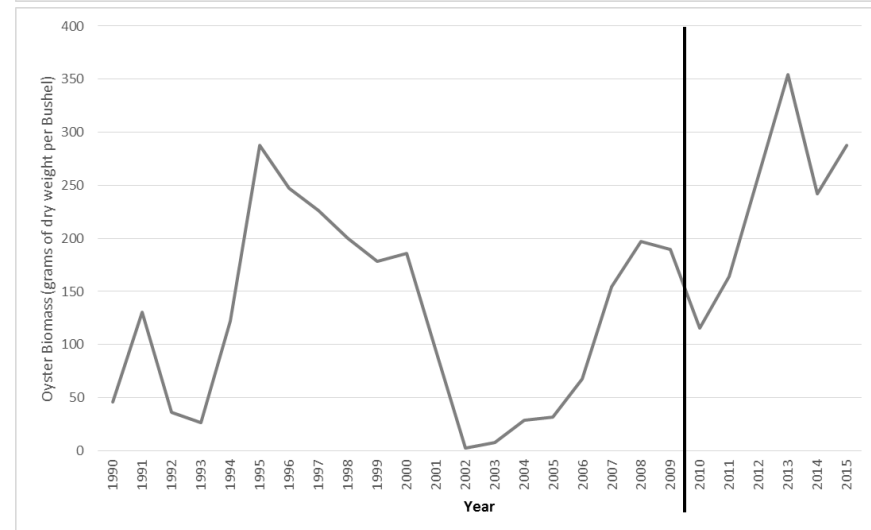
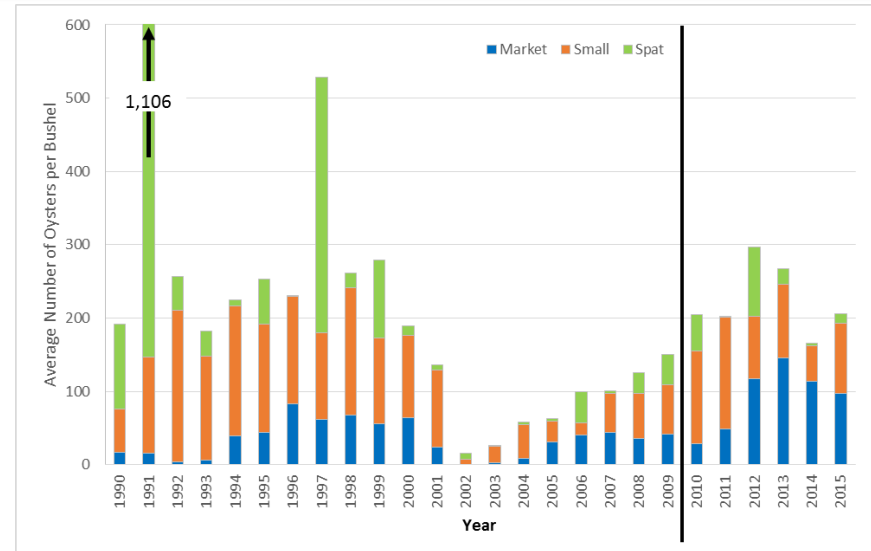
MGO = Marylanders Grow Oysters



Dorchester (5 Year Report Info)

Little Choptank River Sanctuary

- Established in 2010
- Tier 0
 - Receiving large scale restoration
 - One of 5 tributaries part of the 2014 Chesapeake Watershed Agreement
- Low salinity
- Average mortality (average 22% mortality)
- Replenishment plantings for fishery from 1990 to 2004
- Restoration plantings in 2011 and 2014 to present
- No MGO planting on proposed bars
- 2014 patent tong oyster population survey
 - 40% of samples had no oysters
 - 29% of samples met the minimum threshold to be considered restored



Kent / Queen Anne's (Proposal)

Harvest Proposal:

- Area between the dive gear line to Deep Point
- Rotational harvest and seed planting within the three sections

Seed or Shell Planting Proposal:

- Rotationally planting wild or hatchery seed one of the sections annually

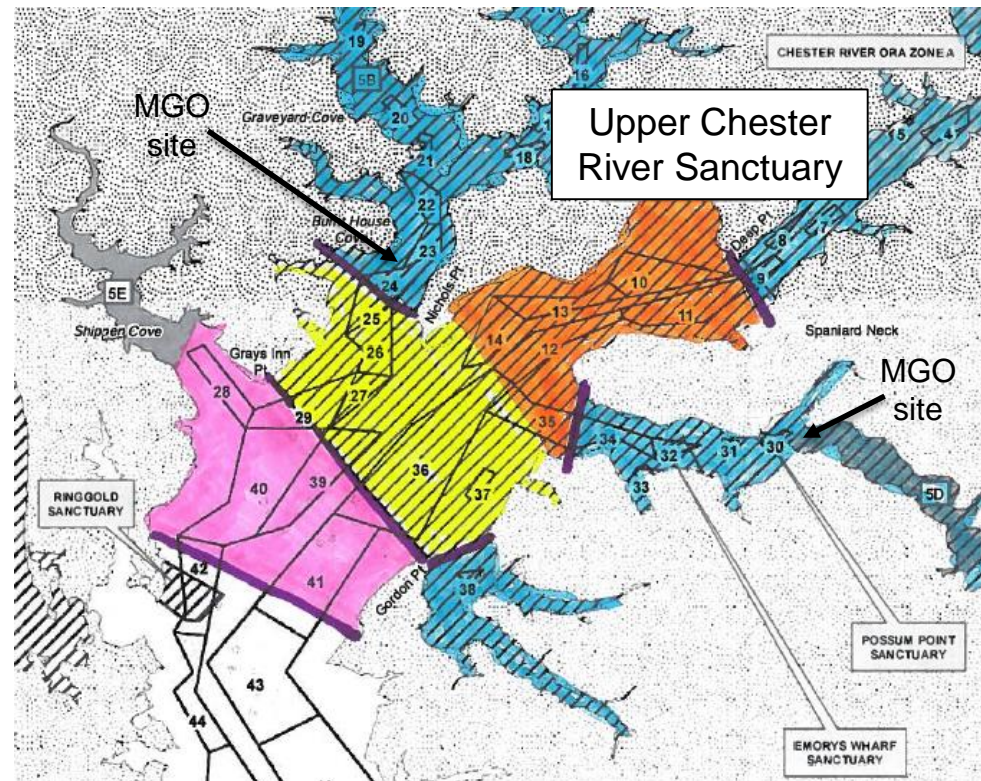
Bottom Exchange Proposal:

- None proposed
- Each county would plant ½ million spat-on-shell in the remaining sanctuary area

Reasoning:

- No oysters have been planted in this area of the sanctuary since 2010

Under this proposal, 550 acres of oyster bottom would revert back to the public fishery. 0 acres will become a sanctuary.

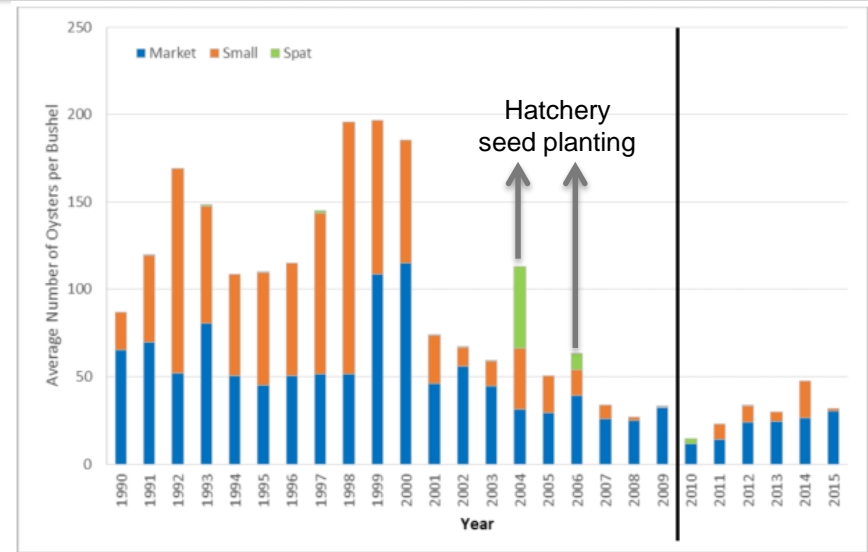


Would remain as a sanctuary	Already open to the public fishery	Proposed to be declassified as a sanctuary	Proposed to be declassified as a sanctuary
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Kent / Queen Anne's (5 Year Report Info)

Upper Chester River Sanctuary

- Established in 2010
- Tier 1A: 2 older sanctuaries in Corsica River
- Low salinity
- Below average mortality (average 14% mortality)
- Replenishment plantings for fishery from 1990 to 2008
- Restoration planting in 2008 but not in proposed area
- No MGO planting on proposed area
- 2012 patent tong oyster population survey
 - 85% of samples had no oysters
 - No samples met the minimum threshold to be considered restored



Somerset (Proposal)

Harvest Proposal: Declassify the sanctuary and convert to public shellfish fishery area

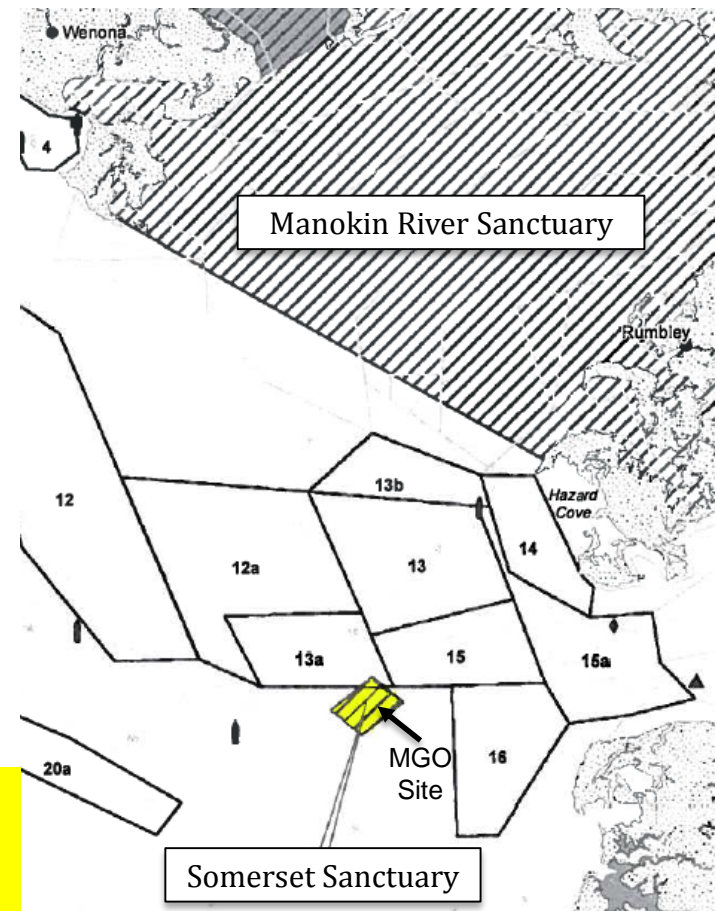
Seed or Shell Planting Proposal: None proposed

Bottom Exchange Proposal: None proposed

Reasoning:

- Cost DNR (NRP) to patrol area
- Area is similar to “speed trap”
- Will not take away from 24% of bottom in sanctuaries

Under this proposal, 68 acres of oyster bottom would revert back to the public fishery. 0 acres will become a sanctuary.

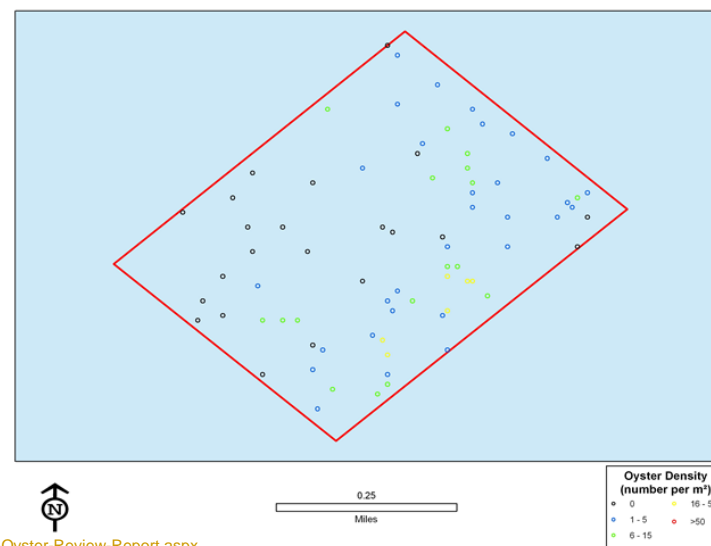
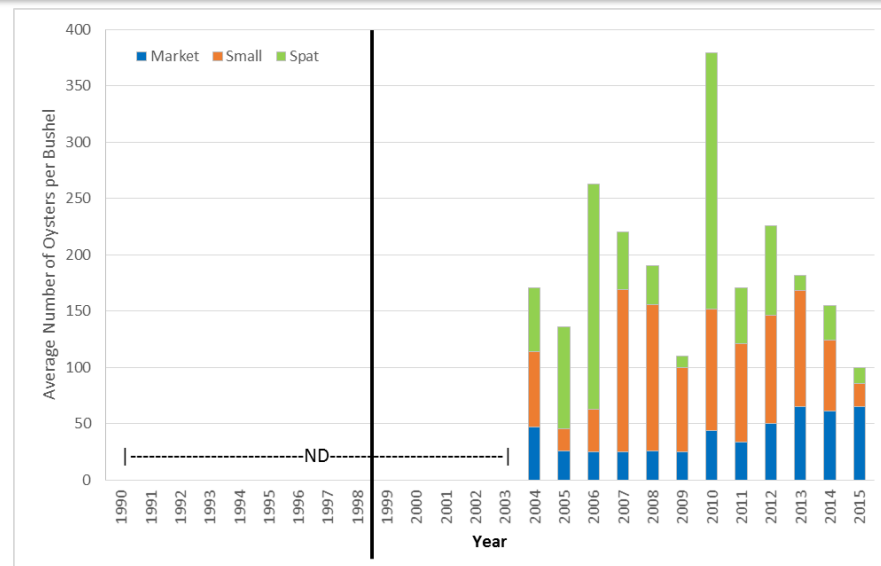


Yellow area is proposed to be declassified as a sanctuary

Somerset (5 Year Report Info)

Somerset Sanctuary

- Established in 1999
- Tier 1
- High salinity
- Average mortality (average 21% mortality)
- No replenishment planting for fishery since 1990
- Restoration plantings in 1999 to 2003: Seed planting, reef balls & limited MGO plantings (seed from 12 MGO cages)
- 2012 patent tong oyster population survey
 - 29% of samples had no oysters
 - A few samples met the minimum threshold to be considered restored



St Mary's (Proposal)

Harvest Proposal:

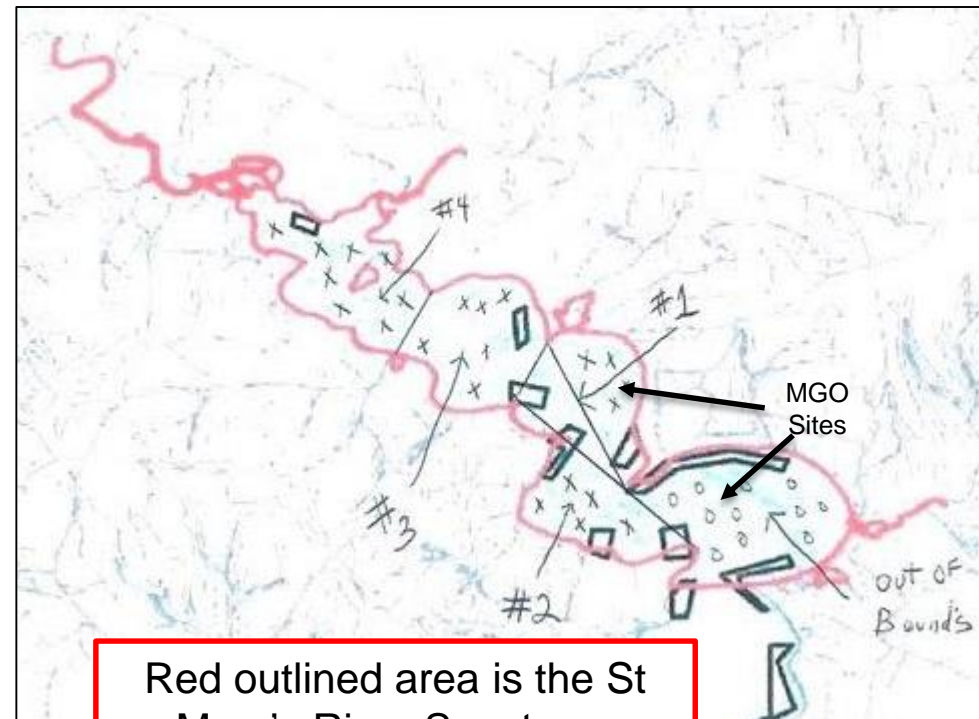
- Keep lower section as a sanctuary
- Rotational harvest – harvest in area #1 in year 1, #2 in year 2, etc...
- Annual harvest during the last three weeks of March

Seed or Shell Planting Proposal:

- Planting of shell. Area obtains natural spatfall.
- Will plant a bushel of shell for every bushel of oysters harvested

Bottom Exchange Proposal: None proposed

Under this proposal, ? acres of oyster bottom would revert back to the public fishery. 0 acres will become a sanctuary.



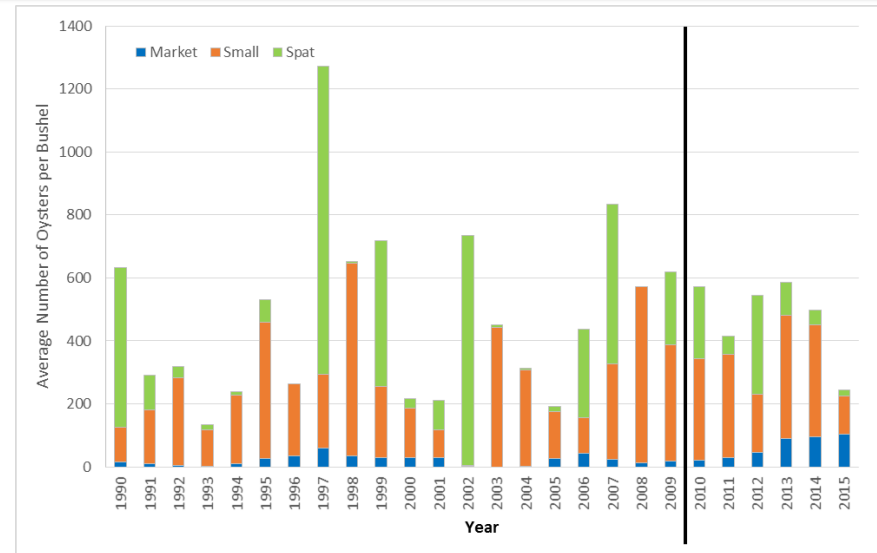
Note: Acres are based on the PEIS estimate of productive oyster bottom calculated using a reduction factor applied to the 1974-1983 Bay Bottom Survey. However, the survey did not extend up into the area being proposed to be declassified as a sanctuary. Thus, the estimated area of productive bottom is unknown.



St Mary's (5 Year Report Info)

St Mary's Sanctuary

- Established in 2010
- Tier 1
- Medium salinity
- Average mortality (average 21% mortality)
- Replenishment plantings for fishery in 1999 and 2000
- Restoration plantings from 2010 to present within some locations in the proposed area: reef balls and seed planting (MGO and St. Mary's River Watershed Association)
- 2015 patent tong oyster population survey
 - 44% of samples had no oysters
 - 41% of samples met the minimum threshold to be considered restored



Talbot (Proposal)

Harvest Proposal: Open to harvest

- Diving and dredging in Cook Point
- Hand tong in Upper Choptank

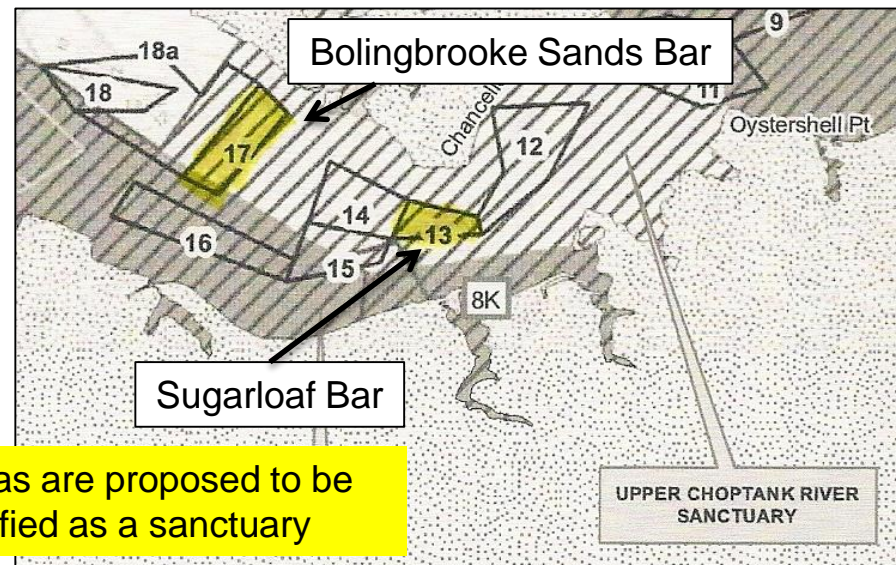
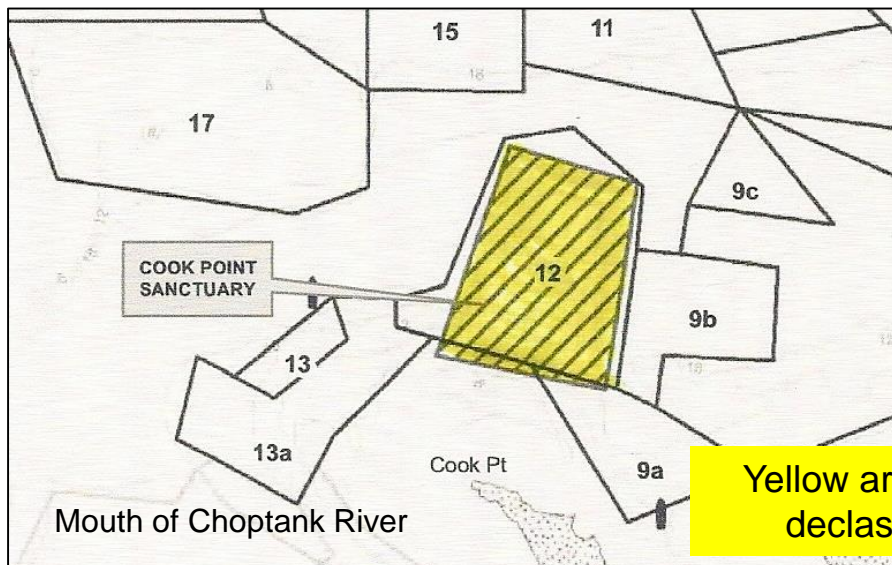
Seed or Shell Planting Proposal: To be determined

Bottom Exchange Proposal: None proposed

Under this proposal, 200 acres of oyster bottom would revert back to the public fishery. 0 acres will become a sanctuary.

104 acres in Cook Point proposal

96 acres in Upper Choptank River proposal

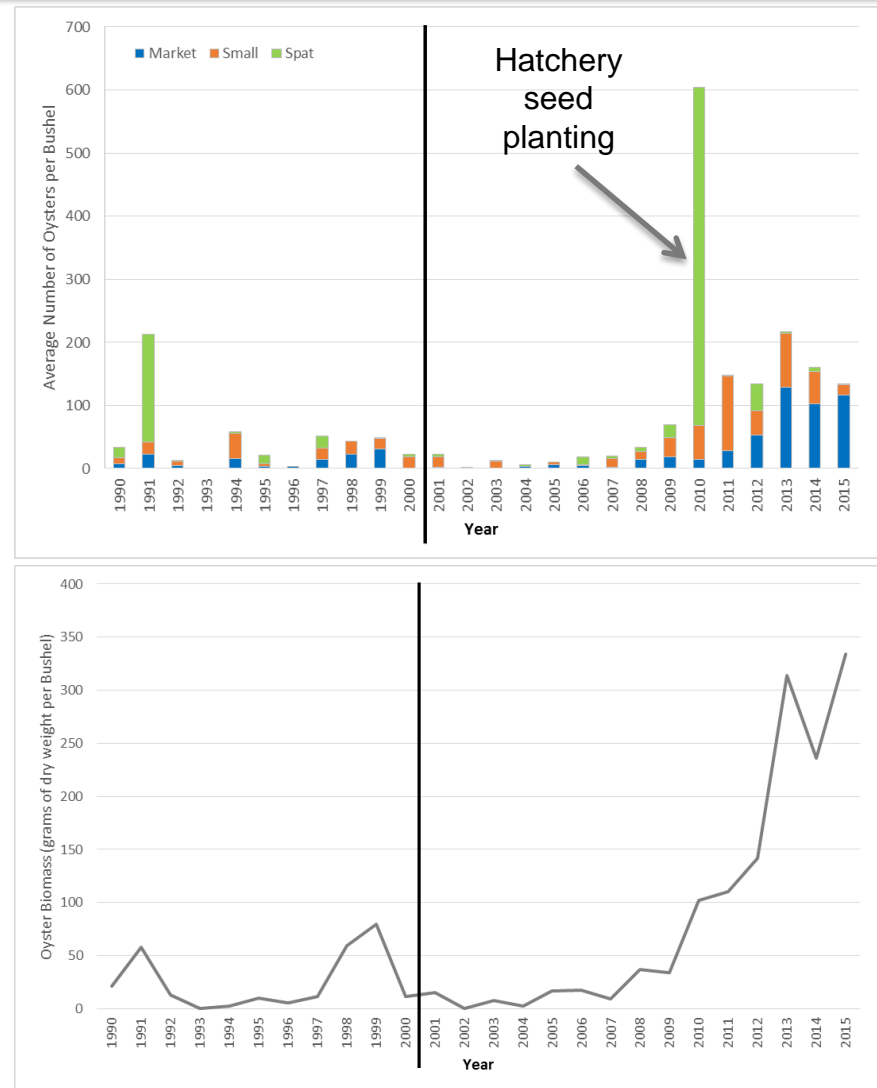


Yellow areas are proposed to be declassified as a sanctuary

Talbot (5 Year Report Info)

Cook Point Sanctuary

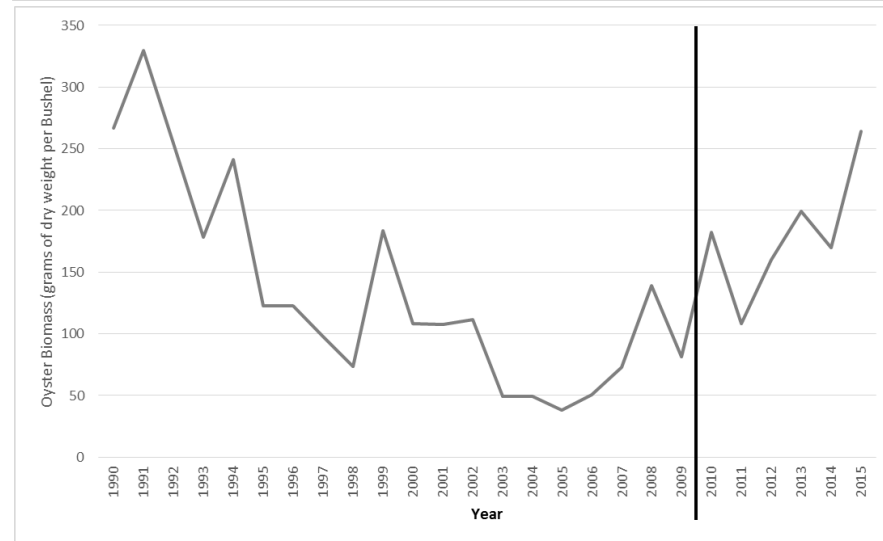
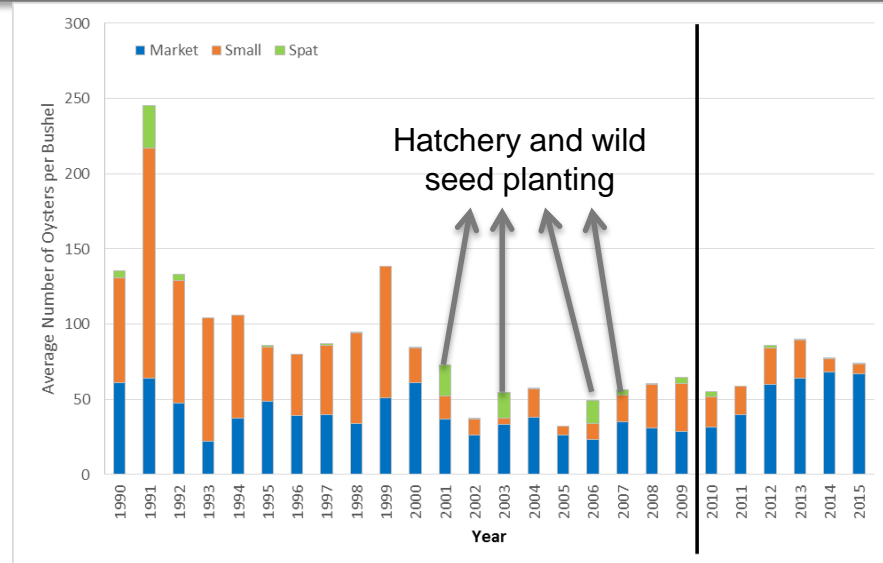
- Established in 2001
- Tier 1A
- Medium salinity
- USACE/CBF/UMD research area
- Above average mortality (average 26% mortality)
- Replenishment plantings for fishery in 1990, 1997, and 1998
- Restoration planting from 2008 to 2013: seed, reef balls, and shell and alternative substrate
- No MGO planting on proposed area



Talbot (5 Year Report Info)

Upper Choptank River Sanctuary

- Established in 2010
- Tier 1A (older States Bank Sanctuary)
- Low salinity
- Below average mortality (average 15% mortality)
- Bolingbrooke Sands bar was a harvest reserve last opened in 2011
- Replenishment plantings for fishery on Bolingbrooke Sands prior to 2010; No plantings on Sugarloaf
- Restoration plantings in 2005 to 2011 (not on Bolingbrooke Sands or Sugarloaf)
- No MGO planting on proposed bars



Talbot (Proposal)

Harvest Proposal: Open to harvest

- Miles River Sanctuary: Hand tong from Oct to Feb then dredging in March
- Wye River Sanctuary: Hand tong and diving

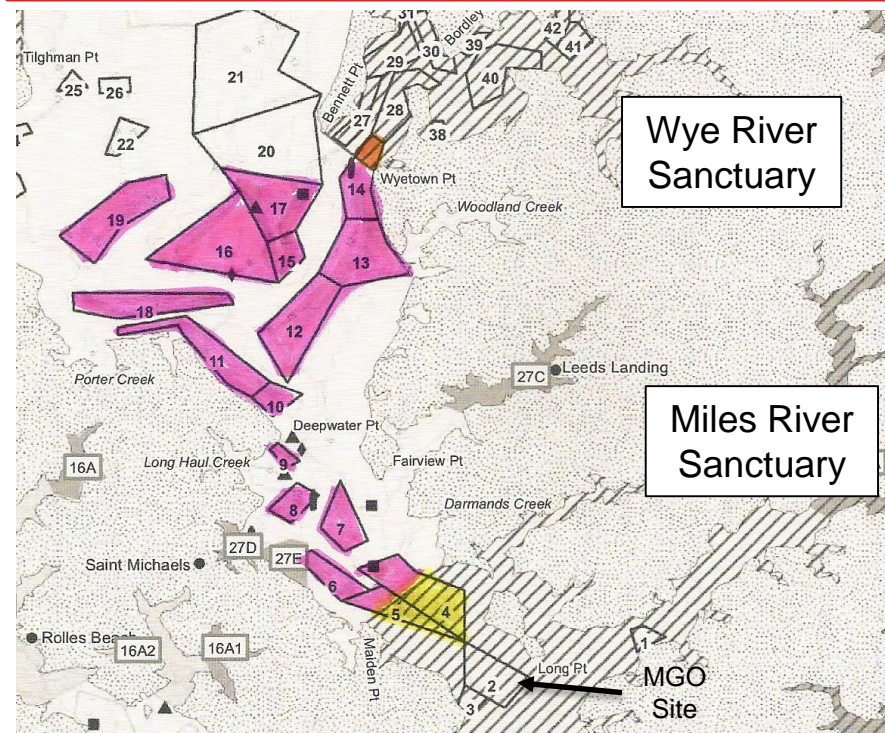
Seed or Shell Planting Proposal: To be determined

Bottom Exchange Proposal: None proposed

Reasoning: Open to power dredging in March to clean shells and prepare the area for future spat on shell plantings

Under this proposal, 24 acres of oyster bottom would revert back to the public fishery. 0 acres will become a sanctuary.

19 in Miles River Sanctuary proposal
5 in Wye River Sanctuary proposal



Already a public fishery area. Open to harvest by hand tong from Oct to Feb. Open to harvest using power dredging in March.

Orange area are proposed to be declassified as a sanctuary.

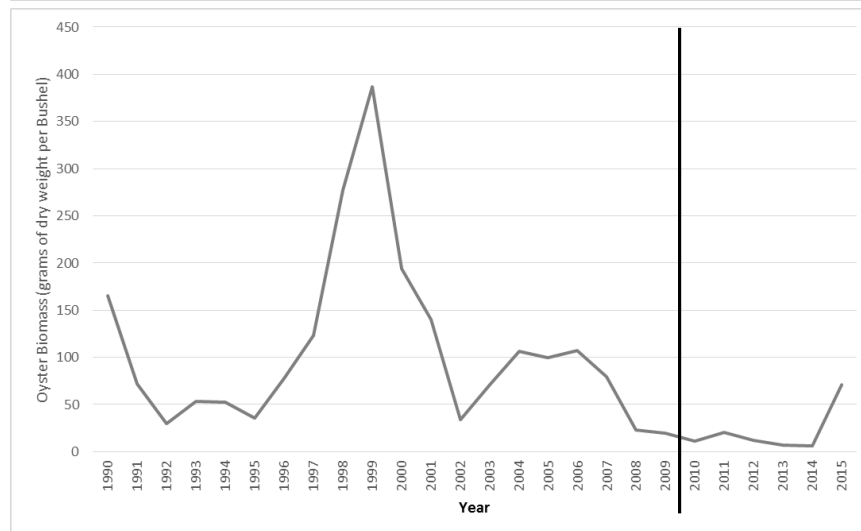
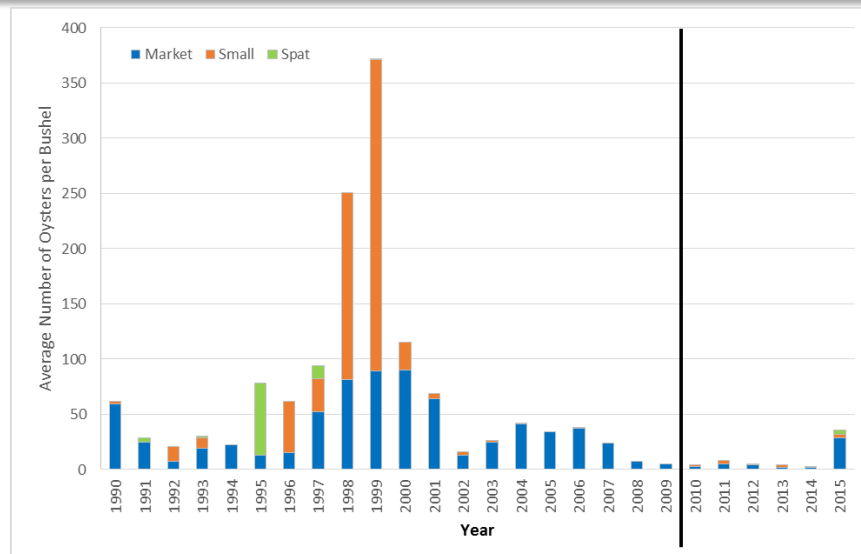
Yellow areas are proposed to be declassified as a sanctuary.



Talbot (5 Year Report Info)

Miles River Sanctuary

- Established in 2010
- Tier 2
- Low salinity
- Average mortality (average 25% mortality)
- Replenishment planting for fishery in 1998 and 1999
- No restoration plantings on those proposed bars
- No MGO planting on proposed bars
- 2014 patent tong oyster population survey
 - 96% of samples had no oysters
 - No samples met the minimum threshold to be considered restored

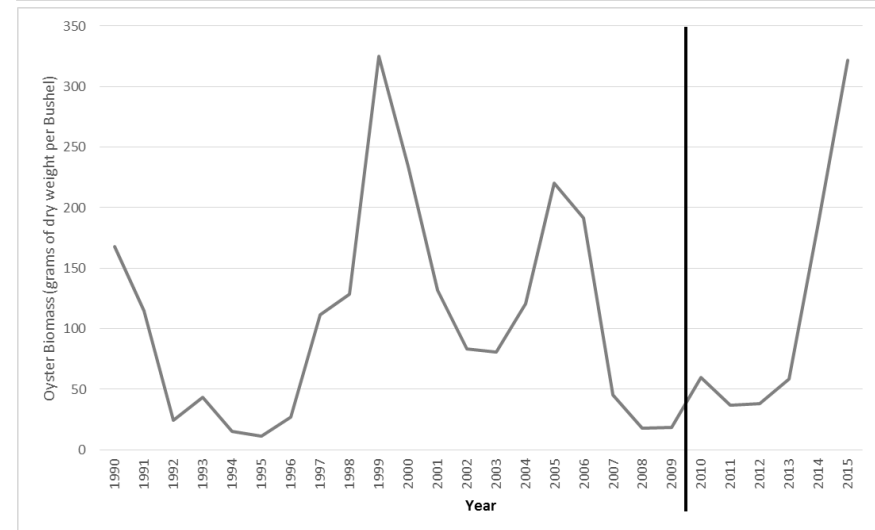
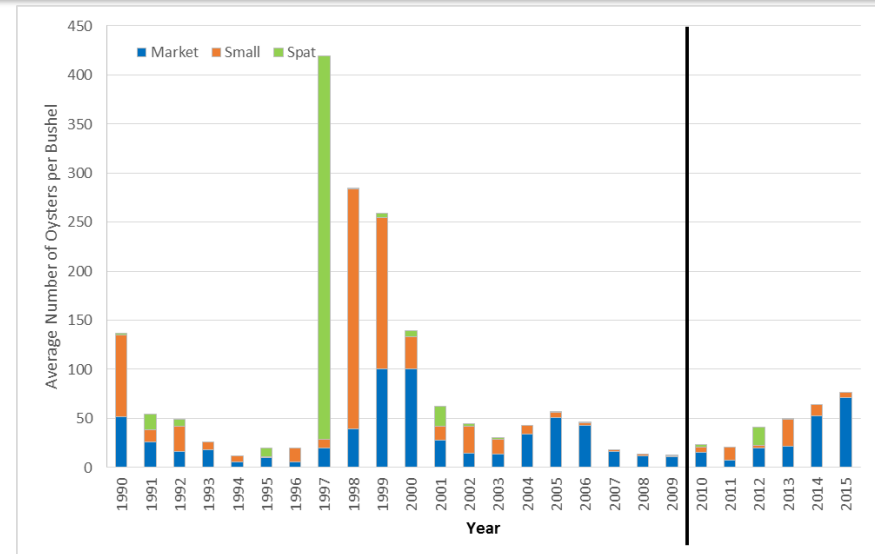




Talbot (5 Year Report Info)

Wye River Sanctuary

- Established in 2010
- Tier 1
- Low salinity
- Average mortality (average 21% mortality)
- Replenishment planting for fishery in 1990, 1998 and 2001
- No restoration plantings on those proposed bars
- No MGO planting on proposed bars
- 2014 patent tong oyster population survey
 - 48% of samples had no oysters
 - Two samples met the minimum threshold to be considered restored



Wicomico (Proposal)

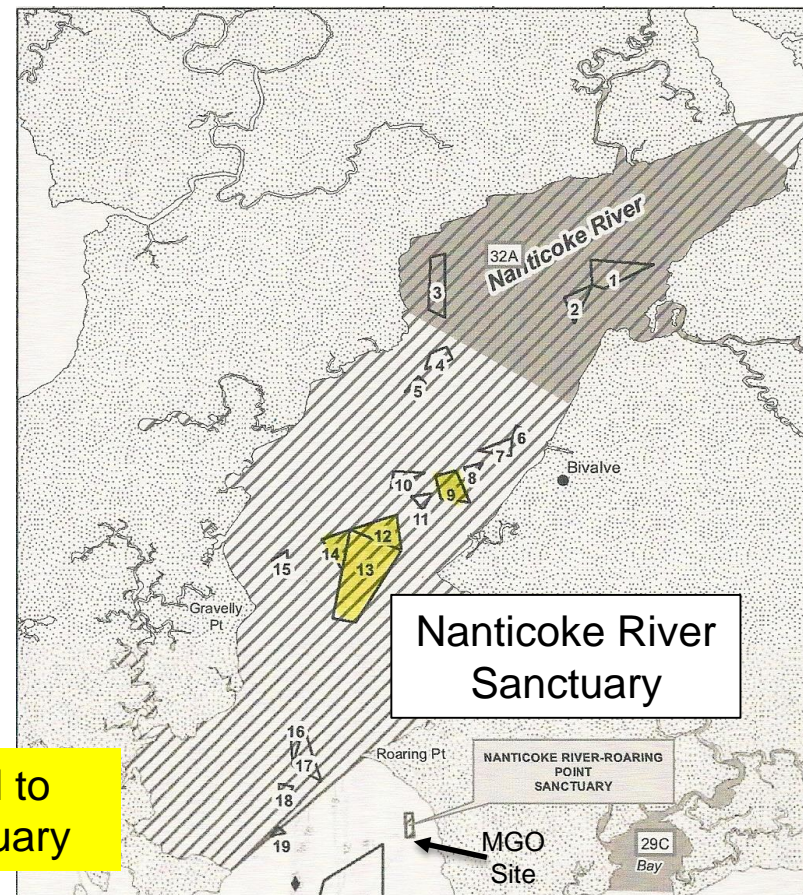
Harvest Proposal: Open to harvest annually from either Dec 1st or Jan 1st to the end of the season

Seed or Shell Planting Proposal: Plant seed annually for 10 years

Bottom Exchange Proposal: None proposed

Reasoning: Propose to plant seed in an area for the next 10 years where no restoration plantings have occurred for past 10 years

Under this proposal, 65 acres of oyster bottom would revert back to the public fishery. 0 acres will become a sanctuary.



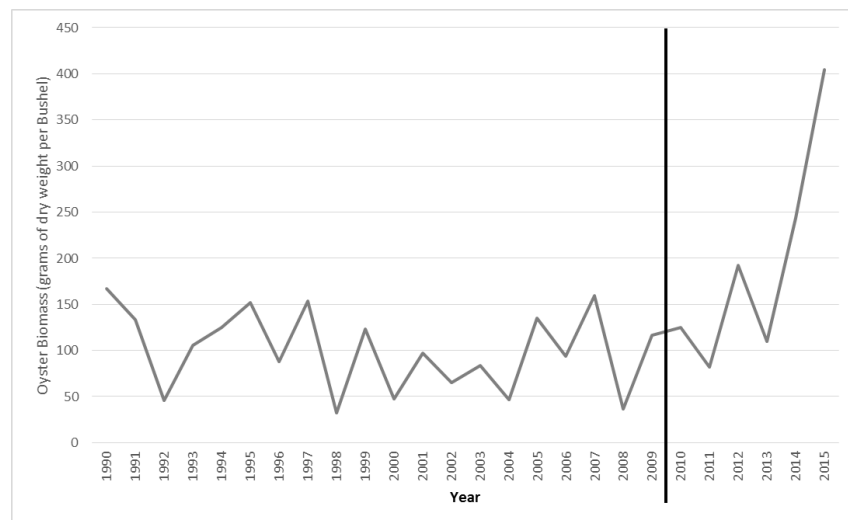
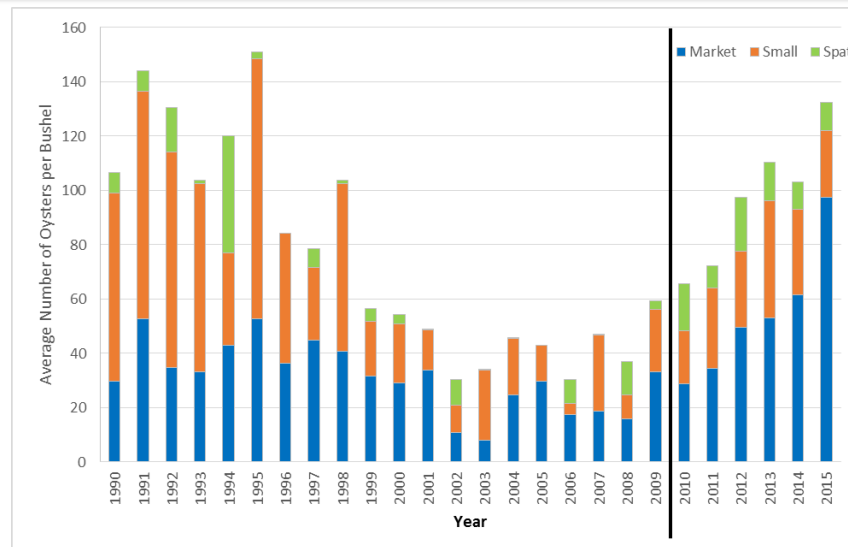
Yellow areas are proposed to be declassified as a sanctuary



Wicomico (5 Year Report Info)

Nanticoke River Sanctuary

- Established in 2010
- Tier 1
- Low salinity
- Below average mortality (average 15% mortality)
- Replenishment plantings for fishery prior to 2009
- No restoration plantings on proposed bars
- No MGO planting on proposed bars





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 Marys	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			

Proposed Acres per County (Based on All Proposals)

County	Estimated Proposed Acres In Sanctuaries			
	Total Acres of All Charted Oyster Bottom	% of All Charted Oyster Bottom	Total Acres of Estimated Productive Bottom	% of Estimated Productive Bottom
Anne Arundel	8,723	25.6%	1,063	21.3%
Baltimore	1,803	59.0%	344	18.3%
Calvert	4,905	26.4%	548	39.0%
Charles	114	1.5%	45	3.3%
Dorchester	14,938	19.4%	1,398	24.8%
Kent	3,027	22.8%	627	25.3%
Queen Anne	5,832	20.9%	891	28.5%
St Mary's	1,480	3.8%	779	16.5%
Somerset	17,173	26.0%	724	15.8%
Talbot	6,733	17.2%	770	13.7%
Wicomico	163	7.4%	32	10.4%
Worcester	0	0.0%	0	0.0%
Total	64,890	19.7%	7,221	20.0%

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.