Advocates for Herring Bay

June 2, 2020

Ms. Rebecca Thur
Department of Natural Resources (DNR)
Aquaculture and Industry Enhancement Division
580 Taylor Avenue, E-4
Annapolis, Maryland 21401

Re: Shellfish Aquaculture Lease Application #482, Maryland Seafood Cooperative
31.2-acre Submerged Land Lease in the Herring Bay Oyster Sanctuary

DNR's decisions on Lease #482 will affect the ecological health of Herring Bay for the next 20 to 40 years. Viewed through the lens of Action 7.0.2 in Maryland's Final Oyster Management Plan, this 31-acre site appears unsuitable for mechanical harvesting because of the abundance of fish, birds, and wildlife in this nook in the Herring Bay Oyster Sanctuary (see Attachment 1).[1] Under certain conditions, however, Lease #482 could be managed in ways that may optimize the environmental benefits for the sanctuary as a whole. Such conditions also would demonstrate Maryland's willingness to forge partnerships not just with the aquaculture industry, but with citizens working to preserve habitats for all living resources in the Chesapeake Bay.

Specifically, the Advocates for Herring Bay (AHB)[2] urge DNR to make the approval of Lease #482 contingent on compliance with three conditions—conditions that largely conform to the current plans of the applicant:

1. ***Require planting diploid spat on most—if not all—of this oyster sanctuary site.*** By law, the Herring Bay oyster sanctuary is meant to serve as a "reservoir of reproductive capacity."[3] Planting diploid spat on the aquaculture lease would expand that capacity by adding fertile larvae that can be exchanged with spat from the sanctuary reefs that abut the site. This is not an empty hope. AHB began restoring a small area on one of the Yates bars in 2019, raising the prospects for successful cross-fertilization. Seeding Lease #482 with diploids also would be a way for the State of Maryland—which helps pay for the spat through grants and credits from MDE's nutrient credit trading program—to invest in sustainable and harvestable reefs at the same time. There will be no reproductive benefits for the sanctuary, however, if the aquaculture lease is seeded with sterile triploid spat.

2. ***Require rotational harvests***. Lease #482 is big—roughly twice the size of the average aquaculture lease in Maryland[4]—and located in the most pristine area in Herring Bay. It's across from a 300-acre property with an easement held by the Maryland Environmental Trust that includes a "shoreline protection area" aimed at managing more than 2 miles of undeveloped beachfront as breeding and nursery habitat for horseshoe crabs, terrapins, shorebirds, and other wildlife. As noted in DNR's 2002 designation of the Herring Bay "No Discharge Zone," the area also has numerous species of fish and waterfowl. Rotating harvests over a 3 to 4-year period would limit the scale and/or duration of habitat disruptions while allowing the lessee to dredge 7-10 acres a year. Right-sizing the operation for its ecological context is warranted under DNR's policy Action 7.0.2 and consistent with federal guidelines for mitigating the environmental impacts of dredging.[5]

[1] Action 7.0.2 in Maryland's 2019 Final Oyster Management Plan states that DNR will "Identify areas suitable for submerged land and/or water column leases that do not create adverse impacts to existing living resources."
[2] The Advocates for Herring Bay is a community-based environmental group in Anne Arundel County.
[3] The regulations establishing sanctuaries were adopted in 2010. For documentation of the policy objectives, see Maryland Department of Natural Resources, *Oyster Management Review, 2010-2015*, July 2016, page ii.
[4] As of 2019, the average size of all aquaculture leases was 16 acres; the average bottom lease was 20 acres.
[5] See Department of Commerce, *Review of the Ecological Effects of Dredging in the Cultivation and Harvest of Molluscan Shellfish*, National Oceanic and Atmospheric Administration Technical Memorandum NMS-NE-220, December 2011.

3. ***Tailor the timing and tools to reduce the risk of by-catch and disturbance of other fish and wildlife.*** Seasonality matters. While wildlife is evident at this site throughout the year, the impact of mechanical harvesting would be most acute if it occurred during the peak breeding and foraging periods. We urge DNR to be proactive in minimizing further population loss of horseshoe crabs by requiring the lessee to avoid dredging when horseshoe crabs are migrating to their spawning and nursery grounds.[6] Similarly, we ask DNR to discourage harvesting at this site during the peak waterfowl months in the winter. Using non-mechanical harvesting methods also could reduce the risk from by-catch impacts.

It is our understanding that the Maryland Seafood Cooperative's (Co-op's) current plans generally follow our recommendations. As shown in Attachment 2, their current plan involves:

- ✓ planting mostly diploid spat
- ✓ following a rotational seeding and harvesting cycle
- ✓ harvesting oysters over about a two-month period in the spring
- ✓ using mechanical dredging or hand-tongs, and
- ✓ having no more than two boats operating on the site at any time.

What this plan lacks is certainty. Once leases and permits are issued, there is nothing in DNR's current regulatory framework that will require the Co-op to conduct their operations in a manner that protects existing living resources or promotes a sustainable oyster population on sanctuary reefs. While we do not question the veracity of the Co-op's stated intentions, we also recognize that personnel and market conditions will change over the next 20 to 40 years, and that those changes could result in actions that maximize private profits at the expense of Herring Bay's ecosystems.

To resolve that uncertainty, the Advocates for Herring Bay hereby request that DNR make the three conditions outlined in this letter enforceable requirements of Lease #482. Adding such legally binding conditions would align the permits with Maryland's environmental policy promises, helping ensure a harmonious balance between the aquaculture operation and other living resources in Herring Bay, including our sanctuary reefs. Since the Co-op has signaled its intent to follow most of these practices voluntarily, we anticipate that making these practices compulsory should not be considered burdensome or inappropriate.

Thank you for considering our views. Please do not hesitate to contact us at herringbay@gmail.com if you have any questions or comments about our recommendations.

Sincerely,
Kathleen Gramp
President, Advocates for Herring Bay

Attachments
Cc:

Senator Sarah Elfreth
Delegate Seth Howard
Senator Katherine Klausmeier
Delegate Johnny Mautz
Karl Roscher, DNR, Aquaculture Council
Dr. Jeffry Cornwell, UMCES
Dr. Reggie Harrell, UMD
Christopher Judy, DNR, Director, Shellfish Division
Phil Hager, DNR, Assistant Secretary for Land Resources
Kate Charbonneau, Executive Director, Critical Area Commission
Matthew Johnston, AA County, Environmental Policy Director
Martha Witt, Maryland Seafood Cooperative (MSC)
Kelly Barnes, Oyster Recovery Partnership and MSC
William Scerbo, AA County Watermen's Association

[6] Horseshoe crab breeding season currently peaks in May and June in Herring Bay, with hatchlings moving into nearby waters in the subsequent 3 to 4 weeks. Those months also are prime breeding periods for terrapins and other birds and wildlife.

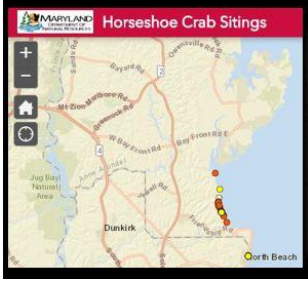
Attachment 1: Lease #482 is located in an area with abundant existing living resources

Maryland Policy:

Action 7.0.2. Identify areas suitable for submerged land and/or water column leases that do not create adverse impacts to existing living resources.

Lease # 482:

Located by Old Colony Cove, the most pristine shoreline habitat in Herring Bay



Mechanical harvesting on Lease #482 could adversely affect existing living resources by harming by-catch, disturbing sediments, and having sustained ambient and underwater acoustical effects that disrupt wildlife behavior and breeding

Dredging Would Occur Along Shoreline Under a MET Easement Designed to Protect Breeding and Foraging Habitat

In 2010, the Nature Conservancy adopted an environmental easement held by the Maryland Environmental Trust (MET) for Old Colony Cove farm. That easement created a "shoreline protection area" for the express purpose of protecting habitat for key species along its two-mile stretch of natural shoreline (see text below).

This protected area is closed to the public, allowing the natural shoreline to function like a nature preserve for numerous species.

2. Article II is hereby amended to add new Paragraphs M as follows:

"M. A portion of the Property, as more fully described and depicted on Exhibit H Shoreline Protection Area attached hereto and made a part hereof, is hereby designated as "Shoreline Protection Area," an area recognized by the State of Maryland as potential breeding, nesting, and foraging habitat for horseshoe crabs, terrapins, bald eagles and colonial nesting shorebirds. Within the Shoreline Protection Area, there shall be no new structures, piers, jetties, docks, ramps, or impervious surfaces. Within the Shoreline Protection Area, there shall be no cutting or destruction of trees, shrubs or other vegetation and no tillage, cultivation or mowing for purposes other than for establishment and maintenance of native plants.

Attachment 1: Lease #482 is located in an area with abundant existing living resources

Taken together, the land and water habitats in this nook of Herring Bay provide breeding and foraging habitat for numerous species

Bald Eagles~ Great Egrets ~ Snowy Egrets ~ Black-crowned Night Herons ~ Great Blue Herons ~ Green Herons~ Common Terns ~ Royal Terns ~ Great black-backed Gulls, Laughing Gulls~ Ring-billed Gulls ~ Double-breasted Cormorants~ Kingfishers ~ Killdeer ~ Spotted Sandpipers ~ Osprey

Tundra swans ~ Buffleheads ~ Canvasbacks, ~ Common Loons ~ Coots ~ Hooded Mergansers Horned Grebes ~ Long-tailed ducks ~ Northern Shovelers ~Ring-necked ducks ~Ruddy ducks ~ Scoup

Horseshoe Crabs ~ Diamond-backed Terrapins Blue Crabs ~ American eel ~ Razor Clams ~ Cow-nosed Rays

EPA and DNR Recognized the Diversity of Living Resources When Designating Herring Bay as a "No Discharge Zone"

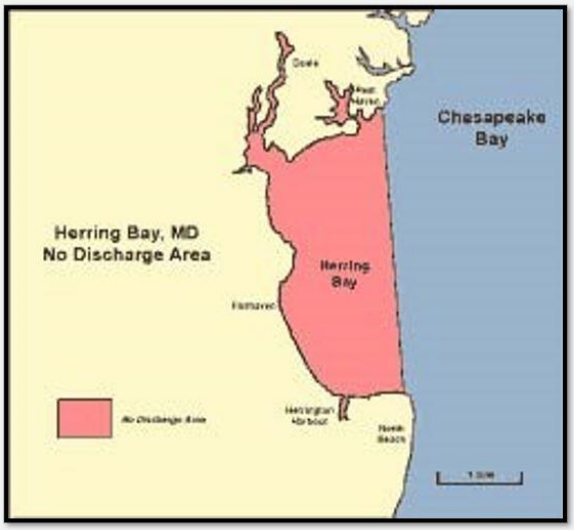
Description of Herring Bay No Discharge Zone
Source: U.S. Environmental Protection Agency
http://www.epa.gov/reg3wapd/nodischarge/maryland.htm
Adopted in 2002; text extracted from EPA website in 2009
Italics and emphasis added

The Herring Bay No Discharge Zone (NDZ) is a 3,134 acre are of water located along the western shore of the Chesapeake Bay in southern Anne Arundel County. The area includes Rockhold, Tracy, and Parker creeks on the north and Rose Haven Harbor on the south….

The Herring Bay watershed is approximately 25 square miles. Although traditionally a farming area, several residential communities are located within the watershed including some that are located along the shoreline. The town of Deale sits adjacent to Rockhold Creek. Herring Bay is also a very popular recreational boating area and is home to 16 marinas containing 2,090 slips.

There are four bathing beaches on Herring Bay: Mason's Beach, Town Point, Owings Cliffs, and Rose Haven. ***Other beaches are specifically designated as terrapin and horseshoe crab nesting and spawning areas. Herring Bay is also a general aquatic nursery and feeding area providing habitat for a rich mixture of blue crabs, Atlantic croaker (hardhead), spot, bluefish, gray sea trout (weakfish), Atlantic menhaden, bay anchovy, striped bass, summer flounder, and white perch.*** Herring Bay also contains natural oyster bars as well as bottom habitat for soft clams. Herring Bay is bounded by productive crab potting areas in the Chesapeake Bay. ***Wildlife includes great blue heron, American black duck, canvasback duck, and scaup, as well as nesting areas for osprey and bald eagle. Finally, the area along the shoreline contains submerged aquatic vegetation.***

Only two areas were designated as NDZs in Maryland in 2002: Herring Bay and the northern Coastal Bays on the Eastern Shore.



Attachment 2: Initial Plans for Lease #482, provided by the Oyster Recovery Partnership and Maryland Seafood Cooperative to the Advocates of Herring Bay, April 2020

Lease Site Management Plan

Who is the Maryland Seafood Cooperative?

The Maryland Seafood Cooperative (Co-op, MDSC) (http://mdseafood.coop) is the first watermen-owned cooperative that aims to produce and sell sustainably grown Chesapeake Bay shellfish for the regional retail market. The cooperative is creating sustainable and stable economic opportunities for its members while working to revitalize historically productive oyster habitat. The Co-op is both a producer and marketing cooperative – producing and distributing shellfish from its own managed leased areas as well as shellfish produced on member's private leases. Members will utilize a collective approach to producing and processing oysters (opportunities to aggregate harvesting, packaging, storing and distribution) as well as seeding and managing oyster beds at scale. As a marketing cooperative, the MDSC will brand its oysters and establish dedicated sales channels for its products, thereby maximizing the price members receive.

Why was the Co-op started?

In 2016, the State of Maryland DNR, the UMD Environmental Finance Center and the Oyster Recovery Partnership wanted to work the watermen community to uniting the commercial oyster harvesters, provide them with stable economic opportunities, and in the process revitalize dormant oyster habitat that also provides habitat for other marine life. We approached the watermen community and found there was interest for a private-public partnership of this type.

Who manages the Co-op?

Maryland Seafood Cooperative's founding and current Board of Directors are all multi-generational watermen with aquaculture experience representing five Maryland counties. Since its founding in late 2017, a majority of the 21 member-owners are leaders in their respective watermen communities and many run their own successful seafood-related businesses. The Board meets monthly and the membership meets on a quarterly basis to review, discuss and make decisions regarding future operations. Day to Day operations of the Coop are managed by Kelly Barnes (ORP) and Stephan Abel (Ferry Cove Hatchery).

Why Herring Bay for a lease site?

The Co-op is actively seeking leases around the state that are close to members' homeports. This strategy also helps reduce the risk of weather events impacting the oysters as they grow out. In addition, we are looking for sites that are in unrestricted waters and located within protected sanctuaries to minimize the potential for theft. When looking in and around Anne Arundel County, we explored multiple areas and found this fallow area that was outside of a Yates bar. The site which lies about 1/3 mile off shore had no SAV, was outside a navigation channel and pound net sites and upon conducting a survey had no live oysters (or shell). The bottom is barren hard, sticky mud and clay. Many of the bars that used to have thriving oyster reefs on them are now all sand, which is not conducive to on-bottom aquaculture due to high energy over the bottom.

What is our site management plan?

The Co-op will be conducting on-bottom shellfish aquaculture – meaning the planting of spat on shell on the bottom; no cages or floats. Our goal will be to plant multi-year plantings to create a rotational

Attachment 2: Initial Plans for Lease #482, provided by the Oyster Recovery Partnership and Maryland Seafood Cooperative to the Advocates of Herring Bay, April 2020
Page 2 of 2

seeding/harvest structure. Assuming we plant 25 of the 30 acres with shellfish (we leave space between the areas), over the next three years, we'll be planting up to 100 million oysters (25 to 30 million per year). When you start a reef on barren bottom, like we are, it will take four to five years for the site to get established before any harvesting would occur. Most of the oysters that we plan on using will be diploid oysters given their availability from the hatchery.

A planting vessel would come on site two to three times per year during spring/summer months for a few hours to plant the oysters (hosing them over the side of a boat) and annually we would survey the site monitoring their growth. Harvesting would occur once they are over three inches in size. We anticipate at this point that seasonal harvesting would occur in April or May by one or two boats at any given time. Once we get closer to that stage, the Coop will develop a detailed harvesting plan, but we will be following best management protocols that NOAA has outlined to mitigate/minimize environmental impacts that includes both mechanical (dredging) or non-mechanical harvesting (hand tongs) processes.