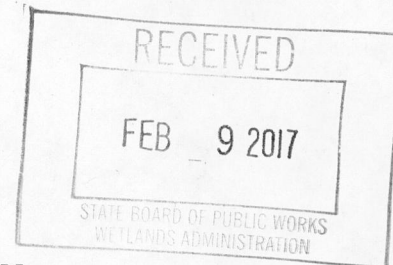


Maryland Department of the Environment  
Water Management Administration  
Tidal Wetlands Division



**WETLANDS REPORT AND RECOMMENDATION**  
**STATE WETLANDS CASE NUMBER 14-WL-0104**

Applicant: Maryland Department of Natural Resources  
Attn: Michael Naylor, Fisheries Service  
Tawes State Office Building  
580 Taylor Avenue  
Annapolis, Maryland 21401  
410-260-8652

**Date Application Received:** December 20, 2013

**Public Notice Required:** Yes

**Comment Closing Date:** May 9, 2014

**Latitude/Longitude:** 38.533°N x 76.2354°W

**Location of Proposed Work**

The proposed work will occur at various locations within the Little Choptank River, Dorchester County, Maryland.

**Description of Proposed Work**

The Maryland Department of Natural Resources (DNR) has applied for a ten year license to restore approximately 188 acres of existing State designated Natural Oyster Bars (NOBs) located in water depths of approximately minus 6 to minus 9 feet at mean low water (MLW). The work is depicted in the attached revised plans dated January 20, 2017 and includes the following activities:

- 1) Depositing approximately 349,968 cubic yards of oyster shell, clam shell, or various alternative materials to a maximum thickness of 17 inches off of the Little Choptank River bottom. The alternate materials to be used in the restoration are limited to, fossilized oyster shell, concrete rubble, stone, marl, brick, and/or crushed cinderblock.
- 2) Planting the alternate material with shell seeded with eastern oyster (*Crassostrea virginica*) spat at a density of 5 million spat per acre, creating a thickness of approximately 1 inch and a final post construction thickness of 18 inches off of the river bottom and clearances of approximately 4-8 feet at mean low water above the elevation of restored bottom habitat.

**Requires Water Quality Certification?** Yes. The Department will issue the Water Quality Certification upon approval of the Wetlands License by the Board of Public Works.

**Qualifies for Maryland State Programmatic General Permit?** No, the U.S. Army Corps of Engineers (USACE) has determined that this application must be reviewed under the requirements of an Individual Permit.

## **WETLANDS REPORT AND RECOMMENDATION**

State Wetlands Case Number 14-WL-0104

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**Area of Vegetated Wetland Impacts:** 0 square feet.

**Area of Wetlands Created:** 0 square feet.

**Was the Applicant's Original Project Modified?** No.

### **Purpose of the Proposed Project**

The purpose of the project being proposed by DNR is to restore natural, self-sustaining, oyster populations and oyster bottom habitats in the Little Choptank River to their former condition, as part of a State/federal strategy for oyster restoration. The application is supported by:

- President Obama's Chesapeake Bay Protection and Restoration Executive Order 13508 issued in May 2009, which acknowledged that historical efforts to restore the health of the Chesapeake Bay and its watershed did not show sufficient progress. The Executive Order focused on oyster restoration and specifically called for the restoration of native oyster populations in twenty Chesapeake Bay tributaries by 2025.
- Maryland's Oyster Restoration and Aquaculture Development Plan, which was announced by Governor O'Malley in December 2009 and called for the restoration of oyster bars in Maryland's portion of Chesapeake Bay; and
- The May 2010 Strategy for Protecting and Restoring the Chesapeake Bay Watershed developed by the Federal Leadership Committee for the Chesapeake Bay.

A multi-agency workgroup continues to work on actions to meet the goal of restoring twenty Chesapeake Bay tributaries. In Maryland, the lead participating agencies include DNR, the USACE, and the National Oceanic and Atmospheric Administration. Additionally, a number of other State, federal, and non-profit groups have devoted considerable time and resources to improve oyster habitat in Maryland.

### **Background**

The Board of Public Works issued Tidal Wetlands License 08-WL-0045 to DNR on October 1, 2008. This license was authorized for a time period of ten years. The Tidal Wetlands division recommends that license 14-WL-0104 also should be valid for a period of ten years. The License authorized the deposition of up to 1.5 million cubic yards of alternate materials within Maryland charted oysters bars in the Chesapeake Bay, while maintaining a minimum vertical clearance of 8 feet at mean low water. At the time the License was issued, the exact placement sites within historic natural oyster bars were unknown. Today, site specific information is available to identify the location of restorable bottom in the Little Choptank River and to determine that many of these sites are located in areas that are shallower than 9-feet at mean low water. Therefore, in order to take advantage of these shallower restoration sites, DNR has applied to emplace alternate materials in the Little Choptank River at water depths ranging from 6- to 9-feet, which will result in a minimum vertical clearance of 4 feet at mean low water.

The proposed project represents the second oyster restoration on a tributary-scale. A similar oyster restoration effort in Harris Creek, Talbot County, Maryland was authorized by Tidal Wetlands License 12-WL-1231. Under that License, a total of 189 acres of natural oyster bars in



## **WETLANDS REPORT AND RECOMMENDATION**

State Wetlands Case Number 14-WL-0104

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Harris Creek had been restored by 2013. According to DNR, preliminary investigations on restored areas show thriving oyster populations with multiple age classes growing vertically at a rate that can outpace sedimentation.

### **Comments by Local, State or Federal Agencies and Elected Officials**

#### *Maryland Department of Natural Resources (DNR)*

DNR's Fisheries Service conducted an internal Departmental review of the proposed project and any concerns raised by that review were addressed by DNR prior to the submission of the application. As a result, DNR's Integrated Policy and Review Unit did not comment during MDE's application review process.

#### *Maryland Historical Trust (MHT)*

Upon receipt of an application, MDE screens using a Geographic Information System (GIS) database for potential impacts to historical and archeological resources. For this particular application, the screening process identified potential areas of concern so the application was forwarded to MHT for review and comment. Subsequently, MHT provided its determination that the proposed project would not have any significant effect on historical or archeological resources.

#### *National Oceanic and Atmospheric Administration (NOAA)*

At the Department's April 9, 2014 public informational hearing, a NOAA representative stated that the bottom substrate in the proposed planting areas was suitable for the restoration work and that dissolved oxygen levels should increase as a result of the proposed project.

#### *Dorchester County Council*

The Dorchester County Council submitted a letter questioning the need for the proposed project and expressed many concerns, including potential loss of work time for local watermen, the size of the alternative material, potential turbidity issues from emplacing the proposed fossil shell into the waterway, the potential for the introduction of pathogens and disease into the Chesapeake Bay and impacts on navigation and natural resources. In addition, during the Department's April 9, 2014 public informational hearing, a Dorchester County Councilman made reference to the Public Trust Doctrine and expressed his concerns over riparian rights and the use of State waters for the proposed project.

### **Public Participation**

As required by §5-204(b) of the Environment Article, the Department drafted and issued a public notice by posting the public notice on its web site from March 15, 2014 to April 14, 2014 and publishing the public notice for the proposed project in the March 26, 2014 edition of the Dorchester Banner. In addition, notice was provided to adjacent property owners, Dorchester County elected officials, and individuals on the Department's interested persons list. A joint State public informational hearing/federal public informational meeting was held on Wednesday, April 9, 2014 from 6:00 PM to 9:00 PM at the Cambridge/South Dorchester High School, 2475

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Cambridge Beltway, Cambridge, Maryland 21613. A poster session, which was available from 6:00 PM to 7:00 PM, was followed by the State public informational hearing/federal public informational meeting. The public informational hearing record remained open until May 9, 2014, providing interested persons additional time to comment on the application. (The list of adjacent property owners notified of the application (attachment A) and the attendance sheets for the Public Informational Hearing (attachment B) were provided to the Board under separate cover.)

Written comments were received during the comment period, oral and written comments were received during the Public Informational Hearing, and additional written comments were received during the period the hearing record remained open. The comments received by MDE were both in support of and in opposition to the proposed project. In addition to the comments from NOAA and Dorchester County discussed in the previous section entitled "Comments by Local, State or Federal Agencies and Elected Officials," local watermen expressed concerns about the proposed project. Those comments are summarized below.

Watermen expressed concerns over the restoration efforts, including: potential economic impacts due to loss of work time; the need for the proposed project; the size and origin of the alternative material; potential turbidity issues from emplacing fossil shell into the waterway; and potential pathogens associated with fossil shell being transported from Florida. The Watermen were also concerned about impacts to navigation and natural resources, such as fish and crabs.

In addition, the Watermen suggested using power dredging to restore the oyster population within the Chesapeake Bay and its tributaries. According to DNR, power dredging is a method of harvesting oysters using a dredge to scrape up oysters behind a power boat. The dredge is brought up from the bottom by mechanical means, usually a hydraulic winder. Proponents of power dredging believe that such activity helps revitalize oyster bars by uncovering buried shell and keeping the bars cleared of silt. On the other hand, opponents believe that power dredging creates a sediment plume within the waterway that covers resources with a layer of silt.

The Department also received written comments which were similar in nature to the comments from the public hearing. The Coastal Conservation Association and two private citizens submitted letters in support of the oyster restoration. Another private citizen wrote a letter opposing the project and expressing concern over the theory of the restoration project.

### **Maryland's Oyster Restoration Strategy**

Oysters provide important ecological services, including water filtration and habitat for numerous estuarine species. They also provide economic opportunity, supporting commercial fisherman and shucking houses. Maryland's oyster reefs, however, have been in decline due to overharvesting, sedimentation and disease. Once the cornerstones of a healthy Bay, today the Chesapeake's oyster population has declined to less than one percent of what it was when colonists arrived in the 17th century. Consequently, maintaining status quo for oysters was no longer an option. For six years, stakeholders and citizens were involved in an extensive public process to chart a new course for oyster restoration in Maryland through the Environmental Impact Statement (EIS) on non-native oysters, the Oyster Advisory Commission (OAC) and the Aquaculture Coordinating Council. In addition, the passage of the Oyster Restoration Act by the



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Maryland General Assembly in 2007, which established the OAC to provide advice on strategies to protect and restore the oyster population in the Chesapeake Bay. Since then Maryland DNR has worked with the OAC, other scientists, sister agencies and stakeholders to develop a new plan to recover Maryland's decimated oyster population and industry.

The EIS decision and the advice from OAC focused on native oysters for ecological restoration and aquaculture development, with the goal of restoring natural, self-sustaining, oyster populations and oyster bottom throughout the Chesapeake Bay and its tidal tributaries. The Oyster Advisory Commission recommended greater use of large sanctuary areas in targeted regions for ecological restoration purposes, a separate focus on increased aquaculture to rebuild the commercial industry, and development of a management plan that continues to provide an opportunity for a more targeted and scientifically managed sustainable commercial public oyster fishery. Since 2009, State agencies have worked together to implement these recommendations, which culminated in the restoration activities in Harris Creek and the Little Choptank River starting in 2013.

### **Reef Construction**

Construction of the reefs relies on cranes with clamshell buckets to place reef materials. The cranes are equipped with GPS (Global Positioning System) receivers that allow for placement to within several feet of desired locations. In addition, whenever, alternate materials are used to construct the reefs, the material is covered with plantings of spat on shell within 12 months of placement. On all sites, follow-up sonar monitoring is performed to verify both the lateral extent and the final height of planted materials, and corrections are made when permit tolerances are exceeded or when placements otherwise don't match the construction plans.



## **Findings of the Maryland Department of the Environment**

### *Public Trust Doctrine*

The State of Maryland – like all other states – owns the navigable waterways within its boundaries, and the submerged lands beneath those waterways. Under what is known as the public trust doctrine, the states must hold title to the lands beneath the navigable waters in trust for the benefit of the public. This doctrine imposes on the states the responsibility to preserve the navigable waters and submerged lands for a variety of public uses, including navigation, commerce, and recreation, as well as fisheries management and environmental protection. In evaluating any application for a tidal wetlands license, the Department and the Board of Public Works must take into account the proprietary interests of the State as property owner and the State's duty to protect tidal waters for public uses.

Because the basic purpose of DNR's proposed project is to restore oyster populations and oyster bottom habitat in the Little Choptank River, the project comports with the State's duty under the public trust doctrine to protect and promote the public oyster fishery in the State. Further, it is DNR, through statute, that has been assigned stewardship duties over public fisheries in the State, and as such DNR is the appropriate agency to serve as applicant for this project on behalf of the State.

### *Reef Restoration in the Little Choptank River*

The restoration sites within the Little Choptank River proposed by DNR are located on natural oyster bars as defined by Natural Resources Article 4-11A-01, Annotated Code of Maryland. The sites were selected based on the following criteria: (1) their status as an oyster sanctuary; (2) the availability of restorable bottom, where the substrate consists of hard sand, shell, and sand or mud mixed with shell; (3) adequate dissolved oxygen; (4) historic spat set; (5) hydrodynamics favoring larval retention; and (6) an intermediate salinity that balances the reproduction of high salinity waters with the disease refuge of low salinity waters.

### *Alternate Materials*

The use of alternative material is becoming common-place in reef construction because natural, Chesapeake Bay oyster shell is expensive and not available in large quantities. While a variety of alternate materials are proposed to be used in the application, DNR is only considering the use of oyster shell, clam shell, quarried stone, and fossilized shell for reef construction in the Little Choptank River. In addition, it is important to note that fossilized shell is geologically classified as stone, mined from a quarry where it was deposited in the late Pliocene epoch about 3-5 million years ago. According to DNR, none of these materials have been used in toxic or industrial environments where they could have become contaminated or come in contact with pathogens. While concerns have been raised about the use of fossilized shell and the introduction of shellfish diseases into the Chesapeake Bay, neither the fossilized shell nor the quarry from which it is mined harbor shellfish pathogens. DNR has also stated that the CSX Corporation will transport the fossilized shell by train from Florida to Maryland at cost to complete the planned reef restoration in the Little Choptank River and other similar ongoing



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restoration efforts such as Harris Creek.

Concerns have also been expressed about the size of the alternate material that will be used to construct the Little Choptank River oyster reefs. In response, DNR has developed operational limitations designed to limit waterway impacts, including limiting the size of the alternative material used for the restoration effort. The granite will range in size between 3 and 6 inches, which is typically the size of R-3 rip rap. The fossil oyster shell, on the other hand, will be between 1.5 and 5 inches in size and topped with clean, native oyster shell from the University of Maryland Center for Environmental Science Horn Point hatchery. DNR has stated that some fine sediment from the quarry will remain attached to the fossil shell after cleaning. It is important to note, however, that DNR has reviewed the excavation and cleaning process at the quarry and found it to be adequate to provide material that meets contract specifications, which specifies the percentage of the material that shall be between 1.25 and 5 inches with less than 5% fines that pass through a #200 sieve. Water quality monitoring conducted on previous barge deliveries has shown that turbidity levels are well within 150 NTUs (Nephelometric Turbidity Units), the acceptable water quality standard, with plume averages ranging from 10 to 68 NTUs. Consequently, no significant sedimentation is expected to occur with the proposed project. In addition, to further protect water quality, the Department, in consultation with DNR, has developed special conditions to ensure that the project is constructed in a manner that does not violate Maryland's Water Quality Standards. These guidelines are included as a recommended in Special Condition "H." Additionally, according to DNR, fossils from a land-based quarry would not have bound nutrients, so it was not necessary to test for phosphorus and nitrogen.

### *Navigation Impacts*

Impacts to navigation have been raised as a potential concern with the proposed project. DNR has stated that the as-built drawings of the constructed reefs and sonar scans of completed reefs will be sent to NOAA so that nautical charts may be modified to reflect the changed conditions. In addition, plans will be modified for specific areas of concern such as Hudson Creek, a tributary of the Little Choptank River, whenever possible according to DNR.

### *Fishery Impacts*

Given the very small percentage of the Little Choptank in which reef creation will occur and the fact that the entire river is open for trotlines DNR believes that any potential impact to crabbing will be negligible. Once oysters are planted on the reef and allowed to grow, the alternate materials will be covered by a thriving reef, and should enhance crabbing, fish and oyster populations in the area throughout the river. In addition, the schedule to place alternative material on the River bottom was developed to minimize resource conflicts. The schedule will minimize conflicts with buried crabs, which typically emerge from hibernation at water temperatures of 52-55 degrees Fahrenheit. Monitoring stations showed temperatures near the Little Choptank at 55 degrees Fahrenheit or greater at the time placement began on the currently-permitted sites. Furthermore, restoration efforts are focused on old oyster bars where the bottom is firm enough to support heavy fossil shell and/or granite. These areas are not considered to be ideal for crab burial or hibernation, as crabs usually prefer softer bottom substrates. Given the very small percentage of the Little Choptank in which reef creation will occur (less than 1% of

## WETLANDS REPORT AND RECOMMENDATION

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the river in any given month) any potential impact to crabs would be negligible.

### *Submerged Aquatic Vegetation*

Standard operating procedures for oyster reef restoration is to survey proposed sites for submerged aquatic vegetation (SAV) prior to emplacing oyster shell, clam shell, or alternate materials on the bottom of a waterway and to use the survey to avoid impacting this important natural resource. In addition to the standard operating procedures, MDE is recommending Special Condition "D," which not only requires an SAV survey, but also includes a 300-foot buffer zone around identified SAV beds.

### *Advanced Notice of Deployment*

The public participation process identified the need for DNR to provide advanced notice of its deployment schedule to **County Council of Dorchester County** and local watermen in order to avoid conflicts with watermen who rely on proposed restoration areas for their livelihood. MDE is recommending Special Condition "E," to address this finding.

### *Evaluation Criteria*

In reviewing the proposed project, the Department determined that:

- Dredging activities were avoided and filling activities were minimized to include those areas in the Little Choptank River with restorable bottom, where the substrate consists of hard sand, shell, and sand or mud mixed with shell. In addition, the deposition of oyster shell, clam shell, or various alternative materials to a maximum depth of 18 inches off of the Little Choptank River bottom, which result in clearances of approximately 4-8 feet at mean low water above the elevation of restored bottom habitat.
- The restoration of existing State designated Natural Oyster Bars is water-dependent.
- The proposed activity will not alter or destroy tidal wetlands. Furthermore, the proposed activity:
  - Will enhance the value of the tidal wetlands as a source of nutrients and habitat for finfish, crustaceans, mollusks, or wildlife of significant economic or ecologic value,
  - Will not affect potential habitat areas such as historic spawning and nursery grounds for anadromous and semianadromous fisheries species and shallow water areas suitable to support populations of submerged aquatic vegetation,
  - Will not eliminate or substantially reduce marine commerce, recreation, and aesthetic enjoyment,
  - Will not affect the natural ability of tidal wetlands to reduce flood damage and adversely affect the public health and welfare, and
  - Will not substantially reduce the capacity of tidal wetlands to trap sediment, and result in increased silting of channel and harbor areas to the detriment of free navigation.
- The proposed activity will not alter natural water flow, tidal circulation regimes, or water temperature. On the other hand, the proposed activity will enhance water quality.
- The proposed activity will not alter littoral drift.



## **WETLANDS REPORT AND RECOMMENDATION**

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- The proposed activity will enhance the aquatic environment.
- The proposed activity may have a minimal impact on local, regional, and State economic conditions, but overall will result in improved economic conditions as the productivity of the restored oyster bars improve the fishery and water quality.
- The proposed activity is consistent with State, federal, and local land use plans and laws, including Critical Area laws.
- Natural, scenic, historic property, and aesthetic values will be retained or enhanced.
- Danger from hurricanes, floods, sea level rise, or other determinable and periodically recurring natural hazards is avoided or minimized due to the location of the proposed activity.
- Navigational safety will not be adversely affected due to the project's design parameters, which will maintain clearances of approximately 4-8 feet at mean low water above the elevation of restored bottom habitat.
- The proposed activity will provide public benefits by restoring natural, self-sustaining, oyster populations and oyster bottom throughout the Little Choptank River. Oysters provide important ecological services, including water filtration and habitat for numerous estuarine species. They also provide economic opportunity, supporting commercial fisherman and shucking houses.
- Maintenance and operation of the proposed project is assured through a monitoring program that will be conducted by DNR. Growth and survivorship of the constructed reefs will be monitored post planting at the following intervals: 3 months, one year, three years, and six years. Monitoring will allow for adaptive management, supplemental oyster planting in case of mortality, or suspension of plantings where natural spat is observed.
- Recreational and navigational access to waters of the State is maintained.
- The proposed activity will not alter the scenic and wild qualities of a designated State scenic and wild river. and
- The proposed project will not impact historic waterfowl staging areas and colonial bird-nesting sites.

### **Conclusion and Recommendation**

The Department's evaluation of this project has taken into account ecological, economic, recreational, developmental, and aesthetic considerations appropriate for this proposal as well as other requirements set forth in the Code of Maryland Regulations. To insure that impacts to resources are avoided and minimized to the maximum extent possible and to insure that all work is performed in accordance with critical area and local regulations, the Department has recommended a number of special conditions. Provided all general and special conditions are adhered to, the work proposed will not cause significant deleterious impacts to marsh vegetation, submerged aquatic vegetation, finfish, shellfish, or navigation. In consideration of the site characteristics and the nature of the proposed work, the Department concludes that the application represents a reasonable exercise of riparian rights.

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### **Recommended Special Conditions**

- A. The Maryland Department of the Environment has determined that the proposed activity complies with, and will be conducted in a manner consistent with, the State's Coastal Zone Management Program, as required by Section 307 of the Federal Coastal Zone Management Act of 1972, as amended.
- B. The Licensee shall maintain a 250-foot buffer zone around federal aids to navigation, and a 150-foot buffer from federally-designated channels in accordance with U.S. Coast Guard requirements.
- C. The Licensee is authorized to emplace clean oyster shell, clean clam shell, and the following alternate materials on the bottom of the Little Choptank River: fossilized shell, marl, concrete, stone, brick and crushed cinderblock with a maximum size limit of 9 inches. If concrete is used, all rebar is to be cut off flush with the concrete prior to emplacement. Any rebar exposed as a result of the concrete breaking during emplacement is to be cut flush with the concrete. The use of asphalt rubble is not authorized by this License.
- D. No submerged aquatic vegetation shall be filled, dredged, or otherwise altered or destroyed. The Licensee shall perform a submerged aquatic vegetation survey and establish a 300-foot buffer zone around the submerged aquatic vegetation beds prior to emplacing alternate materials on the bottom of the Little Choptank River.
- E. The Licensee shall provide the Dorchester County Commissioners, the Maryland Watermen's Association, the Dorchester County Seafood Harvesters Association and other local seafood industries 48 hours notice prior to performing work within the proposed restoration sites.
- F. The Licensee shall perform a post construction survey to confirm a minimum vertical clearance of 4 feet at mean low water measured from the top of the substrate used during the construction of the restoration project.
- G. The Licensee shall cap any alternate materials used during the construction of the restoration project with clean shell to minimize impacts to recreational and commercial crabbing in the Little Choptank River.
- H. The Licensee shall adhere to the following performance and monitoring criteria. The criteria do not limit or constrain the ability of the Water Management Administration, Compliance Program to enforce the provisions of this License and may be modified by the Water Management Administration as needed to ensure that water quality standards are being met by the Licensee.



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State Wetlands Case Number 14-WL-0104

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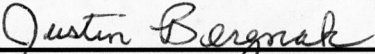
- 1) The Licensee will ensure that any material placed at the site has been cleaned sufficiently to prevent a violation of water quality standards when it is placed in open water. Any material that has been found to be unacceptable shall be returned to its point of origin at the Licensee's expense.
- 2) The Licensee shall inspect the site at least once per day during material placement operations to ensure compliance with this License. The Licensee shall immediately report any noncompliance issues to the Water Management Administration, Compliance Program.
- 3) Turbidity in the surface water resulting from any discharge during the material placement operation shall not exceed 150 NTUs (Nephelometric Turbidity Units) or 50 NTUs as a monthly average. For the purposes of this project, the project site boundaries are defined to be within 300 feet from the area of active material placement.
- 4) Prior to start and at the conclusion of material placement operations, the Licensee or its contractor shall obtain a sample to characterize ambient water quality.
- 5) The Licensee or its contractor shall monitor turbidity and pH hourly while material is being placed in open water. Samples shall be taken within 300 feet of the placement site, in the direction of tidal flow, and at a surface depth of 6 to 12 inches.
- 6) The Licensee shall maintain a log of all required samples and report any samples that exceed water quality standards to the Water Management Administration, Compliance Program - Eastern Shore Division within 24 hours of the event. The log shall include the following information: latitude and longitude of the sample location; name of the person performing the sampling and/or analyses; the date and time the analyses were performed; the analytical technique or method used; and the sample results.
- 7) The Licensee or its contractor shall cease material placement operations if suspended sediment is observed leaving the site and turbidity readings higher than 150 NTUs are measured within a distance of 300 feet from an placement site; if the monthly average exceeds are 50 NTUs, or a visible plume at or below the surface of the open water within the direction of tidal flow does not dissipate within a distance of 300 feet from the area of active material placement when ambient turbidity is 150 NTUs or greater. After a shutdown event, material placement shall not resume unless turbidity levels have returned to ambient levels.
- 8) Upon written request and approval from the Department, the permittee may reduce the sampling frequency; if the permittee can demonstrate with sampling data that water quality parameters established have been achieved.

# WETLANDS REPORT AND RECOMMENDATION

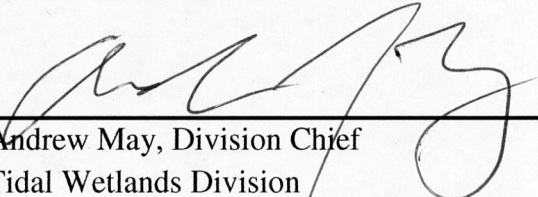
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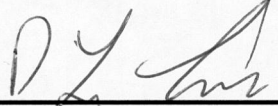
## DEPARTMENT OF THE ENVIRONMENT APPROVAL:

  
Justin Berezna, Natural Resource Planner  
Tidal Wetlands Division

2/8/17  
DATE

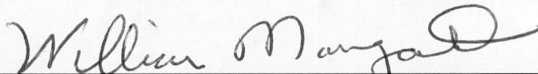
  
Andrew May, Division Chief  
Tidal Wetlands Division

2/8/17  
DATE

  
D. Lee Currey, Acting Director  
Water Management Administration

2/8/17  
DATE

## WETLANDS ADMINISTRATION CONCURRENCE:

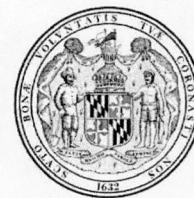
  
William Morgante, Wetlands Administrator  
Board of Public Works

2/17/17  
DATE





STATE OF MARYLAND  
DEPARTMENT OF THE ENVIRONMENT  
WATER MANAGEMENT ADMINISTRATION  
WATER QUALITY CERTIFICATION



for  
WETLAND LICENSE 14-WL-0104

WATER QUALITY CERTIFICATION NUMBER: **14-WQC-0104**

EFFECTIVE DATE: **February 6, 2017**

EXPIRATION DATE: **February 5, 2020**

CERTIFICATION HOLDER: **MD Department of Natural Resources**

ADDRESS: **580 Taylor Ave**

**Annapolis, Maryland 21401**

PROJECT LOCATION: **CHESAPEAKE BAY AND ITS  
TRIBUTARIES**

**Statewide, MD 21401**

**Little Choptank River in Dorchester County**

UNDER AUTHORITY OF SECTION 401 OF THE FEDERAL WATER POLLUTION CONTROL ACT AND ITS AMENDMENTS AND IN ACCORDANCE WITH §9-313 THROUGH §9-323, INCLUSIVE, ANNOTATED CODE OF MARYLAND, THE WATER MANAGEMENT ADMINISTRATION ("ADMINISTRATION") HAS DETERMINED THAT THE FOLLOWING REGULATED ACTIVITY, IN ACCORDANCE WITH THE CONDITIONS OF THIS CERTIFICATION AND THE ATTACHED PLANS APPROVED BY THE ADMINISTRATION'S TIDAL WETLANDS DIVISION DATED January 20, 2017, AND PREPARED BY Maryland Department of Natural Resources AND INCORPORATED HEREIN, WILL NOT VIOLATE MARYLAND'S WATER QUALITY STANDARDS:

The Maryland Department of Natural Resources (DNR) has applied for a ten year license to restore approximately 188 acres of existing State designated Natural Oyster Bars (NOBs) located in water depths of approximately minus 6 to minus 9 feet at mean low water (MLW). The work is depicted in the attached revised plans dated January 20, 2017 and includes the following activities:

- 1) Depositing approximately 349,968 cubic yards of oyster shell, clam shell, or various alternative materials to a maximum thickness of 17 inches off of the Little Choptank River bottom. The alternate materials to be used in the restoration are limited to, fossilized oyster shell, concrete rubble, stone, marl, brick, and/or crushed cinderblock.
- 2) Planting the alternate material with shell seeded with eastern oyster (*Crassostrea virginica*) spat at a density of 5 million spat per acre, creating a thickness of approximately 1 inch and a final post construction thickness of 18 inches off of the river bottom and clearances of approximately 4-8 feet at mean low water above the elevation of restored bottom habitat.

THIS CERTIFICATION DOES NOT RELIEVE THE APPLICANT OF RESPONSIBILITY FOR OBTAINING ANY OTHER APPROVAL, LICENSES OR PERMITS IN ACCORDANCE WITH FEDERAL, STATE, OR LOCAL REQUIREMENTS AND DOES NOT AUTHORIZE COMMENCEMENT OF THE PROPOSED PROJECT. A COPY OF THIS REQUIRED CERTIFICATION HAS BEEN SENT TO THE CORPS OF ENGINEERS.

THE CERTIFICATION HOLDER SHALL COMPLY WITH THE CONDITIONS LISTED BELOW.

### **SPECIAL CONDITIONS**

- A. The Maryland Department of the Environment has determined that the proposed activity complies with, and will be conducted in a manner consistent with, the State's Coastal Zone Management Program, as required by Section 307 of the Federal Coastal Zone Management Act of 1972, as amended.
- B. The Licensee shall maintain a 250-foot buffer zone around federal aids to navigation, and a 150-foot buffer from federally-designated channels in accordance with U.S. Coast Guard requirements.
- C. The Licensee is authorized to emplace clean oyster shell, clean clam shell, and the following alternate materials on the bottom of the Little Choptank River: fossilized shell, marl, concrete, stone, brick and crushed cinderblock with a maximum size limit of 9 inches. If concrete is used, all rebar is to be cut off flush with the concrete prior to emplacement. Any rebar exposed as a result of the concrete breaking during emplacement is to be cut flush with the concrete. The use of asphalt rubble is not authorized by this License.
- D. No submerged aquatic vegetation shall be filled, dredged, or otherwise altered or destroyed. The Licensee shall perform a submerged aquatic vegetation survey and establish a 300-foot buffer zone around the submerged aquatic vegetation beds prior to emplacing alternate materials on the bottom of the Little Choptank River.
- E. The Licensee shall provide the Dorchester County Commissioners, the Maryland Watermen's Association, the Dorchester County Seafood Harvesters Association and other local seafood industries 48 hours notice prior to performing work within the proposed restoration sites.
- F. The Licensee shall perform a post construction survey to confirm a minimum vertical clearance of 4 feet at mean low water measured from the top of the substrate used during the construction of the restoration project.
- G. The Licensee shall cap any alternate materials used during the construction of the restoration project with clean shell to minimize impacts to recreational and commercial crabbing in the Little Choptank River.
- H. The Licensee shall adhere to the following performance and monitoring criteria. The criteria do not limit or constrain the ability of the Water Management Administration, Compliance Program to enforce the provisions of this License and may be modified by the Water Management Administration as needed to ensure that water quality standards are being met by the Licensee.
  - 1) The Licensee will ensure that any material placed at the site has been cleaned sufficiently to prevent a violation of water quality standards when it is placed in open water. Any material that has been found to be unacceptable shall be returned to its point of origin at the Licensee's expense.
  - 2) The Licensee shall inspect the site at least once per day during material placement operations to ensure compliance with this License. The Licensee shall immediately report any noncompliance issues to the Water Management Administration, Compliance Program.



- 3) Turbidity in the surface water resulting from any discharge during the material placement operation shall not exceed 150 NTUs (Nephelometric Turbidity Units) or 50 NTUs as a monthly average. For the purposes of this project, the project site boundaries are defined to be within 300 feet from the area of active material placement.
- 4) Prior to start and at the conclusion of material placement operations, the Licensee or its contractor shall obtain a sample to characterize ambient water quality.
- 5) The Licensee or its contractor shall monitor turbidity and pH hourly while material is being placed in open water. Samples shall be taken within 300 feet of the placement site, in the direction of tidal flow, and at a surface depth of 6 to 12 inches.
- 6) The Licensee shall maintain a log of all required samples and report any samples that exceed water quality standards to the Water Management Administration, Compliance Program - Eastern Shore Division within 24 hours of the event. The log shall include the following information: latitude and longitude of the sample location; name of the person performing the sampling and/or analyses; the date and time the analyses were performed; the analytical technique or method used; and the sample results.
- 7) The Licensee or its contractor shall cease material placement operations if suspended sediment is observed leaving the site and turbidity readings higher than 150 NTUs are measured within a distance of 300 feet from an placement site; if the monthly average exceeds are 50 NTUs, or a visible plume at or below the surface of the open water within the direction of tidal flow does not dissipate within a distance of 300 feet from the area of active material placement when ambient turbidity is 150 NTUs or greater. After a shutdown event, material placement shall not resume unless turbidity levels have returned to ambient levels.
- 8) Upon written request and approval from the Department, the permittee may reduce the sampling frequency; if the permittee can demonstrate with sampling data that water quality parameters established have been achieved.

### **GENERAL CONDITIONS**

- A. The proposed project shall be constructed in a manner which will not violate Maryland's Water Quality Standards as set forth in COMAR 26.08.02. The applicant is to notify this department ten (10) days prior to commencing work. Verbal notification is to be followed by written notice within ten (10) days.
- B. The Maryland Department of the Environment has determined that the proposed activities comply with, and will be conducted in a manner consistent with the State's Coastal Zone Management Program, as required by Section 307 of the Federal Coastal Zone Management Act of 1972, as amended.

- C. If the authorized work is not performed by the property owner, all work performed under this Water Quality Certification shall be conducted by a marine contractor registered with the Maryland Department of the Environment in accordance with Chapter 286 of the 2010 Laws of Maryland. A list of registered marine contractors can be obtained by contacting the Department at 410-537-3249 or by e-mail at [MDE.MCLB@maryland.gov](mailto:MDE.MCLB@maryland.gov).
- D. The Certification Holder shall ensure the proposed project shall be constructed in accordance with the authorized plan and any authorized revisions.
- E. The Certification Holder shall ensure that all fill and construction materials not used in the project shall be removed and disposed of in a manner which will prevent their entry into waters of this State.
- F. The Certification Holder shall notify the Water Management Administration, Tidal Wetlands Division, in writing, upon transferring property ownership or responsibility for compliance with these conditions to another person. The new owner/operator shall request, in writing, transfer of this Water Quality Certification to his/her name.
- G. The Certification Holder shall allow representatives of the Maryland Department of the Environment to inspect the authorized activities.
- H. The Certification Holder shall ensure that a copy of this Permit, including the approved plans, is available at the site until the authorized work is complete.
- I. The Certification does not relieve the Certification holder from the responsibility of obtaining all necessary federal, State and local government authorizations.
- J. The Certification Holder shall comply with all Critical Area requirements and obtain all necessary authorizations from local jurisdiction. This Certification does not constitute authorization for disturbance in the 100-foot Critical Area Buffer. "Disturbance" in the Buffer means clearing, grading, construction activities, or removal of any size of tree or vegetation. Any anticipated Buffer disturbance requires prior written approval, before commencement of land disturbing activity, from local jurisdiction in the form of a Buffer Management Plan.

Failure to comply with these conditions shall constitute reason for suspension or revocation of the Water Quality Certification and legal proceedings may be instituted against the Certification Holder in accordance with the Annotated Code of Maryland. In granting this certification, the Department reserves the right to inspect the operations and records regarding this project at anytime.



CERTIFICATION APPROVED

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Andrew J. May, Chief  
Western Region  
Tidal Wetlands Division

February 8, 2017

Date

Tracking Number: 201362125  
Agency Interest Number: 118437

Enclosure: Plans dated January 20, 2017  
cc: WMA Inspection & Compliance Program