



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
GREATER ATLANTIC REGIONAL FISHERIES OFFICE  
55 Great Republic Drive  
Gloucester, MA 01930-2276

JUN 1 2017

Beth Bachur, Acting Chief  
Regulatory Branch  
Baltimore District, Corps of Engineers  
P.O. Box 1715  
Baltimore, MD 21203-1715

RE: CENAB-OP-RMN 2009-61802-M04; MDNR/Fisheries Service/Man O' War  
Shoal Shell Dredging

Dear Ms. Bachur:

We have reviewed the updated essential fish habitat (EFH) assessment for Maryland Department of Natural Resources' (MDNR) Man O' War Shoal Shell Dredging project, received April 14, 2017. MDNR proposes to dredge oyster (*Crassostrea virginica*) shell from Man O' War Shoal in the Chesapeake Bay near the mouth of the Patapsco River, Baltimore County, Maryland, to obtain oyster shell to be used to restore oyster populations and oyster fisheries in the Bay. MDNR is requesting a five-year permit to hydraulically dredge two to five million bushels (120,000 to 300,000 cubic yards) of oyster shell from the shoal. We appreciate the coordination between the Corps and MDNR to provide the information we requested in our February 9, 2016, letter on this project.

### **Magnuson Stevens Fishery Conservation and Management Act (MSA)**

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) requires you to consult with us on projects such as this that may adversely affect EFH. This process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments and generally outlines each agency's obligations in the consultation process.

As discussed in your EFH assessment, the upper Chesapeake Bay has been designated as EFH for several federally managed species of finfish, including juvenile and adult windowpane flounder (*Scophthalmus aquosus*), summer flounder (*Paralichthys dentatus*), and bluefish (*Pomatomus saltatrix*); and egg, larva, juvenile and adult life stages of king mackerel (*Scomberomorus cavalla*), Spanish mackerel (*Scomberomorus maculatus*), and cobia (*Rachycentron canadum*). Summer flounder and bluefish have been found in the vicinity of Man O' War Shoal during MDNR fisheries surveys.

The EFH final rule published in the Federal Register on January 17, 2002, defines an adverse effect as "any impact that reduces the quality and/or quantity of EFH". Adverse effects may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components. Adverse effects to EFH may result from actions occurring within EFH or outside



of EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions. The EFH worksheet provided refers to the updated permit application Attachment 1 for the description of impacts of the proposed project. In addition, MDNR has provided responses to our questions from February 2016. The necessary information has been provided and we consider the EFH assessment complete.

### *Dredging Locations*

MDNR conducted a patent tong population survey on December 20, 2016, over the area proposed for shell dredging. No oysters were found throughout the area, which lessens our concerns about the determination of dredge cut locations, should a permit be issued. We recommend that MDNR continue to use oyster surveys to guide dredging locations, particularly if a spat set is detected in the fall survey, in order to minimize impacts to potential future oysters at Man O'War Shoal.

MDNR should locate reference sites where dredge cut locations would not interfere with them, and a buffer distance should be maintained between cut locations and reference sites.

### *Time of Year Restrictions*

MDNR requests the ability to dredge at any time of year. We recognize the benefit of dredging from mid-May through July in order to plant shell during the oyster spawning season and capitalize on natural reproduction. We also recognize that significant spat set at the Man O'War Shoal is infrequent. However, if MDNR is dredging for shell that is not specifically intended to be planted during the upcoming oyster spawning season, we recommend a time of year restriction from June 1 through September 30 to protect potential spat in the area. This restriction may be waived only if shell would immediately be planted at sites that are expected to take advantage of natural oyster reproduction.

Documented spawning areas for alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*), white perch (*Morone americana*), and striped bass (*Morone saxatilis*) are upstream of Man-O-War Shoal in the upper Chesapeake Bay and in the Patapsco River, making the area around Man O'War Shoal a migratory corridor for anadromous species. The immediate area around the shoal is mapped by MDNR as juvenile habitat for alewife and blueback herring and white perch.

Alewife and blueback herring are a food source for juvenile bluefish, windowpane and summer flounder. The EFH final rule states that the loss of prey may be an adverse effect on EFH and managed species because the presence of prey makes waters and substrate function as feeding habitat. As a result, activities that adversely affect the spawning success and the quality for the nursery habitat of these anadromous fish will adversely affect the EFH for these species.

In their application, revised February 2017, MDNR describes 1998 monitoring of TSS and turbidity in a plume created by a shell dredging operation east of Pooles Island during different tidal stages. MDNR's summary states that "ambient concentrations of TSS and turbidity were reached at distances ranging 2,500 m to 4,500 m from the dredge." Given this distance, we

recommend a time of year restriction from February 15 through June 15, annually, to protect anadromous fish migrating past the area to spawn from potential impacts caused by noise and turbidity created by dredging. With this time of year restriction in place, we do not believe that protective measures for shutting down dredging based on characteristics of the dredge plume resulting from dredging and wash water are necessary.

### *Acreage of Impacts*

MDNR estimates that each dredge cut would be approximately 3.2 acres (500 ft by 275 ft) and an estimated 10 cuts would be made, totaling approximately 32 acres of impact. However, MDNR would continue to make dredge cuts until the target number of bushels of shell is obtained – that is, up to their proposed two million bushels of shell in year two of the permit and three million bushels of shell in year five of the permit. We are concerned that MDNR is counting in bushels of shell and not acres of impact, which appear to have no limit under this design. If less shell is available than is estimated, that would result in more dredging and greater impacts to existing habitat. As a result, we recommend that dredging be limited to no more than 10 cuts or 5 million bushels of shell, whichever comes first during the life of the permit.

The quality and quantity of useable shell should be considered as part of the criteria used to determine if dredging should continue in year five. If there is less shell obtained in year two dredging than was estimated and if more than 10 dredge cuts would be needed to obtain the target amount of shell over the life of the permit, then a permit modification should be requested and activities coordinated with the resource agencies at that time.

### *Allocation of Shell*

MDNR has stated that they will work with federal partners, the public, and the industries to develop an allocation plan for the dredged shell. This plan should be developed before dredging begins. Shell is a limited resource that is part of existing fish habitat, and MDNR should only dredge what is absolutely necessary to restore oyster populations and oyster fisheries in the Bay.

### *Monitoring Plan*

Monitoring of impacts to water quality, sediment, benthos, oyster, and fish populations would occur throughout the five-year permit and a monitoring report would be submitted in year four, as described in the application. The Corps should re-coordinate with resource agencies and allow them the opportunity to review the monitoring report before dredging is authorized for year five of the permit. MDNR should not be the sole entity determining if their project has adverse impacts; input should be solicited from other agencies to determine if future dredging is acceptable.

MDNR states in their February 2017, response to Corps comments that monitoring is not planned for year five of the permit “because by this time the program would have been reviewed based on monitoring data from the prior years as well as the report issued in year 4, and the project would be cleared to proceed.” We recommend that monitoring continue in years four and five and after year five dredging is complete in order to accomplish MDNR’s stated goal of a

“comprehensive monitoring project to assess the ecological consequences of removing shell from the shoal.” This monitoring will also provide information for MDNR’s future permit application to continue dredging at the shoal in future years until a maximum of 30 million bushels of shell have been removed.

### **Essential Fish Habitat Conservation Recommendations**

Pursuant to Section 305 (b) (4) (A) of the MSA, we recommend the following EFH conservation recommendations be incorporated into the project:

- Use oyster surveys to guide dredging locations, particularly if a spat set is detected in the fall survey.
- No dredging from June 1 through September 30 to protect potential spat in the area. This restriction may be waived if shell will be immediately planted at sites that are expected to take advantage of natural oyster reproduction.
- No dredging February 15 through June 15, annually, to protect anadromous fish migrating past the area to spawn from potential impacts caused by noise and turbidity created by dredging.
- Dredging should be limited to no more than 10 cuts or 5 million bushels of shell, whichever comes first during the life of the permit. If additional dredging is required by MDNR then permit modification should be requested and activities coordinated with the resource agencies at that time.
- Coordinate with resource agencies before year five dredging is approved.
- Continue monitoring in years four and five, and after year five dredging to provide a comprehensive monitoring report.

Please note that Section 305 (b)(4)(B) of the MSA requires you to provide us with a detailed written response to these EFH conservation recommendations, including the measures adopted by you for avoiding, mitigating, or offsetting the impact of the project on EFH. In the case of a response that is inconsistent with our recommendations, Section 305 (b) (4) (B) of the MSA also indicates that you must explain your reasons for not following the recommendations. Included in such reasoning would be the scientific justification for any disagreements with us over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate or offset such effect pursuant to 50 CFR 600.920 (k).

Please also note that a distinct and further EFH consultation must be reinitiated pursuant to 50 CRF 600.920 (j) if new information becomes available, or if the project is revised in such a manner that affects the basis for the above EFH conservation recommendations.

### **Endangered Species Act (ESA)**

Federally listed species including the threatened loggerhead (*Caretta caretta*), and the endangered Kemp's ridley (*Lepidochelys kempi*), green (*Chelonia mydas*) and leatherback (*Dermochelys coriacea*) sea turtles and Atlantic sturgeon (*Acipenser oxyrhynchus*) may be present in the project area. You should continue to coordination with our Protected Resources

Division to address any potential impacts to these species pursuant to section 7 of the ESA. Should you have any questions about the section 7 consultation process, please contact Brian Hopper at (410) 573-4592 or by e-mail ([brian.d.hopper@noaa.gov](mailto:brian.d.hopper@noaa.gov)).

If you have questions or need additional information, please contact Kristy Beard at (410) 573-4542 or [kristy.beard@noaa.gov](mailto:kristy.beard@noaa.gov).

Sincerely,



Louis A. Chiarella  
Assistant Regional Administrator  
for Habitat Conservation

cc: Abbie Hopkins (ACOE)  
Chris Guy (USFWS)  
Mike Mansolino (EPA)  
Justin Berezna (MDE)  
Brian Hopper (GARFO PRD)  
Sean Corson (NOAA)  
Kevin Chu (NOAA)  
Christopher M. Moore (MAFMC)  
Lisa Havel (ASFMC)