UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

William Seib, Chief
Regulatory Branch
Baltimore District
U.S. Army Corps of Engineers
1800 Washington Blvd., Suite 430
Baltimore, MD 21230-1708

FEB 18 2016

Re: NAB-2009-61802; Maryland Department of Natural Resources; Man O' War Shoal Dredging

Dear Mr. Seib,

The U.S. Environmental Protection Agency (EPA) has reviewed the Public Notice (15-89) and associated application materials for Maryland Department of Natural Resources' (MDDNR) proposal to dredge oyster (*Crassostrea virginica*) shell from the Man O' War Shoal to be used to restore oyster populations and oyster fisheries throughout the Chesapeake Bay. The Man O' War Shoal is located in the Chesapeake Bay near the mouth of the Patapsco River, Baltimore County, Maryland. The shell will be used to make improvements to existing oyster bars to enhance natural recruitment; to provide a foundation for hatchery-spawned seed oysters which encourages reestablishment of an abundant, self-sustaining oyster population; to provide substrate for leased bottom in support of aquaculture (oyster farming); and to provide substrate necessary to sustain oyster fisheries. MDDNR is requesting a five year permit to hydraulically dredge 2 to 5 million bushels (120,000 to 300,000 cubic yards) of oyster shell from the shoal. The public notices describes the project as part of a comprehensive research and development effort to monitor and assess the ecological consequences to removing shell from the shoal.

EPA is in receipt of the comment letter provided by the United States Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), National Marine Fishery Service (NMFS) in response to the Public Notice. EPA recognizes and relies on the expertise of NMFS on proposed projects that may have impacts to fishery resources and habitats. EPA's review is generally intended to help ensure that the proposed project is consistent with requirements of the Clean Water Act (CWA) and its implementing regulations, including the CWA Section 404(b)(1) Guidelines (Guidelines). In addition to the comments and concerns raised by NMFS, EPA offers the following comments.

The PN states that the purpose of the proposed project is to obtain oyster shell to be used to restore oyster populations and oyster fisheries in the Bay. When determining the project purpose, it should not be so restrictive as to constrain the range of alternatives to be considered. If the overall purpose of the project is to restore oyster populations and oyster fisheries in the Bay, then other less damaging practicable alternatives may be available that do not involve dredging oyster shells and avoid potential adverse impacts to and around the Man O' War Shoal. The applicant discussed a variety of alternative substrate instead of dredged shell, including fossilized shells, clam shells, imported shell, construction debris, quarry rock, etc. within the

documentation provided. While the cost estimates provided for each of the alternatives supports that dredging shell is the most cost effective alternative, the documentation did not discuss the impracticability of those alternatives. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology and logistics, in light of overall project purposes (40 C.F.R. § 230.3(q)). The applicant should be aware that neither increased costs of an alternative nor an unwillingness to pursue an alternative necessarily renders that alternative impracticable. Based on the information provided, it is not clear that the LEDPA has been identified, and further documentation and analysis should be provided to document the preferred alternative as the LEDPA.

A thorough alternatives analysis should also include a detailed evaluation of practicable project design and implementation alternatives to assure that all opportunities to avoid and minimize impacts, including water quality and habitat impacts, have been fully considered. For example, the information provided discusses the volume of shell to be dredged but does not discuss how the locations for the dredge cuts were selected. EPA recommends MDDNR minimize the proposed dredge cuts to the maximum extent possible while still accomplishing the project's research objectives. MDDNR should also discuss if Man O' War Shoal is a living oyster bar, and if so, how highly dense areas of living oyster will be avoided. Additionally, EPA recommends completing an updated survey of the shoal's living oyster population prior to any dredging to better determine the pre-construction conditions.

EPA has concerns regarding the placement of shells dredged from the Man O' War Shoal. Based on the application materials provided for review, it is unclear where the shells will be placed, or what criteria will be used to determine placement. The alternatives analysis should discuss the options, or criteria, to determine the preferred alternative for distribution of the dredged shell. In addition, EPA questions how the distribution allocations will be made. MDDNR describes three possible options for shell allocation with two options proposing a significant portion of the shells (50% +) to be allocated to public harvest and/or aquaculture areas. While one of the project's goals is to provide substrate for leased bottom in support of aquaculture, it is unclear why such a significant portion of the shells harvested would be used for this purpose when the goal of the project is to also encourage reestablishment of an abundant, self-sustaining oyster population. Additional information that explains and clarifies this aspect of the project should be provided.

Consideration of likely secondary impacts on habitat for existing oyster populations, other benthic communities, as well as other species which depend on the shoal also should be evaluated. The application materials discuss how the proposed dredging will leave a minimum of two feet of shell material to be utilized as new substrate for future oyster growth; however the information also states that the discharge of 10-15 feet of sediments washed from the dredged shell will be discharged into the cut areas. EPA is concerned that the sediment and fill material being discharged back into the cuts would cover the remaining oyster shell, negating any benefits of leaving shell in the bottom of the cut areas for future oyster growth. The application materials also acknowledge that the redepositing of the materials will lead to a sediment plume in the surrounding areas of the Bay. This plume will lead to additional secondary impacts to other species that utilize the shoal and the surrounding area. Measures that reduce these secondary impacts should be evaluated in and included in any final design and implementation plan for the harvesting of oyster shell from the shoal.

Thank you for the opportunity to provide comments regarding this proposal. EPA supports the goal to restore oyster populations and oyster fisheries throughout the Chesapeake Bay, however, based on our review of the provided information, there are a number of concerns that should be addressed in the review process.

Should you have any questions please feel free to contact Mr. Michael Mansolino at 215-814-2794 or by email at mansolino.michael@epa.gov.

Sincerely,

Jessica L Mantanona

for Jeffrey D. Lapp, Associate Director
Office of Environmental Programs