

**WATER AND SCIENCE ADMINISTRATION
TIDAL WETLANDS DIVISION**

Wetland Report and Recommendation

State Wetlands Case No:

22-WL-0268

Applicant: Evergreen Marine Corp (Taiwan) Ltd 8F, No 163, Sec. 1 Hsin-Nan Road Luchu Hsiang, Taoyuan Hsien, Taiwan R.O.C., Z- OIMT Only 33845 johnsonchiu@tw.evergreen-line.com	Agent: Polaris Applied Sciences, Inc Atten: Greg Challenger 120th Ave NE, Ste 200 Kirkland, Washington 98033 GChallenger@polarisappliedsciences.com
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Date Application Received: June 28, 2022 **Public Notice Required?** Yes

Comment Period Closing Date: December 01, 2022

Maryland Coordinates: 160538 x 452579

Location of Proposed Work: In the Chesapeake Bay adjacent to the Craighill Channel near Downs Park, Pasadena, Anne Arundel County, Maryland, 21122.

Purpose of Proposed Work: To free and refloat the vessel known as the M/V Ever Forward.

Description of Authorized Work:

1. Mechanically dredging an area of 170,056 square feet around the stern of the vessel, an area of 132,159 square feet around the starboard side of the vessel, and 99,205 square feet around the port of the vessel resulting in a total of 401,420 square feet to a maximum depth of 47.1 feet at mean low water; and to deposit approximately 213,872 cubic yards of dredged material in the upland placement cell at the Poplar Island Ecosystem Restoration Project.
2. Mitigate for 624,485 square feet of impacts to a natural oyster bar and open water habitat due to dredging and grounding of the vessel. The mitigation project will consist of 41 acres of oyster enhancement / seeding for both public and sanctuary oyster bars of which approximately 29 acres of oyster enhancement / seeding will be to public oyster bars in the Anne Arundel County Main Bay and the South River areas, and approximately 12 acres to oyster sanctuary bars in Anne Arundel County, or to nearby counties if deemed appropriate by the Maryland Department of Natural Resources. Prioritization will be made for sites in Anne Arundel County.

Waterbody: Chesapeake Bay

Requires Water Quality Certification?: Yes, a WQC has been issued by MDE for the Nationwide Permit 22.

Qualifies for Maryland State Programmatic General Permit?: No, the dredging occurred under the U.S. Army Corps of Engineers Nationwide Permit 22 and the Corps issued a 408 decision letter granting permission to conduct potential alterations to two USACE Civil Works project (Baltimore Harbor & Channels navigation and Poplar Island Ecosystem Restoration Project) which constitutes the final Corps approval necessary from the Baltimore District.

Area of Vegetated Wetland Impacts Requiring Mitigation: 0 s.f.

Area of Open Water Tidal Wetlands Requiring Mitigation: 123,135 s.f. (approx. 2.86 ac)

Area of Natural Oyster Bar (NOB) Requiring Mitigation: 501,350 s.f. (approx. 4.62 ac)

Area of Wetlands Created: 0 s.f.

Area of Oyster Bars Enhanced: 29 acres of public oyster bars and 12 acres to oyster sanctuary bars

Was the Applicant's Original Project Modified?: During the dredging operation, the Emergency Wetlands License was modified to increase the proposed dredging depth in order to refloat the vessel. After the completion of the dredging operation, the Emergency License was modified to transfer from the DonJon Smit to Evergreen Marine Corp. (Taiwan) Ltd.

Department Comment: 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 November 1,2022 to December 1, 2022 and publishing the public notice for the proposed project in The Capital on November 4, 2022 and the Star Democrat on November 4, 2022. In addition, the public notice was provided to Interested Parties listed on Attachment A. As identified on Attachment A, some Interested Parties were notified by email. These emails were provided by staff at the Maryland Department of Natural Resources Shellfish Division. Due to the location of the project and distance from the shore, no adjacent property owners were notified.

The Department received public comments from Mr. William Scerbo, the President of the Anne Arundel County Waterman's Association. In his comment letter, Mr. Scerbo requested that commercial fisherman be involved in decisions made regarding the mitigation project. He stated that all mitigation of sanctuary bars should be in Anne Arundel County waters, preferably sanctuary bars in Herring Bay and not in rivers where there would be a low survival rate. Additionally, he stated that mitigation in the main body of the Chesapeake Bay would potentially benefit more crabs and fish for a longer portion of the year. During MDE's discussions with DNR regarding site selection for mitigation, DNR stated their intent is to consult and conduct outreach with various oyster and fishery organization/commissions to determine the most suitable locations. DNR has stated that they will start their search for suitable locations in Anne Arundel County and will only expand their search to nearby Counties if Anne Arundel County does not have enough suitable locations. A copy of Mr. Scerbo's comments have been forwarded to DNR so they are aware of his requests. The Department did not receive a request for a public hearing.

The Maryland Department of Natural Resources (DNR) reviewed the proposed project and provided the following comments associated with the Emergency License:

- Any dredging occurring between April 1 and June 1 of any year should deploy and maintain a turbidity curtain around the work area to protect anadromous fish spawning area as a best management practice.
- Any dredging occurring between June 1 and September 30 of any year should deploy and maintain a turbidity curtain around the work area to protect a Natural Oyster Bar (NOB) as a best management practice.
- No dredge material should be placed in open water and all dredge material should be transported in water tight containers and properly disposed of at an approved dredge material placement facility (DMP).
- Vessel appears grounded within the boundaries of a NOB (NOB 4-2).
- The grounding and removal operation impacts should be mitigated for impacts for the area of bottom within the NOB.

DNR reviewed the proposed project during the public notice and stated that DNR has been and will continue to be engaged with MDE regarding the project. The area within the boundaries of an NOB is specifically established, reserved, and protected from activities and impacts considered detrimental to oyster populations or destruction of the bottom. Soon after the refloating of the vessel, DNR's Shellfish Division conducted a survey and sampling of the area within NOB 4-2 impacted by the grounding and subsequent dredging and refloating efforts as well as adjacent areas outside of the direct impact area to assess impacts to the bottom within the legally established boundaries of the NOB. The report also included an estimation of the impacts to overwintering crabs based on the Department's nearest sampling station two nautical miles from the grounding location. Any crabs overwintering in the area of the grounding and dredging would have been killed by the grounding, dredging and deposition of the dredged material. Additionally, the dredging resulted in the deepening of the bottom from approximately 20 feet at mean low water to 47.1 feet at MLW. As a result, the area dredged will be subject to an increased frequency of hypoxic events that will limit its future availability as habitat for benthic fauna. DNR has been involved in discussions for proposed mitigation and is supportive of the proposed plan. The Department's Shellfish Division will work with the applicant and other interested parties to determine the exact locations for the mitigation. The applicant is responsible for funding the cost of the mitigation which could take two years to complete depending on the availability of hatchery oyster spat. The Department's Fishing and Boating Services has agreed to administer the funds for the mitigation and the implementation of the actual placement of the hatchery spat at the selected mitigation sites. The applicant should contact Mr. Chris Judy, Director, Shellfish Division at chris.judy@maryland.gov or (410) 260-8259 regarding the implementation of the mitigation requirement.

The Maryland Historical Trust (Dr. Susan Langley) reviewed that proposed project and determined that there are no known historic sites in the area, but noted that the area has not been surveyed, though the area of the channel has been. Dr. Langley said to proceed as necessary with the awareness that there may be unanticipated finds, though she felt that was unlikely. If there were any historic findings (e.g. sunken ship) she was to be contacted and she would work with the Unified Command to determine what should be done to address it as expeditiously as possible. During the refloating process, no historic resources were identified and further coordination with MHT was not required.

The 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 ensure that impacts to resources are avoided and minimized to the maximum extent possible and to ensure 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.

Project Justification: 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.

Emergency Wetlands License

The Department was contacted on March 18, 2022 with a request for approval to dredge the area surrounding a vessel, the M/V Ever Forward, that had grounded off of the Craighill channel in the Chesapeake Bay. To free the vessel, it was determined that offloading of containers, fuel and ballast water would not be enough to refloat the vessel and it would be necessary to dredge around the vessel. In accordance with regulations for Emergency Licenses, MDE contacted both the Maryland Department of Natural Resources (DNR) and the Maryland Historical Trust (MHT). Comments provided by these agencies are included above. Dredged material was disposed at one of the upland placement cells at the Poplar Island Ecosystem Restoration Project. MDE received a disposal acceptance letter from Holy L. Miller, Deputy Director of Harbor Development for the Maryland Department of Transportation's Maryland Port Authority. Core samples of the dredged material were not required prior to disposal because the grounding location was directly adjacent to the Craighill Channel. The July 2019 Final Report titled "Evaluation of Dredged Material Upper Chesapeake Bay Approach Channel to the Port of Baltimore" prepared by the U. S. Army Corps of

Engineers was appropriate for a reference site application and provided sufficient documentation to determine the suitability of the material for placement at Poplar Island.

According to the Applicant's representative, Don Jon-Smit LLC, the vessel was designed and constructed to float and was under stress the longer it rested on the submerged bottom lands. Resting on the submerged bottom lands could increase pressure and stress on the hull, which would increase the risk of a hull rupture. It was estimated that there was approximately 700,000 gallons of fuel, oil, and other fluids and lubricants on board the vessel. Also, the longer the vessel rested on the bottom substrate, the more at risk it was of sinking, which would require additional dredging. As a further matter, an exclusion zone was created around the vessel to lower speeds and not disturb the vessel. This slowed movement within the federal navigation and shipping channel. Due to the potentially catastrophic threat to the health, safety, welfare, and integrity of the ecological, recreational, and aesthetic values of the State of Maryland, the Department determined that an emergency condition existed and recommended the issuance of an Emergency License for the proposed dredging to the Maryland Board of Public Works (BPW). On March 19, 2022, BPW issued Emergency Wetlands License 22-0268EX to DonJon-Smit, LLC.

On March 28, 2022, the Department requested BPW modify the Emergency Wetlands License. The Agent reconsidered their calculations and determined that in order to refloat the vessel, they would need to increase the dredging depth. The increased depth would dredge additional space to allow material underneath of the vessel to flow. This modification increased the authorized depths to 43 feet below mean low water (MLW) and resulted in an increase in the minimum amount of material that would be deposited at Poplar Island. BPW issued a modification on March 29, 2022 (22-WL-0268(R1)).

The dredging operation was completed on April 8, 2022 and the vessel was refloated on April 17, 2022. After completion of the project, DonJon-Smit LLC was no longer contracted by Ever Green Marine Corporation. This required the transfer of the Emergency License from DonJon-Smit to the Ever Green Marine (Taiwan) Corporation Ltd. MDE requested BPW modify the License to update the Licensee. BPW issued this modification on May 12, 2022 (22-WL-0268(R2)).

In order to minimize adverse environmental impacts, the Emergency Wetlands License include multiple Special Conditions. These conditions required the submission of an application to MDE, a post dredging bathymetric survey, an assessment of impacts to the NOB, and a mitigation plan. To fulfill these conditions, an application was received by MDE on June 27, 2022, a post dredging bathymetric survey was received on April 20, 2022, a side scan sonar report with accurate impacts to the submerged bottom lands was received on August 8, 2022, and MDE and DNR worked with the Agent to finalize mitigation requirements during review of the application. The Emergency License also required all dredged material to be disposed at the approved disposal site. All material was disposed at the Poplar Island Ecosystem Restoration project and disposal and discharge were in compliance.

Additional special conditions included recommended time of year restrictions for anadromous fish and the NOB. These conditions also recommended use of a turbidity curtain. Dredging was completed on April 8, 2022 and occurred during the anadromous fish time of year restriction that started on April 1st. The special condition recommended, but did not require, the use of a turbidity curtain during the time of year restriction. The use of a turbidity curtain was only a recommendation because mechanical dredging does not typically require the use of a turbidity curtain. During the dredging operation MDE and DNR were not aware of any excess turbidity. After the dredging operation was completed, DNR assessed the impact to the NOB and noted in that assessment that "whatever oysters or surface shells were present did not appear to be silted over". Dredging did not occur during the recommended NOB time of year restriction from June 1st to September 30th, of any given year.

Application

After completion of the emergency, MDE received an application on June 27, 2022 from Ever Green Marine (Taiwan) Corporation. During review of the application, the Agent provided more detailed information

about the total area of impact and the cubic yards of material than were estimated during the emergency dredging operation. In June 2022, the Applicant conducted a survey of the impact area using side scan sonar. This survey was then used to create an accurate outline of the impact area. Using information from this survey, the total dredging footprint has been modified from approximately 349,427 s.f. to 401,420 s.f. An additional 233,605 s.f. of submerged bottom lands were not dredged, but directly impacted by the grounding of the vessel. The total volume of material removed has also been updated. During the dredging operation, Don Jon-Smit estimated the dredging total as a minimum of 164,236.4 cubic yards of material removed. Based on the final scow report from Poplar Island the total volume of dredged material was 213, 872 cubic yards. These modifications have been revised in the project description above.

DNR Assessment

Because the grounding and associated efforts to free the vessel were located within the legal boundaries of a designated NOB it was important for DNR to determine impacts to the oyster population, shell habitat, and associated epibenthic organisms. To ascertain the impacts to the immediate area and far-field impacts associated with freeing the vessel, DNR's Shellfish Division designed and conducted a survey of the impact area. This survey, its findings, and the history of the site can be found in Attachment B. The Assessment concluded that:

“Oyster population was not present within the immediate grounding/dredging site, as this was natural mud bottom which pre-existed the grounding. Oysters and viable habitat were found to the east and southeast inside the Yates Bar LECC. There did not appear to be a far-field impact on this habitat from the activity to free the vessel, as indicated by the presence of numerous epibenthic animals living on the viable shell habitat.”

In the same Assessment, DNR investigated the impact of the vessel ground and dredging on the overwintering crab population using their long-standing blue crab winter dredge survey. As noted in DNR's Assessment, the location of the grounding and associated activities was in a favorable habitat of overwintering blue crabs. Anecdotally, DNR stated that the area near the channel is know as a productive area for harvesting crabs in the spring. A detailed analysis of impacts to blue crabs can also be found in Attachment B. The Assessment concluded that:

“In summary, the M/V Ever Forward grounded in a favorable habitat for overwintering of blue crabs, in a year where the total population of blue crabs is very low and crab distribution appears to be skewed towards the northern bay. The impact to the resource on a baywide scale is estimated to be small, but there are likely to be longer lasting effects on the local scale redistributing crabs and fishing effort until the bottom returns to its earlier formation.”

Mitigation

Due to impacts associated with the grounding of the vessel and the dredging operation, the Department recommends mitigation. Mitigation is recommended for impacts within the boundaries of a designated NOB and to open water habitat. Regardless of the oyster population found in the survey conducted by DNR, mitigation is recommended because the impacts were within the legally defined boundaries of an NOB. Using the side scan sonar survey, it was determined that there was approximately 501,350 s.f. of impact within the boundary of the NOB. The remaining 123,135 s.f. of impacts were outside of the NOB boundary and in open water. MDE has determined that mitigation should be required for impacts to open water habitat due to the functional loss impact to tidal wetlands. This determination is based on DNR's Assessment which stated that the impact area was a favorable habitat for over wintering blue crabs.

It was determined that mitigation would consist of the enhancement/seeding of oyster bars. Impacts within the NOB boundary were approximately 501,350 s.f. (11.51 ac). The replacement ratio for NOBs is 3:1. As in-kind creation of oyster habitat, the mitigation doubler does not apply to this area of impact. Therefore, impact to the NOB will require approximately 35 acres of enhancement/seeding of oyster bars (11.51 acres x

3 x 1). Impacts outside of the NOB boundary were approximately 123,135 s.f. (2.83 acres). The replacement ratio for open water habitat is 1:1 and as out-of-kind creation the mitigation double does apply to this area of impact. Therefore, impact to open water habitat will require approximately 6 acres of enhancement/seeding of oyster bars (2.83 acres x 1 x 2). **MDE recommends a total of 41 acres of enhancement/seeding of oyster bars due to impacts to a natural oyster bar and open water habitat due to dredging and the grounding of the vessel.**

MDE consulted with DNR's Shellfish Division to determine the area of enhancement/seeding that should be placed at public oyster bars versus in oyster sanctuaries. In total, 29 acres will be created at public bars. As public bars these areas will be available for oyster harvesting and other commercial fishery activities. The remaining 12 acres will be placed in an oyster sanctuary. The total area to be placed in oyster sanctuaries is approximately the value of the NOB acreage impacted to provide a functionally equivalent area and to address water quality. These bars will not open for oyster harvesting, but other commercial fishery activities, including blue crab harvesting, is not prohibited. According to DNR, the enhancement/seeding of public bars will require approximately 87 million spat (3 million per acre), and the enhancement/seeding of oyster sanctuaries will require approximately 60 million spat (5 million per acre). Due to the limited hatchery capacity and Maryland's priority to complete five large scale sanctuary areas, DNR thinks it will take at least two years to complete this project's 147 million spat.

To improve the likelihood of long-term success and prevent adverse impacts to natural resources, DNR's Shellfish Division will administer the mitigation project. MDE recommends that the Applicant be responsible for the funding of the mitigation project (production, transporting, and seeding of spat), but the implementation be administered by DNR's Shellfish Division (see Special Conditions F, G, H and I). The Applicant and their insurer have been provided with and are agreeable to the estimated cost to implement the project, with the condition that there will be no increase other than inflation. Because spat production and completion of the mitigation project will take at least two years, the mitigation cost recommended in Special Condition H includes an estimated cost increase due to inflation. The current market estimate to complete the mitigation is \$588,000. MDE's proposal includes reasonable consideration of cumulative CPI over the term of the license by increasing the payment by 20% to account for a potential market cost increase. This payment would ensure the work can be completed adequately by Maryland during the 3 year license term (or beyond) should special circumstances arise delaying implementation. DNR has identified potential locations preemptively, however, once a Wetlands License is issued, DNR intends to consult and conduct outreach with various oyster and fishery organizations/commissions to determine the most suitable locations for the mitigation to occur as close as reasonably practical to the impact site to ensure long term success. DNR will start their search for suitable locations within Anne Arundel County. If Anne Arundel County does not have enough suitable locations to fulfill the mitigation requirements, then DNR will expand their search to surrounding Counties. At present, DNR has proposed public bars in the Anne Arundel County mid Bay and South River areas, and sanctuaries in the Magothy River and Chester River. These areas are subject to change if other areas are deemed more appropriate by DNR.

The proposed mitigation will ensure that the loss of tidal wetlands will be replaced. In accordance with COMAR 26.24.05.01.C.(4), the Department determined that the proposed mitigation would replace the loss of tidal wetlands acreage and function. When evaluating the "functional loss", impacts to oysters as well as crabs, benthic organisms, and other fishery species were holistically considered. Each individual species was not independently evaluated for mitigation, but collectively as providing an overall function within the ecosystem. It was determined that the mitigation project will not only enhance oyster bars, but the oyster bars will provide fisheries habitat for many different species. For example, blue crabs benefit from oyster bars by providing foraging grounds and a structural habitat, which can be useful to evade predators. Additionally, seeding oyster spat on existing oyster bars contributes to an improved functioning system due to the oysters' ecological role in enhancing benthic populations, providing food and habitat to many organisms, by consuming algae which help to sequester nitrogen, and by improving water quality. As stated in DNR's Assessment, DNR found no discernable impacts to oysters. Regardless of the lack of discernable impacts, the NOB provides other beneficial functions such as habitat and water quality benefits. The

sanctuary placement will ensure that, at a minimum, the functions provided by the NOB prior to impact will endure in perpetuity over public oyster bar placement.

MDE Recommendation

MDE recommends ratification of the Emergency Wetlands License with modifications to the project description and Special Conditions. The evaluation of the final impact of the emergency dredging operation to refloat the vessel was the minimum necessary to eliminate the potentially catastrophic threat to the health, safety, welfare, and integrity of the ecological, recreational, and aesthetic values of the State of Maryland.

SPECIAL CONDITIONS:

- A. 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.
- B. The Licensee shall comply with all Critical Area requirements and obtain all necessary authorizations from local jurisdiction. This License 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.
- C. If the authorized work is not performed by the property owner, all work performed under this Tidal Wetlands License shall be conducted by a marine contractor licensed by the Marine Contractors Licensing Board (MCLB) in accordance with Title 17 of the Environment Article of Annotated Code of Maryland. A list of licensed marine contractors may be obtained by contacting the MCLB at 410-537-3249, by e-mail at MDE.MCLB@maryland.gov or by accessing the Maryland Department of the Environment, Environmental Boards webpage.
- D. The issuance of this license is not a validation or authorization by the Department for any of the existing structures depicted on the plan sheets on the subject property that is not part of the authorized work description, nor does it relieve the Licensee of the obligation to resolve any existing noncompliant structures and activities within tidal wetlands.
- E. This License provides no justification or assurances for future dredging. All proposed dredging projects shall be evaluated on the biological and physical characteristics of the project site at the time an application is made.
- F. The Licensee shall perform a minimum of 41 acres of oyster enhancement/seeding as mitigation to offset impacts to 501,350 square feet of a natural oyster bar and 123,135 square feet of open water habitat. The mitigation project will consist of 41 acres of oyster enhancement/seeding for both public and sanctuary oyster bars of which 29 acres of oyster enhancement/seeding will be to public oyster bars in the Anne Arundel County Main Bay and the South River areas, and 12 acres to oyster sanctuary bars in Anne Arundel County as the priority, or to nearby counties if deemed appropriate by the Maryland Department of Natural Resources.
- G. The Licensee is responsible for funding the mitigation work identified in Special Condition F that will be completed by the Maryland Department of Natural Resources (DNR) that includes but is not limited to producing, transporting, and seeding of spat that is estimated to occur over 2 years during the term of the License.

- H. The Licensee shall submit a single payment of \$705,600 USD to the Maryland Department of Natural Resources (DNR) into the Donation Fund (Fund #0367) to mitigate the impacts to 501,350 square feet of a natural oyster bar and 123,135 square feet of open water habitat. The Licensee is required to submit the payment within 30 days from the date of the invoice from DNR after execution of this License. Failure to comply with this condition will result in automatic suspension of the license. An invoice for payment and instructions will be mailed separately by DNR, Shellfish Division to the Licensee at: Evergreen Marine Corp (Taiwan) Ltd, c/o Polaris Applied Sciences, Inc, Atten: Greg Challenger, 120th NE, Ste 200, Kirkland, Washington 98033, GChallenger@polarisappliedsciences.com.
- I. Licensee shall, in coordination with DNR, submit an annual report to MDE's Tidal Wetlands Division to document the status of the mitigation project no later than December 31 of each year until the mitigation project is completed.
- J. Licensee's mitigation requirement will be deemed complete upon DNR's final implementation of the mitigation requirement as set forth in Special Conditions F, G, and H and all required payments by the Licensee have been received by DNR as invoiced for the mitigation project, and all annual reports required by Special Condition I have been submitted to MDE under the terms of this License.


DEPARTMENT OF THE ENVIRONMENT APPROVAL:

Heather L. Nelson for
 Heather Hepburn, Natural Resource Planner
 Tidal Wetlands Division

12/12/2022
 DATE

Heather L. Nelson for
 Tammy Roberson, Division Chief
 Tidal Wetlands Division

12/12/2022
 DATE


 D. Lee Currey, Director
 Water and Science Administration

12/12/2022
 DATE

WETLANDS ADMINISTRATION CONCURRENCE:

William Morgante
 William Morgante, Wetlands Administrator
 Board of Public Works

12/15/2022
 DATE