

The Chesapeake Tunnel Joint Venture (CTJV) is requesting an Incidental Harassment Authorization (IHA) for a proposed tunnel. This tunnel will run parallel and directly west of the existing Thimble Shoal Tunnel. The project will use down-the-hole (DTH) pile driving techniques, which have the potential to cause sound levels that exceed acoustic thresholds in both initial impacts, as well as a cumulative sound threshold that could be dangerous for marine mammals. The mammals specified in this application are the Fin Whale, North American Right Whale, Humpback Whale, Bottlenose Dolphin, Harbor Porpoise, Harbor Seal, and Gray Seal. All these animals are protected under the Marine Mammal Protection Act (MMPA) of 1972, and the North American Right Whale and Fin Whale are protected under the Endangered Species Act (ESA) of 1973.

This project is expected to alleviate constraints on regional mobility. Based on current traffic volume, the expected benefits of this project include improved safety, ability to conduct necessary tunnel maintenance without impacting traffic flow, and guaranteed, reliable hurricane evacuation routes. The use of in-water pile driving is necessary to create vessel moorings and to support excavation walls. The project's scope of expected time using pile driving techniques is expected to take no more than 252 days.

Activities during the project that may cause auditory harm to marine mammals derive from the use of three different types of hammer: impact, vibratory, and Down-The-Hole pile driving techniques. Animals that have been exposed to increased sound thresholds within their environment may suffer both physical and psychological effects. Exposure to the sound impacts that accompany the three hammer types that will be used in this project could lead to increased stress hormones or shifts in behavioral reactions.

Marine Mammals are protected under the MMPA. This act prohibits the incidental taking of marine mammals. The ESA protects species that have been deemed either endangered or threatened by the US Fish and Wildlife Service. The ESA prohibits incidental takings of listed species, as well as designated habitat areas that have been considered critical to species recovery. The IHA requests incidental takings permit for potential noise harassment to marine wildlife. Harassment is the only type of take expected with this project.

The MMPA defines level A harassment as, any action that "has the potential to injure a marine mammal", and level B harassment as any action that has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns" This application requests takes for five species by level B harassment standards. Species included in this request are harbor seals, gray seals, humpback whales, harbor porpoises, and bottlenose dolphins. The application also requests takes for three species by level A harassment standards, these species are: harbor seals, grey seals and harbor porpoises. Neither CTJV nor the National Marine Fisheries Service (NMFS) expects serious injury or mortality to result from the project activity.

Section seven of the ESA requires each federal agency to determine if any action it authorizes is likely to harm or harass endangered or threatened species or critical habitat. For this IHA, NMFS has consulted internally to meet the standards of the ESA. Information concerning behavior, habitat and migratory patterns of the species mentioned in this IHA have

been included in the application. The ESA-listed species mentioned in the IHA, the North American Right Whale and the Fin Whale, are not likely to occur in the project area, so no incidental taking is expected.

The MMPA dictates that for IHA's to be issued, NMFS must set forth methods of mitigation that will effectively control and lessen the impact on the species at issue. Some of the mitigation efforts mentioned in the IHA include:

- CTJV must establish and implement shutdown zones and a Marine Mammal Monitoring Plan
- Physical interactions with marine mammals must be avoided. If a marine mammal is to come within 10 meters of activity, all activities must cease, and each vessel in the area must reduce speed to minimum possible level.
- A third-party marine mammal monitoring crew must be enrolled and have effective communication lines between crew and supervisors at all times of activity.
- If a species that is not mentioned in the IHA, or a species in the IHA that has already met the approved number of takings, has been observed in the area, pile driving activities must halt immediately.

Because the mitigation efforts mentioned, and the small number of takings requested, I see no need to hinder this project further. All the provided information seems well researched and neither the NMFS nor the CJTV expected serious injury or mortality to result from the project's activities. The possibility of environmental damage seems inconsequential. As a result of the extensive research that was placed into this request, my comment is in consent of allowing the project to continue.