§ 217.224 Mitigation.

(a) When conducting the activities identified in §217.220(a), the mitigation measures contained in the LOA issued under §§216.106 and 217.226 of this chapter must be implemented. These mitigation measures include:

1. Limited Impact Pile Driving. (i) All sheet piles shall be installed using a vibratory driver, unless impact driving is required to install piles that encounter consolidated sediments or for proofing load bearing sections. (ii) Any impact driver used in conjunction with vibratory pile driving shall employ sound attenuation devices, where applicable. (iii) Any attenuation devices that become available for vibratory pile driving shall be considered for additional mitigation.

2. Containment of Impact Pile Driving. The majority of permanent concrete piles shall be driven behind the temporary containment wall.

3. Additional Attenuation Measures. In the event that underwater sound monitoring shows that noise generation from pile installation exceeds the levels originally expected, SDOT shall immediately notify NMFS so it can...
evaluate the need for implementation of additional attenuation devices or other mitigation measures.

(4) Ramp-up. (i) Ramp-up shall be used at the beginning of each day’s in-water pile-related activities or if pile driving has ceased for more than 1 hour.

(ii) If a vibratory hammer is used, contractors shall initiate sound from vibratory hammers for 15 seconds at reduced energy followed by a 1-minute waiting period. This procedure shall be repeated two additional times before full energy may be achieved.

(iii) If a non-diesel impact hammer is used, contractors shall provide an initial set of strikes from the impact hammer at reduced energy, followed by a 1-minute waiting period, then two subsequent sets.

(iv) Ramp-up shall be implemented if pile driving or removal is delayed or shutdown for >15 minutes due to the presence of a delphinid or pinniped within or approaching the exclusion zone, or if pile driving or removal is delayed or shutdown for >30 minutes due to the presence of a large whale.

(5) Marine Mammal Exclusion Zones. (i) The following exclusion zones shall be established to prevent the Level A harassment of all marine mammals and to reduce the Level B harassment of large whales:

(A) An exclusion zone for delphinids or pinnipeds shall be established with a radius of 200 feet (61 meters) waterward of each steel sheet pile during impact pile driving;

(B) An exclusion zone for delphinids and pinnipeds shall be established with a radius of 50 feet (15 meters) waterward of each concrete pile during impact pile driving;

(C) An exclusion zone for large whales shall be established with a radius of 3,280 feet (1,000 meters) waterward of each steel sheet or concrete pile during impact pile driving;

(D) An exclusion zone for large whales shall be established with a radius of 2.5 miles (3,981 meters) waterward of each steel sheet pile during vibratory pile driving.

(ii) Temporary buoys shall be used, as feasible, to mark the distance to each exclusion zone during in-water pile-related activities.

(iii) The exclusion zones shall be used to provide a physical threshold for the shutdown of in-water pile-related activities.

(iv) At the start of in-water pile-related activities each day, a minimum of one qualified protected species observer shall be staged on land (or an adjacent pier) near the location of in-water pile-related activities to document and report any marine mammal that approaches or enters a relevant exclusion zone throughout the day.

(v) Additional land-based observers shall be deployed if needed to ensure the construction area is adequately monitored.

(vi) Observers shall monitor for the presence of marine mammals 30 minutes before, during, and for 30 minutes after any in-water pile-related activities.

(vii) In-water pile-related activities shall not occur if any part of the exclusion zones are obscured by fog or poor lighting conditions.

(6) Shutdown and Delay Procedures. (i) If a marine mammal is seen approaching or entering a relevant exclusion zone (as specified in §217.224(5)(i)), observers will immediately notify the construction personnel operating the pile-related equipment to shut down pile-related activities.

(ii) If a marine mammal(s) is present within the applicable exclusion zone prior to in-water pile-related activities, pile driving/removal shall be delayed until the animal(s) has left the exclusion zone or until 15 minutes (pinniped or small cetacean) or 30 minutes (large cetacean) have elapsed without observing the animal.

(7) Additional mitigation measures as contained in an LOA issued under §§216.106 and 217.226 of this chapter.