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## **3.5 Marine Plants and Invertebrates**



## **3.5 MARINE PLANTS AND INVERTEBRATES**

### **3.5.1 AFFECTED ENVIRONMENT**

For purposes of this Supplemental Environmental Impact Statement (EIS)/Overseas EIS (Supplemental EIS/OEIS), the Region of Influence (ROI) for marine plants and invertebrates remains the same as that identified in the March 2011 Gulf of Alaska Navy Training Activities Final EIS/OEIS and includes the Temporary Maritime Activities Area (the Study Area).

#### **3.5.1.1 Existing Conditions**

Following a review of recent literature, the existing conditions of marine plants and invertebrates in the Study Area, as listed in the 2011 GOA Final EIS/OEIS, has not appreciably changed. As such, the information and analysis presented in the 2011 GOA Final EIS/OEIS remains valid.

##### **3.5.1.1.1 Open Ocean (Pelagic) Habitats**

All areas, except those near the coast and the sea floor, are called the pelagic or oceanic zone. The descriptions of pelagic habitats in the Study Area, as listed in the 2011 GOA Final EIS/OEIS, have not changed. As such, the information and analysis presented in the 2011 GOA Final EIS/OEIS remains valid.

###### **3.5.1.1.1.1 Microscopic Communities**

Plankton are organisms that float or drift in the water column and are unable to maintain their position against the movement of water masses (Parsons et al. 1984); they move with the currents through the aquatic environment. Planktonic assemblages include phytoplankton (plant-like) and zooplankton (animal). In general, plankton are very small or microscopic, although there are exceptions. For example, jellies (some grow to 10 feet [3 meters] in diameter) and pelagic *Sargassum* (macroalgal seaweed) are both considered part of the plankton group due to their inability to move against surrounding currents.

###### **Phytoplankton and Zooplankton**

Following a review of recent literature, including government technical documents and reports and online scientific journal databases, the information presented on phytoplankton and zooplankton in the Study Area, as listed in the 2011 GOA Final EIS/OEIS, has not changed. As such, the information and analysis presented in the 2011 GOA Final EIS/OEIS remains valid.

###### **Pelagic Invertebrates**

Following a review of recent literature, including government technical documents and reports and online scientific journal databases, the information presented on pelagic invertebrates in the Study Area, as listed in the 2011 GOA Final EIS/OEIS, has not changed. As such, the information and analysis presented in the 2011 GOA Final EIS/OEIS remains valid.

##### **3.5.1.1.2 Open Ocean Deepwater Benthic Habitats**

Open ocean deepwater benthic habitats in the Study Area include the continental shelf, continental slope, submarine canyon communities, abyssal plain, seamounts, chemosynthetic ecosystem, cold seeps, whale falls, artificial habitats, and buoy moorings. Descriptions of these habitats found in the study area are described in the 2011 GOA Final EIS/OEIS and have not changed since the publication of the 2011 GOA Final EIS/OEIS.

After the publication of the 2011 GOA Final EIS/OEIS, a petition was filed with the National Marine Fisheries Service (NMFS) requesting the listing of 44 taxa of coral (42 species, 1 subspecies, and 1 variant) in the Alaska region as threatened or endangered. Ten of the 42 species are present in the

GOA, with 7 inhabiting the continental shelf and 3 found exclusively in very deep waters associated with seamounts. On February 14, 2013, NMFS issued a negative ruling because none of the species on the petition met the criteria for listing (Endangered and Threatened Wildlife, 2013). Noting the negative ruling on the coral petition, the information and analysis presented in the 2011 GOA Final EIS/OEIS remains valid.

### **3.5.1.1.3 Federally Protected Areas**

#### **3.5.1.1.3.1 Marine Protected Areas, National Marine Sanctuaries, and Protected Habitats**

Many areas of the marine environment in the United States have some level of federal, state, or local management or protection. Marine protected areas (MPAs) have conservation or management purposes, defined boundaries, and some legal authority to protect resources. These areas vary widely in purpose, managing agency, management approaches, level of protection, and restrictions on human uses. They have been designated to achieve objectives ranging from conservation of biodiversity, to preservation of sunken historic vessels, to protection of spawning habitats important to commercial and recreational fisheries. Executive Order (EO) 13158, *Marine Protected Areas*, was created to “strengthen the management, protection, and conservation of existing MPAs and establish new or expanded MPAs; develop a scientifically based, comprehensive national system of MPAs representing diverse United States (U.S.) marine ecosystems, and the nation’s natural and cultural resources; and avoid causing harm to MPAs through federally conducted, approved, or funded activities.”

EO 13158 requires each Federal agency whose actions affect the natural or cultural resources that are protected by a national system of MPAs to identify such actions, and in taking such actions, avoid harm to those natural and cultural resources. Pursuant to Section 5 of EO 13158, agency requirements apply only to the natural or cultural resources specifically afforded protection by the site as described by the List of National System MPAs. For sites that have both a terrestrial and marine area, only the marine portion and its associated protected resources are included on the List of National System Marine Protected Areas and are subject to Section 5 of EO 13158. A full list and map of areas accepted in the National System of MPAs are available from the National Marine Protected Areas Center.

The National Marine Sanctuary (NMS) system is administered by the National Oceanic and Atmospheric Administration and protects special natural and cultural resources. Protected areas (Conservation Areas) throughout the Gulf of Alaska restrict groundfish harvest to minimize harmful impacts of fishing methodology and equipment to ocean bottom habitat. A recent review revealed no changes have been made to the current listings of the National System of MPAs, NMS, and protected areas within the Study Area as listed in the 2011 GOA Final EIS/OEIS. As such, the information and analysis presented in the 2011 GOA Final EIS/OEIS remains valid.

### **3.5.1.2 Current Requirements and Practices**

As stated in the 2011 GOA Final EIS/OEIS, the U.S. Department of the Navy (Navy) has no existing protective measures in place specifically for marine plants and invertebrates. However, marine plants and invertebrates benefit from measures in place to protect marine mammals, sea turtles, and Essential Fish Habitat. For a complete description of these measures, see Chapter 5 (Standard Operating Procedures, Mitigation, and Monitoring) of this Supplemental EIS/OEIS.

## **3.5.2 ALTERNATIVES ANALYSIS**

All three alternatives (No Action Alternative, Alternative 1, and Alternative 2), as discussed in the 2011 GOA Final EIS/OEIS, remain the same for this Supplemental EIS/OEIS. The Navy conducted a review of

existing federal and state regulations and standards relevant to marine plants and invertebrates, as well as a review of new literature, to include laws, regulations, and publications pertaining to marine plants and invertebrates. No additional information was found that indicates an appreciable change to the existing environmental conditions as described in the 2011 GOA Final EIS/OEIS. Because the existing conditions have not changed appreciably, and no new Navy training activities are being proposed to occur in the Temporary Maritime Activities Area (TMAA) in this Supplemental EIS/OEIS, re-analysis of the alternatives with respect to marine plants and invertebrates is not warranted. Subsequently, the conclusions made for the alternatives analyzed in the 2011 GOA Final EIS/OEIS remain unchanged in this Supplemental EIS/OEIS.

### **3.5.3 CONCLUSION**

As described above, there is no information on existing environmental conditions that changes the affected environment, which forms the environmental baseline of the marine plants and invertebrates analysis in the 2011 GOA Final EIS/OEIS. Additionally, no new Navy training activities are being proposed in this Supplemental EIS/OEIS that would affect plants and invertebrates in the TMAA. Therefore, conclusions for plants and invertebrates impacts made for the alternatives analyzed in the 2011 GOA Final EIS/OEIS remain unchanged in this Supplemental EIS/OEIS. For a summary of effects of the No action Alternative, Alternative 1, and Alternative 2 on marine plants and invertebrates under both the National Environmental Policy Act and EO 12114, please refer to Table 3.5-3 (Summary of Effects by Alternative) in the 2011 GOA Final EIS/OEIS.

## **REFERENCES CITED AND CONSIDERED**

Endangered and Threatened Wildlife; 90-Day Finding on a Petition to List 44 Species of Corals as Threatened or Endangered Under the Endangered Species Act; Notice of 90-day petition finding, 78, *Federal Register*, (31) (14 February 2013) pp 10661–10606.

Parsons, T.R., Takahashi, M., & Hargrave, B. (1984). *Biological oceanographic processes*. 3d ed. Oxford, United Kingdom: Pergamon Press.