

## 3.5 MAUI

Maui is the second largest of the populated Hawaiian Islands. It covers approximately 700 square miles and was formed by two separate volcanoes: Mt. Haleakala, the world's largest dormant volcano, and Puu Kukui. Wailuku is the county seat. Maui County includes the islands of Maui, Lanai, Molokai (except Kalaupapa peninsula), and Kahoolawe. Current and proposed Hawaii Range Complex (HRC) operations on or offshore of Maui addressed in this Environmental Impact Statement (EIS)/Overseas EIS (OEIS) are located at the Maui Offshore area, Maui Space Surveillance Site, Maui High Performance Computing Center, Sandia Maui Haleakala Facility, and Molokai. For organizational purposes in this document, discussions about Molokai are included under the Maui heading, although it is a separate island and are not part of the island of Maui.

### 3.5.1 MAUI OFFSHORE

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The Maui Offshore is an area situated around the islands of Maui, Kahoolawe, Lanai, and Molokai. The offshore area also includes the portion of Penguin Bank that is within 12 nautical miles (nm) of the islands' coastlines. The area is used as a submarine training area due the unique characteristics of its acoustic environment and shallow depths of 50 and 100 fathoms. Multiple in-water runs of exercise MK-48 torpedoes (with no warheads) using one submarine as both target and launch platform occur in the Penguin Bank area as part of training and RDT&E operations.

Of the 13 environmental resources considered for analysis, air quality, airspace, cultural resources, geology and soils, hazardous materials and hazardous waste, health and safety, land use, noise, socioeconomics, transportation, utilities, visual and aesthetics, and water resources are not addressed.

#### 3.5.1.1.1 Biological Resources—Maui Offshore

Appendix C includes a description of the primary laws and regulations regarding biological resources.

#### Region of Influence

The region of influence is the area within 12 nm around the islands of Maui, Kahoolawe, Lanai, and Molokai.

#### Affected Environment

##### *Marine Habitats, Invertebrates*

Detritus from nearby islands and calcareous sand and mud make up the bottom sediments in the region of influence. Sand, coral, and mud are all present in the area that formerly held hydrophones. Since black coral has been identified near the western end of Kahoolawe,

1 additional coral patches are expected to be in the area. (Naval Undersea Warfare Center  
2 Detachment, 1994)

### 3 *Fish*

4 Bottomfishes and pelagic fishes occur at Penguin Bank. Bottomfish are fish species that live  
5 their lives on the ocean floor, whereas pelagic fish are species that live in the upper layers of  
6 the ocean. (Naval Undersea Warfare Center Division Newport, Rhode Island, 2007)

7 Lutjanid snapper (opakapaka) makes up the bulk of the bottomfish catch, although other fish,  
8 crabs, lobsters, and occasionally shrimp are present. The bottom fishery appears to be in  
9 decline or to have reached its maximum sustainable yield. A small commercial and recreational  
10 hand-line fishery for opakapaka is located in the region of influence. (Naval Undersea Warfare  
11 Center Detachment, 1994)

12 Pelagic fishes that occur in Hawaiian waters include, but are not limited to, striped marlin  
13 (*Tetrapturus audax*), broadbill swordfish (*Xiphias gladius*), northern bluefin tuna (*Thunnus*  
14 *thynnus*), albacore (*Thunnus alalunga*), Bigeye tuna (*Thunnus obesus*), mackerel (*Scomber*  
15 *spp.*), sickle pomfret (*Tactichthys steindachneri*), lustrous pomfret (*Eumegistus illustris*),  
16 yellowfin tuna (*Thunnus albacares*), kawakawa (*Euthynnus affinis*), and skipjack tuna  
17 (*Katsuwonus pelamis*). (Naval Undersea Warfare Center Division Newport, Rhode Island,  
18 2007)

### 19 *Marine Mammals*

20 Spinner dolphins (*Stenella longirostris*) travel in pods of 10 to 300 dolphins throughout the  
21 Hawaiian Islands, but are found most frequently in deeper water. They prefer clear, calm water  
22 close to deep water where food is found, and rest in shallow bays during the day. Spotted  
23 dolphins (*Stenella attenuata*), which may be the most numerous Hawaiian cetacean, are found  
24 in large pods in offshore waters less than 100 fathoms. Bottlenose dolphins (*Tursiops*  
25 *truncatus*) inhabit offshore waters along the 50- to 100-fathom isobaths around the Hawaiian  
26 Islands. They are common during the December to May timeframe. (Commander, Submarine  
27 Force U.S. Pacific Fleet, 1997)

28 At least 28 different marine mammal species have been observed in the Penguin Bank area. Of  
29 these, 26 species are whales and dolphins and 2 are pinnipeds. At least nine species are  
30 generally found in the study area in moderate to high numbers either year-round or during  
31 annual migrations into or through the proposed test area. These include North Pacific right  
32 whale (*Eubalaena japonica*), humpback whale (*Megaptera novaeangliae*), Bryde's whale  
33 (*Balaenoptera edeni*), beaked whales (family *Zaiphiidae*), common bottlenose dolphin,  
34 Pantropical spotted dolphin, spinner dolphin, false killer whale (*Pseudorca crassidens*), and  
35 short-finned pilot whale (*Globicephala macrorhynchus*). Other cetacean species are present  
36 during part of the year based on occasional sightings, or stranding records. (Naval Undersea  
37 Warfare Center Division Newport, Rhode Island, 2007) Cetaceans are discussed in more detail  
38 in Section 3.1.2, Open Ocean.

### 39 Rare, Threatened, and Endangered Species

40 Five species of sea turtles may occur at Penguin Bank: green turtle (*Chelonia mydas*),  
41 hawksbill turtle (*Eretmochelys imbricata*), loggerhead turtle (*Caretta caretta*), olive ridley turtle

1 (*Lepidochelys olivacea*), and leatherback turtle (*Dermochelys coriacea*) (Naval Undersea  
2 Warfare Center Division Newport, Rhode Island, 2007). Green turtles and hawksbill turtles are  
3 the most commonly seen marine turtles in the Main Hawaiian Islands. Most sightings of these  
4 species have been in shallow water. The green turtle prefers waters less than about 27  
5 fathoms deep. Numerous sightings have been reported for the water off Maui. Hawksbill turtles  
6 have been observed on Molokai and Maui. No critical habitat has been designated in the  
7 Pacific for any of these species of sea turtles. (Commander, Submarine Force U.S. Pacific  
8 Fleet, 1997) Sea turtles are discussed in more detail in Section 3.1.2, Open Ocean.

9 The presence of the endangered humpback whale in the region of influence is seasonal, with  
10 peak concentrations in mid-February to mid-March. The whales seem to prefer areas within the  
11 100-fathom contours such as the Molokai–Lanai–Maui–Kahoolawe channels and Penguin  
12 Bank. Humpback whale sightings in the region of influence are mainly concentrated north of  
13 Kahoolawe in protected channel areas. The Hawaiian monk seal (*Monachus schauinslandi*),  
14 considered to be uncommon in the summer, is occasionally seen in the vicinity of Kahoolawe,  
15 and may be observed in the region of influence. (Commander, Submarine Force U.S. Pacific  
16 Fleet, 1997; Naval Undersea Warfare Center Division Newport, Rhode Island, 2007)

#### 17 *Hawaiian Islands Humpback Whale National Marine Sanctuary*

18 Portions of the Maui Offshore area are included in the Hawaiian Islands Humpback Whale  
19 National Marine Sanctuary. According to the Hawaiian Islands Humpback Whale National  
20 Marine Sanctuary EIS (U.S. Department of Commerce, National Oceanic and Atmospheric  
21 Administration and State of Hawaii, Office of Planning, 1997), "... the waters adjacent to Maui,  
22 Molokai, and Lanai are important training areas for Navy ships home ported in Pearl Harbor.  
23 The channel between Maui, Lanai and Molokai is extensively used for biennial RIMPAC [Rim  
24 of the Pacific] exercises, EOD/MCM [explosive ordnance disposal/mine countermeasures]  
25 exercises, and as well for shallow-water ASW [anti-submarine warfare]... The areas inside the  
26 100-fathom isobath surrounding Maui, Molokai and Lanai, and specifically the channel between  
27 these islands, are used for shallow-water ASW operations."

1 **3.5.1.2 SHALLOW-WATER MINEFIELD SONAR TRAINING AREA-**  
2 **OFFSHORE**

3 The Shallow-water Minefield Sonar Training Area provides Naval Station Pearl Harbor based  
4 submarines with the capability to conduct mine sonar training operations. A review of the 13  
5 resources that would be affected by the No-action Alternative, Alternative 1, or Alternative 2  
6 determined there would be no impacts from HRC operations at the Shallow-water Minefield  
7 Sonar Training Area.

1 **3.5.2 MAUI ONSHORE**

2 **3.5.2.1 MAUI SPACE SURVEILLANCE SYSTEM**

3 The Maui Space Surveillance Site provides facilities that observe sub-orbital vehicles.  
4 Operations at this site consist of an existing telemetry tower, communications, and tracking  
5 facilities. A review of the 13 resources that would be affected by the No-action Alternative,  
6 Alternative 1, or Alternative 2 determined there would be no impacts from HRC operations at the  
7 Maui Space Surveillance System site.

1 **3.5.2.2 MAUI HIGH PERFORMANCE COMPUTING CENTER**

2 The Maui High Performance Computing Center is an Air Force Research Laboratory managed  
3 by the University of Hawaii that provides state-of-the-art data processing. Operations at this site  
4 consist of data processing. A review of the 13 resources that would be affected by the No-  
5 action Alternative, Alternative 1, or Alternative 2 determined there would be no impacts from  
6 HRC operations at the Maui High Performance Computing Center.

1 **3.5.2.3 SANDIA MAUI HALEAKALA FACILITY**

2 The Sandia Maui Haleakala Facility provides telemetry receiving and recording, flight following,  
3 command control and flight termination systems for high-altitude/exoatmospheric launches from  
4 the Pacific Missile Range Facility and for high-altitude operations that traverse the Hawaiian  
5 Islands Chain. Operations at this site consist of support for existing telemetry towers and  
6 communications. A review of the 13 resources that would be affected by the No-action  
7 Alternative, Alternative 1, or Alternative 2 determined there would be no impacts from HRC  
8 operations at the Sandia Maui Haleakala Facility.

1 **3.5.2.4 MOLOKAI MOBILE TRANSMITTER SITE**

2 A mobile command and control node is located at the Molokai Mobile Transmitter Site during  
3 Major Exercises. The transmitter site includes vehicles and portable equipment to generate  
4 low-power electronic signals that simulate various types of radar. A review of the 13 resources  
5 that would be affected by the No-action Alternative, Alternative 1, or Alternative 2 determined  
6 there would be no impacts from HRC operations at the Molokai Transmitter Site.

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