
Appendix 4

Habitat-Use Table Methodology

HABITAT-USE TABLES: DEFINITIONS

The four habitat categories used in this publication are defined below.

Category	Definition	Examples
Freshwater habitat	Habitats located between headwater and head-of-tide, with negligible salinity. (Headwater is the inland source from which a river originates; head-of-tide is the inland limit of water affected by tides.)	Columbia River, Penobscot River, Togus Stream, Bond Brook (latter two are both Kennebec River tributaries)
Estuarine habitat	Habitats located in a semi-enclosed coastal body of water extending from head-of-tide to a free connection with the open sea, and within which sea water is mixed with fresh water.	Chesapeake Bay, Puget Sound
Shallow marine habitat	Habitats less than 200 m (656 ft) in bottom depth located between the outer boundary of an estuary or coast (continent or island) and the outer boundary of the U.S. Exclusive Economic Zone (EEZ), which is usually 370 km (200 nautical miles [nmi]) from shore. This includes the seafloor and open water column over areas shallower than 200 m (656 ft).	Continental Shelf habitats, fringe and barrier reefs, atolls (e.g. Johnston Atoll), Gulf of the Farallones, Heceta Bank
Oceanic habitat	Habitats greater than 200 m (656 ft) in bottom depth located between the outer boundary of an estuary or coast (continent or island) and the outer boundary of the U.S. EEZ. This includes the seafloor and open water column over areas deeper than 200 m (656 ft).	Slope habitats, Bear Seamount, Hudson Canyon, Gulf of Maine basins, Monterey Canyon, abyssal plains

Geographic Regions

The information presented in this report is divided into five regions: Northeast, Southeast, Pacific Coast, Alaska, and Pacific Islands. These regions correspond to the NMFS regional structure. All the report's regions extend from the upper reaches of watersheds utilized by anadromous fishes to the U.S. EEZ boundary, which is either an international boundary (e.g. with Canada or Mexico), or 370 km (200 nmi) off the U.S. coast. It should be noted, however, that most states have jurisdiction over waters out to 5.6 km (3 nmi) from the U.S. baseline, which is the mean lower low-water line along the coast. The exceptions are Texas, Puerto Rico, and the Gulf Coast of Florida, which have jurisdiction out to 16.7 km (9 nmi) from the U.S. baseline. The distributions of some highly migratory fish and marine mammals extend beyond these regions, into the territorial seas of other countries and/or into the international waters of the open ocean.

Region in the
Our Living Oceans
habitat report

Geographic extent

Northeast	From the U.S.–Canada border (Maine–New Brunswick) to Cape Hatteras, North Carolina
Southeast	From Cape Hatteras, North Carolina, to the U.S.–Mexico border (Texas–Tamaulipas); also Puerto Rico and U.S. Virgin Islands
Pacific Coast	From the U.S.–Canada border (Washington–British Columbia) to the U.S.–Mexico border (California–Baja California)
Alaska	Alaska
Pacific Islands	Hawaii, Northwest Hawaiian Islands, and several small island territories extending nearly as far west as Japan and to nearly 20 degrees south of the equator

HABITAT-USE TABLES: SPECIES GROUPINGS

Habitat use for the Nation's federally managed and protected species is described in the tables in terms of the following species groupings.

Fishery Management Plan (FMP)

Habitat use for the Nation's federally managed fishery species is primarily described by FMP. Some FMPs cover only one species, and, in these instances, the table entries describe the habitat use for all life stages of that species. Other FMPs cover multiple species. In these cases, a single table entry represents the compiled habitat-use patterns available for all the life stages of all species included in the FMP that use the particular habitat. See Appendix 5 for a complete list of FMP species.

Fishery Ecosystem Plan (FEP) Management Unit Species (MUS) Groups

Until 2010, the Western Pacific Regional Fishery Management Council (WPRFMC) utilized five Fishery Management Plans (FMPs). These included the Bottomfish FMP, Coral Reef Ecosystems FMP, Crustaceans FMP, Pelagics FMP, and Precious Corals FMP. Beginning in 2010, the WPRFMC adopted five new Fishery Ecosystem Plans (FEPs). The FEPs (American Samoa FEP, Hawaii FEP, Marianas FEP, Pacific Islands Remote Area FEP, and Pelagics FEP) shifted management focus from species-based to place-based, and began the implementation of ecosystem-based approaches to fisheries management in the Pacific Islands. The FEPs have recently established new fishing regulations, and have created the organizational structure to incorporate additional information, community input, and local knowledge into development of fishery ecosystem management.¹ The Management Unit Species (MUS) in each FEP include crustaceans, bottomfishes, coral reef ecosystem species, pelagics, and precious corals. Habitat use is described only once for each MUS group but applies to each of the location-based FEPs. For example, the crustacean MUS habitat-use table entry applies to crustaceans in the American Samoa, Marianas, Hawaii, and Pacific Islands Remote Area FEPs. As with the FMPs, a table entry describing habitat use often applies to multiple species (and all their respective life stages).

Protected Species

NMFS provides oversight and guidance on the conservation of marine mammals and threatened or endangered marine species.² See Appendix 5 for a complete list of protected species included in this report. To include habitat-use information for these species, they are grouped into the following categories:

- Cetaceans: marine mammals of the Order Cetacea, which includes whales, dolphins, and porpoises.
- Pinnipeds: marine mammals of the Suborder Pinnipedia, which includes seals and sea lions.³
- Sea Turtles: marine reptiles of the Superfamily Chelonioidea.⁴

For a full listing of the protected species included in these groupings, refer to Appendix 5.

¹See the Western Pacific Regional Fishery Management Council website at <http://www.wpcouncil.org/fishery-plans-policies-reports/> (accessed October 2013).

²Conservation duties are administered by NMFS for all U.S. marine mammals except the polar bear, sea otter, Pacific walrus, and West Indian manatee.

³Conservation duties are administered by NMFS for all U.S. pinnipeds except the Pacific walrus.

⁴Federal conservation duties are shared by NMFS and the U.S. Fish and Wildlife Service.

Habitat-Use Categories

Habitat-use estimates incorporate the use of one of the four habitat categories by all life stages of a given species; and in some cases, multiple species. These estimates are based on the tendency of a marine organism(s) to be found in the given habitat type.

Usage of each habitat category is defined as the following:

- Frequent (F): commonly used as habitat by at least one life stage (>25% of the time).
- Occasionally (O): occasionally used for habitat by at least one life stage (<25% of the time).
- Never (N): never used as habitat by any life stage.

HABITAT-USE TABLES: ESTIMATING HABITAT USE

The values in the habitat-use tables represent the likelihood of all species within the FMP, FEP Management Unit Species Group, or group of cetaceans, pinnipeds, or sea turtles (which may be one or multiple species) being found in a particular habitat, not necessarily the amount of time spent in the habitat. For example, if a given species depends on estuarine habitat as a juvenile for foraging and protection from predators, but only uses that habitat for a short part of its life cycle, the use estimate would still be characterized as “frequent” (F), because of its dependency upon that particular habitat type. Alternatively, a species may sometimes be found in a particular habitat, though its use is more incidental than deliberate. For example, it is not uncommon to find beluga whales traveling up rivers into freshwater environments, though this is often a case of following a prey source rather than deliberately seeking freshwater habitat. Such usage would best be characterized as “occasional” (O). For species that never use a particular habitat (e.g. corals never use freshwater habitats), the habitat-use value recorded is “never” (N). In addition, the habitat-use ratings in each table represent the highest level of usage for a species within the particular FMP, FEP Management Unit Species (MUS) Group, or group of cetaceans, pinnipeds, or sea turtles. For example, an FMP may have multiple species, some of which frequently use shallow marine habitats and some of which frequently use oceanic habitats, but not all of which frequently use both habitats. The table entries for this FMP, however, would show a habitat-use rating of “frequent in both shallow marine and oceanic habitats,” to indicate that both habitats are used on a regular basis by one or more species within the FMP.

HABITAT-USE TABLES: REGIONAL CHAPTERS AND NATIONAL SUMMARY

Habitat tables are included in each regional chapter. The Northeast has 13 FMPs, Southeast has 17 FMPs (excluding the Aquaculture FMP), Pacific Coast has 4 FMPs, Alaska has 6 FMPs, and the Pacific Islands has 5 MUS groups that apply to all FEPs. Each region’s table has entries provided for each of the region’s FMPs or FEP MUS groups in freshwater, estuarine, shallow marine, and ocean habitat types. The percentage of the number of FMPs or FEP MUS groups with species that use each habitat type is also provided. In addition, table entries are provided for groups of cetaceans, pinnipeds, and sea turtles in each region. A table entry for a region’s cetaceans, for example, represents the combined habitat use for all cetaceans (and their respective life stages) in each habitat type. The National Summary has a table that summarizes habitat use on a national scale for the Nation’s fishery species. It is based on all the regional tables and uses a total number of 45⁵ FMP and FEP MUS groups to formulate the national percentage of FMPs and FEP MUS groups with species that use each habitat type, and a total number of 15 nationwide groups of cetaceans, pinnipeds, and sea turtles to formulate the national percentage of cetacean, pinniped, and sea turtles groups with species that use each habitat type.

⁵Appendix 3 lists a total of 46 FMPs that were present at the time of report production. The habitat-use tables do not include information for the Aquaculture FMP and therefore include information for only 45 of the 46 FMPs.