



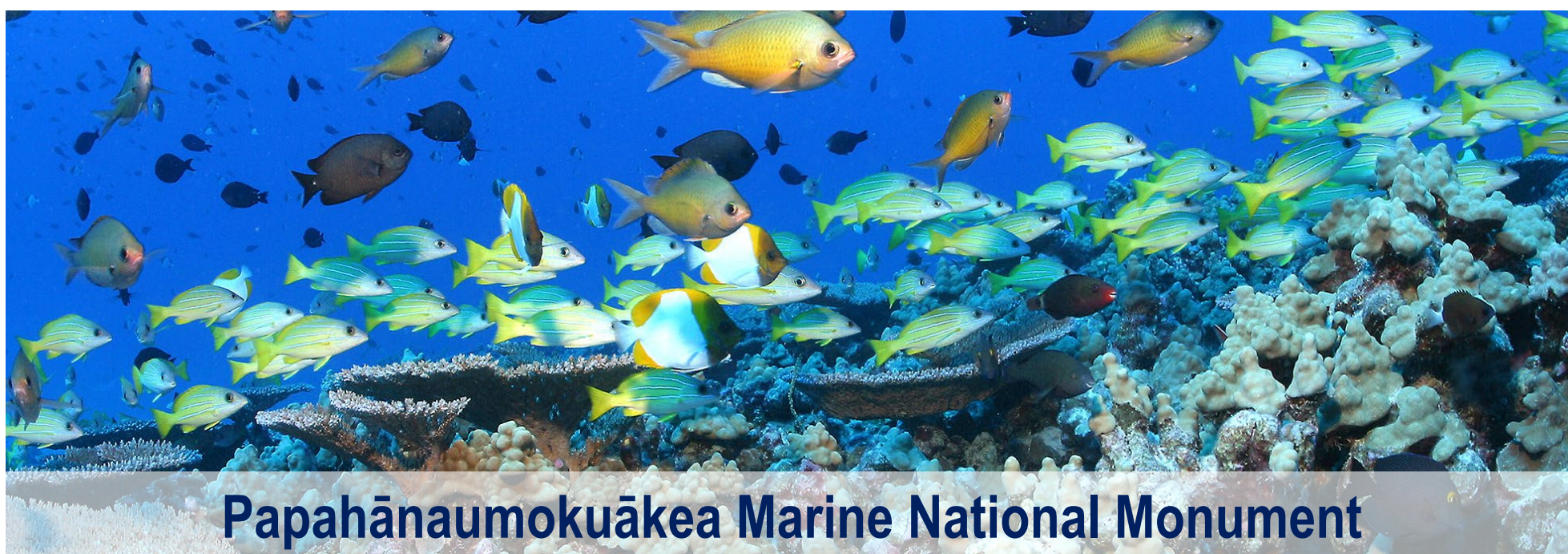
FISH AND ESSENTIAL FISH HABITAT



Fish

Fish in the NOS action area inhabit both marine environments in the U.S. Exclusive Economic Zone (EEZ) and freshwater environments in the Great Lakes and rivers. Of the thousands of fish species found in the action area, 19 are listed as threatened or endangered under the Endangered Species Act (ESA).

Marine fish occupy a wide variety of water depths and habitats including coastal, deep sea, pelagic (open ocean), demersal (bottom), and coral reefs.



Papahānaumokuākea Marine National Monument

Freshwater fish spend at least part of their lives in fresh water, such as rivers and lakes. Freshwater fish are considered to be either warmwater, coldwater, or coolwater fish.



Sockeye Salmon

Under the Magnuson–Stevens Fishery Conservation and Management Act (MSA), EFH is designated to aid in responsibly managing fish and invertebrate species in U.S. waters. EFH protects migration corridors, spawning areas, and water characteristics such as turbidity zones and salinity gradients.

Essential Fish Habitat (EFH)

Environmental Consequences from NOS Activities

NOS activities that could impact fish and EFH

- Sound from vessels and underwater acoustic sources
- Vessel surface wake and underwater turbulence
- Disturbance of the sea floor
- Accidental leaks or spills of oil, fuel, and chemicals

The primary impact of NOS surveying and mapping activities on fish would be temporary behavioral responses of individual fish or schools of fish, such as moving away from a vessel or from areas of turbidity. Impacts on fish habitat and EFH would include relatively small footprints of disturbance to the sea floor, suspension of disturbed sediments and turbidity, water column turbulence, and disturbance of prey species. The overall impact of the Proposed Action on fish, fish habitat (including designated critical habitat), and EFH would be **adverse, minor, and insignificant**.