



The Future of Sea Otters: Conservation and Reintroduction

Sea Otters on the West Coast

Before commercial hunting began in the 1700s, ~150,000 to 300,000 sea otters (*Enhydra lutris*) occurred in coastal waters from northern Japan to Baja California, Mexico.

At the time of an internationally agreed hunting prohibition in 1911, just a few thousand survivors remained, scattered among small remnant populations in remote areas of Russia, Alaska, and central California.



Current (gray) and historical (yellow) sea otter range along the Pacific rim (from [Davis et al. 2019](#)).

[Northern sea otters](#) (*E. lutris kenyoni*) from Alaska and [southern sea otters](#) (*E. l. nereis*) from central California have since recolonized or been reintroduced in parts of their historical range. In the late 1960s/early 1970s, northern sea otters were used for reintroductions in southeast Alaska and the outer coasts of British Columbia, Washington, and Oregon. While successful elsewhere, the relocated sea otters did not become established in Oregon, and sea otters remain absent from the coasts of Oregon and northern California.

Sea Otter Reintroduction Feasibility Assessment

In 2022, [the United States Fish and Wildlife Service \(USFWS\) released a report, “Feasibility Assessment: Sea Otter Reintroduction to the Pacific Coast”](#) as directed by Congress under the Consolidated Appropriations Act for 2021. USFWS studied the cost and feasibility of reintroducing sea otters to Oregon and northern California.

The objectives of a reintroduction are:

1. To restore the species, *Enhydra lutris*, within important gaps in its historical range, including improving the status of the federally threatened subspecies, *E. l. nereis*, or southern sea otter.
2. To restore ecosystem function, including enhancing ecosystem resilience, biodiversity, carbon sequestration, and resilience to the effects of climate change.

The assessment concluded that reintroduction of sea otters to Oregon and northern California is feasible biologically, legally, and socioeconomically. The assessment recognizes that sea otter reintroduction is of concern to some commercial and recreational shellfish fishers due to potential competition with sea otters for prey species and proposes programs to reduce conflict and/or compensate commercial fisheries for losses. In some regions, sea otter presence has not resulted in negative outcomes (e.g., [the California Dungeness crab fishery](#)). Analyses and modeling to assess potential impacts will be useful to preemptively mitigate impacts to commercial fisheries.

Benefits of Sea Otter Reintroduction

Sea otters promote the health of nearshore ecosystems.

Sea otters [promote diversity and resiliency in kelp forest ecosystems](#): a classic example of the positive benefits provided by a keystone species. Sea otters eat urchins, which in turn reduces urchin grazing on kelps, therefore allowing kelp forest habitats to recover and thrive, protecting shorelines from erosion, enhancing biodiversity (including nursery and adult habitat for commercially valuable finfish), and sequestering carbon.

Sea otters benefit other ecosystems, too, as shown by recent studies of seagrass beds and sea otters. Sea otters in British Columbia promote [increased reproduction and genetic diversity of seagrass](#). In California, ecosystem effects of [predation on crabs by recovered sea otter populations have resulted in healthier seagrass beds](#) and greater resilience against human-caused nutrient loading of Elkhorn Slough.

Seagrass beds, like kelp forests, are important nearshore habitats and key players in preventing shoreline erosion and sequestering carbon. Seagrass beds also serve as habitat for diverse species, including providing nursery environments for finfish (e.g., salmon and rockfish).

Sea otters will drive ecotourism when reintroduced to areas where they are currently missing.

The Feasibility Assessment concludes that “any reintroduced sea otter population, if visible or otherwise accessible to the public, is expected to enhance local businesses connected to ecotourism,” and that these impacts will be immediate (as opposed to delayed benefits of nearshore ecosystem restoration processes).

Economic benefits of sea otters have been studied in Canada and California. A [2020 study in British Columbia](#) concluded that the economic benefits of sea otter presence exceeded losses to shellfish fisheries many times over. A [2006 study of California sea otter ecotourism](#) in Santa Barbara and Ventura counties estimated a tourism-related income range of \$1.5 to \$8.2 million from sea otter expansion along a portion of the southern California coastline. Early modeling for Oregon contracted by the [Elakha Alliance](#) suggests that shellfish fishery losses or tourism gains from [sea otter presence would vary by reintroduction location](#).

For more information:

Visit our website to read more about the [northern](#) and [southern](#) sea otter populations and their status. To read more about reintroduction efforts, visit the [USFWS sea otter reintroduction webpage](#).

Did you know?

- Sea otters were almost driven to extinction during the maritime fur trade.
- Sea otters are still locally extinct in large areas of their range, including the coasts of Oregon and northern California.
- Sea otters help maintain healthy nearshore coastal environments and increase resilience to climate change, promote biodiversity, prevent shoreline erosion, and more.



A sea otter swims in Elkhorn Slough. Photo by Robert Scoles (USGS).