

Key Site 10: Izembek Lagoon, Alaska

Location: 55°19'11"N, 162°50'36"W

Size: 322 km²

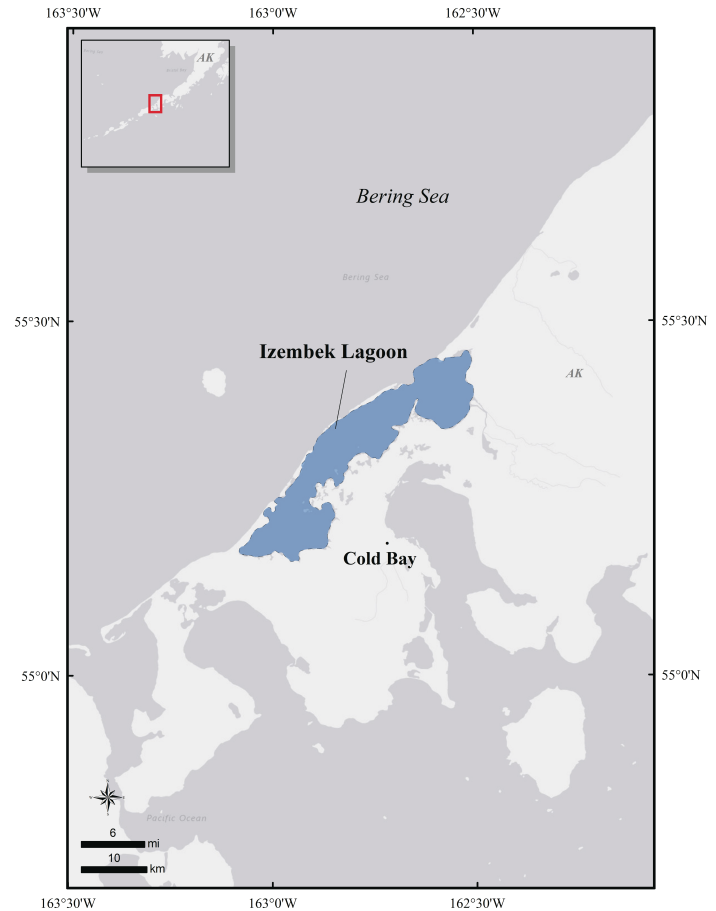
Description: Izembek Lagoon is a marine body of water located on the north side of the Alaska Peninsula near its western tip, about 10 km north of the city of Cold Bay, Alaska. Long, narrow, sparsely vegetated barrier islands form a shallow lagoon on the south side of the Bering Sea (Appendix 1). The lagoon contains extensive eelgrass beds that are exposed at low tide, along with sand and mudflats, with a few deeper channels connecting the lagoon to the Bering Sea. Izembek Lagoon contains the largest eelgrass beds in the world; about 60 to 70% of the lagoon is vegetated with eelgrass. The upland area surrounding the lagoon includes wet sedge meadows and upland tundra with numerous ponds and lakes.

Precision and Correction of Abundance

Estimates Presented: Abundance estimates are based on either single counts or an average of within-year repeated counts from aerial surveys of waterfowl conducted from fall through early spring (i.e., September to April; Wilson 2016, 2017a, 2017b, 2019, Dooley et al. 2016). This was intended to illustrate maximum value of the area to sea ducks during the fall-to-spring nonbreeding period. During those surveys, all birds observed are tallied but there is no estimate of detection rate or adjustment for counting error. Thus, counts are considered indices and are not adjusted for incomplete detection.

Biological Value: This site is an important molting and staging area for several species of waterfowl, including Steller's Eiders (*Polysticta stelleri*) that breed in Russia and northern Alaska. Steller's Eiders are present in this area from mid-August through April; wing molt occurs from August into October. Izembek is one of the few important molting sites for Steller's Eiders in Alaska, with about 2500 to 7000 birds seen during August/September surveys from 2012 to 2016 (Williams et al. 2016). Based on data from fall goose surveys (Wilson et al. 2017a), numbers of molting Steller's Eiders seem to be decreasing from estimates over the past two decades.

During January to March winter surveys, 6000 to 43,000 Steller's Eiders have been observed in the lagoon on a single day (Wilson et al. 2017b),



although the total number of Steller's Eiders that pass through the area during fall and spring migration is undoubtedly much larger, perhaps 70,000 or more, and represents a significant proportion of the Pacific population.

In addition to Steller's Eiders, several thousand Black Scoters (*Melanitta americana*), Long-tailed Ducks (*Clangula hyemalis*), as well as smaller numbers of Red-breasted Mergansers (*Mergus serrator*) and Harlequin Ducks (*Histrionicus histrionicus*) inhabit this area during fall and winter. Izembek is along a major migration route for sea ducks wintering further west in the Aleutian Islands. The abundance of eelgrass throughout the lagoon makes this a particularly productive habitat for waterfowl.

Sensitivities: The barrier islands that separate the adjacent Bering Sea from the lagoon are subject to erosion, which may increase due to sea level rise, reduced ice coverage in the southern Bering Sea, and increased frequency of storm tides as a result of climate change. It is not known how this may affect the protected lagoon system, or benthic prey

communities, upon which Steller's Eiders rely during much of the nonbreeding season. Eelgrass beds may be harmed by increases in sea level, and the marine invertebrate community could be impacted by increasing ocean temperatures and acidification.

Steller's Eiders that molt in this area are sensitive to disturbance from boaters, particularly when flightless. Although there is little motorboat use until fall-winter hunting season starts September 1, and flightless eiders are present into October. Steller's Eiders are identified as "vulnerable" by the International Union for Conservation of Nature (BirdLife International 2012). Greater than 90% of the Pacific population of Steller's Eiders molts and winters in Alaska. Alaska-breeding Steller's Eiders (a subset of the Pacific population) are listed as a threatened species in Alaska under the Endangered Species Act (ESA; USFWS 1997). Currently, Steller's Eiders are closed to harvest during both the fall-winter and spring-summer hunting seasons.

Potential Conflicts: Izembek Lagoon is remote and there is little human use of the area, with the exception of fishing in the waters outside the lagoon in the Bering Sea. Birds that molt in this area would be particularly vulnerable to oil spills because they cannot fly and leave the area.

The area of the Outer Continental Shelf currently designated by BOEM as the North Aleutian Basin Planning Area, including Bristol Bay, was withdrawn from federal offshore oil and gas leasing and development in 2014 for an indefinite period of time due to the area's importance to Alaska Native subsistence users, fish and wildlife species, and commercial and recreational fisheries. The withdrawn area includes Izembek Lagoon. A road through Izembek National Wildlife Refuge connecting the communities of King Cove and Cold Bay has been proposed, but plans are currently on hold. The existence of the road could increase hunting access and increase disturbance of Steller's eiders during molt and wintering periods.

Status: Izembek Lagoon comprises most of the Izembek Lagoon and Bechevin Bay Important Bird Area (IBA) and is considered an IBA of global importance (Audubon 2017) because of its importance to waterfowl and shorebirds. It is also designated as a wetland of international importance under the Ramsar Convention (Ramsar 2018). Izembek Lagoon is designated critical habitat for Steller's

eiders under the ESA. The lagoon and intertidal habitats are managed by the State of Alaska as Izembek State Game Refuge, while the surrounding uplands are managed by the U.S. Fish and Wildlife Service as part of Izembek National Wildlife Refuge. Parts of the refuge are designated wilderness. There are a few small sections within this area that are considered "selected" under the Alaska Native Claims Settlement Act, but not yet conveyed, which means they are currently managed as refuge lands.

Literature Cited

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