



State of Alaska  
**Division of Oil and Gas**  
Department of Natural Resources

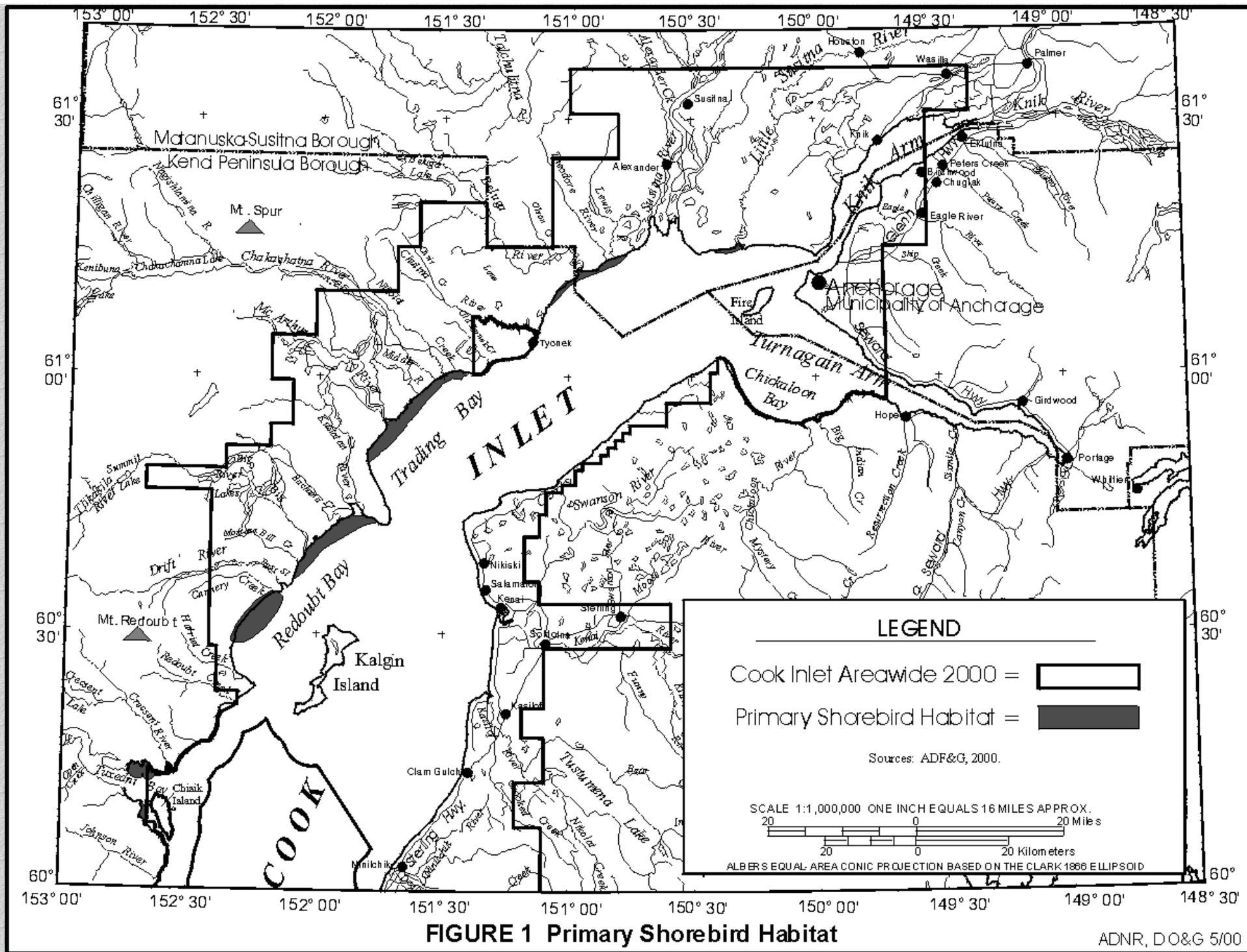


**Supplement to Cook Inlet Areawide Oil and Gas Lease Sale  
Best Interest Finding**

**Shorebirds**

Researchers (Gill and Tibbitts, 1999) studied seasonal shorebird use of intertidal habitats in Cook Inlet, from February 1997 to February 1999 and have identified important seasonal shorebird habitat (ADF&G, 2000). The Cook Inlet area is a significant stopover site for migrating Western Sandpipers and Dunlin and a wintering area for Rock Sandpiper. Twenty-eight species of shorebirds were recorded using the area (Table 1), ranging from all being present during spring to a single species present during winter. Primary shorebird habitat, as identified by ADF&G, is depicted in Figure 1.

**Figure 1. ADF&G maps of primary shorebird habitat.**



**FIGURE 1 Primary Shorebird Habitat**

ADNR, D,O&G 5/00

Table 1. Shorebird Species Using the Cook Inlet Area\*

Black-bellied Plover	Red Knot
American Golden-Plover	Sanderling
Pacific Golden-Plover	Semipalmated Sandpiper
Semipalmated-Plover	Western Sandpiper
Greater Yellowlegs	Least Sandpiper
Lesser Yellowlegs	Baird's Sandpiper
Solitary Sandpiper	Pectoral Sandpiper
Whimbrel	Rock Sandpiper
Hudsonian Godwit	Dunlin
Bar-tailed Godwit	Ruff
Marbled Godwit	Short-billed Dowitcher
Ruddy Turnstone	Long-billed Dowitcher
Black Turnstone	Common Snipe
Surfbird	Red-necked Phalarope
*Species identified by Gill and Tibbitts, 1999.	

The annual pattern of use was characterized by the sudden occurrence and rapid increase in numbers of birds during early May and their abrupt departure in mid- to late-May. During this period, survey totals frequently exceeded 150,000 birds per day (Gill and Tibbitts, 1999).

Comparatively little use occurred during summer and autumn, but use was significant from late autumn to early spring when Rock Sandpipers resided in the inlet. During spring, a single species, the Western Sandpiper was by far the dominant shorebird, accounting for three-fourths of all birds recorded in Cook Inlet, especially southern Redoubt Bay. Cook Inlet also supported between 11 and 21 percent of the Pacific flyway population of Dunlin and what may be the entire population (ca. 20,000 birds) of the Rock Sandpiper. Several areas along the west side of Cook Inlet proved to be extremely important to shorebirds. Southern Redoubt Bay supported 73 percent of all shorebirds during spring (average 32,000 per day) while Susitna Flats accounted for 82 percent of use during winter (8,400 per day). The next highest bird use occurred at northern Tuxedni Bay, where an average of 6,325 birds occurred per day in spring. (Gill and Tibbitts, 1999).

Shorebirds that nest around Cook Inlet travel several kilometers from inland nesting sites to feed on intertidal areas. They also move their young chicks to intertidal habitats throughout the brood-rearing period (Gill and Tibbitts, 1999). Relatively few shorebirds are present during the summer breeding season. However, for one species in particular, the Hudsonian Godwit, the Cook Inlet drainage basin is the preferred nesting habitat in the state and may be critical to a major portion of the continental population. Western North American godwits, including those in Alaska have been shown to be genetically distinct from those breeding in eastern Canada (Gill and Tibbitts, 1999).

Shorebirds inhabit the tidal flats and feed on bi-valves, *Macoma balthica* (a small clam) and *Mytilus* (mussel). Evidence suggests that tidal currents in Cook Inlet affect the food supply through ice scour. The Beluga and Ivan River portions of the Susitna Flats are kept relatively free of grounded ice by the strong sweeping currents allowing Sandpipers to forage under the most severe winter conditions (Gill and Tibbitts, 1999). During extremely cold weather they move to Trading Bay off Nikolai Creek. They have also been known to use the area south of Redoubt, Tuxedni, and Kachemak Bays, and the Homer Spit, almost exclusively on the mud flats (Gill, pers. comm., 1999).

Shorebirds are most likely to be adversely affected by oil and gas development in three ways: 1) by disturbance during critical periods of use, 2) by direct contamination from pollutants, and 3) both directly and indirectly through elimination or contamination of benthic food supplies (Gill and Tibbitts, 1999). For a more detailed description of the cumulative

effects of oil and gas development on birds, see Chapter Six of the Cook Inlet Areawide 1999 Oil and Gas Lease Sale Final Finding.

The following are summaries of some applicable mitigation measures and lessee advisories. Mitigation Measure 21 and Lessee Advisory 4 have been amended at the request of ADF&G specifically to protect shorebirds. A complete listing of amended Mitigation Measures and Lessee Advisories is included with this Notice.

- Habitat loss avoidance -- Lessees must identify and avoid sensitive habitat areas and site facilities outside of key wetlands. Permanent facilities must be sited minimum distances from streams and waterbodies.
- Disturbance avoidance -- Surface entry for drilling and above ground lease-related facilities and structures are prohibited within the primary shorebird habitat in the Susitna Flats SGR, Trading Bay SGR; and Redoubt Bay CHA. Similar provisions will be imposed by the director to protect primary shorebird habitat in Redoubt Bay, south of the CHA.
- Aircraft flying over the primary shorebird habitat within the Sustina Flats SGR, Trading Bay SGR, and Redoubt Bay CHA must maintain a minimum altitude of 1,500 feet and a lateral distance of one mile.
- Oil spill prevention -- Lessees are required to implement oil spill prevention, control, and countermeasures plans.

### References

ADF&G (Alaska Department of Fish and Game)

2000 Memorandum from Lance Trasky, Regional Supervisor, Habitat Division to James Hansen, Leasing Manager, DO&G, February 28.

Gill, R.E. and T.L. Tibbitts.

1999 Seasonal shorebird use of intertidal habitats in Cook Inlet, Alaska. Final Report. U.S. Dept. of the Interior, U.S. Geological Survey, Biological Resources Division and OCS Study, MMS 99-0012.

Gill, R.E. pers. comm.

1999 Personal communication between Robert Gill, Wildlife Biologist, Biological Resources Division, U.S. Geological Survey, and Tom Bucceri, DO&G, February 9.

Maintained By:

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