Essential Fish Habitat project status report

Reporting date: October 23, 2007

Project number: 2007-9

Title: Mapping and fish utilization of coastal habitats vulnerable to disturbance from development and climate change

PIs: Johnson, Thedinga, Lindeberg, Harris

Funding year: FY 2007

Funding amount: $92,000

Status: [x] Complete [ ] Incomplete, on schedule [ ] Incomplete, behind schedule

Planned completion date if incomplete: Fall 2007

Reporting: Have the project results been reported? Yes. About 6,100 km of shoreline in southern southeastern Alaska (Dixon Entrance) were imaged with *ShoreZone* in 2007–within this mapped area, nine locations (30 seine sites) were sampled in June 2007 to determine fish utilization by habitat type. All data has been entered into an existing GIS database and online Fish Atlas (http://www.fakr.noaa.gov/habitat/fishatlas/) for reference by resource managers. Southeastern Alaska now has 20,076 km (60%) of shoreline imaged and 8,500 km mapped. Statewide, imagery has been collected for a total of 39,483 km of shoreline (about 20,190 km has been mapped). Both the mapping and GIS database (*ShoreZone*/Fish Atlas) will need continuous updating as more shoreline is mapped and fish distribution and relative abundance data is collected.

To address data deficiencies in the distribution and habitat use of nearshore fishes in the Arctic, we sampled nine sites in the Chukchi and Beaufort Seas with two gear types (beach seine and small bottom trawl). All data has been entered into an existing GIS database and online Fish Atlas (http://www.fakr.noaa.gov/habitat/fishatlas/) for reference by resource managers. Additional sampling (2008 and 2009) is planned at these sites to establish a baseline for monitoring changes in nearshore fish assemblages in a rapidly changing environment.

Results: What is the most important result of the study? Forage fish dominated catches in the Arctic. For example, juvenile capelin and Pacific sand lance were the most abundant species captured with a beach seine. Juvenile Arctic cod were one of the most abundant species captured with a trawl. All of these species are extremely important in the diet of other fishes, sea birds, and marine mammals and justify the need to protect nearshore areas from development.