Essential Fish Habitat project status report

Reporting date: 8/29/08

Project number: 2006-16

Title: Nearshore Essential Fish Habitat–Seasonal Fish Use, Mapping, GIS Database

PIs: Johnson, Thedinga, Lindeberg, Harris

Funding year: 2006

Funding amount: $110,000

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

Planned completion date if incomplete:

Reporting: Have the project results been reported? If yes, where were the results reported? Yes

1. Johnson et al. 2008. Seasonal Distribution, Habitat Use, and Energy Density of Forage Fish in the Nearshore Ecosystem of Prince William Sound, Alaska. Final report submitted to NPRB on 30 July 2008. Three peer-review publications will result from this final report.

2. Nearshore Fish Atlas of Alaska website (http://www.fakr.noaa.gov/habitat/fishatlas/) available to resource managers online; database includes fish catch by habitat type, fish size, species composition, fish and site photos, site coordinates, temperature, and salinity data for the Arctic, the Aleutian Islands, Cook Inlet, Prince William Sound, and southeastern Alaska.

Results: What is the most important result of the study?

1. Four species accounted for 92% of the total catch in Prince William Sound–Pacific herring, saffron cod, pink salmon, and capelin. Total catch (all spp.) increased seasonally in 2006 (4,653 fish in April, 5,274 fish in July, 7,861 fish in September); this indicates that fish occupy shallow, nearshore waters for at least several months a year. More importantly, species composition changed with season–pink salmon dominated catches in April, saffron cod and herring in July, and capelin in September. Catches differed among habitat types for some species–catches of saffron cod were greater in eelgrass than in bedrock or kelp, whereas catches of capelin were infrequent and mostly in kelp. Fish abundance was similar in eelgrass and kelp during day and night, but mean size of fish increased and number of fish species in kelp increased at night. Nearshore habitats are utilized by young-of-the-year herring and saffron cod as nursery areas to grow and to store energy before winter.