Essential Fish Habitat project status report

Reporting date: 10/18/2010

Project number: 2008-5

Title: Habitat characterization and utilization of early benthic phase red king crab

PIs: **Persselin, Stoner, Foy, Eckert**

Funding year: 2008

Funding amount: $45,166

Status: ☒ Complete ☐ Incomplete, on schedule ☐ Incomplete, behind schedule

Planned completion date if incomplete:

Reporting: The project data have not been formally reported at this time.

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

Field work was completed in spring 2010 to quantify larval supply and habitat use by early benthic juvenile red king crab. Larval supply was minimal and not high enough to test for any differences among Bays. At marginal pier in Women's Bay near Kodiak Island larval supply in shallow areas was lower than in deeper areas, however, the larval collection devices in shallow areas became covered with filamentous green algae that may have affected settlement of red king crab. Additionally, suction dredging did not capture a single juvenile red king crab suggesting that the recruitment processes to the benthic habitat in this region are extremely low. The photo survey was also completed in June 2010. The final analysis of the photos will be completed in the winter of 2011. These data will be incorporated into an ongoing project to assess red king crab habitat in nearshore areas of Kodiak Island.

As the total number of crabs captured either in the suction dredges or in the larval collection devices was low, no statistical analyses could be performed relating juvenile RKC to habitat. The habitat assessment by photos, which will quantify cover by both biogenic and non-biogenic structure, will give an annual progression of known juvenile red king crab habitat. In general, in shallow areas, macro-algae grew during the spring and summer and died back during the fall and winter, whereas there was no seasonal change in habitat in the deeper areas. This data will be generally useful for other projects examining temporal shifts in habitat in Alaskan waters.