Essential Fish Habitat project status report

Reporting date: 4/04/2008

Project number: 2006-01

Title: Mapping Long Term Equilibrium Impacts of Fishing and Evaluation of Impacts of Fishing on Fish Condition, Fish Distribution, and Fish Diet

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Funding year: FY 2006

Funding amount: $6,000

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. The data have been reported in the following NOAA Technical Memorandum (a followup peer-review publication is planned):
Aydin, K.Y., B. Matta and T. Buckley. Trends in bioenergetic foraging potential for walleye pollock in the Bering Sea. AFSC Tech. Memo. (in internal review).

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

We have created a series of bioenergetic maps on a 20-km resolution for the Bering Sea, showing (quantifying) the projected growth rates at fixed ration of walleye pollock in the summer, and interannual variation in this "growth potential." These maps are based on water temperature and the quality of prey (caloric contents) measured on this 20-km scale from 1984-2006. We have automated the method of creating these maps to update them annually in the future based on trawl-survey data. The maps are available in gridded form or in the ArcGIS format by request and through the Tech Memo. These maps will become an important component of the Bering Sea Integrated Research Project (BSIERP) modeling effort for spatial variation in fish production (FEAST – Forage Euphausiid Abundance in Space and Time). The automation of this method through database tools means we can extend our work to other species with minimal effort; specifically arrowtooth flounder and Pacific cod are planned as part of the BSIERP research.