JIMAR – PFRP ANNUAL REPORT FOR FY 2006

P.I./Sponsor Name: Jeffrey Polovina and Michael Seki

Project Proposal Title: Describing the Vertical Habitat of Bigeye and Albacore Tunas and Post Release Survival for Marlins in the Central Pacific Longline Fisheries with Pop-up Archival Transmitting Tags

Funding Agency: NOAA

NOAA Goal (Check those that apply):

x To protect, restore, and manage the use of coastal and ocean resources through ecosystem-base management

☐ To understand climate variability and change to enhance society's ability to plan and respond

☐ To serve society's needs for weather and water information

☐ To support the nation's commerce with information for safe, efficient, and environmentally sound transportation

1. Purpose of the Project (one paragraph)
   To describe the vertical habitat and horizontal movements of bigeye and albacore tunas in the central Pacific. These tunas are target species in longline fisheries in both Hawaii and American Samoa, and an understanding of the habitats and movements of these species is needed as a background to fisheries management.

2. Progress during FY 2006 (One-two paragraphs, including a comparison of the actual accomplishments to the objectives established for the period, and the reasons for slippage if established objectives were not met):

   Two tagging cruises were conducted. In March 2005, around Hawaii, 16 fish were tagged with PAT tags including 9 bigeye and 1 albacore, and in February 2006, around American Samoa, 7 albacore and 2 bigeye were tagged with PAT tags. Two manuscripts were written incorporating the tagging data from previous years. Talks were presented at various scientific meetings on vertical habitats of albacore and bigeye tunas.

   The American Samoa tagging found that albacore primarily occupied a depth range of 150-200m corresponding to the temperature range 20 -25 C. A local maxima in micronecktonbiomass as estimated from acoustic backscatter was also observed at the 150-200 m depth range. The bigeye tuna tagging around Hawaii found during the

day they generally occupied the depth range 250 – 500 m, corresponding to a temperature range of 10-14 C, while at night they were in the top 50m.

One difficulty encountered has been a lack of marlins encountered on our tagging cruises so we have not collected the data to estimate their post release survival.

3. Plans for the next fiscal year (one paragraph):
Project concludes at the end of FY06. However some analyses and manuscript preparation will continue into FY07.

4. List of papers published in refereed journals during FY 2006.
Howell, E.A., D. R. Hawn, J. J. Polovina. In Review. Integrating environmental, longline, time-depth-recorder, and pop-up satellite archival tag data to describe the Hawaii longline fishery for bigeye tuna at 30N in the summer. *Marine Biology*

Domokos, R., M. P. Seki, J. J. Polovina, D. R, Hawn. In Prep. Oceanographic characterization of of the American Samoa albacore habitat and longline fishing grounds. *Fish. Oceanogrpahy*

5. Other papers, technical reports, meeting presentations, etc.
Talks at Tuna Conf, PFRP meetings, Oregon State University.

6. Graduates (Names of students graduating with MS or PhD degrees during FY 2005. Provide titles of their thesis or dissertation):

7. Awards (List awards given to JIMAR employees or to the project itself during the period):
8. Publication Count (Total count of publications for the reporting period and previous periods categorized by NOAA lead author and Institute (or subgrantee) lead author and whether it was peer-reviewed or non peer-reviewed (not including presentations):

	JL Lead Author			NOAA Lead Author			Other Lead Author		
	FY03	FY04	FY05	FY04	FY05	FY06	FY03	FY04	FY05
Peer-reviewed						2			
Non-peer reviewed									

9. Students and Post-docs (Number of students and post-docs that were associated with NOAA funded research. Please indicate if they received any NOAA funding. For institutes that award subcontracts, please include information from your subgrantees):

10. Personnel:

(i) Number of employees by job title and terminal degree that received more than 50% support from NOAA, including visiting scientists (this information is not required from subgrantees): Fishery Biologist B.S. – 1 employee

(ii) Number of employees/students that received 100% of their funding from an OAR laboratory and/or are located within that laboratory.

(iii) Number of employees/students that were hired by NOAA during the past year:

11. Images and Captions (JIMAR will be including images in the annual report. Please send two of your best high-resolution, color images (photo, graphic, schematic) as a JPEG of TIFF with a caption for each image. Hardcopies of images can be dropped off at the JIMAR office if no electronic versions are available.

● Caption 1: The NOAA Vessel O.E. Sette (background) and fishing vessel Adelita conducting oceanographic surveys and electronic tagging of albacore in American Samoa waters, February 2006.