PRINCE WILLIAM SOUND
OIL SPILL RECOVERY INSTITUTE

Request for Professional Services

Issued July 20, 2006

Task: Research and write a 5-10 page white paper on the topic of tracking and monitoring marine organisms in the Prince William Sound (PWS) and Copper River Delta region. This white paper will be distributed through the Oil Spill Recovery Institute (OSRI) and some of its partner organizations and will serve to identify potential requests for proposals which OSRI may develop.

Deadline for completion of the White Paper: August 25, 2006 via electronic delivery.
Deadline to apply: August 1, 2006 – see application process below.

Background: Exciting technologies have been developing for tracking and monitoring marine organisms, such as the bioacoustic arrays deployed throughout the Pacific for salmon and other marine organism studies in the POST (Pacific Ocean Shelf Tracking) project. Transmitters can be turned on and off to conserve battery life up to a number of years. It appears that there will be opportunities to track and monitor forage fish with this technology, and that POST has plans to deploy arrays in PWS in 2007. OSRI science and work plan committees agreed that interfacing with POST might yield large returns from our rather small research fund investment. Tracking and monitoring marine organisms by interfacing with innovative technologies could also help with modeling goals for real-time biology.

Developing an RFP in this area will require identification of key questions through exploration of possibilities for using this technology to address issues specific to the Prince William Sound.

Some questions include: Is this technology appropriate for tracking and monitoring species such as herring or sandlance, or is it designed primarily for larger mammals? Which species would we monitor, and where would the arrays be placed in PWS? Is the POST concept adaptable to PWS and at frequencies for organisms of concern? Are there other similar technologies that should also be referenced in an RFP?

Some of the scientific questions relevant to OSRI revolve around distribution of organisms that would be impacted by oil in the water, and especially by oil spill response methods, such as use of dispersants. Available technologies are active (battery bearing) and passive (no batteries). What are the advantages of active and passive devices for tracking and monitoring marine organisms? Are there questions that can be answered by active technologies that can't be addressed by passive technologies, and conversely? Some of the passive methods have been around a long time, so how have they been used in PWS and what were the results? Have active technologies been used in PWS and what were the results? Are there important groups of species that can't be addressed by active or passive technologies due to size, behavior, federal laws, etc.? To what species would each class (passive, active) of technologies be applicable, and are these species of interest to OSRI?

Acoustic receivers/transmitters, data loggers and linking networks have been developed for fishes, birds, and marine mammals. The vendors generally rave about applications and successes, but there are likely sufficient "unknowns" about use in the real world to warrant a white paper that describes not only what is available (off the shelf and other), but who is using the methodologies, and what questions are being answered. Are these technologies really working for researchers? How and where?

Expectations

- The contractor would communicate with POST and other technology groups operating in the Pacific or elsewhere. The white paper should summarize findings from those communications and other research on the topic (i.e., through Internet searches).
- The contractor would communicate with some individuals in PWS to identify the most important issues of PWS (herring, marine mammals, etc.).
- The white paper should also address whether, and if so how, this technology can interface with the Alaska Ocean Observing System (AOOS) to implement their biological monitoring goal.
- The research portion of this project is anticipated to require 5-6 days full time work and the writing portion an additional 2-4 days.

Application Process

Interested contractors should submit a statement of interest and proposed work, including a budget, and attach a resume or C.V. **Submit these materials by August 1** to Dr. Katey Walter, OSRI Research Program Manager, kwalter@pwssc.gen.ak.us

OSRI expects to award a contract for this work by August 4, 2006.