

## EVOS ANNUAL PROJECT REPORT

All recipients of funds from the *Exxon Valdez* Oil Spill Trustee Council must submit an annual project report in the following format by September 1 of each fiscal year for which project funding is received, with the exception of the final funding year in which a final report must be submitted. Satisfactory review of the annual report is necessary for continuation of multi-year projects. Failure to submit an annual report by September 1 of each year, or unsatisfactory review of an annual report, will result in withholding of additional project funds and may result in cancellation of the project or denial of funding for future projects.

**PLEASE NOTE:** Significant changes in a project's objectives, methods, schedule, or budget require submittal of a new proposal that will be subject to the standard process of proposal submittal, technical review, and Trustee Council approval.

**Project Number: 040210**

**Project Title: Youth Area Watch**

**PI Name: Rich DeLorenzo**

**Time Period Covered by Report: September 1, 2003 to August 30, 2004**

**Date of Report: August 30, 2004**

### 1. **Work Performed:**

Due to the delay in Trustee Council action on the funding of FY 04 projects, some revisions were necessary for the schedule of project 040210. It was mid-semester of the 03/04 academic year when the Council approved the funding. Most schools were already committed to their curricula and unable to accommodate the Youth Area Watch program as originally proposed, in their schedules. In addition to providing the necessary ramp-up activity needed to institute the full program in the subsequent academic years, the proposed revision allowed the Youth Area Watch program the opportunity to reorganize efforts to be more responsive to the EVOS GEM program.

The YAW website was updated to reflect current goals, objectives and new application procedures. Links are now available to past projects and partners. It will be updated regularly throughout the year. The new website url is  
[http://www.chugachschoools.com/youth\\_area\\_watch/](http://www.chugachschoools.com/youth_area_watch/)

Since Craig Matkin is one of two scientists committed to working with our YAW group over the long term, he suggested our students become more versed in the study of genetics and DNA sampling techniques as they relate to his whale studies. In the past, YAW students have joined him on his spring whale sampling trips, but have had very little training other than the fall orientation. This year we piloted a genetics program at Whittier school where students attended weekly classes in genetics and the molecular basis of heredity.

After 3 months of study, students were ready to participate in a DNA Fingerprinting lab. Since Chugach School District doesn't have the equipment to conduct electrophoresis, we partnered

with Kirk Brown of Lawrence Livermore Labs in California. Kirk sent us the lab equipment from BioRad Technologies and arranged to have his Biotechnology high school students conduct the lab with Whittier students via videoconferencing at both sites. The lab was considered a success by all involved and more are planned for the upcoming 04/05 school year.

In an effort to shift to GEM guidelines, more emphasis on long term environmental monitoring was put into the YAW agenda. With the help of the Center for Alaskan Coastal Studies (CACs), an EPA grant was obtained for \$5000 to provide teacher training along those lines.

With those funds, a Coastal Environmental Monitoring workshop was held August 15-17, 2004 at the CACS Field Station in Peterson Bay. Four YAW teachers (from Tatitlek, Valdez, Anchorage) attended the class and had favorable comments regarding its usefulness to their roles as YAW site teachers. Each developed lessons pertinent to their classroom and location, involving their students in environmental field monitoring projects.

The Valdez class plans to conduct a resource inventory for newly designated marine parklands. In addition to the educational value and the need for the data, this will also provide much needed information for the governmental agencies and scientists involved.

Students in Tatitlek will monitor chosen sections of their beach for designated species abundance and change over time, while involving local community members in their data collection techniques. This addresses the need for community involvement in long term monitoring projects and the added benefit of involving parents in their children's' education.

The Whittier participants are still devising their plans for a long term monitoring project. The kittiwake colony across from Whittier has been monitored for many years, with a recent lack of attention. This may become their long-term focus again, with the support of community members (for transportation and monitoring assistance).

Recruitment for student participation in the 04/05 school year began May 17, 04. When school begins in fall 04, students will have already completed the application process (which requires more input than in years past) and will be ready to begin their environmental monitoring projects in September, while the weather is still cooperative. In years past, YAW recruitment began in late Sept/ October, followed by a YAW Orientation gathering in October/November. With field season over until spring, this made it difficult for teachers and students to participate in any long-term data collection.

When schools in the Kenai Peninsula Borough School District (KPBSD) were contacted for about 04/05 involvement, they declined participation due to extensive teacher cutbacks, and resulting increased work loads.

## **2. Future Work:**

KPBSD declined participation in late May 04 therefore, more recruitment throughout PWS area schools, to involve more students, is planned for early September 04.

Since YAW orientations have traditionally occurred at the Alaska SeaLife Center in Seward, and several students in this year's program are past participants in YAW, the orientation site has changed for this year. The 04/05 YAW Orientation will be held at the Center for Alaskan Coastal Studies during September 27-29, 2004, coinciding with the lowest tides of the month. Students will be trained in tide pool species identification, environmental monitoring techniques and will receive instruction from CACS scientists, whale biologist Craig Matkin, and meteorologist Michael Lilly. Facilities rental and travel costs will be similar to those proposed in the budget.

Costs for resupplying the water quality monitoring kits have not yet been incurred but should be forthcoming, as kits will soon be inventoried.

In an effort to expose students to the variety of scientific research being conducted throughout the region, we plan to have more involvement with the Prince William Sound Science Center (PWSSC) in Cordova. Those contacts are currently being developed.

## **3. Coordination/Collaboration:**

In conjunction with Michael Lilly's work with meteorological studies throughout Alaska, Austin McHugh of Campbell Scientific, Inc in Utah donated the use of a data logger to YAW.

This piece of equipment will be used to train students in obtaining data at their individual sites then field testing it with downloaded information from the data logger already stationed at their sites.

Regular communication is ongoing throughout the year with Craig Matkin, regarding ways to improve student involvement in his whale identification and monitoring project. As per Craig's suggestion, more comprehensive student understanding of genetics is being addressed in the classroom by YAW teacher(s) and collaboration with Kirk Brown of Lawrence Livermore Labs in California.

Continued development and deployment of the genetics class and DNA fingerprinting labs with Kirk Brown and his biotechnology students will occur during the school year, involving YAW students enrolled in the genetics class, and who have access to video-conferencing capabilities. Many meetings took place in January and February 2004 with Kirk Brown, Bill Engelhardt (Director of Instructional Technology, San Juan County of Ed), Sheryl Salasky and Randy Fleharty (YAW and Technology coordinators) to arrange the seamless video connections necessary to conduct the labs.

## **4. Community Involvement/TEK & Resource Management Applications:**

One of the standard content areas necessary for Chugach School District students to address prior to graduation is "Service Learning". This can translate as participating in community

improvement projects, volunteering for a local agency, or involving local elders in educational endeavors. YAW students are encouraged to include local community members in their environmental monitoring projects, thus addressing several criteria: the need for a service learning project, and garnering community involvement/input in management of local resources.

There was no official YAW program during the reporting period; however, the guidelines are now in place for involving community members and gathering TEK as environmental monitoring data is collected.

YAW students are charged first with monitoring a chosen marine related species (preferably coastal). Once they become knowledgeable about that species, they train local community members on their sampling techniques involving them in the process. This, in turn, starts a dialogue between students and community members about local natural resources, including traditional ecological knowledge. Most community members in the villages of Tatitlek and Chenega Bay are long-term residents possessing a wealth of traditional ecological knowledge. This will be recorded on the data form and submitted to the CIRCAC website listed below (under information transfer).

Cordova also boasts a population of knowledgeable long-term residents, both Native and non-Native Alaskans. YAW students there have access to two of the local resource management agencies: ADFG and USFWS. During the reporting period, students of the YAW teacher assisted USFWS personnel in conducting a shorebird census during spring migration. The plan is for this partnership to continue.

In Valdez, the recent acquisition of marine state park lands necessitates a resource inventory prior to designating the use of those resources. The YAW teacher in Valdez is planning on involving her marine biology class with collecting baseline data requested by state park personnel. YAW students will partner with students from the Prince William Sound Community College marine biology class, also involved in this resource inventory. The instructor for this class also attended the recent CACS environmental monitoring training for YAW teachers.

#### **5. Information Transfer:**

An environmental monitoring workshop for YAW teachers was held August 15-17, 2004 at the CACS field station in Peterson Bay. Four YAW teachers attended and devised plans for conducting long term environmental monitoring projects with their students. No data was collected within the reporting period, however, protocols were presented for collecting and inputting coast walk data obtained during the upcoming year. The website monitored by Cook Inlet Regional Citizens Advisory Council (CIRCAC) is <http://coastalaska.net/>

#### **6. Budget:**

Due to the delay in funding this year, YAW was unable to meet the original timeline as proposed in the 040210 research plan. A newer plan was discussed with Phil Mundy and Gail Phillips in early December 03. It involved, in part, the designing of science courses, geared to state educational standards, preparing students with the knowledge and skills necessary to work effectively with their communities on local projects, as well as work with the scientists in a

productive and meaningful way. The original budget and timeline for 03/04 YAW school year was revised to reflect those changes.

The budgets for FY 05 & 06 remain the same as originally proposed, despite a reorganization of the timeline.

The field trip in May 04 to accompany Craig Matkin for whale studies did not occur as planned due to timing conflicts and last minute changes in students' schedules. It is requested that those unspent funds carryover into the FY 05 budget to cover additional field trips to PWSSC and CACS (not originally planned).

As noted in the YAW budget, an EPA grant covered partial costs of the above-mentioned CACS workshop, facilities rental and ferry transportation across Kachemak Bay. YAW funds covered the travel costs of getting teachers from their site to Anchorage and one night's meal and lodging in Homer; Chugach School District provided the costs of travel from Anchorage to Homer and return (and overnight lodging in Anchorage).

In April, 2004 a proposal was submitted to the Alaska Section of the American Water Resources Agency (AWRA) requesting funds for \$500 for meteorological and water monitoring sensors. Response is pending.

**Report Prepared By: Sheryl Salasky, Rich deLorenzo**

**Project Web Site Address: [http://www.chugachschoools.com/youth\\_area\\_watch/](http://www.chugachschoools.com/youth_area_watch/)**

**SUBMIT ANNUAL REPORTS ELECTRONICALLY TO [phil\\_mundy@oilspill.state.ak.us](mailto:phil_mundy@oilspill.state.ak.us). THE REPORTS WILL BE POSTED ON THE TRUSTEE COUNCIL'S WEB SITE AND SHOULD ALSO BE POSTED ON THE PI'S WEB SITE. The subject line of the e-mail transmitting the report must include the project number and the words "annual report" (e.g., "035620 Annual Report"). Electronic reports must be submitted either as an Acrobat Portable Document Format (PDF) file or word processing document (Microsoft Word 2000 for Windows or lower or WordPerfect 9.0 or lower) with any figures and tables imbedded. Acrobat PDF 4.0 or above file format must be used, preferably in 'formatted text with graphics' (called "PDF normal" under Acrobat PDF 4.0) format. Minimally, "PDF searchable image" (called "PDF original image with hidden text" under Acrobat PDF 4.0) may be used if pre-approved by the Trustee Council Office. In either case, the PDF file must not be secured or locked from future editing, or contain a digital signature from the principal investigator.**