

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: 050210

Project Title: Youth Area Watch

PI Name: Rich DeLorenzo (retired 05-05) -> Robert Crumley (new PI)

Time Period Covered by Report: September 1, 2004 to August 30, 2005

Date of Report: August 30, 2005

1. **Work Performed:**

September 04

The student application period for YAW, normally held in May, was extended to early September. This is due to many circumstances, including busy classroom agendas in May, and overextended students and teachers. It is often easier to plan school visits in the fall before schedules erupt. Combined with the spring round of applicants from Valdez and Cordova, a total of 20 participants were accepted from 28 applications from 4 sites.

There were no age-eligible applicants from Chenega Bay. Past YAW schools from the Kenai Peninsula have new teachers who are not yet ready to commit to the program.

Student orientation for YAW occurred September 26-29, 2004 at the Center for Alaskan Coastal Studies (CACS), Peterson Bay Field Station across the bay from Homer. [The training provided for teachers at this facility in August 2004 was possible through an EPA grant jointly written by CACS and YAW personnel (see annual report 040210).]

During this four day workshop 19 students (and 3 teachers) were trained, by CACS staff and visiting biologists, in sampling techniques for environmental monitoring projects. (YAW Orientation-Itinerary-Final.doc available upon request.) Site groups worked together to plan and design similar projects to conduct back in their communities.

Students and teachers were provided with:

- guided practice in scientific sampling techniques

- technology skills to download local shoreline maps from website
- notebooks containing data logs and other useful scientific information
- contact information for various scientists & ecologists.

Back at their sites students conducted the following projects (see YAW website for projects):
 Whittier Community School—Winter Weather Study (brochure for residents/mariners/visitors)
 Tatitlek Community School—Ocean Monitoring and Community Survey
 Valdez High School—Mineral Creek State Park Baseline Inventory
 Cordova High School—Power Creek Watershed Monitoring Project

Various agencies assisted students in their training and data collection:

- Whittier: National Weather Service-Linda Tolman, certified weather observer
- Tatitlek: ADFG-Fritz Kraus, fisheries biologist
- Valdez: Dept Natural Resources – Jack Sinclair, district ranger
- Cordova: ADFG; USFWS; Copper River Delta Project-Becky Clausen

Digital copies of those projects will be accessible on the YAW website soon.

October 04

Students continue planning and conducting monitoring projects back at sites. Preliminary plans/arrangements were made for additional classroom instruction in science related topics:

- Environmental monitoring—plan YAW Wave to provide students with more in-depth instruction on environmental monitoring techniques, based on Chugach School District (CSD) science standards
- Genetics--ongoing communication with Kirk Brown of Lawrence Livermore Labs for distance delivery genetics lessons and labs
- Chemistry--contact master high school chemistry instructor Jamie Crannell of Michigan re teaching spring classes with Whittier YAW students

November 04

Students participated in research activities - YAW Wave 1 took place in Anchorage Nov 8-11 to give students practice in dealing with contrived environmental issues and appropriate scientific monitoring techniques. Students from Whittier, Cordova, Anchorage and Tatitlek arrived in Anchorage for the 4-day event held at CSD's Anchorage House. Evaluations from involved students indicated this a valuable experience. (Increased scores on science assessments taken Feb 05 support this.)

December 04

Whittier students were trained by a certified weather observer. Students apprenticed with Linda Tolman during her hourly weather watches and were trained in various data collection techniques. This weather project will continue throughout the school year, ultimately to be compiled and published in a brochure for distribution around town for visitors and local mariners.

Preliminary plans were made for YAW Wave 2, a follow-up from Wave 1 to ensure students are proficient in National Science Standards for 'science in the personal and social perspectives' (environmental science).

January 05

YAW students from Whittier presented their weather monitoring project at the EVOS Annual Symposium poster session at the Anchorage Hilton on January 24, 2005.

Students continued working on their community-based monitoring projects:

- Tatitlek students were not able to conduct their tidal organisms survey, due to various reasons-- access their tidal beach was cutoff due to poor weather (snow during scheduled trips), no low tides during school hours in Jan & Feb, and Russian Christmas celebrations during the month of January
- Whittier students continued daily weather recordings and designed their brochure
- Valdez students made several reconnaissance trips to the Mineral Creek State Park site where they planned to help the Park Ranger conduct a resource inventory. They began their study once good weather replaced the snow!
- Cordova students had not decided on their long term monitoring project yet.

Richard DeLorenzo, Project P.I., announced his upcoming retirement effective May 31, 2005

February 05

YAW students from Whittier, Cordova and Anchorage attended the second YAW Wave, held at the CSD Anchorage House on February 7-11, 2005. In addition to conducting environmental investigations related to air and water quality, they attended the Anchorage Forum on the Environment held at the Egan Convention Center the same week as the Wave. Students attended various sessions on environmental issues pertinent to Alaska.

- Tatitlek students were unable to attend this Wave; poor weather prevented them from flying into Anchorage for the week.
- After completing their second Wave, 4 students passed science assessments, moving them onto the next level of National Science Standards for 'science in the personal and social perspectives' (environmental science).

Video labs taught by Kirk Brown's biotechnology students have been postponed this year due to scheduling conflicts.

March 05

New Era Films was contracted to help produce a 5 minute dvd to explain the YAW program.

Film clips were obtained from new and existing footage.

Jamie Crannell taught a week of chemistry classes for Whittier Community School

April 05

Arrangements for May 20, 21 whale observation trips with Craig Matkin and Kenai Fiords Tours were confirmed. Logistics included charter flights to/from Valdez and Cordova, airport shuttle from Seward airport to boat harbor, driving arrangements from Whittier. Tatitlek students did not participate due to a schedule conflict with class trip.

Students wrap-up long term-monitoring projects for May 1 deadline. Their completed project report earned students passage to whale observation trips with Craig Matkin aboard Kenai Fiords Tours vessel.

May 05

Three sites (Whittier, Valdez, Cordova) submitted their work in digital format. Tatitlek submitted hard copies of surveys. See September report above for list of projects.

Projects are too large to attach to this report, but are being copied to a separate cd for submission to EVOSTC. They will also be linked to the YAW website.

Project coordinator traveled to school sites for 2005/06 recruitment:

- Recruitment occurred at Valdez Jr/Sr High School May 2, 2005. Nine applications were received. Five students (3 new; 2 returning) were accepted.
- When Cordova was contacted for a recruitment presentation, they advised waiting until Fall 05 when new marine science/YAW teacher replaces current marine science/YAW teacher
- Recruitment at 3 CSD sites was postponed to Fall 05, due to busy schedules.

Since site visits can be problematic with scheduling conflicts, a 5-minute dvd was made to show to prospective participants (scientists, teachers, students, funders) whenever a visit is not feasible. As per phone conversation on May 31, 05 with Richard Dworsky, a copy of this dvd will be given to the EVOS Trustee Council for their files.

Students participate in whale identification and tissue sampling trip in Resurrection Bay:

- May 20, 2005—day trip with Craig and Eva for 13 students and teachers from Cordova, Whittier and McCarthy; one humpback whale was observed shortly after leaving Seward harbor; resident killer whales were observed resting throughout the day; vocalizations were sparse; large swell caused mild seasickness in over half of the participants onboard; students were unable to assist biologists in photo identifications of whales; we spent time in calmer bays when possible; it was decided that if seas continue rough on next trip, we'd return to the harbor early and spend time touring Alaska SeaLife Center
- May 21, 2005—day trip with Craig and Eva for 13 students and teachers from Valdez and Anchorage; seas were calmer than the day before and whale activity was more visible; many resident killer whales were observed throughout the day; tissue samples were obtained from on 'new' whale not sampled before; fish scales were also collected to determine upon which species whales were feeding; students were able to assist biologists in photo identifications of whales
- Students from Tatitlek did not participate in the whale observation trips since they had a scheduling conflict with another field trip
- Discussion between biologists and YAW coordinators yielded a plan to more actively involve students in mapping the boat route, recording data regarding the whale observations and recording hourly meteorological data
- The cost of day charter with Kenai Fiords Tours increased from \$1600/day to \$2000/day. Since YAW budgeted at 1600/day one less charter was scheduled to absorb price increase
- The incentive of a reserved space on the KFT boat with whale biologists, worked well in motivating YAW teams to submit their long term monitoring project prior to the end of the school year (even though some projects will continue next year)

Richard DeLorenzo, CSD superintendent and YAW P.I. retired May 31, 2005.
Robert Crumley became the new CSD superintendent and YAW P.I. Welcome, Bob!

2. Future Work:

In an effort to expose students to as many Prince William Sound communities as possible, the 05/06 YAW Fall Orientation is being planned at Prince William Sound Science Center in Cordova. This will give students exposure to yet another community vital to the ecology and economy of the Sound.

Scientists from various agencies conducting research in PWS and Copper River Delta have been contacted for this student training session. Kate Alexander of PWS Science Center has been instrumental in facilitating this.

Kate McLaughlin, EPA representative in Chenega Bay is conducting shellfish sampling, and water quality testing of 2 local creeks. She has offered to train our first YAW student there in many years, to assist her in those studies. A local community member in Chenega Bay who is trained in GLOBE environmental sampling protocols, has also offered to work with village students in obtaining and entering data into the GLOBE website.

The YAW project coordinator and the Extension School liaison for CSD are both registered for GLOBE training September 23-24, 2005.

Since the 2 YAW Waves were so successful last year, 2 more are being planned for the upcoming school year: October 10-14, 2005 and March 20-24, 2006.

3. Coordination/Collaboration:

In addition to the various agencies that assisted students in their training and data collection (see list of agencies under: 1. "Work Performed" - September 04) YAW coordinated with new and continuing educators, scientists and scientific supply companies.

One of this year's goals was increased involvement with Prince William Science Center (PWSSC) in Cordova. Kate Alexander and Allan Marquette are making this happen with Fall 05 Orientation activities. PWSSC conducted site visits, offering science activities in Chenega Bay and Tatitlek, both YAW schools.

Jamie Crannell, master science teacher, spent a week in March working with Whittier students improving their mastery of chemistry.

Onset Computer Corporation has loaned YAW one of its HOBO data loggers for student use. YAW students will be trying this out at 05 Fall Orientation to see if they want to purchase some for their projects.

Fritz Kraus of ADFG in Anchorage sent a refrigerated salt-water tank to Tatitlek so students could participate in an egg take and rear the fertilized eggs over the winter to young smolt. They were released according to ADFG guidelines in May 05 (concurrent with the whale trips in Resurrection Bay—it's a busy month!).

Craig Matkin and Eva Saulitis continue to work tirelessly with YAW students and planners, to give students the most comprehensive, real-life science experience possible. At the end of the May 05 trips, they met with YAW to increase student involvement while traveling aboard the vessel. If more scientists were this accessible and willing to spend time bringing students into their research world, more students would jump into science with both feet, gladly!

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.

Tatitlek Community School students surveyed community members about their intertidal harvesting memories from years past. Students also inquired about elders’ preferences for a YAW study topic. Some suggested that the bidarki population was diminished from years past; others made mention of changes in the presence and location of marine algae. Students spent a good deal of time surveying community members, however the sampling portion of their project was beset by weather problems and scheduling conflicts.

Most community members in the villages of Tatitlek and Chenega Bay are long-term residents possessing a wealth of traditional ecological knowledge. While addressing various CSD education targets, students are regularly encouraged to dialogue with their families and then write about those discussions.

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. Last year, students of the YAW teacher assisted USFWS personnel in conducting a shorebird census during spring migration. The plan is for this partnership to continue.

With increased sport fishing pressure on the Copper River Delta, agency managers are conducting human-resources use surveys at local fishing spots. YAW students will be trained in how to administer those surveys at the upcoming Fall 05 Orientation

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 involved her marine biology class in collecting baseline data requested by state park personnel. YAW students were to partner with students from the Prince William Sound Community College marine biology class, also involved in this resource inventory, however the college class was cancelled due to lack of enrollment. The instructor slated to teach this class also attended last year’s CACS environmental monitoring training for YAW teachers.

5. Information Transfer:

A dvd describing the goals and purpose of YAW was made during FY05 to show a variety of participants and interested parties what it means to be involved in YAW.

A Chenega Bay community member is trained in GLOBE protocols and is willing to work with local students in collecting and entering data on the GLOBE website. The YAW project coordinator and CSD Extension School coordinator both will obtain GLOBE training September 23-24, 2005. They plan to work with the CSD Extension School students, encouraging them to collect (and enter on the GLOBE website) local environmental data based on GLOBE protocols.

The YAW website is developing into a central information gathering and collection point for YAW-related activities. It has been updated with the current YAW application, past and present student projects and links to involved agencies. Improvements are ongoing.

6. Budget:

Due to the delay in funding for FY04, there were no whale observation & monitoring trips in May 2004. When the trips were planned for May 2005, the cost of the day charter had increased. This price increase was not budgeted for, so YAW was able to pay the increased price by scheduling only 3 trips at \$2000/day, rather than the usual 4 trips at \$1600/day. Since one of the YAW schools was unable to attend, we were able get all students out in 2 trips, thus saving another \$2000. It is hoped those funds will be rolled over into the FY06 budget for use in the May 06 trips, as the price has already gone to \$2200/day.

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. Those funds were received February 2005.

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Project Web Site Address: http://www.chugachschoools.com/youth_area_watch/

SUBMIT ANNUAL REPORTS ELECTRONICALLY TO 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.