

**Project Number: 050743**

**Project Title: Connecting with Coastwalk: Linking Shoreline Mapping with Community-based Monitoring**

**Principal Investigators:**

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**Time Period Covered by Report:** October 1, 2006 – August 31, 2007

**Date of Report:** August 31, 2007

**Prepared By:** Steve Baird and Marilyn Sigman

**1. Work Performed**

The following tasks were completed during this annual report period:

- 1) A poster was presented by the co-PI's of this project at the annual GEM conference in January 2007.
- 2) Data from the 2006 Coastwalk was entered into the database.
- 3) CACS contracted with Rob Bochenek, Axiom Consulting and Design, to improve the Kachemak Bay CoastWalk database and web interface.

A poster titled “Community Involvement in Coastal Monitoring: Linking Shoreline Mapping with Community Monitoring” was presented at the annual GEM conference in January 2007. This poster explained the benefits of citizen involvement in coastal monitoring and the details of this project to date.

Axiom Consulting and Design performed the following tasks as part of their contract under this project:

- 1) The Coastwalk database was up-scaled into an SQL-compliant data structure and database (SQL Server);
- 2) Two Excel databases containing all historic data were converted to MS Access Databases for Office 2000 and Office 2003.
- 3) Improved ease of data entry and management through the creation of data entry forms (MS Access DB) for the CoastWalk checklist and biodiversity data entry forms.
- 4) Design of a prototype web page and web-accessible search interface for users to access and browse the CoastWalk database by zone and date of survey:

<http://test.axiomdms.com/cacs/CoastwalkDB/COastwalk.cfm>

In addition, the Center for Alaskan Coastal Studies has upgraded a page on the CACS website as a portal for Alaska coastal community monitoring: <http://www.akcoastalstudies.org/gem.htm>.

## **2. Future Work.**

We anticipate our project to continue on schedule.

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

This project is a collaboration between the Center for Alaskan Coastal Studies and the Kachemak Bay Research Reserve. The evaluation effort performed by Tom Dean provided the means to align revised CoastWalk protocols with those being developed for the GEM Nearshore Monitoring Plan and community-based monitoring site recommendations were provided to them as part of efforts to identify sites in several coastal communities within the GEM geographic area. Recommendations for nearshore monitoring sites were coordinated with sites employed in other projects with a substantial community involvement component in Kachemak Bay: EVOS Project 030647 Investigating the Roles of Natural and Shoreline Harvest in Altering the Kenai Peninsula's Rocky Intertidal completed in FY2004 (Contacts: Jennifer Ruesink, Anne Salomon) and EVOS Project 030666 Alaska Natural Geographic in Shore Areas; Census of Marine Life field project (Contacts: Brenda Konar, Katrina Iken).

The project has been coordinated with outreach about ShoreZone mapping for use by teachers, natural resource managers, and community members. The annual CoastWalk will continue to adopt the methods and procedures recommended by Tom Dean to increase the scientific value of the results of CoastWalk surveys, including the use of GPSs to obtain coordinates for zone boundaries and identify locations for eagle nests, cliff erosion, human activities, areas of vehicle use, structures on the beach, archeological sites, garbage dumps, outfalls and pipelines; and the adoption of procedures for documenting dead birds, collecting otter skulls, and documenting mass mortalities of invertebrates.

We also benefited from a collaboration with Rob Bochenek, of Axiom Consulting and Design. His expertise was invaluable in redesigning the database and producing a prototype web site to access the data.

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

The overall purpose of the project is to develop a model for community-based nearshore monitoring. The work accomplished has increased the accessibility of historic data collected and will increase the utility of the data beginning in September, 2005, when the first phase of recommended changes to methods were implemented. The evaluation report provides a "blueprint" for the further development of this community involvement activity and the resulting database.

The Kachemak Bay CoastWalk program has goals of: 1) building community awareness of the importance of local marine habitats, 2) gathering data to detect long-term trends in biodiversity,

and 3) observing and documenting the effects of human impacts. The development of more intensive data collection protocols and the merger of the dataset with the KBRR's GIS shoreline mapping has provided the means to address these goals with greater scientific rigor and to enable the application of the collected data and trend information to shoreline habitat evaluation and mitigation of the effects of human activities such as shoreline development, point-source pollution, and marine spills.

## **5. Information Transfer**

We developed a poster presentation "Community Involvement in Coastal Monitoring: Linking Shoreline Mapping with Community Monitoring" with co-authors Tom Dean, Steve Baird, and James Bodkin. The poster was presented at the 2007 GEM conference and has been described above

## **6. Budget**

There are no substantial differences between the expected and actual budget expenses.