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CLALLAM COUNTY MARINE RESOURCES COMMITTEE PROJECT FINAL REPORT

Elwha Nearshore Consortium—Beached Bird Monitoring at Elwha Bluffs and Crescent Bay  
5/1/2010-6/11/2011

MOA 332.10.013 Final Report

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## **COASST Background**

Housed at the University of Washington, the Coastal Observation and Seabird Survey Team (COASST) is an independently funded program providing hundreds of people with the opportunity to contribute to rigorous citizen science of direct relevance to science and resource management. In approximately 5 hours, COASST staff train coastal residents how to identify over 80 species, and conduct monthly surveys of beached (dead) marine birds using standardized protocols, a volunteer kit that includes basic measurement (e.g., dividers, tapes, wing-ruler) and recording (e.g., data sheets) supplies, and a full color, dichotomous key. Once trained, COASSTers return data sheets and digital photographs monthly. These raw data are compiled, verified by seabird experts, and analyzed to meet the specific needs of end-user groups: scientists (e.g., Parrish et al. 2008), resource managers (e.g., Dr. Julia Parrish testimony to the Committee on Natural Resources and Marine Waters, Winter 2010), volunteers (e.g., COASST Reports), and general public (e.g., Trying to Crack an Ocean Mystery, Seattle Times, 11/29/2009).

Marine birds are subject to a variety of pressures from human activities and/or their consequences (including fishing, pollution, and energy development); climate forcing; and changes in biological interactions (e.g., predators, invasive species, disease). With 45 data collection sites in Clallam County, COASST data provide the most comprehensive baseline against which species and event-specific mortality of Washington's priority species, federally-listed threatened and endangered species, as well as locally abundant breeders, can be assessed. Specifically, COASST data have documented threats to priority species of fishery bycatch (Hamel et al. 2009), entanglement (Lyday et al. 2009), and climate (Parrish et al. 2008). Within this grant, we focus on two sites (Crescent Bay and Elwha West (Bluffs)) within the Elwha drift cell to explore bird deposition changes that may occur following the removal of the Elwha Dams. Over 30 additional COASST sites along the Strait of Juan de Fuca, outside of the Elwha drift cell, provide baseline mortality data for comparison.

Scope of work includes the following:

### **At least one training session to recruit new volunteers**

Outcome: Two training sessions conducted, one in Port Angeles, one in Neah Bay (see *Volunteer Training Rosters*, below)

### **Monthly surveys of Elwha Bluffs and Crescent Bay Beaches (by permission)**

Outcome: monthly surveys of Elwha West (Bluffs) (June 2010-June 2011), monthly surveys of Crescent Bay (November 2010-June 2011)

**Provide centralized services (e.g., volunteer recruitment, volunteer communication, data entry and data verification)**

Outcome: for both trainings, COASST staff recruited volunteers through various avenues (newspaper, posters, word-of-mouth, state/federal/tribal agencies, email listserves), followed up trainings with immediate communication regarding beach selection, responded to volunteer questions and comments via e-mail/phone, entered all data until May 2011 and verified all data to April 2011.

**Deliver raw data quarterly, or more frequently by request**

Outcome: all raw data is included as an attachment with this final report, “moa332.10.013.”

Preliminary data (as of January) were presented at the Elwha Nearshore Consortium Workshop, February 14, 2011.

Specific deliverables for this grant:

**Volunteer Training Rosters**

This grant supported two COASST training sessions Clallam County, one in Port Angeles, WA and one in Neah Bay, WA for a total of 26 attendees.

*Port Angeles – Oct 9, 2010 (Trainers: Julia Parrish, Janet Lamont)*

Mike Wheeler

Meredith Massey

Kaila Janders

David McDaniels

Olivia Vitale

Elizabeth Seifert

Lynda Phillips

Dan Phillips

Mary Harp

Rod Harp

Bob Campbell

Dan Lieberman

Tara Morrow

North Olympic Peninsula Skills Center Students – Bahja Huffman, Alexis Olea, Garrett Goudie

*Neah Bay – May 14, 2011 (Trainers: Annie Woods, Janet Lamont)*

Adrianne Akmajian

Eric Page

Amy Magisos

Miriam Bobkoff

Sally Parker

UW Students – Kelsey Gordon, Monica White, Jasmine Palmer, Erin Costello, Kate Terpstra

## Digital Photos from training



Left to right: Daniel Baker, Daniel Williams (part of Daniel Lieberman's North Olympic Peninsula Skills Center natural resources class) and Tara Morrow (mentor) key out a Double-crested Cormorant with the COASST *Beached Birds* field guide on their March survey.



Sam Ybarra, Daniel Baker, Ben Stratton, Tara Morrow (mentor) and Daniel Williams (all part of Daniel Lieberman's North Olympic Peninsula Skills Center Natural Resources class) pause for a photo after COASST surveys on Elwha West in March.





Janet Lamont (right) checks the work of Eric Page (left) as he records an immature gull at Hobuck Beach.





Miriam Bobkoff (left) and Janet Lamont (right) look on as Eric Page records a immature gull find on Hobuck Beach.



Janet Lamont (right) explains to Adrianne Akmajian (left) how to tag new COASST bird finds.





UW students Erin Costello (left) and Kate Terpstra (right) profile some of their non-bird finds at Hobuck Beach in May.



New COASST volunteers look on as Janet Lamont (right) and Eric Page (left) measure the tarsus of a White-winged Scoter on Hobuck beach.





Attendees from the COASST training at Hobuck beach in May pause for a group photo. (top: left-right Adrienne Akmajian, Janet Lamont, Miriam Bobkoff, Sally Parker, Monica White, Amy Magisos, Eric Page bottom: left-right Jasmine Palmer, Kelsey Gordon, Erin Costello, Kate Terpstra.



Left to right: Daniel Williams, Ben Stratton, Lucy Bert (students of Daniel Lieberman's North Olympic Peninsula Skills Center Natural Resources class) and Tara Morrow (mentor) combine COASST surveys and marine debris removal from Elwha West Beach in May.

### **Raw data**

Raw data is included in an attached excel (.xls) spreadsheet, "moa332.10.013." Data spans 5/10/2010-6-11/2010 for all Clallam County COASST-surveyed beaches.

### **Deposition Rate Calculation**

COASST monthly encounter index is calculated by summing of all birds within a survey. Multiple surveys within a month (up to one/day) are averaged, such that beaches are equally weighted within month. Raw bird counts are standardized by beach length to produce birds per kilometer. Beaches are then samples within each region, allowing us to calculate average encounter rate per region, per month, for each year. Below are deposition rate for the two beaches part of this grant, Elwha West (i.e., Elwha Bluffs) and Crescent Beach (i.e., Crescent Bay):



ELWHA WEST – 1.2km

Jun – 0

Jul – 0

Aug – 1.67 birds/km

Sep – 0

Oct – 0

Nov – 0.42 birds/km

Dec – 0

Jan – 0

Feb – 0.83 birds/km

Mar – 0

Apr – 0.83 birds/km

May – 0

Jun – No data received yet

CRESCENT BAY – 1.16km

Nov – 0

Dec – 0

Jan – 0

Feb – 0.86 birds/km

Mar – 0

Apr – 0

May – No data received yet

Jun – No data received yet

## **Conclusions and Further Directions**

COASST staff will continue to network with various state/federal/tribal agencies, local non-profit and community groups and community colleges to recruit additional volunteers, and raise awareness of the COASST program and its contributions to our understanding of nearshore marine ecosystem health. We foresee continued data collection at Elwha West (Bluffs), however, Crescent Bay Beach data collection will end in the winter of 2012 unless an agreement can be made with private landowners to access and park at the beach for no cost.