

Form Rev. 10.3.14

1. Program Number: *See, Reporting Policy at III (C) (1).*

13120114-N

2. Project Title: *See, Reporting Policy at III (C) (2).*

Long-term Monitoring: Pelagic Monitoring Component - Long-term monitoring of humpback whale predation on Pacific herring in Prince William Sound.

3. Principal Investigator(s) Names: *See, Reporting Policy at III (C) (3).*

John R. Moran (NOAA) and Janice M. Straley (UAS)

4. Time Period Covered by the Report: *See, Reporting Policy at III (C) (4).*

Feb. 2014-Jan. 2015

5. Date of Report: *See, Reporting Policy at III (C) (5).*

Feb 17, 2014

6. Project Website (if applicable): *See, Reporting Policy at III (C) (6).*

www.gulfwatchalaska.org

7. Summary of Work Performed: *See, Reporting Policy at III (C) (7).*

All work during 2014 proceeded as planned. During the reporting period four whale surveys of Prince William Sound were completed (April 2014, Sept. /Oct. 2014, July 2014 and Dec. 2014). In addition to our three scheduled surveys, a July survey was conducted using NOAA funds. These same funds allowed for a second vessel on the Sept. survey (see Coordination/Collaboration).

All obligations to the Synthesis Report and Trustee meetings were met.

Deliverable/Milestone	Status
April 2014 Survey	completed
Sept. 2014 Survey	completed
Dec. 2014 Survey	completed
Data entry	Data entry completed, QA/QC in progress.

8. Coordination/Collaboration: *See, Reporting Policy at III (C) (8).*

8A. Killer whale and humpback whale photos were exchanged with Craig Matkin. This collaboration expands the temporal and spatial scope of both projects.

- Winter Seabird Survey observers were present on whale surveys.
- The Gulf Watch Alaska pelagic team PIs (Moran, Straley, Arimitsu, Piatt and Bishop) collaborated to facilitate a broader understanding of humpback whale and seabird foraging dynamics and forage fish availability in Prince William Sound.

8B. There was no collaboration with other Trustee funded projects.

8C. Forage fish are being collected during a February 2015 acoustic survey of PWS by the NOAA vessel Oscar Dyson. These samples will provide mid-winter energetics data for whale prey.

- Pollock were collected during whale surveys for the AFSC recruitment energetics project.
- Brand resights and haulout photos of Steller sea lions were provided to ADF&G.
- Data on whale locations and prey quality was given to the review Steller Sea Lions Critical Habitat Workshop held in Seattle, January 2015.

<p>9. Information and Data Transfer: See, Reporting Policy at III (C) (9).</p>

Outreach

PWSSC Community Lecture Series, Field Notes radio program, Gulf Watch Alaska Virtual Field Trip, Gulf Watch Project brochure, and a KCAW Public Radio Interview.

Presentations

Moran. *Living in a Humpback World*. Lecture at University of Eastern Finland, Joensuu, Finland.

Moran. *Challenges of Photo ID during the Alaskan Winter*. Photo ID Workshop, Joensuu, Finland.

Moran, Straley, and Arimitsu. *Humpback Whales as indicators of Herring Movements in PWS*.

AMSS, Anchorage Alaska.

Data

The PWS humpback whale catalog has been made available to public via GWA workspace..

<p>10. Response to EVOSTC Review, Recommendations and Comments: See, Reporting Policy at III (C) (10).</p>

N/A

<p>11. Budget: See, Reporting Policy at III (C) (11).</p>
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At this time we are 6% under budget for this reporting period. Travel was 22% higher than proposed due to addition surveys made possible by non-EVOSTC funds. Commodities are 28% under budget because we have yet to replace supplies used during FY14.

Form Rev. 10.3.14

1. Program Number: *See*, Reporting Policy at III (C) (1).

13120114-P

2. Project Title: *See*, Reporting Policy at III (C) (2).

Long-term Monitoring of Oceanographic Conditions in the Alaska Coastal Current from Hydrographic Station GAK 1

3. Principal Investigator(s) Names: *See*, Reporting Policy at III (C) (3).

Thomas Weingartner

4. Time Period Covered by the Report: *See*, Reporting Policy at III (C) (4).

February 1, 2014-January 31, 2015

5. Date of Report: *See*, Reporting Policy at III (C) (5).

February 10, 2015

6. Project Website (if applicable): *See*, Reporting Policy at III (C) (6).

www.gulfwatchalaska.org and <http://www.ims.uaf.edu/gak1/>

7. Summary of Work Performed: *See*, Reporting Policy at III (C) (7).

Our sampling activities include 1) quasi-monthly CTD casts at station GAK 1 (periods of sampling given in table below) and the recovery and re-deployment of a string of 6 temperature-conductivity-pressure (TCP) recorders on a mooring at GAK 1. This mooring is recovered and re-deployed annually in March of each year. After the mooring is recovered the TCPs are sent to Seabird for post-calibration.

Deliverable/Milestone	Status
February 2014 CTD cast at GAK 1	Completed
March 2014 mooring recovery and re-deployment at GAK 1	Completed
March 2014 CTD cast at GAK 1	Completed
April 2014 CTD cast at GAK 1	Completed
May CTD cast at GAK 1	Completed
June CTD cast at GAK 1	Completed
September CTD cast at GAK 1	Completed
November CTD cast at GAK 1	Completed
December CTD cast at GAK 1	Completed
January 2015 CTD cast at GAK 1	Completed

8. Coordination/Collaboration: *See*, Reporting Policy at III (C) (8).

- Publications produced during the reporting period: **none**
- Conference and workshop presentations and attendance during the reporting period: Weingartner attended the Gulfwatch PI meeting in November 2013, the Alaska Marine Science Symposium in January 2014 and the EVOSTC Science Meeting in February 2015. The following talk was given at the AKMSS meeting in January 2015.

Gulf Watch Alaska: Monitoring the Pulse of the Gulf of Alaska's Changing Ecosystems

Kristine Holderied, kris.holderied@noaa.gov; Molly McCammon, mccammon@aoos.org; Katrina Hoffman, khoffman@pwssc.org; Stanley Rice, jeep.rice@noaa.gov; Brenda Ballachey, bballachey@usgs.gov, Thomas Weingartner, tjweingartner@alaska.edu ; Russell Hopcroft, rrhopcroft@alaska.edu

- Data and/or information products developed during the reporting period, if applicable: Dr. Weingartner's graduate student (James Kelly) has used the GAK 1 data sets to investigate sea level variability in Seward. The goal here is to determine the causes for sea level variations and eventually to determine if Seward Sea level can be used as a proxy for current variations in the ACC. We find that the annual cycle of sea level variations at Seward are in-phase with dynamic heath (vertically-integrated density) at GAK 1. At periods of days to ~1 month the sea level variations are significantly coherent with and in-phase with the along-shore winds over the Gulf of Alaska shelf, especially in fall, winter, and early spring. Given that the wind is also coherent with ACC transport at these periods it appears that Seward Sea level anomalies at these periods may be useful as an index of ACC transport. Mr. Kelly will graduate with an MS degree in spring 2015.
- Data sets and associated metadata that have been uploaded to the program's data portal.

All Data through 2013 has been uploaded to www.gulfwatchalaska.org and <http://www.ims.uaf.edu/gak1/>

9. Information and Data Transfer: *See, Reporting Policy at III (C) (9).*

There have been 37 publications that have used the data from GAK1 of which we are aware. These include data sets for several student theses, for use in peer-reviewed papers, and by the North Pacific Management Council in their Groundfish Stock Assessment and Fishery Evaluation Reports

10. Response to EVOSTC Review, Recommendations and Comments: *See, Reporting Policy at III (C) (10).*

No recommendations provided

11. Budget: *See, Reporting Policy at III (C) (11).*

Please see attached budget form for details. This project is behind in spending due to a number of factors. The State of Alaska fiscal years are offset, with billing showing through July 2014. Additionally, this project is a continuation of previously awarded EVOS funding, and during year 1, was spending the balance of previous funding packages.

Budget Category:	Proposed FY 12	Proposed FY 13	Proposed FY 14	Proposed FY 15	Proposed FY 16	TOTAL PROPOSED	Actual Cumulative
Personnel	\$2.0	\$2.0	\$2.0	\$2.0	\$0.0	\$8.0	\$6.1
Travel	\$5.4	\$5.4	\$5.4	\$5.4	\$1.8	\$23.4	\$19.8
Contractual	\$103.5	\$104.8	\$114.7	\$116.5	\$46.1	\$485.6	\$302.9
Commodities	\$6.0	\$6.0	\$6.0	\$6.0	\$2.0	\$26.0	\$12.9
Equipment	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Indirect Costs (<i>will vary by proposer</i>)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
SUBTOTAL	\$116.9	\$118.2	\$128.1	\$129.9	\$49.9	\$543.0	\$341.7
General Administration (9% of subtotal)	\$10.5	\$10.6	\$11.5	\$11.7	\$4.5	\$48.9	\$30.8
PROJECT TOTAL	\$127.4	\$128.8	\$139.6	\$141.6	\$54.4	\$591.9	\$372.5
Other Resources (In kind Funds)	\$83.5	\$74.7	\$75.0	\$78.5	\$25.0	\$336.7	\$233.2

COMMENTS: In-kind contribution from NOAA - \$25K/year in salary for Moran. An addition \$58.5K in FY12 , \$49.7K in FY13, \$50.0K in FY14, and \$54.9K in FY15 of NOAA ship time was used to increase survey effort.

FY12-16

**Program Title: 15120114-N Humpback Whale
Monitoring
Team Leader: Moran/Straley**

SUMMARY