

Prince William Sound marine bird surveys – Irons/Kuletz (USFWS Alaska Region, 15120114-K)

FY15 PROJECT PROPOSAL SUMMARY PAGE					
Continuing, Multi-Year Projects					
Project Title: Continuing the Legacy: Prince William Sound Marine Bird Population Trends.					
Project Period: February 1, 2015 – January 31, 2016					
Primary Investigator(s): Kathy Kuletz, David Irons, and Robb Kaler, US Fish and Wildlife Service, Migratory Bird Management, Anchorage, Alaska					
Study Location: Prince William Sound					
Project Website (if applicable):					
<p>Abstract: This project is a component of the integrated Long-term Monitoring of Marine Conditions and Injured Resources and Services submitted by McCammon et al. and spans 1989-2014, and includes 13 years of boat-based surveys aimed at monitoring population trends of marine birds and mammals in Prince William Sound after the <i>Exxon Valdez</i> oil spill. Data collected will be used to examine trends from summer to determine whether populations in the oiled zone are increasing, decreasing, or stable, as well as to examine overall population trends for the Sound. Data collected from 1989 to 2012 indicated that pigeon guillemots (<i>Cepphus columba</i>) and marbled murrelets (<i>Brachyramphus marmoratus</i>) are declining in the oiled areas of Prince William Sound. We have found high inter-annual variation in numbers of some bird species and therefore recommend continuing to conduct surveys every two years. These surveys are the only ongoing means to evaluate the recovery of most of these injured marine bird species. Surveys would also benefit the benthic monitoring and forage fish monitoring aspects of the Long-term Monitoring Project as well as the Herring Project.</p>					
Estimated Budget:					
EVOSTC Funding Requested (must include 9% GA):					
FY12	FY13	FY14	FY15	FY16	TOTAL
\$24.2	\$211.1	\$24.2	\$215.7	\$681.6	\$24.2
Non-EVOSTC Funds to be used:					
FY12	FY13	FY14	FY15	FY16	TOTAL
\$56.0	\$22.0	\$56.0	\$22.0	\$56.0	\$212.0
Date: September 2, 2014					

I. EXECUTIVE SUMMARY

In order to assess population trends in the years following the Exxon Valez Oil Spill (EVOS), the objectives of the proposed project “Continuing the Legacy: Prince William Sound Marine Bird Population Trends are (1) determine population abundance, with 95% confidence limits, of marine bird populations in Prince William Sound during March and July 2012, 2014 and 2016 in both oiled and unoiled regions; and (2) determine population abundance, with 95% confidence limits, of marine bird populations in Prince William Sound during March and July 2012, 2014 and 2016 for Prince William Sound as a whole. During the past reporting period, Daniel Cushing completed his degree of Master of Science at Oregon State University and his thesis titled “Patterns of Distribution, Abundance, and Change over Time in the Marine Bird Community of Prince William Sound, Alaska, 1989-2012” (Cushing 2014). Using data collected during small boat surveys (1989-2012), Cushing (2014) used taxon- and community-centric approaches to examine patterns of marine bird distribution and abundance in Prince William Sound and found marine bird communities as a whole to be spatially structured along a primary onshore-offshore environmental gradient, and secondarily structured along an estuarine-marine environmental gradient. Cushing (2014) also investigated spatial habitat associations and temporal change of *Brachyramphus* murrelets and found that abundance estimates for both marbled murrelets (*Brachyramphus marmoratus*) and (*B. brevirostris*) decreased by more than two-thirds over the study period. There was no evidence that rates of change differed along environmental or geographic gradients and no evidence that changes in seasonal patterns of abundance occurred. Using marine bird data collected in July 2014, in FY15 we will continue to explore the hypothesis that climate change has differentially affected nearshore and offshore components of PWS food webs, and how this may have contributed to the failure of some taxa to recover from the population injury caused by the EVOS.

II. COORDINATION AND COLLABORATION

A. Within the Program

N/A

B. With Other Council-funded Projects

N/A

C. With Trustee or Management Agencies

N/A

III. PROJECT DESIGN – PLAN FOR FY15

A. Objectives for FY15

To determine population abundance, with 95% confidence limits, of marine bird populations in Prince William Sound during July 2012, 2014 and 2016 in both oiled and unoiled regions, as well as in Prince William Sound as a whole, in order to assess population trends in the years following the EVOS. To be met by April 2015.

B. Changes to Project Design

No changes have been made to the project design

IV. SCHEDULE

A. Project Milestones for FY 15

FY 15, 1st quarter (October 1, 2014-December 31, 2014)

Attend Annual PI Meeting

Finish Quality Assurance and Quality Check of 2014 marine bird survey data

FY 15, 2nd quarter (January 1, 2015-March 31, 2015)

Attend Alaska Marine Science Symposium

Complete analysis of 2014 marine bird survey data

Determine population abundance, with 95% confidence limits, of marine birds in Prince William Sound during July 2014.

FY 15, 3rd quarter (April 1, 2015-June 30, 2015)

Summarize results from 2014 survey, incorporate results into annual report

FY 15, 4th quarter (July 1, 2015-September 30, 2015)

Submit annual report

B. Measurable Project Tasks for FY 15

FY 15, 1st quarter (February 1, 2015 - April 31, 2015)

February: Project funding available

Feb – Mar Update project outreach website, analyze and summarize data

FY 15, 2nd quarter (May 1, 2015-July 30, 2015)

June: Upload 2014 data to workspace, update metadata

July-Aug: Fieldwork

FY 15, 3rd quarter (August 1, 2015 – October 31, 2015)

September: 2014 field data compilation, lab analyses

November: Annual PI meeting

FY 15, 4th quarter (November 1, 2015- January 31, 2016)

December: Begin analysis and report writing

V. PROJECT PERSONNEL – CHANGES AND UPDATES

Curriculum Vitae of new Primary Investigator, Robb Kaler.

Mr. Kaler will be leading the field component of the PWS marine bird and mammal survey. Mr. Kaler will also be responsible for data analysis and report writing for the remainder of the project.

Robb S.A. Kaler

U.S. Fish and Wildlife Service

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Anchorage, Alaska 99503

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Education

2007	M.S. in Ecology, Kansas State University, Division of Biology, Kansas State University, Manhattan, Kansas
1997	B.S. in Wildlife Biology, The Evergreen State College, Olympia, Washington

Recent Professional Experience

2010-present	Alaska Seabird Data Coordinator, Migratory Bird Management, U.S. Fish and Wildlife Service
2008-2010	Seabird Researcher, Alaska Maritime National Wildlife Refuge, USFWS
2005-2007	Graduate Research Assistant, Kansas State University

Honors and Awards

2010	Edwards Prize for Best Article of the Year in The Wilson Journal of Ornithology (Vol. 122), Wilson Ornithological Society
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- 2007 Recipient, Best Student Presentation Award, The Wildlife Society annual meeting, Tucson, Arizona
- 2007 Nominee, Golden Key Award for Excellence in Undergraduate Teaching, Kansas State University
- 2007 Recipient, James Ackert Award for Outstanding Student Presentation, Division of Biology, Kansas State University

Professional Societies

American Ornithologists' Union (2005), Pacific Seabird Group (2007), Wilson Ornithological Society (2005), Cooper Ornithological Society (2010)

Related Publications

- Kaler, R.S.A., L.A. Kenney, A.L. Bond, and C.A. Eagles-Smith. 2014. Mercury concentrations in breast feathers of three upper trophic level predators from the western Aleutian Islands, Alaska. *Marine Pollution Bulletin* <<http://dx.doi.org/10.1016/j.marpolbul.2014.02.034>>
- Kenney, L.A. and R.S.A. Kaler. 2013. Identifying nesting habitat of Kittlitz's Murrelet *Brachyramphus brevirostris*: Old nests lead to a new breeding record. *Marine Ornithology* 41:95-96.
- Kaler, R., L. Kenney, and B. Sandercock. 2009. Breeding ecology of Kittlitz's Murrelets at Agattu Island, Aleutian Archipelago, Alaska. *Waterbirds* 32:363-373.

Other Publications

- Gregory, A.J., R.S.A. Kaler, T.J. Prebyl, B.K. Sandercock, and S.M. Wisely. 2012. Influence of translocation strategy and mating system on the genetic structure of a newly established population of island ptarmigan. *Conservation Genetics* 13:465-474.
- Kaler, R.S.A., and B.K. Sandercock. 2011. Effects of translocation on the behavior of island ptarmigan in B.K. Sandercock, K Martin, and G. Degelbacher (eds.). *Ecology, conservation, and management of grouse. Studies in Avian Biology* 39:295-306.
- Manning, J. A. and R. S. A. Kaler. 2011. Effects of survey methods on Burrowing Owl Behaviors. *Journal of Wildlife Management* 75:525-530.
- Braun, C.E., W.P. Taylor, S.E. Ebbert, R.S.A. Kaler, and B.K. Sandercock. 2011. Protocols for successful translocation of ptarmigan. In R. T. Watson, T. J. Cade, M. Fuller, G. Hunt, and E. Potapov (eds.). *Gyrfalcons and ptarmigan in a changing world. The Peregrine Fund, Boise, Idaho, USA.*
- Kaler, R., S. Ebbert, C. Braun, and B. Sandercock. 2010. Demographic measures of translocation success: reintroduction of an island population of Evermann's Rock Ptarmigan. *Wilson Journal of Ornithology* 122:1-14 (*Winner of 2010 Edwards Prize*)
- Sullivan, B., and E. Kershner with J. Dunn, R. Kaler, S. Lynn, N. Munkwitz, and J. Plissner. 2005. The birds of San Clemente Island. *Western Birds* 36: 158-273.

VI. BUDGET

F. Budget Forms

Please see program budget workbook

G. Changes from Original Proposal

No have no changes to our FY15 request.

H. Sources of Additional Funding

N/A