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Under the MMPA and ITS authorization under
the ESA

GULF of ALASKA

NAVY TRAINING ACTIVITIES EIS/OEIS

Annual Monitoring Report 2011
YEAR 1

17 May 2011 to 31 October 2011

For The U.S. Navy's

Gulf Of Alaska Temporary Maritime Activities Area

15 December 2011

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US NAVY'S

GULF OF ALASKA TEMPORARY MARITIME ACTIVITIES AREA

YEAR 1 ANNUAL MONITORING REPORT

17 May 2011 to 31 October 2011

INTRODUCTION

The U.S. Navy (Navy) prepared this Year 1 Annual Range Complex Monitoring Report covering the period from 17 May 2011 through 31 October 2011 in compliance with the National Marine Fisheries Service (NMFS) Final Rule under the Marine Mammal Protection Act (MMPA) for the Gulf of Alaska Temporary Maritime Activities Area (GOA TMAA).

The Navy met its current GOA monitoring obligations as specified in the NMFS Final Rule of 6 May 2011 and subsequent Letter of Authorization of 17 May 2011 (NMFS 2011a, 2011b).

Two bottom-mounted passive acoustic recording devices were deployed within the GOA TMAA in July 2011. The devices are configured to collect marine mammal vocalization data until their first data retrieval service call scheduled for May 2012.

YEAR 1 SUMMARY

Two high-frequency acoustic monitoring packages (HARPs) were deployed by Scripps Institute of Oceanography (SIO) at the University of California San Diego within the northeast portion of the GOA TMAA on 12 July 2011.

Technical details on SIO's HARPs are available online at:

http://cetus.ucsd.edu/technologies_AutonomousRecorders.html

One HARP was deployed on the shelf in 200 meters (656 feet) of water and the second on the slope in 1,100 meters (3,609 feet) of water (Figure 1).

These devices, placed on the ocean floor, record marine mammal vocalizations on internal hard drives that must be retrieved during field service calls. To extend the time between service calls due to likely inclement weather in the GOA between November 2011 and April 2012, the duty cycle was adjusted to extend battery life until spring of 2012. Currently, the first service call and data retrieval from the GOA TMAA HARPs is scheduled for May 2012.

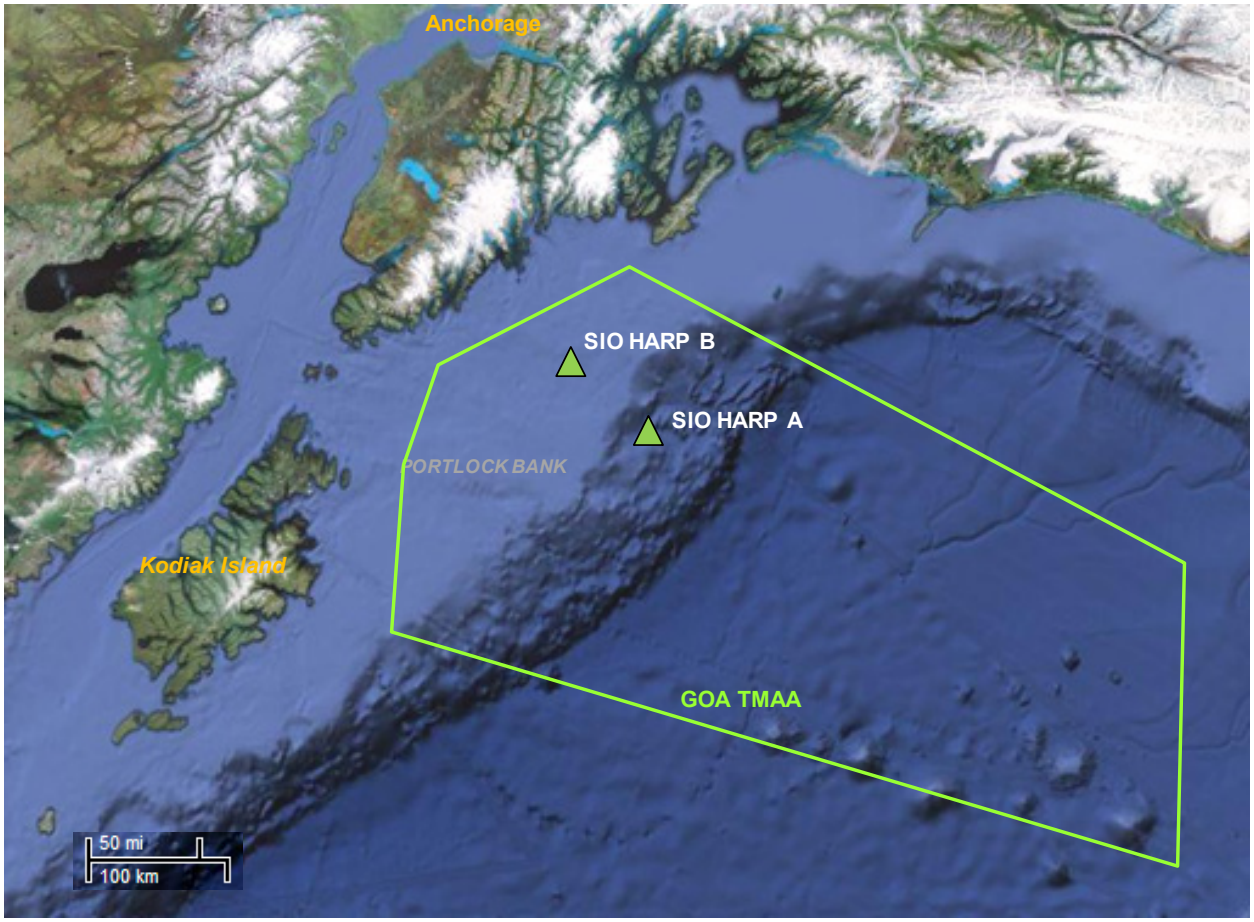

Figure 1. Location of Navy funded HARPs deployed in July 2011 in the northeast corner of the GOA Temporary Maritime Activities Area.

Once data is retrieved from the field, vocalization data will undergo analysis by SIO, and results will be presented in the Navy's 15 December 2012 GOA TMAA Year 2 Annual Monitoring Report. Based on similar device deployment in Southern California and the Pacific Northwest, at a minimum analysis will include, but is not limited to, the following:

- Thorough whistle analyses, such as the Real-time Odontocete Call Classification Algorithm (ROCCA), or a functional equivalent.
- Description of the diversity of marine mammal species captured on recordings.
- Types of vocalizations per detection of marine mammals. Quantitative and qualitative description of classes of vocalizations, including representative spectrograms. Both yearly and summarized weekly plots will be presented.
- Rates of vocalization within an encounter. (Some species or types of marine mammals will need to be characterized over longer time frames than others)
- Quantifiable changes (if any) with respect to natural diel or seasonal cycles.
- General characterization of noise levels in the environment and any overall patterns of noise that can be characterized from the recordings. This shall also include an estimation of ambient noise conditions.
- Characterization of anthropogenic noise, if detected, including source level.
- Signal to noise ratios of acoustic detections.

Examples of previous Navy-funded HARP passive acoustic analysis can be seen in the Navy's 2011 Hawaii Range Complex-Southern California Range Complex Annual Monitoring Report:

http://www.nmfs.noaa.gov/pr/pdfs/permits/navy_hrc_socal_monitoring2011.pdf

Pacific Northwest Navy funded HARP analysis can be seen in Olesen *et al*. 2009 and Širović *et al.* 2011:

http://edocs.nps.edu/npspubs/scholarly/TR/2009/NPS-OC-09-001.pdf

http://edocs.nps.edu/npspubs/scholarly/TR/2011/NPS-OC-11-004CR.pdf

Year 2 Monitoring From 1 November 2011 to 31 October 2012

Adaptive Management For Monitoring In GOA TMAA

The NMFS has acknowledged that the GOA TMAA passive acoustic monitoring will enhance the understanding of marine mammal distributions within the offshore waters of the northern Gulf of Alaska. Additionally, NMFS also indicated that information gained from the investigations associated with the Navy's monitoring may be used in the adaptive management of mitigation or monitoring measures in subsequent NMFS authorizations, if appropriate.

Therefore, the Navy's adaptive management of GOA TMAA monitoring under its MMPA responsibilities involves close coordination with NMFS to align marine mammal monitoring with the overall scientific objectives of characterizing marine mammal species within the Gulf of Alaska. The Navy's effort also is designed to support national objectives for "increasing scientific understanding of the ocean" (Southall et al. 2009, EO 2010, CEQ 2010). To date, 2011 monitoring within the GOAA TMAA represents the beginning of Year 1 of a planned five year effort. As such, it would be premature to draw detailed conclusions or initiate comprehensive monitoring changes without further consultation and public review.

Proposed GOA TMAA 1 November 2011 to 31 October 2012 Monitoring

The Navy proposes to keep the same level of monitoring effort in Year 2 of the GOA TMAA as was committed and accomplished in Year 1 (Table 1).

In essence, the Navy will continue passive acoustic data collection from May 2012 to at least September 2013 while concurrently presenting completed analysis from retrieved data. The first data set and analysis from the GOA TMAA HARPs will cover the period from 12 July 2011 to May 2012.

In support of the Joint Subcommittee on Ocean Science and Technology recommendations (Southall *et al*. 2009) and Ocean Policy direction (EO 2010), the Navy is committed to meet the NMFS monitoring requirements for both the GOA TMAA Final Rule and Letter of Authorization (NMFS 2011a, 2011b). Additionally, the Navy is committed to making significant contributions to the greater body of marine mammal science in the GOA TMAA.

Table 1. Navy's proposed Year 2 monitoring plan goals for the Gulf of Alaska Temporary Maritime Activities Area from 1 November 2011 to 31 October 2012.

Monitoring Technique	Implementation	Review
Passive Acoustic Monitoring	Maintain two US Navy funded passive acoustic monitoring devices, and continue to collect passive acoustic vocalization data within the northern GOA TMAA. Present data analysis from date collected between July 2011 and May 2012.	Adaptive Management Review (AMR) for 2013
No metric changes are planned in Year 2 (2011-2012) from the level of effort and funding performed in Year 1 (2011)		
TOTAL Navy Year 2 Goal: • *2 PAM devices and associated analysis*		

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CEQ 2010. Final Recommendations of The Interagency Ocean Policy Task Force - July 19, 2010. White House Council on Environmental Quality.

EO 2010. Executive Order - Stewardship of the Ocean, Our Coasts, and the Great Lakes - July 19, 2010. Office of the White House.

National Marine Fisheries Service (NMFSa) 2011. Taking and Importing Marine Mammals; Military Training Activities Conducted Within the Gulf of Alaska Temporary Maritime Activities Area; Final Rule. Office of Protected Resources 76FR 25480 May 4, 2011.

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