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UNCLASSIFIED

2018
Ice Exercise (ICEX)
Exercise and Monitoring Report

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ICEX 18 EXERCISE AND MONITORING REPORT

INTRODUCTION

The U.S. Navy prepared this Unclassified Exercise and Monitoring Report for ICEX 18 in compliance with the National Marine Fisheries Service (NMFS) Incidental Harassment Authorization (IHA) under the Marine Mammal Protection Act (MMPA) for the U.S. Navy's ICEX 18 Study Area.

In the ICEX 18 IHA, the following report subsections were specified and are presented within this report:

- (1) Summary of Sound Sources
- (2) Individual Marine Mammal Sighting Information
- (3) Mitigation Shutdown
- (4) Monitoring

(1) Summary of Sound Sources

The sources in Table 1 were used during research activities and modeling of these sources was conducted based on testing plans for these activities. The modeling resulted in potential takes of ringed seals based on all sources modeled for ICEX 18 (unclassified and classified). The Navy applied for an IHA that authorized 1,676 Level B harassment takes of ringed seals based on all modeled sources.

The unclassified sources used during research activities were conducted in the same manner that they were modeled, therefore authorized takes were not exceeded.

Table 1

Research Institution	Source Name	Frequency Range (kHz)	Source Level (dB)	Pulse Length (milliseconds)	Duty Cycle (Percent)	Source Type
Office of Naval Research	Autonomous Reverberation Measurement System	3 to 6	200	1,000	1.67	Moored
Naval Research Laboratory	SAS	Classified				Unmanned Underwater Vehicle (UAV)
Massachusetts Institute of Technology/ Lincoln Labs	Continuous Wave*	0.20 to 1.2	190	continuous	100	Moored
	Chirp*	0.25 to 1.2	190	15,000	25	Moored

(2) Individual Marine Mammal Sighting Information

There were no marine mammal sightings.

(3) Mitigation Shutdown

No marine mammals were detected and shutdown mitigation was not required.

(4) Monitoring

Although not required under this IHA, USFF purchased 50 tags (SPOT and SPLASH10) for ribbon and spotted seal monitoring conducted by the NMFS Marine Mammal Lab. The tags were deployed during a monitoring cruise in April of 2018. Peter Boveng, Polar Ecosystems Program Leader, expects “the results from the cruise to provide a substantial increment in our understanding of spotted and ribbon seals’ dependence on sea ice in a rapidly changing sea ice ecosystem.” As this data becomes available from NMFS, Navy will consider it.