

ENVIRONMENTAL STUDIES PROGRAM: Ongoing Studies

Region: National

Planning Area(s): Atlantic and Alaska

Title: Identify Information Needs and Data Gaps on the Effects to Fish, Fisheries, and Invertebrates in the U.S Atlantic and Arctic from Sound-Generating Activities by the Energy Industry

BOEM Cost: (in thousands) \$300-\$400 **Period of Performance:** FY 2011-2012

Conducting Organization(s): Normandeau Associates (M11PC00031)

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Description:

Background: Biological impacts and impacts to commercial and recreational fisheries in both U.S. Atlantic and Arctic waters from anthropogenic noise have been identified by BOEM as important topics needing additional information. There are gaps in the available information regarding the effects of BOEM-regulated sound-producing activities on fish, fisheries and invertebrates which make it difficult to evaluate impacts. BOEM proposes to sponsor a workshop to gather relevant experts and stakeholders to identify data gaps and discuss scientific approaches for addressing these gaps. The products of this effort will be a literature synthesis, a meeting report, and a data gap analysis. The results of this workshop will be used to better inform BOEM and other regulatory agencies in their decision-making and environmental analysis processes evaluating oil, gas and mineral production as well as renewable energy and alternate use on the U.S. Outer Continental Shelf (OCS). This workshop also will serve in developing avenues of communication and collaborative relationships with experts on fish, fisheries, invertebrates and acoustics from other Federal agencies, affected State and local groups, industry, as well as representatives from other countries.

Objectives: The following lists the objectives of this profile:

- Identify the priority fisheries and species in the U.S. Atlantic and Arctic OCS
- Determine the feasible short-term and long-term research goals to close significant knowledge gaps
- Ascertain available means to reduce anthropogenic noise levels
- Identify mitigation options to reduce exposure risk

Methods: The following lists the methods of this profile:

Synthesize the relevant literature regarding the effects of anthropogenic noise on marine fish and commercial and recreational fisheries in the Atlantic between Maine and Florida and in Alaska's Beaufort and Chukchi Seas. The examination should focus on data relevant to the analyses of effects of sound on offshore fish species in Atlantic and Arctic waters from the coastline out to 200 nautical miles offshore during the past 20 years. The product of this examination shall be a document that discusses and synthesizes the information in the literature. This Synthesis was provided to workshop participants via the website.

- Convene a workshop of domestic and international experts, academia, governments and industry to develop scientific methodologies which tests for impacts from seismic air guns on harvested fish and shell fish species important to commercial, recreational and subsistence fisheries in the Atlantic and Alaska.
- Develop a list of priority species, from the Atlantic and Alaska, to consider for further studies implementing the scientific protocols developed at the workshop.
- Identify the latest and best techniques and equipment that may be useful in addressing this topic.

Importance to BOEM: Scientific uncertainty exists over the effects of seismic survey air guns on fish and shell fish, especially for species harvested commercially, recreationally and through subsistence. This study will hold a workshop which seeks to define a scientifically-sound protocol for assessing impacts to these fisheries and identify key species in the Atlantic and Alaska from which to conduct future field testing of these methodologies. Results from this study will help address key fishery impact concerns noted in various BOEM environmental analyses and also provide new information for use in consultations and assessments under the National Environmental Policy Act, Endangered Species Act and Magnuson-Stevens Fishery Conservation and Management Act.

Current Status: Awarded September 16, 2011. The Literature Synthesis was released on January 2012. Workshop held March 20-22, 2012. The Data Gap Analysis and Final Report are being drafted. The Workshop website can be found at <http://www.boemsoundworkshop.com/>

Final Report Due: December 16, 2012

Publications: A Literature Synthesis was written to inform the Workshop and can be found at <http://www.boemsoundworkshop.com/>

Affiliated Web Sites: <http://www.boemsoundworkshop.com/>

Revised Date: May 2012

ESPIS: Environmental Studies Program Information System

All *completed* ESP studies can be found here:

http://www.data.boem.gov/homepg/data_center/other/espis/espisfront.asp