United States Department of the Interior

FISH AND WILDLIFE SERVICE
Washington, D.C. 20240

In Reply Refer To:
FWS/AES/DER/BCH/056843
FWS 2014-I-0002

MAR 0 5 2014

Holly Smith
National Science Foundation
Division of Ocean Sciences
4201 Wilson Blvd., Suite 25
Arlington, VA 22230

Subject: Informal Consultation on the High-Energy, 3-D Marine Geophysical Survey in the Atlantic Ocean off the Coast of New Jersey

Dear Ms. Smith:

This letter is in response to your February 3, 2014, email requesting the U.S. Fish and Wildlife Service's (Service) concurrence that the proposed high-energy, 3-D marine geophysical survey in the Atlantic Ocean off the coast of New Jersey is not likely to adversely affect the endangered roseate tern (*Sterna dougallii*) and the threatened piping plover (*Charadrius melodus*), pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531 -1544), as amended (ESA). This consultation is based on the draft Environmental Assessment entitled a Marine Geophysical Survey by the R/V *Marcus G. Langseth* in the Atlantic Ocean off New Jersey, June – July 2014.

Lamont-Doherty Earth Observatory (L-DEO), with funding from the U.S. National Science Foundation (NSF) plans to conduct high-energy, 3-D geophysical surveys in the northwest Atlantic Ocean approximately 25-85 kilometers from the coast of New Jersey, outside of U.S. waters and within the U.S. Exclusive Economic Zone (located between approximately 39.3 and 39.7°N and approximately 73.2 and 78.8°W). The seismic survey will take place from June through July, 2014, and will take place in water depths between 30 to 75 meters.

The goal of the proposed research is to collect and analyze data on the arrangement of sediments deposited during times of changing global sea level from roughly 60 million years ago to present. The procedures to be used for the surveys would be similar to those used during previous seismic
surveys by L-DEO and would use conventional seismic methodology. The surveys would involve one source vessel, the R/V *Langseth*. The *Langseth* would deploy a small towed subarray of 4 or 8 airguns with a total discharge volume of approximately 700 to 1400 cubic

inches. The receiving system would consist of four 3000 meter hydrophone streamer. As the airguns are towed along the survey lines, the hydrophone streamer would receive the returning acoustic signals and transfer the data to the on-board processing system.

A total of approximately 4,900 kilometers of 3-D survey lines, including turns, would be shot and some additional seismic operations associated with airgun testing and repeat coverage will occur. In addition to the operations of the airgun array, a multibeam echosounder, a subbottom profiler, and an acoustic Doppler current profiler will be operated from the *Langseth* continuously throughout the survey. All planned geophysical data acquisition activities would be conducted by L-DEO with on-board assistance by the scientists who have proposed the study. The vessel would be self-contained and the crew would live aboard the vessel with some personnel transfer on or off the *Langseth* by a small vessel.

Although unlikely to be encountered, the roseate tern and the piping plover could occur at or near the project site. The roseate tern breeds on islands along the northeast coast of the U.S from New York to Maine and north into Canada, and historically as far south as Virginia. During the breeding season, roseate terns forage over shallow coastal waters, especially in water depths less than 5 meters, sometimes near the colony and at other times at distances of over 30 kilometers away. They usually forage over shallow bays, tidal inlets and channels, tide rips, and sandbars. Because of its distribution during the breeding season, the roseate tern likely would not be encountered at the proposed survey site.

The piping plover breeds on coastal beaches from Newfoundland to North Carolina during March-August. Its marine nesting habitat consists of sandy beaches, sandflats, and barrier islands. Feeding areas include intertidal portions of ocean beaches, mudflats, sandflats, and shorelines of coastal ponds, lagoons, or salt marshes. Because it is strictly coastal, the piping plover likely would not be encountered at the proposed survey site.

In the rare event one of these species is in the vicinity of the survey area, there is the potential that the bird might be affected slightly by seismic sound from the proposed study. The impact would not be expected to be significant to the individual bird or their population because the majority of observed sound levels are below the water surface. Additionally, the proposed action includes precautionary measures of powering or shutting down the airguns if a listed bird is seen diving in the area.

Based upon the unlikely chance a bird of either species will be in the action area as well as the precautionary measures in place, we do not anticipate any adverse impacts to the listed roseate tern or piping plover. Thus, we concur that the activities covered under the NSF's proposed high-energy, 3-D marine geophysical survey "may affect" but "are not likely to adversely affect" the roseate tern or piping plover. Coordination with National Marine Fisheries Service on listed species under their jurisdiction is still required.

We are pleased that NSF, L-DEO and its contractors are committed to applying proactive protective measures in order to minimize effects on marine animals. We appreciate the

collaboration your staff has provided. If you have any question please contact Dr. Collette Thogerson of my office at (703) 358-2103.

Sincerely,

Patrice Ashfield
Chief, Branch of Consultation and Habitat
Conservation Plans, Ecological Services