

Finding of No Significant Impact
for
Marine Geophysical Surveys by the University of Texas
in the Northwestern Gulf of America, 2026

LEAD AGENCY: U.S. Department of Energy; National Energy Technology Laboratory

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY:

In accordance with the National Environmental Policy Act (NEPA) of 1969 (Title 42, Section 4321 et seq., United States Code) and Department of Energy (DOE)'s NEPA implementing procedures (Chapter 10, Part 1021, Code of Federal Regulations), the U.S. Department of Energy (DOE) National Energy Technology Laboratory (NETL) prepared the Final Environmental Assessment (EA) for Marine Geophysical Surveys by the University of Texas in the Northwestern Gulf of America (DOE/EA-2267). This EA analyzes the potential environmental, cultural, and social impacts of partially funding the University of Texas at Austin (UT) to conduct high-resolution 3-dimensional (HR3D) marine seismic surveys in the Gulf of America (GoA). DOE is aware that the CEQ issued a final rule to rescind its NEPA implementing regulations at 40 C.F.R. Parts 1500–1508, effective April 11, 2025. To promote completion of its NEPA review in a timely manner and without delay, in this Final EA DOE is voluntarily relying on the CEQ's guidance and DOE's own procedures for implementing NEPA, to meet its obligations under NEPA, 42 U.S.C. §§ 4321 et seq.

The proposed project would include seismic surveys to be conducted from a research vessel on the shallow shelf in Texas state waters. Two Generator-Injector (GI) airguns would be used for the surveys with a total discharge volume of ~210 in³. These surveys would examine the geologic environments beneath the GoA for secure, long-term, large-scale carbon dioxide (CO₂) storage. DOE's Proposed Action would provide funding to UT for this research, which is part of a larger project for which DOE would provide approximately \$14.1 million of the project's \$17.6 million total cost. All discussions and findings related to the Proposed Action and the No-Action Alternative are presented in the attached Final EA and Appendices. The Final EA is hereby incorporated by reference.

Based on the analyses in the EA, DOE finds that implementing the Proposed Action would not constitute a major federal action that would significantly affect the quality of the physical, biological, or human environment, within the meaning of NEPA. Therefore, the preparation of an Environmental Impact Statement is not required, and DOE is issuing this Finding of No Significant Impact (FONSI).

ALTERNATIVES CONSIDERED:

PROPOSED ACTION

DOE proposes to provide funding to UT to conduct HR3D marine seismic surveys in the GoA. The seismic surveys would be conducted from a research vessel on the shallow shelf off Galveston, Chambers and/or Jefferson County, within Texas state waters. The surveys would use 2 GI airguns with a total discharge volume of ~210 in³. These surveys would examine the geologic environments beneath the GoA for secure, long-term, large-scale CO₂ storage. DOE's Proposed Action would provide funding to UT for this research, which is part of a larger project for which DOE would provide approximately \$14.1 million of the project's \$17.6 million total cost.

The surveys would take place during February 2026 for a period of approximately 10 days, including 6 days of seismic operations. The surveys would occur within a 50 km² survey area within Texas state waters less than 30 m deep between ~29.1–29.6°N, ~94.1–94.8°W. The seismic surveys would involve one source vessel. Two 105 in³ GI-airguns would be towed behind the source vessel as the energy source, at a depth of ~3 m. The total discharge volume would be ~210 in³. The receiving system would consist of four 25-m solid-state (solid flexible polymer – not gel or oil filled) hydrophone streamers, spaced 10 m apart (i.e., 30 m spread), towed at a 2 m depth. The airguns would fire at a shot interval of ~12.5 m (~5–10 s). As the airgun array is towed along the survey lines, the hydrophone streamers would receive the returning acoustic signals and transfer the data to the on-board processing system. Approximately 4,440 km of seismic acquisition would occur.

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, DOE would not provide funding to the proposed project; resulting in potential delays if UT opts to search for other funding sources. More likely, the proposed geophysical surveys in the northwestern GoA would not take place. DOE assumes, for the purposes of NEPA, that under the No-Action Alternative the recipient would not pursue the project. Consequently, no seismic data would be collected to examine the geologic environments beneath the GoA for secure, long-term, large-scale CO₂ storage.

ENVIRONMENTAL CONSEQUENCES:

The Final EA includes an analysis of the affected environment (Chapter 3.0) and the potential effects of the Proposed Action on the environment (Chapter 4.0). The description of the affected environment focuses only on those resources potentially subject to impacts, which in this case are marine biological resources. Initial review and analysis of the proposed project activity determined that the following resource areas did not require further analyses in the EA: air quality/greenhouse gases, land use, safety and hazardous materials and management, geological resources, water resources, terrestrial biological resources, visual resources, and socioeconomic conditions.

Potential impacts of the Proposed Action on the environment would be primarily a result of the operation of the airguns during the seismic surveys. The potential effects of sounds from airguns on marine species, including mammals and sea turtles, are described in detail in the Final EA (Chapter 4.0) and could include the following: tolerance, masking of natural sounds, behavioral disturbance, temporary or permanent

hearing impairment, and non-auditory physical or physiological effects. It is unlikely that the Proposed Action would result in any cases of temporary or especially permanent hearing impairment, or any significant non-auditory physical or physiological effects. Some behavioral disturbance is expected if animals occur near the seismic operations, but this would be localized, short-term, and involve a limited number of animals.

The Proposed Action includes monitoring and mitigation measures to further minimize potential impacts on the environment. Mitigation efforts include pre-cruise planning activities such as consideration of energy source optimization/minimization; survey timing (i.e., environmental conditions: seasonal presence of animals and weather); and calculation of mitigation zones. The operational mitigation program would further minimize potential impacts to marine species to a level of insignificance. As detailed in Chapters 2.0 and 4.0 of the EA, the Proposed Action would include operational monitoring and mitigation measures, such as visual observations; enforcement of clearance zones; pre-clearance and ramp ups; and shut downs of the airguns for sea turtles. Shut downs of the airguns would be waived for dolphins. The fact that the airguns direct the majority of the energy downward, and less energy laterally, would also be an inherent mitigation measure. National Marine Fisheries Service (NMFS) has also set forth vessel strike avoidance measures for the proposed activity.

With the planned monitoring and mitigation measures, unavoidable impacts to marine species that could be encountered would be expected to be minimal, and limited to short-term, localized changes in behavior and distribution near the seismic vessel. At most, effects on marine mammals may be interpreted as falling within the U.S. Marine Mammal Protection Act (MMPA) definition of Level B Harassment for those species managed by the NMFS. Level A takes, based on current NMFS Technical Acoustic Guidance¹, would not be anticipated and therefore were not requested and will not be issued by NMFS. No long-term or significant effects would be expected on individual marine mammals, sea turtles, fish, or on the populations to which they belong, or on their habitats.

The reasonably foreseeable effects of the Proposed Action were evaluated in Section 4.1.6 of the Final EA. Human activities in the area around the survey vessel would likely include other research, vessel traffic, oil and gas activities, and fisheries activities. Fisheries activities within the region and potential impacts are described in further detail in the Final EA, Chapter 4.0. Fisheries activities would not be precluded in the survey area; however, a safe distance would need to be kept in order to avoid possible entanglement with the towed equipment. Potential conflicts with ocean users would be avoided through Notice to Mariners and direct radio communications during the surveys. Considering the limited time that the planned seismic surveys would take place and temporary nature of potential environmental impacts, the proposed project is not expected to have any significant impacts on human activities in the area.

The “No Action” alternative would remove the potential of the limited direct and indirect environmental consequences as described. However, it would preclude field validation of monitoring, verification, and account technology for future offshore sub-seabed carbon storage. The “No Action” alternative would not meet the purpose and need of the Proposed Action.

¹ 2024 Update to: Technical guidance for assessing the effects of anthropogenic sound on marine mammal hearing (Version 3.0). Underwater and in-air criteria for onset of auditory injury and temporary threshold shifts. Office of Protected Resources, NMFS, Silver Spring, MD.

COORDINATION WITH OTHER AGENCIES AND PROCESSES:

DOE updated the Final EA based on the outcomes from agency consultations. Discussions with NMFS during MMPA and Endangered Species Act (ESA) consultation resulted in minor refinements to the information initially provided in the Draft EA. Based on the discussions with NMFS, the Final EA was updated with information on monitoring and mitigation measures set forth by NMFS, additional marine mammal density information and revised number of survey days for the calculation of potential takes of dolphins and sea turtles, and removal of requested takes for marine mammal species that are unlikely to occur in the project area. In addition, minor edits to correct typos or improve clarity were also made. All changes from the Draft EA are shown in the Final EA as bold text to allow readers to quickly identify altered material. However, the new information that was included in the Final EA did not alter the overall conclusions of the Draft EA.

The Draft EA was sent to the NMFS during the ESA Section 7 consultation process. NMFS issued the Biological and Conference Opinion and Incidental Take Statement (ITS) on 10 April 2025. The Draft EA was also used as supporting documentation for an Incidental Harassment Authorization (IHA) application submitted by UT, on behalf of itself and DOE, to NMFS, under the U.S. MMPA, for “taking by harassment” (disturbance) of small numbers of marine mammals during the seismic surveys. On 19 November 2024, NMFS issued in the Federal Register a notice of intent to issue an IHA for the surveys and a 30-day public comment period; no public comments were received. On 17 January 2025, NMFS issued a notice of issuance of the IHA in the Federal Register. The IHA is valid from 13 January 2025 to 12 January 2026. As the surveys were postponed due to logistical challenges, UT has requested a reissuance of the IHA to immediately follow the expiration of the current authorization.

Additionally, the Draft EA was used to support the ESA Section 7 and Essential Fish Habitat (EFH) consultation processes with NMFS. NMFS offered no EFH recommendations for the proposed activity and noted that the proposed activity would have minimal adverse effects on EFH. Additionally, the Coastal Zone Management Act (CZMA) consistency determination was submitted to the Texas General Land Office (GLO) which administers the Texas Coastal Management Program (CMP). GLO determined that the project is consistent with the CMP goals and policies.

PUBLIC AVAILABILITY:

DOE encourages public participation in the NEPA process. The public was invited to provide written comments on the Draft EA to DOE by e-mail or ground delivery during the 30-day comment period, which occurred from 18 October to 18 November 2024. Copies of the Draft EA were made available for review at the Rosenberg Library, 2310 Sealy Avenue, Galveston, TX 77550, the La Retama Central Library, 805 Comanche St., Corpus Christi, Texas 78401, and on DOE NETL’s website at <https://netl.doe.gov/node/6939>. Copies of the Draft EA were also distributed to stakeholders. No comments were received from other agencies, non-governmental organizations, or the public.

This FONSI and the associated Final EA are available on the National Energy Technology Laboratory website at <https://www.netl.doe.gov/node/6939> and on the DOE NEPA website at [DOE Environmental Assessments | Department of Energy](#).

MITIGATION REQUIREMENTS:

No additional mitigation measures beyond those contained in the IHA and Biological and Conference Opinion issued by NMFS are required. However, DOE will take into consideration the conservation recommendations from the Biological and Conference Opinion.

FOR FURTHER INFORMATION OR TO REQUEST COPIES CONTACT:

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DETERMINATION:

Based on the information presented in the Final EA (DOE/EA-2267), DOE finds that providing funding to UT for the proposed project would not constitute a major federal action that would significantly affect the quality of the physical, biological, or human environment, within the meaning of NEPA. Therefore, the preparation of an Environmental Impact Statement is not required, and DOE is issuing this FONSI.

Issued in Pittsburgh, Pennsylvania on this 23rd day of January, 2026.

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