Request for Information (RFI)

SPECIAL NOTICE – REQUEST FOR INFORMATION (RFI): The Department of the Interior (DOI), Bureau of Ocean Energy Management (BOEM) is issuing this RFI for Enhancing Spill Risk Analysis for Proposed Outer Continental Shelf (OCS) Oil and Gas Activities. BOEM requests information from industry, academic institutions, Tribal governments, non-governmental organizations, state and federal agencies, and the public on approaches for assessing oil spill risk associated with proposed OCS oil and gas activities. BOEM will use the information received to advance spill risk analysis that supports environmental analyses and consultations.

This effort is primarily focused on oil spill risk, rather than oil spill response. However, information produced from this effort could support general spill-response planning needs in other contexts. BOEM seeks approaches that: 1) rely on inputs that are practical to obtain, 2) are transparent, 3) can be completed in a timely manner, and 4) support the Bureau's decision-making needs. BOEM also seeks approaches that use open-source tools, meaning modeling code and associated input data are publicly accessible, transparent, and able to be independently reviewed. Examples of input data may include but are not limited to environmental and oceanographic conditions (e.g., meteorological forcing, ocean currents, wave fields), historical spill data, and information describing potential offshore operations.

All responses under this RFI Notice must be submitted via email to Stephanie Brock at stephanie_brock@ios.doi.gov no later than Friday June 5, 2026 at 5:00PM EST. Please include "RFI BOEM Spill Risk Analysis Enhancements" in your email subject line. Please include your UEI SAM, primary POC, and business type (small, 8(a), large, etc.). Telephone inquiries will not be accepted or acknowledged. No feedback or evaluations will be provided to companies regarding their submissions.

This RFI does not constitute an Invitation for Bids (IFB), a Request for Quote (RFQ), or a Request for Proposal (RFP) and it should not be construed as a commitment of any kind by the Government to issue a formal solicitation or ultimately award a contract. The U.S. Government is in no way liable to pay for or reimburse any companies or entities that respond to this announcement. Any costs incurred by interested vendors in response to this announcement or incurred for participation in the RFI will NOT be reimbursed. All information marked as proprietary information will be safeguarded to prevent disclosures to non-Government personnel and entities. There is no bid package or solicitation document associated with this announcement. Response to this RFI is strictly voluntary. The results of this market research will contribute to determining the method of procurement and requirement development.

In accordance with Federal Acquisition Regulation (FAR) 52.215-3 - Request for Information or Solicitation for Planning Purposes (Oct 1997):

(a) The Government does not intend to award a contract on the basis of this solicitation or to otherwise pay for the information solicited except as an allowable cost under other contracts as provided in subsection 31.205-18, Bid and proposal costs, of the Federal Acquisition Regulation.

(b) Although "proposal" and "offeror" are used in this Request for Information, your response

will be treated as information only. It shall not be used as a proposal.

(c) This announcement is issued for the purpose of gathering market research information.

SUPPLEMENTARY INFORMATION

1. Background

BOEM's Oil Spill Risk Analysis (OSRA) framework supports statutory requirements associated with orderly, safe, and environmentally responsible OCS oil and gas leasing, exploration, and development. OSRA uses historical spill records, information describing potential offshore activities, resource locations, and operational scale and trajectory modeling to estimate the chance of spill occurrence as well as the probability of a hypothetical spill contacting identified resources. OSRA helps inform Department of the Interior and BOEM decisions related to leasing, exploration, and development activities. The OSRA risk modeling framework has also informed relevant spill-response planning.
More information on the current OSRA program is available at:
https://www.boem.gov/environment/oil-spill-modeling/oil-spill-modeling-program .

Risk assessment differs from response modeling. In response situations, the spill location becomes known, weather and ocean conditions are observed and forecasted, and details about the chemical characteristics of the spilled oil help to understand the potential fate in the environment. By contrast, in program-level planning and risk assessment, specific spill locations, timing, and material characteristics cannot be fully determined in advance. BOEM therefore evaluates hypothetical spills across a range of plausible scenarios and environmental states. This difference is a key challenge in assessing risk at a program scale in advance of OCS energy leasing and related activities.

When evaluating the resources a hypothetical spill may contact and impact, there are difficulties in evaluating and analyzing those resources over a large area and with variable timing and densities. For example, biological resources can be transient and seasonal, which adds natural variability and uncertainty. Ocean conditions also vary by location and depth, which affects how oil spreads and moves in the water column. These factors influence how hypothetical spills may behave and what they may contact.

BOEM's Oil Spill Risk Analysis (OSRA; Smith et al. 1982, Ji et al. 2011, Li et al. 2021) has for more than four decades provided a simple and scientifically grounded foundation for evaluating hypothetical spill risk across the Outer Continental Shelf. OSRA has supported many environmental analyses and decisions and has served as a consistent national framework. Recent work (Kaufman et al., 2024) identifies opportunities to enhance the approach, including reducing model run time, incorporating additional spill-behavior dynamics, and improving public-facing visualization tools. BOEM is actively exploring opportunities to modernize its spill risk assessment methods. BOEM already has a study (BOEM, 2025) that builds upon the work of ABS (2016) and focuses on oil spill occurrence rates and causal factors and is considering updating the OSRA framework with open-source trajectory modeling approaches, including three-dimensional modeling (Li, 2025). However, the final approach to holistically update BOEM's oil spill risk

assessment may differ from the concepts described above based on technical input received through this RFI.

Citations

Kaufman D, Flight M, Foley C, Arthur C, Bunting K, Fox E, Englehart G, Smalley P, Huang J (Industrial Economics, Inc. [IEc], Cambridge, MA). 2024. Evaluating connections: BOEM's environmental studies and assessments. Volume 2: findings and recommendations. Cambridge (MA): U.S. Department of the Interior, Bureau of Ocean Energy Management. 135 p. Report No.: BOEM 2024-022.

Li Z. 2025. Developing a Next-Generation 3D Oil Spill Model to Better Serve BOEM's Mission. Washington (DC): Department of the Interior, Bureau of Ocean Energy Management; [accessed 2026 March 3]. Developing a Next-Generation 3D Oil Spill Model to Better Serve BOEM's Mission | Acquisition Gateway

Li Z, Smith C, DuFore C, Zaleski SF, Auad G, JohnsonW, Ji Z-G, O'Reilly SE. A Multifaceted Approach to Advance Oil Spill Modeling and Physical Oceanographic Research at the United States Bureau of Ocean Energy Management. J. Mar. Sci. Eng. **2021**, 9, 542. https://doi.org/10.3390/jmse9050542

ABS Consulting Inc. 2016. 2016 update of occurrence rates for offshore oil spills. Sterling (VA): U.S. Department of the Interior, Bureau of Ocean Energy Management, Bureau of Safety and Environmental Enforcement. 95 p.

BOEM. 2025. Environmental Studies Planning, National Studies List for 2025. Washington (DC): U.S. Department of the Interior, Bureau of Ocean Energy Management; [accessed 2026 March 3]. Environmental Studies Planning | Bureau of Ocean Energy Management

Ji, Z.-G., W.R. Johnson, and Z. Li. 2011. Oil Spill Risk Analysis Model and Its Application to the Deepwater Horizon Oil Spill Using Historical Current and Wind Data, *in* Monitoring and Modeling the Deepwater Horizon Oil Spill: A Record-Breaking Enterprise, Geophys. Monogr. Ser., doi:10.1029/2011GM001117, pp 227-236.

Smith, R.A., J.R. Slack, T. Wyant, and K J. Lanfear. 1982. The Oil Spill Risk Analysis Model of the U.S. Geological Survey. U.S. Geological Survey Professional Paper 1227. http://www.boem.gov/Environmental-Stewardship/Environmental-Assessment/Oil-Spill-Modeling/Oil-Spill-Modeling-Program---Additional-References.aspx

2. Information Requested

BOEM invites the public to submit input and information to help plan a revised oil spill risk-assessment approach. BOEM seeks input on any or all the topics described below.

A. Approaches for oil spill risk assessment
BOEM seeks information on approaches that:

- characterize the chance that a spill could occur from proposed OCS activities;
- consider a wide range of possible spill locations (including spills deep below the water surface) when exact locations are not known in advance;
- incorporate spill likelihood, possible spill volumes, environmental and ocean conditions, infrastructure information, and resource sensitivity;
- account for oil behavior such as weathering, movement at the surface, movement below the surface, and other physical processes;
- identify, describe, and communicate uncertainty in underlying data, assumptions, and environmental conditions; and
- describe which assumptions are reasonable for BOEM to make in analyzing hypothetical spills.

B. Inputs and data sources
BOEM seeks information on:

- data types that support spill-risk analysis, such as historical spill information, information describing potential offshore operations, environmental conditions, and ocean circulation patterns;
- methods to describe data limitations and uncertainty in plain language;
- how recommended inputs can be practical for BOEM to obtain, and how the data can be made publicly available in some form; and
- general categories of input information that support hypothetical spill analysis when exact spill locations, timing, and oil characteristics are unknown.

For clarity, "information describing potential offshore operations" refers to basic facts about the types of activities that could occur, such as drilling or production methods, pipeline transport, or general equipment types that might influence spill likelihood or spill volume.

C. Modeling and analytical tools (if recommended by respondents)
If respondents propose modeling tools, BOEM seeks information on:

- approaches that ensure transparency, reproducibility, and public access;
- methods to incorporate surface and water-column advection, dispersion, weathering, and other spill-behavior processes at an appropriate level of detail;
- ways to explain uncertainty caused by input data, assumptions, and environmental conditions;
- ways to maintain clarity and avoid unnecessary complexity; and
- what would be needed to support any recommended model (such as data sources, documentation, or steps used to check performance), described in plain language.

D. Outputs useful for environmental analyses and consultations
BOEM seeks information on outputs that will support assessment of potential impacts on environmental, cultural, and socioeconomic resources. Examples include:

- the probability that oil could contact a resource (beyond the oil spill just occurring);
- thresholds of oil thickness or exposure;
- time-to-contact estimates;
- summaries of where and when oil could travel;
- ranges or distributions of possible outcomes.

These outputs will help subject-matter experts evaluate potential impacts. The risk-assessment approach itself will not determine impacts on resources.