



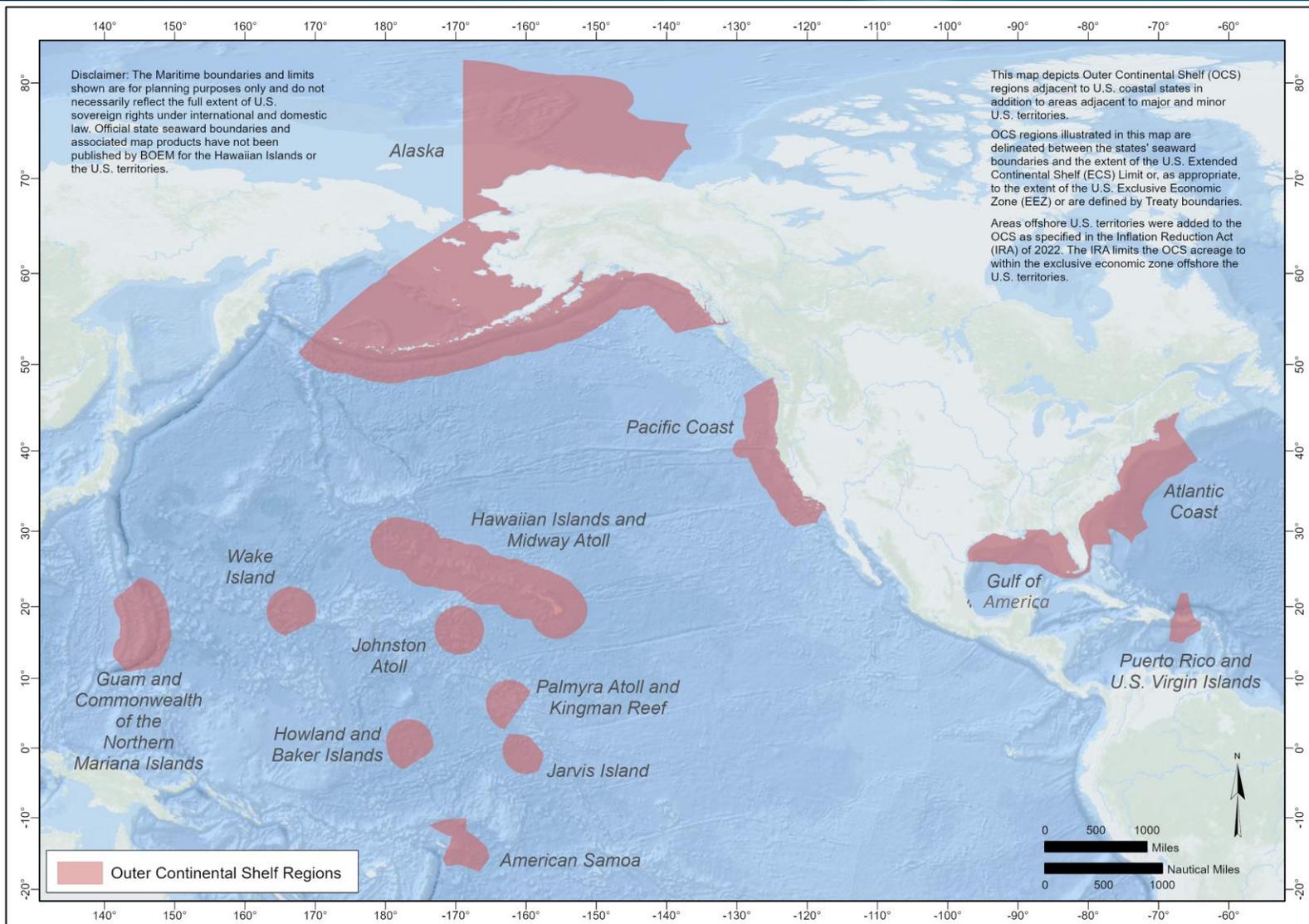
BOEM BUREAU OF OCEAN
ENERGY MANAGEMENT

Marine Minerals Management on the U.S. Outer Continental Shelf

January 27, 2026

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BOEM Mission and Jurisdiction



Manage the responsible development of Outer Continental Shelf offshore energy, mineral and geological resources in an environmentally and economically responsible way

Manages almost **3.2 billion acres** of the U.S. Federal seabed

Established in 2011 within the U.S. Department of the Interior (DOI)

Key Legislation

1953

Outer Continental Shelf Lands Act

“[T]he [OCS] is a vital national resource reserve held by the Federal Government for the public, which should be made available for expeditious and orderly development, subject to environmental safeguards”

2005

Energy Policy Act

Authorized DOI to grant leases for activity that involves the production, transportation or transmission of energy on the OCS from sources other than gas and oil, i.e., establishment of the Renewable Energy Program

2022

Inflation Reduction Act

“[P]rovides DOI with the authority to issue leases, easements and rights-of-way offshore U.S. territories,” i.e., U.S. Virgin Islands, Puerto Rico, American Samoa, Guam, Northern Mariana Islands



Outer Continental Shelf Development Programs

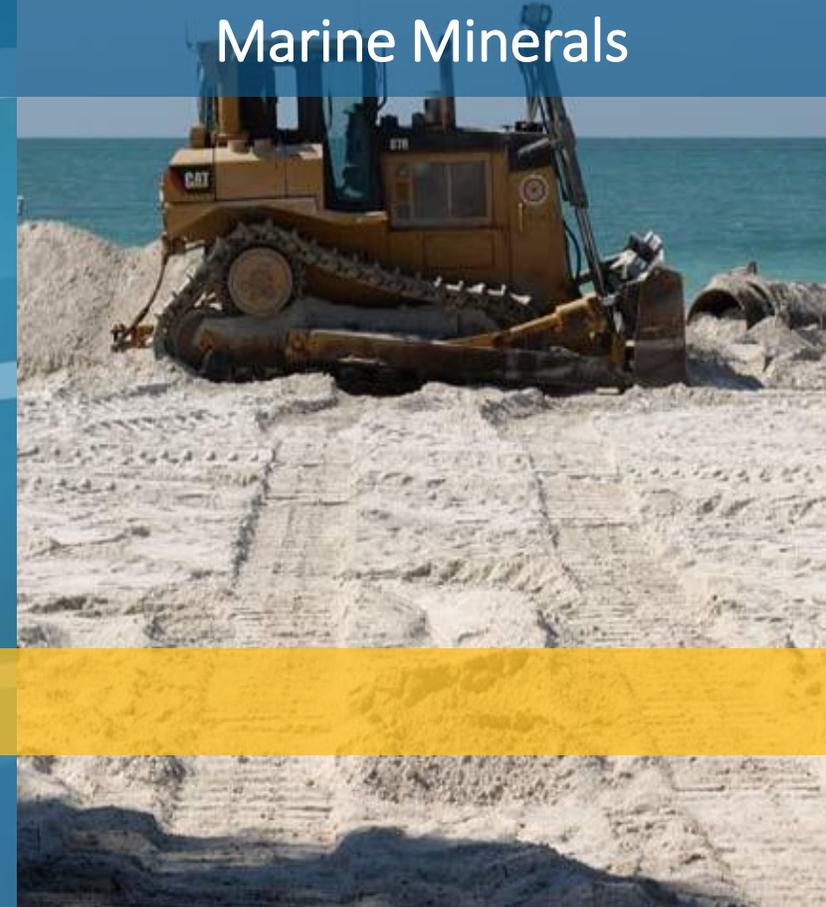
Conventional Energy



Renewable Energy



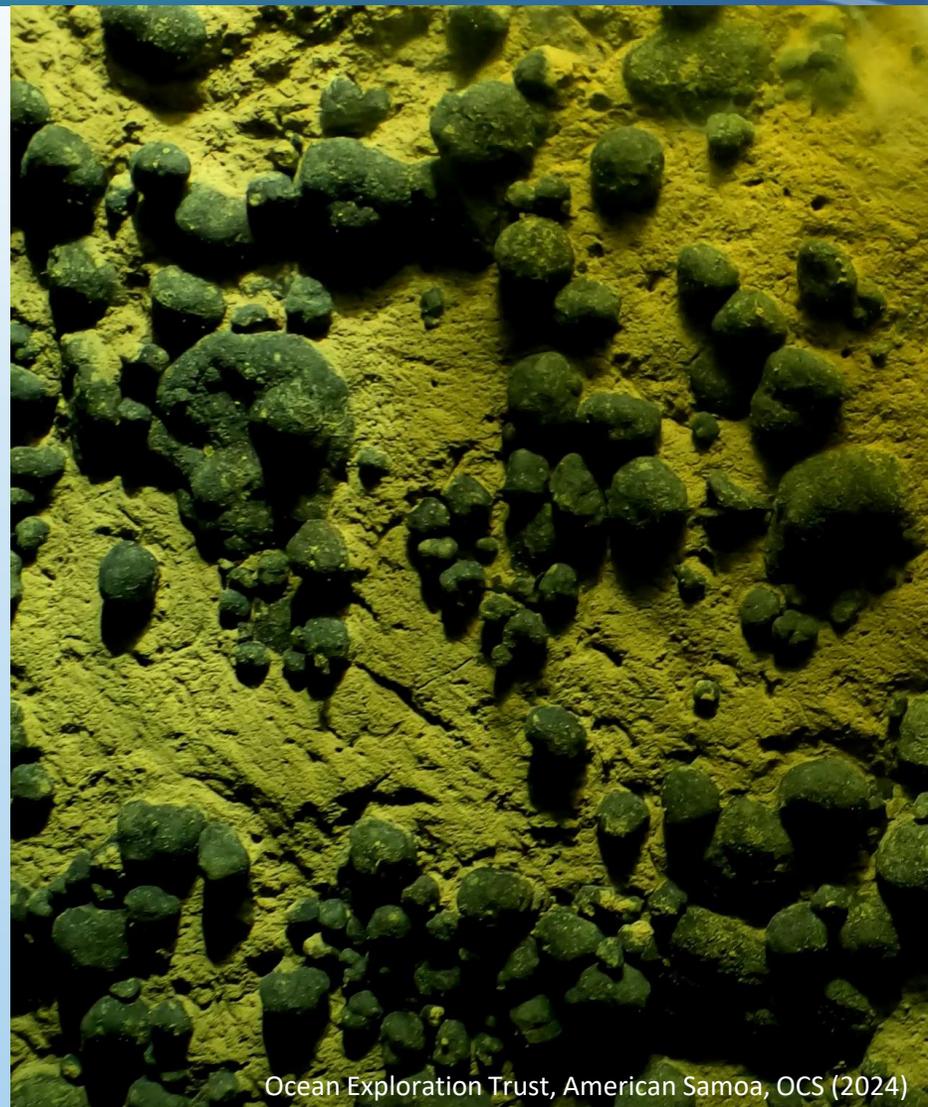
Marine Minerals



Environmental Programs

EO 14285 Unleashing America's Offshore Critical Minerals and Resources

- **Develop domestic capabilities** for seabed mineral exploration, characterization, collection, and processing
- **Streamline permitting and leasing** under both the Outer Continental Shelf Lands Act and the Deep Seabed Hard Mineral Resources Act
 - Secretary of the Interior must "establish an expedited process for reviewing and approving permits" for seabed mineral resource activities
- **Support deep-sea science, mapping, and technology investment**, coordinated across departments
- **Strengthen international coordination**, especially with key partners and allies
- *H.R. 4018 - To unleash America's offshore critical minerals and resources*



Ocean Exploration Trust, American Samoa, OCS (2024)

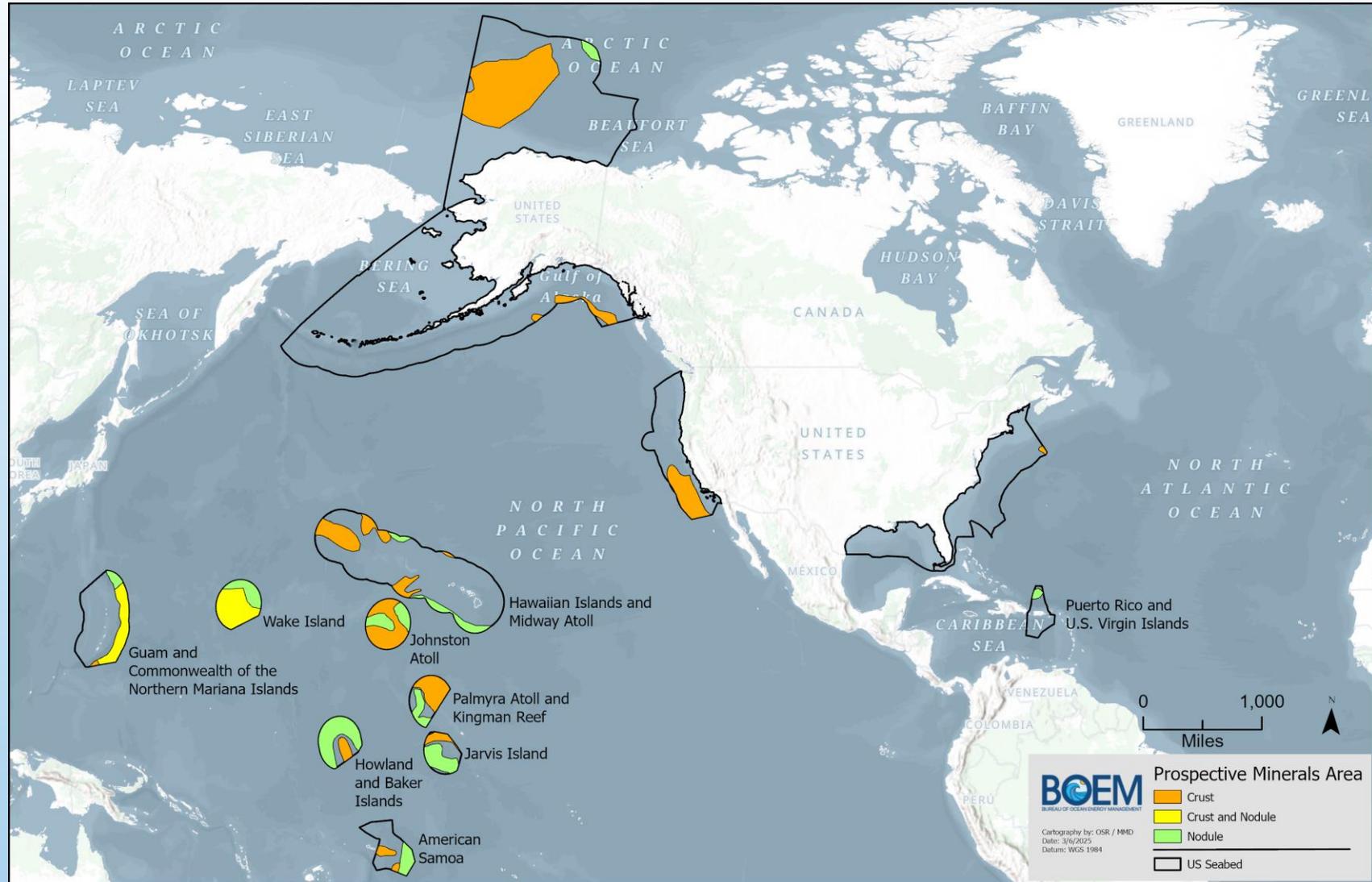
Outer Continental Shelf Critical Minerals Potential

Prospective Maps

- Developed from models and expert knowledge
- Indicates areas where minerals could be present, based on current knowledge

General Prospectivity Trends

- **Remote Pacific:** nodules, crusts
- **West Coast:** phosphates, hydrothermal deposits
- **Alaska:** heavy minerals, crust
- **Gulf of America:** heavy minerals, possible brine minerals
- **Atlantic:** heavy minerals, nodules, crust



Map derived using data in USGS data release "[Global ferromanganese crust and abyssal ferromanganese nodule prospective occurrence regions](#)"

BOEM Regulatory Frameworks for Critical Minerals Development

BOEM
Regulations:

30 CFR 580
Prospecting for Minerals

30 CFR 581
Leasing of Minerals

30 CFR 582
Operations

Action:

Prospecting

Commercial prospecting requires a Geophysical and/or Geological Permit; prospecting does not convey mineral rights

Non-commercial exploration requires an Authorization (or Notice for Scientific Research)

~ 2-3 months for Permit;
~ 1 month for Authorization

Leasing

Competitive process separate from prospecting

Two components:

- Sale
- Lease administration (e.g., required payments, bonding)

Activities under a Lease

Exploration and operations are to be conducted in manner that protects environment and promotes orderly development

- Delineation
- Testing
- Mining

Lessees must also comply with applicable BSEE regulations

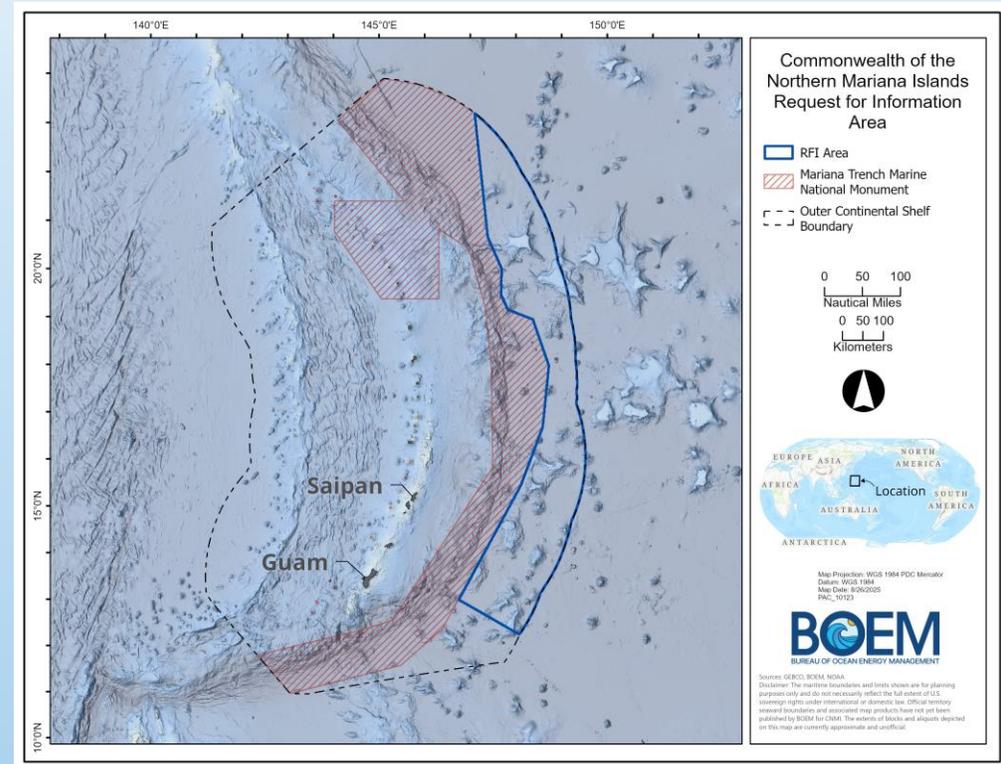
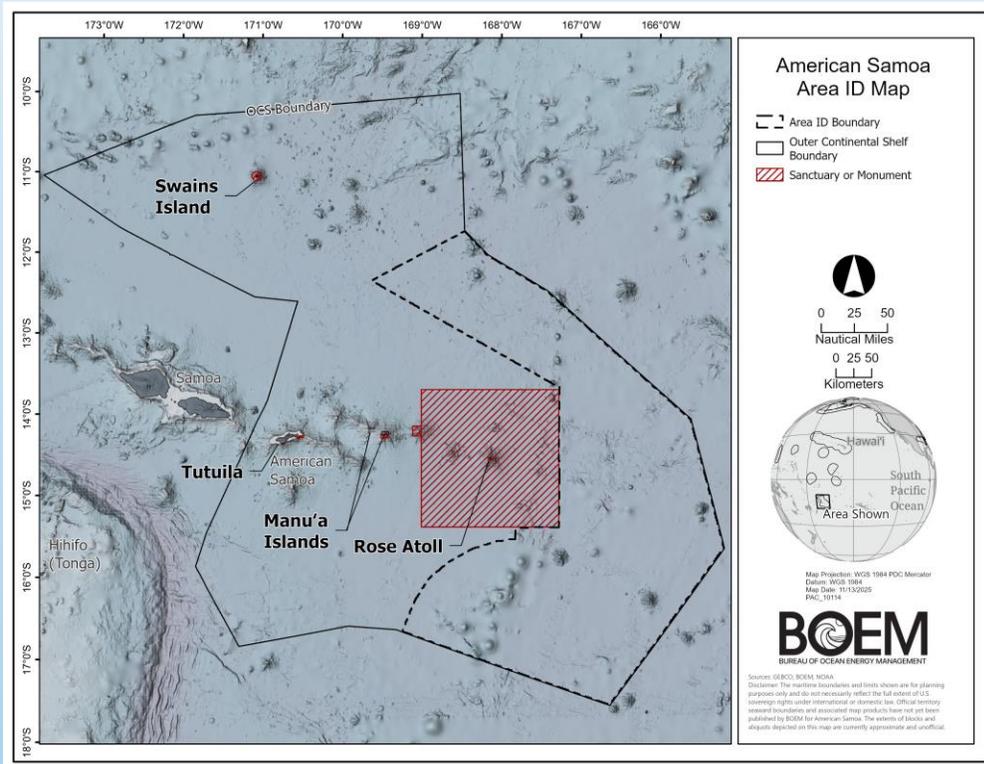
BOEM Regulatory Pathway for OCS Mineral Leasing



Territorial Government and community engagement occurs throughout the process

Current Critical Minerals Activity

- American Samoa – Environmental review
- Commonwealth of the Northern Mariana Islands – Area identification
- Virginia – Processing unsolicited lease sale request



Environmental Framework

- NEPA integrates environmental requirements
 - Physical
 - Federal Water Pollution Control Act
 - Clean Air Act
 - Biological
 - Endangered Species Act
 - Magnuson Stevens Fishery Conservation & Management Act
 - Marine Mammal Protection Act
 - Social-Cultural-Historical
 - National Historic Preservation Act
 - Coastal Zone Management Act
- Consultation and coordination with States, Tribes, and other agencies
- These Acts apply to every environmental review in the process



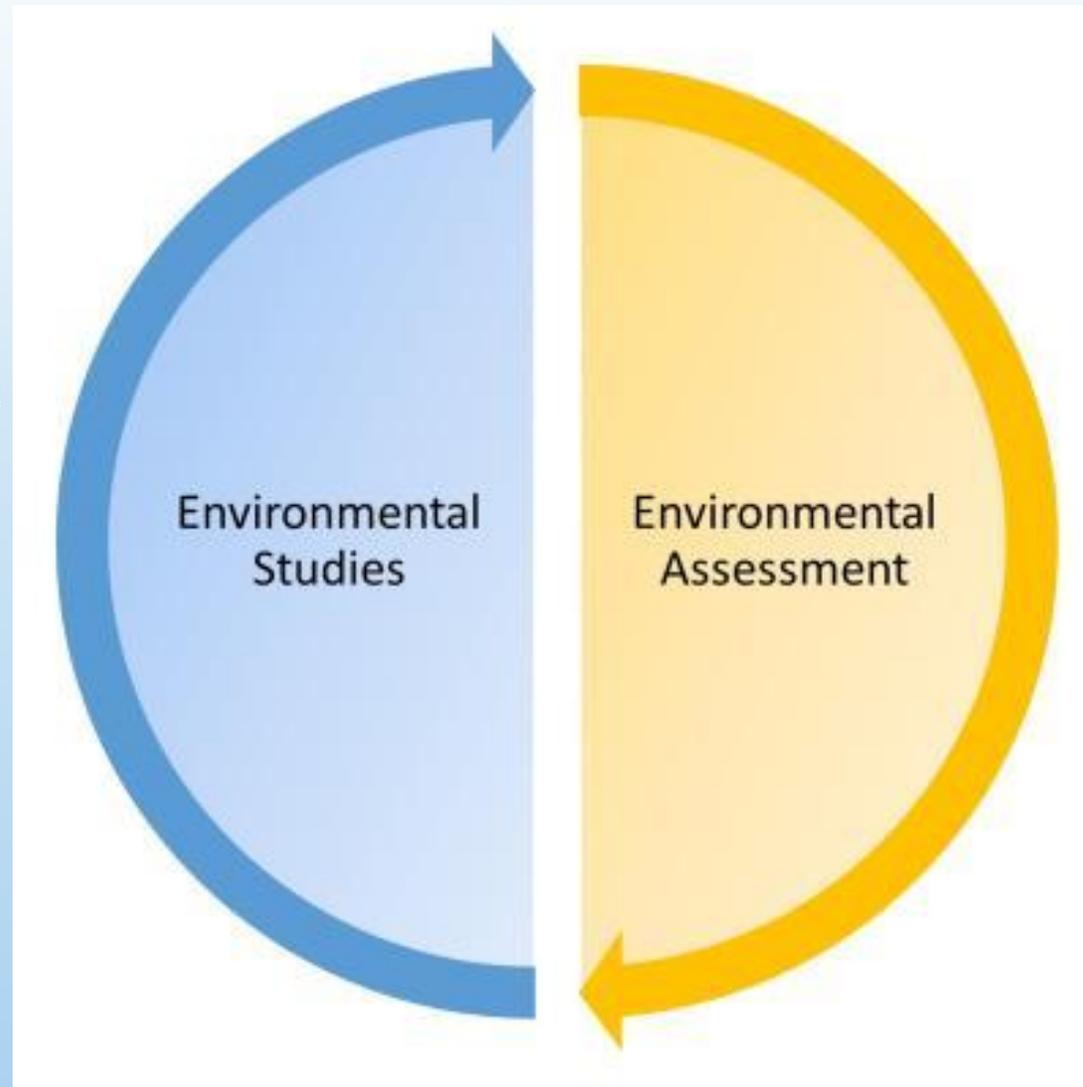
Environmental Studies Program (ESP)



ESP's mission is to provide the information needed to predict, assess, and manage impacts from offshore energy and marine mineral exploration, development, and production activities on human, marine, and coastal environments

Use-Inspired Research

- Synthesize existing data
- Collect new data to fill in gaps
- Assess interactions, risk, and vulnerability
- Monitor change over time and mitigate adverse impacts



- Broad-scale assessments to facilitate planning at a regional level
- Site-specific assessments to support project-level planning

Types of Data Needs

Characterize baseline environment

- Habitat characterization, physical and biogeochemical descriptions
- Species diversity, abundance, and distribution
- Regional context, high versus low-risk areas

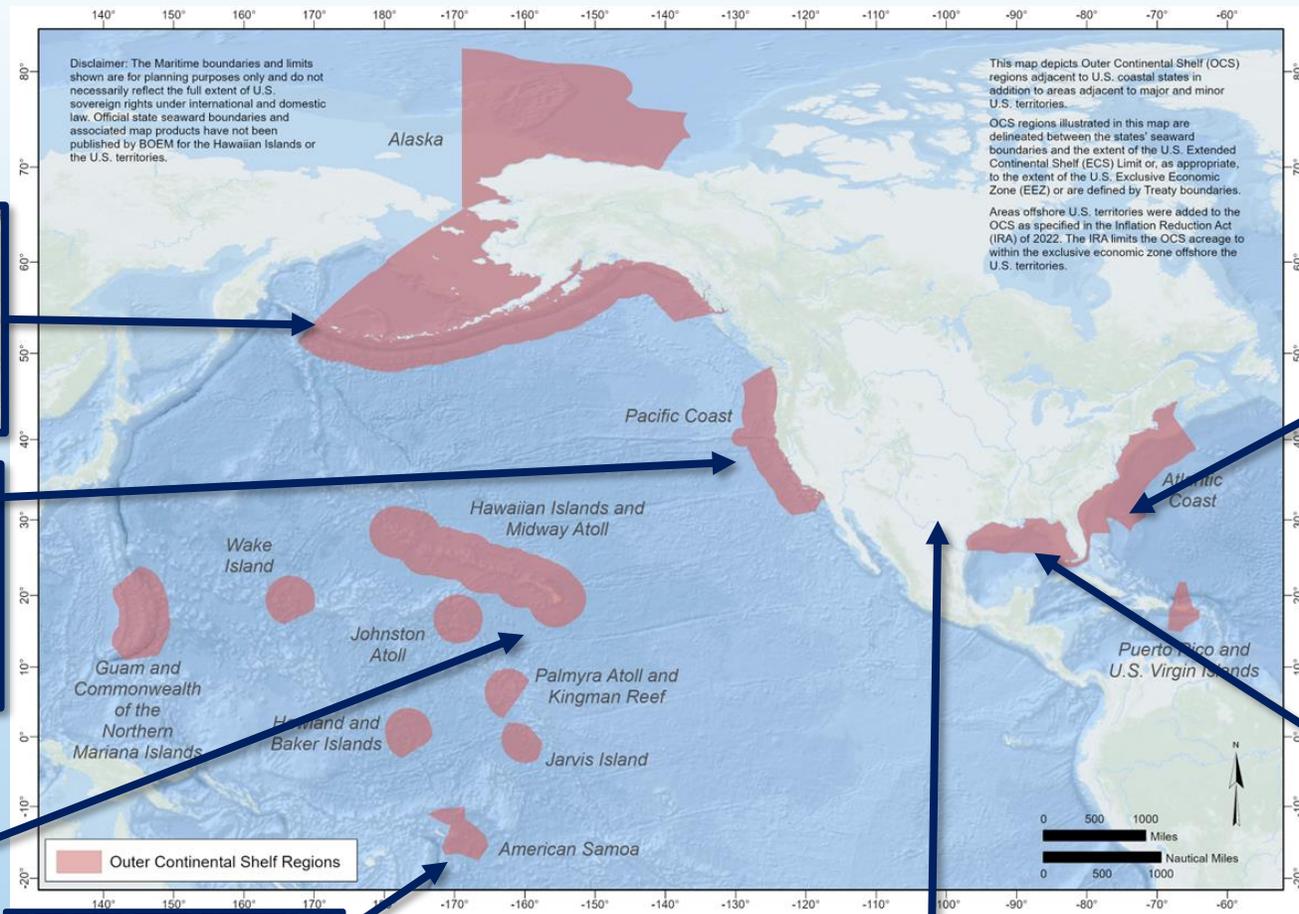
Identify potential impacts

- Magnitude and frequency
- Resilience, capacity to recover/adapt
- Cumulative impacts

Develop monitoring and mitigation

- Indicators and thresholds
- Measures to avoid and minimize risk

BOEM-Funded Offshore Critical Mineral Exploration Projects



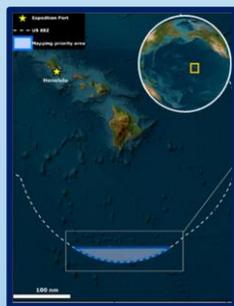
Western Aleutian Seamounts (2025)



Blake Plateau historic test site (2026)



Escanaba Trough (2022)



Hawaii Abyssal Plain (2025)



American Samoa Abyssal Plain (2024)

Tech Development (2025)



Gulf of America salt brines (2026)

Photos courtesy of: Impossible Sensing, Ocean Exploration Trust, USGS, NOAA, ONR, and BOEM

Desired Outcomes

- MM-24-01 *Developing a Critical Minerals Environmental Assessment Framework*
- What information do we need, i.e., what types of environmental studies can we conduct:
 - To establish environmental and ecological baselines (e.g., turbidity, biological communities, acoustics)
 - To understand potential impacts of critical minerals development activities
 - To monitor effects of potential impacts relative to baselines
 - To develop effective and measurable environmental mitigation and monitoring measures
 - To support the statutory requirements under NEPA and associated consultations
- Actionable recommendations to address identified data gaps
- Consideration of sufficient spatial and temporal scales for data
- Prioritization in the short-, mid-, and long-term

Sources of Additional Information

- BOEM critical minerals regulations: 30 CFR 580, 581, 582
- Regional activities
 - [American Samoa webpage](#)
 - [Commonwealth of the Northern Mariana Islands webpage](#)
- Completed and ongoing studies with partners
 - [Resource Evaluation of Critical and Hard Offshore Mineral Programmatic Reference](#)
 - [Escanaba Trough and Gorda Ridge](#)
 - [American Samoa](#)
 - [Guam and the Mariana Arc](#)
 - [Hawai'i](#)
 - [Western Aleutian Islands Arc](#)
 - [Heavy Minerals on the Atlantic Seabed](#)
 - [Blake Plateau](#)



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