United States Department of the Interior
BUREAU OF OCEAN ENERGY MANAGEMENT
Pacific OCS Region
760 Paseo Camarillo, Suite 102
Camarillo, CA 93010-6064

Memorandum

To: Matthew N. Giacona
Acting Director

From: Douglas P. Boren
Regional Director, Pacific Regional Office

DOUGLAS BOREN
Digitally signed by DOUGLAS BOREN
Date: 2025.10.15 07:54:29 -07'00'

Subject: Area Identification Recommendation for the American Samoa Outer Continental Shelf (OCS) Mineral Leasing Process

Area Identification (Area ID) is a major step in the Bureau of Ocean Energy Management's (BOEM) Outer Continental Shelf (OCS) mineral leasing process to develop a recommendation for an area to be carried forward for further leasing consideration and environmental analysis offshore American Samoa. Pursuant to 30 CFR 581.14, after considering the available OCS mineral resources, environmental data, and information, and the comments received from interested parties, including through the Request for Information and Interest (RFI), BOEM recommends tracts to be considered for a proposed lease offering. The recommended tracts would be considered in the forthcoming environmental analysis conducted for the activities that would be permissible under the proposed lease offering.

This memorandum documents your Area ID decision in accordance with 30 CFR 581.14. As noted above, your decision identifies the tracts to be carried forward for further leasing consideration and environmental analysis. The Area ID decision is not a final decision to lease nor is it an irreversible or irretrievable commitment of resources. The Area ID decision to support a potential OCS mineral lease sale offshore American Samoa is documented by your signature and marking your choice on the last page of this memorandum. A copy of this memorandum and the associated attachment will be made available on BOEM's website for public viewing and downloading.

I. Background

On April 8, 2025, BOEM received an unsolicited request from Impossible Metals Inc., for OCS minerals to be offered for lease in an area offshore American Samoa. After reviewing the request, BOEM determined it was appropriate to initiate the first steps that could potentially lead to a lease sale and on June 16, 2025, BOEM issued an RFI for commercial leasing for OCS seabed critical minerals offshore American Samoa (90 Fed. Reg. 25,369). The RFI requested information and comments on, and indications of interest in, the leasing of OCS minerals in and around the RFI Area. The RFI Area is the area of interest identified in the unsolicited lease sale request, located near the eastern limit of the American Samoa OCS bordering the Cook Islands Exclusive Economic Zone. It comprises approximately 18.1 million acres (73,222 square kilometers [km^2]) with approximate water depths ranging from 4,600–20,000 feet (1,400–6,000 meters). BOEM considered available OCS mineral resources, environmental data, and

information and interest received in response to the RFI when considering whether to proceed with additional steps leading to a potential OCS mineral lease sale offshore American Samoa.

II. Comments Received in Response to the RFI

In response to the RFI, BOEM received comments both opposing and supporting the proposed commercial lease sale in and around the RFI Area. BOEM received a total of 76,443 public comment submissions in response to the RFI. Of the total 76,443 public submissions, 1,085 were identified as unique, 73,586 copies were associated with 27 form letter campaigns, and 1,772 were considered duplicate or not germane. Pursuant to 30 CFR 581.14, BOEM considered these comments in developing an Area ID recommendation for a proposed lease sale for OCS minerals offshore American Samoa. **Attachment 1 provides an RFI comment summary**. Key highlights of the comments received are noted below:

- Governor Pulaali'i Nikolao Pula communicated that key leaders of the American Samoa Government reached a unified position of opposition to the proposed commercial leasing within the American Samoa EEZ, consistent with the concerns raised by residents and traditional leaders.[1] The Governor also indicated that the American Samoa Government continues to support collaboration and open dialogue with the Department of the Interior (DOI) and BOEM. He urged BOEM to fully consider the territorial moratorium on seabed mining and opposition to commercial leasing in the territory's EEZ, requested that no activity proceed without territorial consent, and emphasized collaboration grounded in environmental integrity, scientific integrity, and equitable consultation.
- American Samoa Congresswoman Uifa'atali Aumua Amata Coleman Radewagen requested all OCS mineral activities occur at least 50 miles from any of the islands of American Samoa, Rose Atoll, and Swains Island.
- Commenters raised environmental concerns related to the potential impacts to marine ecosystems, fisheries, and biodiversity; potential impacts from sediment plumes; potential disruption of food webs, habitat fragmentation and destruction, and impacts to coastal resilience; and potential impacts to fish populations, migration patterns, and breeding grounds, which could affect economically important species, such as tuna.
- Commenters requested that comprehensive environmental studies be conducted before issuing a lease, including baseline studies, full environmental surveys, comprehensive science-based environmental assessments, impact modeling, an assessment of onshore and offshore logistical impacts, and a Programmatic Environmental Impact Statement for all potential exploration, development and production activities, and that any future exploration be Indigenous-led, science-based, and subject to transparent environmental safeguards aligned with global best practices.
- Commenters expressed concerns about cross-boundary effects on the Cook Island waters, Tonga's tourism and economy, and the impacts on sea life within the Phoenix Island Protected Area.

[1] American Samoa Government - PR001-06232025. Leadership United: Governor and Lieutenant Governor Lead Unified Effort on Seabed Mining. June 23, 2025. https://www.americansamoa.gov/leadershipunited.

- Commenters raised cultural concerns that the waters off American Samoa hold deep cultural significance for Pacific Islanders and are integral to Fa‘aSamoa, the Samoan way of life.
- Commenters also raised concerns about possible impacts to underwater cultural heritage, traditional use areas, and the ability to continue practicing sacred cultural practices that could be sensitive to potential environmental impacts.
- Commenters stated that meaningful consultation with the Indigenous communities of American Samoa and the American Samoa Government should be conducted before any leasing process is considered.
- Commenters emphasized that the American Samoan economy relies on tuna fishing, tuna fish processing, and related industries, which provide significant employment and food security and support the local economy and livelihoods.
- Commenters raised socioeconomic concerns related to the current federal framework which they stated offers no guaranteed benefit to the local communities and the people of American Samoa and violates Indigenous rights and Pacific Island sovereignty, and requested to incorporate revenue sharing agreements for all leases, royalties, and profits with American Samoa which could support local communities and strengthen economic resilience.
- Commenters from the deep-sea mining industry provided recommendations on royalty rates and rental payments, auction formats, lease size, and lease contraction. Other non-industry commenters suggested a lease contraction process under certain circumstances, disagreed with suspension of rental payments, and recommended a benchmarking review of royalties in other jurisdictions, including the International Seabed Authority, the Cook Islands, and relevant onshore regimes.
- Commenters raised concerns that deep-sea mining faces uncertain economic viability due to current mineral prices, emerging alternatives and recycling, untested technology, and the lack of a U.S. processing and supply chain for critical minerals.
- Commenters advocated for a balanced approach with the recommendation that facts be gathered, risks assessed, and exploration of whether deep-sea mining can be pursued responsibly to secure a diversified, sustainable future for the territory.

III. Indications of Interest Received in Response to the RFI

BOEM received comments from industry and industry groups expressing interest in the OCS mineral leasing process offshore American Samoa. In addition to Impossible Metals Inc. confirming their interest in leasing, BOEM received indications of interest from several other companies in response to the RFI. Several indications of interest identified preferences for areas in and around the RFI Area and for expanding the area of consideration to the southwest of the RFI Area, as shown in the Indications of Interest Heat Map (Figure 1).

Collectively, the indications of interest are entirely encompassed by the available acreage/blocks in the Area ID recommendation. Indications of interest and comments identified polymetallic nodules deposits as the primary target for commercial development due to their potential to contain commercially viable quantities of cobalt, nickel, copper, manganese, zinc, rare earth elements, and other minerals that may prove economically viable to extract and process in the future.

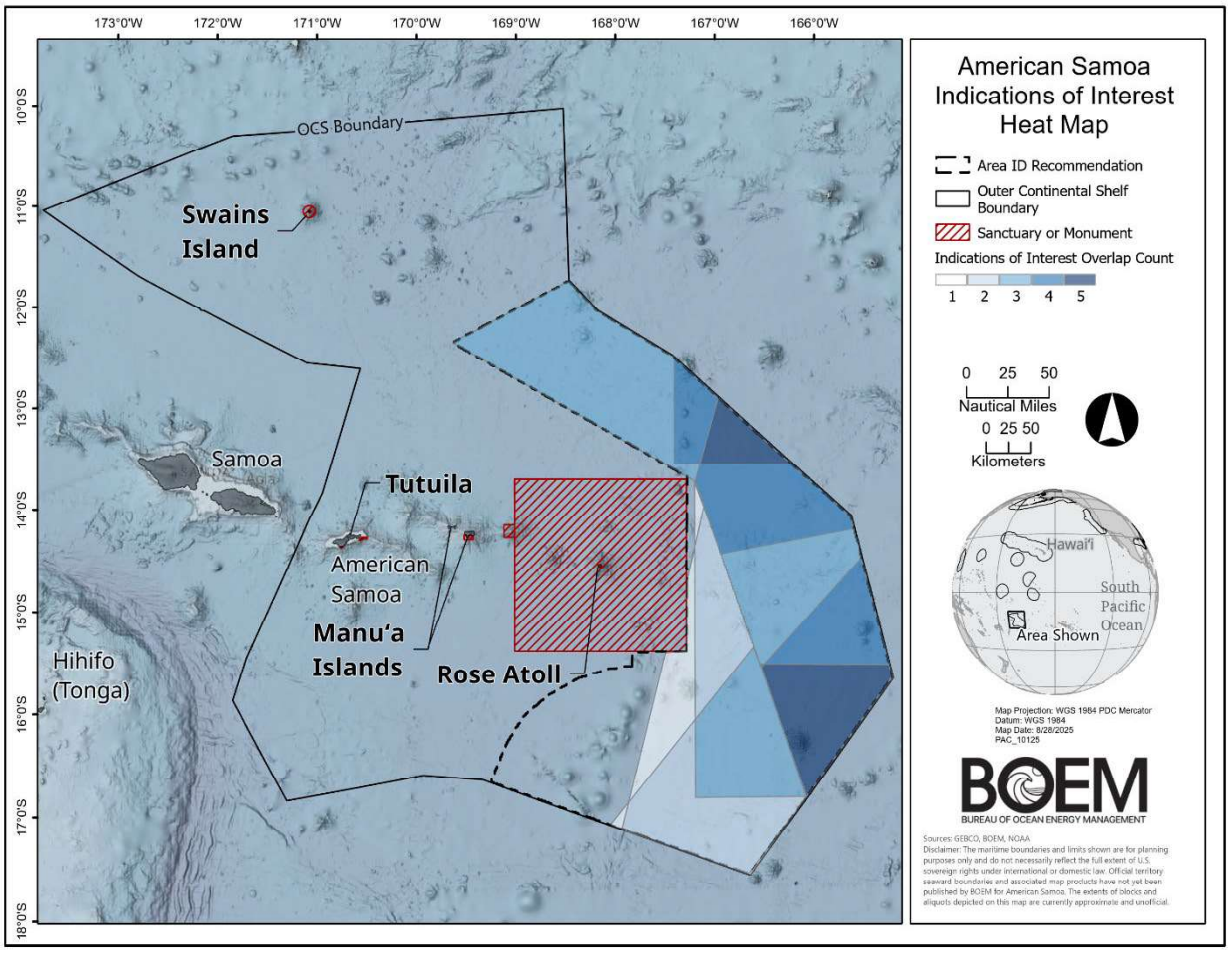

Figure 1: Indications of Interest Heat Map. The highest priority areas are shown as dark blue, lower priority areas shown in lighter shades of blue, and the lowest priority area shown in white.

IV. Recommendation

In formulating the Area ID recommendation, BOEM considered the available OCS mineral resource information, environmental data and information, comments received in response to the RFI, and indications of interest in OCS mineral leasing. The presence of any minable orebody is unknown, and additional prospecting is needed to discover and delineate OCS minerals, hence, the size of the tracts for potential leasing is relatively large. The recommended area is consistent with indications of interest and prospective seabed mineral regions identified by the U.S. Geological Survey (USGS) in and around the RFI Area for ferromanganese crusts and polymetallic nodules, as shown in the American Samoa Marine Minerals Prospective Regions Map (Figure 2), which is based on the USGS Global Marine Mineral Prospective Regions Map.[2]

[2] USGS Coastal and Marine Hazards and Resources Program. Global Marine Mineral Prospective Regions Map. January 31, 2025. https://www.usgs.gov/media/images/global-marine-mineral-prospective-regions-map.

With the inclusion of potentially available OCS mineral resources and the indications of interest, the recommended area is approximately 15,000,000 acres larger than the RFI Area. The selected tracts will be considered in the environmental analysis conducted for the proposed lease offering and BOEM will consider available environmental information and comments received through the RFI that inform the environmental review of activities permissible under a lease which are preliminary activities[3] needed to prepare plans for comprehensive technical and environmental review by BOEM. The comments received in response to the RFI will also inform future project specific environmental analysis if leases are issued and plans are submitted by lessees for work under their lease.

We recommend that you consider for potential leasing and environmental analysis all available blocks within the American Samoa RFI Area plus an additional contiguous area to the southwest of the RFI Area that extends to the southern boundary of the EEZ, as shown in the American Samoa Area ID Map (Figure 3). This Area ID recommendation constitutes an area of approximately 6,069 whole and partial blocks covering approximately 33,136,060 acres. This Area ID recommendation does not commit DOI to future leasing or a specific number of blocks or acreage to be offered at the lease sale stage.

- This Area ID recommendation provides flexibility as BOEM completes the required consultations, environmental analyses, and development of reasonable alternatives pursuant to NEPA and other statutes.
- The environmental analysis, which will be completed before making any decisions to hold a lease sale, will inform potential exclusions and mitigations that can be applied to leases issued in an American Samoa OCS mineral lease sale.
- The process allows for consultation with Indigenous communities of American Samoa that gives meaningful consideration to local concerns and respects self-governance.
- This Area ID recommendation is consistent with a request from American Samoa Congresswoman Aumua Amata Coleman Radewagan to ensure that any potential OCS mineral activities be located no closer than 50 miles from the islands of American Samoa, Rose Atoll, and Swains Island.

[3] Preliminary activities are bathymetric, geological, geophysical, mapping, and other surveys necessary to develop a comprehensive Delineation, Testing, or Mining Plan. 30 CFR 582.21(d).

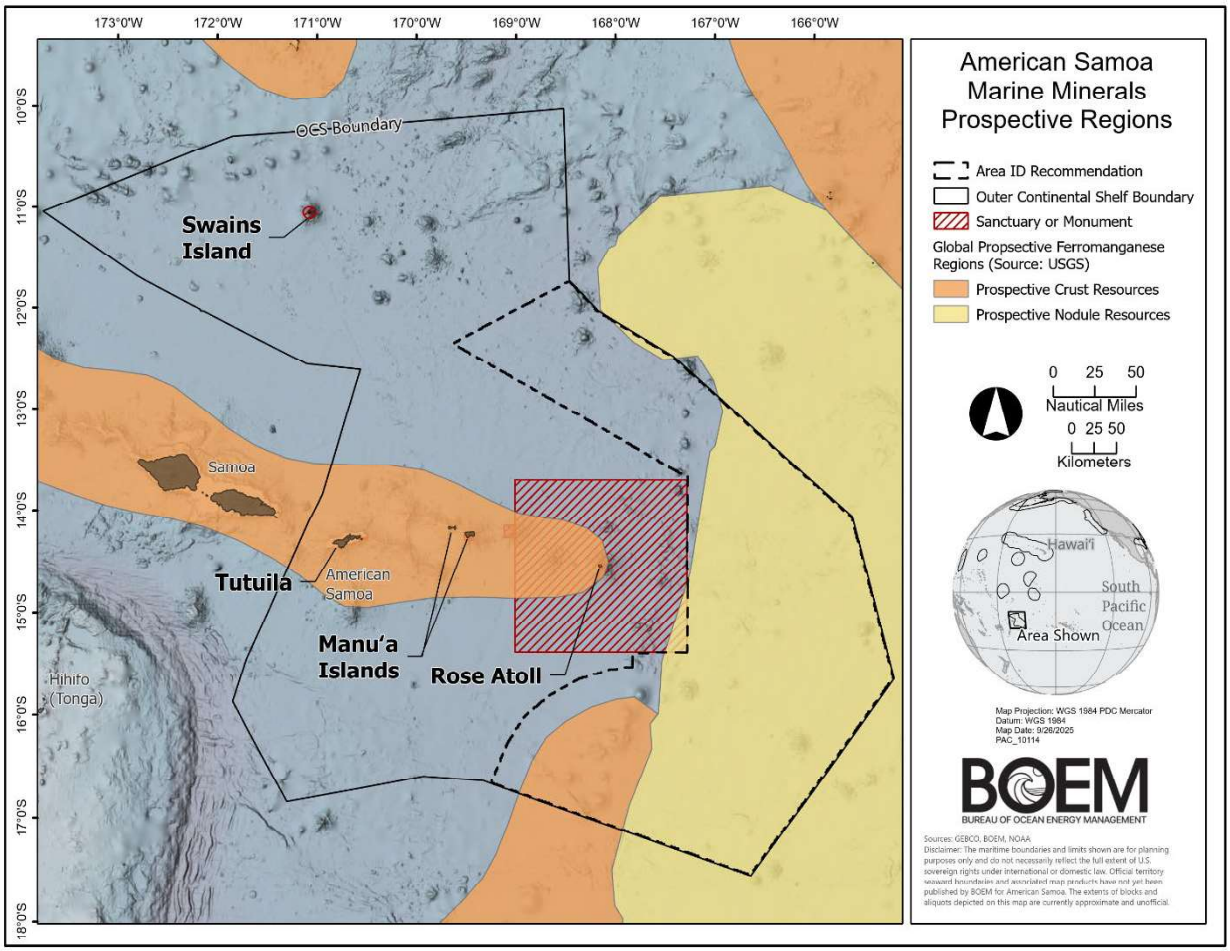

Figure 2: American Samoa Marine Minerals Prospective Regions Map. Global prospective ferromanganese regions for crusts are shown in orange, and prospective ferromanganese regions for nodules are shown in yellow, based on the USGS Global Marine Mineral Prospective Regions Map.[4]

[4] USGS Coastal and Marine Hazards and Resources Program. Global Marine Mineral Prospective Regions Map. January 31, 2025. https://www.usgs.gov/media/images/global-marine-mineral-prospective-regions-map.

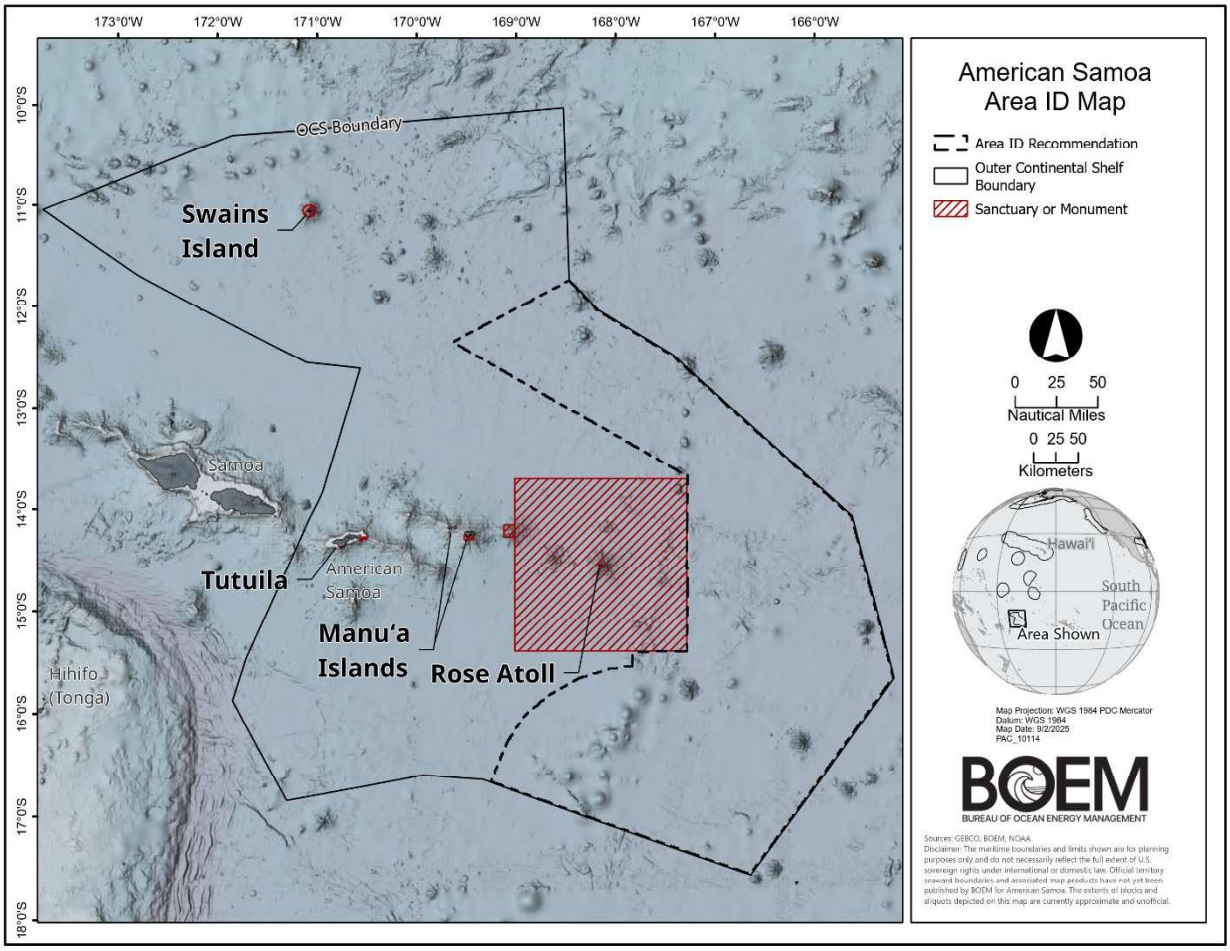

Figure 3: American Samoa Area ID Map.

V. Decision Options

Please indicate your decision by signing and dating this memorandum and marking appropriately below:

☑ I concur with the recommendation. Please continue with the Area ID announcement.

☐ I have made edits to modify the Area ID recommendation; please finalize and continue with the Area ID announcement.

☐ Please stop preparations for the Area ID announcement.

MATTHEW GIACONA
Digitally signed by MATTHEW GIACONA
Date: 2025.10.15 11:51:21 -04'00'

Matthew N. Giacona
Acting Director
Bureau of Ocean Energy Management

Attachment 1: BOEM American Samoa Request for Information and Interest Comment Summary

U.S. Department of the Interior
Bureau of Ocean Energy Management

BOEM Commercial Leasing for Outer Continental Shelf Minerals Offshore American Samoa

Request for Information and Interest

Public Comment Period

Docket BOEM-2025-0035

Summary Report

September 29, 2025

Prepared by

ICF

This page intentionally left blank.

Introduction

On April 8, 2025, the Bureau of Ocean Energy Management (BOEM) received an unsolicited request for Outer Continental Shelf (OCS) minerals to be offered for lease in an area offshore American Samoa. BOEM published a notice in the Federal Register (Fed. Reg.) on June 16, 2025 (90 Fed. Reg. 25,369) requesting information and comments on, and indications of interest in, the leasing of OCS minerals in and around the area submitted in the unsolicited lease sale request. The comment period was extended on July 17, 2025, and closed on August 15, 2025.

Through August 29, 2025, BOEM received a total of 76,443 public comment submissions in response to the Request for Information and Interest (RFI) (Docket BOEM-2025-0035). Of the total 76,443 public submissions, 1,085 have been identified as unique (311 substantive and 774 non-substantive), 73,586 copies were associated with 27 form letter campaigns, and 1,772 were considered duplicative or not germane. The 311[1] substantive submissions and form letter campaigns are reflected in today's report. BOEM will use data and information received during the recent Request for Information and Interest public comment process (BOEM-2025-0035) to determine and document the proposed action's scope of environmental effects, alternatives or effects, and relevant information with respect to BOEM's action and regulatory authority.

[1] One substantive commenter submitted 15 additional submissions that only contained reference or supporting material with no additional comment text. These comments were flagged for "Cites data, reference or publications" but do not appear in this report as they are not coded to an issue. The total count of substantive comments with text included in this report is 296.

General Comments

A commenter said that they support BOEM's RFI because it acts as a critical step toward advancing U.S. national security interests, fostering economic diversification for the Territory of American Samoa, and countering growing foreign influence in the Pacific region, while emphasizing the need for robust environmental safeguards to protect vital resources such as the tuna fisheries.

Commenters referenced American Samoa Executive Order 006-2024, issued by former Governor Lemanu Peleti Mauga, which established a moratorium on deep seabed mining, extracting, removing, or any exploration activities in the waters offshore American Samoa. Several commenters stated that this moratorium remains in full force and effect and has been reaffirmed by current Governor Pulaali'i Nikolao Pula and other territorial leaders.

Several commenters stated that over 800 individuals and more than 40 organizations in American Samoa, over 37 countries, multiple U.S. states, 37 financial institutions, more than 65 major corporations, and over 940 marine experts have signed petitions opposing deep sea mining, indicating a growing global consensus for a moratorium on deep sea mining.

Many commenters called for respect of Indigenous rights and sovereignty in decision-making about ocean resources, while some commenters cited principles, such as Free, Prior, and Informed Consent (FPIC) and the United Nations Declaration on the Rights of Indigenous Peoples.

Commenters requested 30- and 120-day extensions to the comment period.

Background

Concerns Over the Necessity and Efficiency of Deep Sea Mining

Some commenters questioned the RFI's justification for the need for critical minerals, saying:

- Emerging technologies and innovations in recycling are beginning to replace the need for deep sea minerals;
- Assertions that deep sea mining is essential for the renewable energy transition are misleading because sufficient terrestrial sources of critical minerals already exist and their extraction is far more efficient; and
- Deep sea mining is unnecessary and inefficient for meeting clean energy goals.

Commenters said that deep sea mining is economically infeasible due to falling demand and prices for key minerals, rising operational costs, and advances in battery technology that reduce reliance on seabed resources. A commenter stated that seabed mining on the American Samoa OCS is not consistent with national needs, as required by Outer Continental Shelf Lands Act (OCSLA).

Multiple commenters expressed concern and skepticism about the economic benefits of deep sea mining for American Samoa. A territory agency stated that the current Federal framework offers no guaranteed benefit to the people of American Samoa, with no commitments to hire locally, share royalties, or build capacity within American Samoa. A few commenters said that the economic benefits of deep sea mining would primarily accrue to external entities rather than local communities.

Commenters expressed concerns about the technological feasibility of deep sea mining operations, particularly with regard to the high calcium carbonate content of the water. A few commenters specifically questioned the technological capabilities and financial stability of Impossible Metals.

Legal Authority and Expanded Definition of Outer Continental Shelf

A commenter stated that applying OCSLA to American Samoa through the Inflation Reduction Act's (IRA) expanded definition of "State" constitutes a unilateral imposition. The commenter remarked that this approach treats the territory as a "resource colony," enabling Federal extraction without adequate local consent or equitable benefit. A commenter said that Congress added American Samoa to OCSLA's definition of "State" only for wind leasing under the IRA and emphasized that any mineral leasing must meet OCSLA's requirements for environmental safeguards, safe operations, protection of fisheries, and alignment with national and local interests—standards that seabed mining in American Samoa cannot meet.

A commenter wrote that BOEM lacks statutory authority under OCSLA to lease the seafloor for the extraction of polymetallic nodules, cobalt-rich ferromanganese crusts, or seafloor massive sulfides. They stated that these mineral types fall outside the scope of the leasing regime established by OCSLA, which defines "mineral" narrowly to include only oil, gas, sulfur, certain geothermal resources, or minerals authorized by a separate act of Congress for production from public lands. A commenter remarked that applying this expanded interpretation to American Samoa overlooks its unique territorial status and limits local influence over decisions affecting its marine environment.

Historical, Cultural, and Indigenous Rights Considerations; Deeds of Cession

A commenter discussed the Deeds of Cession (1900, 1904) that transferred sovereignty to the United States under commitments to protect Samoan lands, customs, and governance. They said that these deeds impose an implicit trust obligation on the United States to protect Samoan communal governance and Fa'aSamoa, the Samoan way of life. A territory-level elected official asserted the American Samoa legislature's authority in defining policies that protect the land and waters entrusted to their care, ensuring that all decisions regarding resource management align with legal, scientific, and cultural mandates.

Strategic and Geopolitical Considerations

A commenter stated that there are serious geopolitical risks associated with the United States pursuing deep sea mining outside the United Nations Convention on the Law of the Sea (UNCLOS) framework. They wrote that ignoring international governance undermines the United States' ability to demand compliance from other states on issues like illegal fishing and maritime navigation and weakens our legitimacy on the international scale. A commenter expressed concern about the potential for deep sea mining to create new geopolitical vulnerabilities, suggesting that issuing permits for the potential commercial recovery of seabed minerals in international waters could open the door to a race for control over ocean resources by foreign powers.

Coordination and Consultations

Government of American Samoa and U.S. Federal Agencies

Commenters referenced specific legal requirements for consultation under the OCSLA, stating that it guarantees American Samoa a meaningful opportunity to participate in policy and planning decisions related to OCS mineral development.

A commenter said that consultation on the technical kinds of issues relevant to the RFI requires significant scientific expertise and investment; the commenter therefore recommended that BOEM provide funding and technical assistance to the Government of American Samoa to ensure full and effective participation in the consultation process.

Commenters requested that the formal opposition of the Government of American Samoa be fully considered in BOEM's decision-making process, and that no commercial leasing or exploration activity should proceed in the American Samoa Exclusive Economic Zone (EEZ) without the expressed support of the territorial government.

A Federal agency wrote that it is prepared to coordinate with BOEM to close information gaps, such as in benthic habitat mapping, protected species distribution, and small-boat fisheries, and to support risk-informed leasing decisions.

An industry commenter recommended that BOEM should establish default separation distances between mining activities and existing submarine cables, relying on guidance from the Federal Communications Commission's Communications, Security, Reliability, and Interoperability Council.

Indigenous Peoples of American Samoa and other Indigenous Groups

Many commenters generally said that BOEM must fully consult with the people of American Samoa as part of any leasing process around American Samoa and incorporate their input in any future decision, including by giving significant weight to local concerns, holding public hearings with adequate advance notice and language support, providing culturally appropriate educational resources, and generally assisting local communities in assessing risks and benefits. Another commenter wrote that to ensure equitable access to information, all documents and presentations should be translated into Samoan.

Numerous commenters wrote that the United States must respect American Samoa's right to self-governance and FPIC. A commenter said that the American Samoa Government and village councils (Fono) must have the authority to reject proposals that threaten their way of life, arguing that consultation without the power to say "no" is not true consent. A commenter recommended that BOEM should coordinate with a Pacific Indigenous Advisory Council, established under 43 U.S.C. §1344, to provide ongoing input on leasing programs.

Other Coordination and Consultations

Commenters recommended that BOEM seek input from scientists and practitioners of traditional ecological knowledge; establish a standing advisory panel with representation from American Samoa's fishing, cultural, and scientific sectors; consult with American Samoa's fishing communities; identify submarine cable operators and service providers; and build public-private partnerships, including academia, private researchers, community leaders, government representatives, and industry experts, while ensuring representation of American Samoan residents, to advise on the responsible development of offshore mineral resources.

A commenter said that BOEM should include more than one public comment and consultation opportunity in its leasing process, such as after a lease is issued and environmental impact statements are developed. A commenter urged BOEM to ensure that it sufficiently informs the public and allows meaningful participation in the National Environmental Policy Act (NEPA) environmental impact analysis phase of the leasing process.

Leasing Process

A Federal agency agreed that BOEM should develop a clear leasing schedule to allow for the incorporation of ongoing data collection efforts. A couple of commenters suggested that BOEM develop a permitting track for exploration leases, similar to that devised by the International Seabed Authority (ISA), as part of a phased leasing process.

An industry commenter proposed that BOEM follow a leasing process similar to what has been implemented in the Cook Islands, which places a greater emphasis on a due diligence phase for the screening and qualification of applicants and requires the approval of a work plan for all approved lessees, among other requirements that differ from the process defined in OCSLA.

Rental and Royalty Rates

An industry commenter expressed support for BOEM's proposal not to charge rent during the first five years of leases and encouraged BOEM to suspend rental payments while BOEM reviews testing and exploitation plans. The commenter favored a structure that relies more heavily on royalty payments, similar to the structure employed in the Cook Islands. An industry commenter and a public interest organization said that it is premature to set rental rates because there needs to be some reconnaissance work to determine whether there is profitable mineral exploitation in this area. In expressing their opposition to minerals exploration, a couple of individual commenters suggested a rate of $500 million per square meter beginning in the first year, increasing at a rate of 15 percent per year.

An individual commenter stated that there should be rent due within the first five years, citing 30 CFR 581.25(b), which states: "unless otherwise specified in the leasing notice and subsequently issued lease." The commenter said that this means that as long as the notice and lease provide for rental payments in the first five years, they can and should be charged.

Industry and other commenters suggested royalty rates:

- No higher than 3 percent, and that also incorporates a lower royalty rate of 1.5 percent for the first five years of paying royalties;
- Approaching the 12.5 percent rate in the oil and gas industry over time, but lower initial rates; and/or
- Based on revenues generated, not on the nodules themselves.

Commenters said that it is premature to recommend precise royalty percentages due to the early stage of the industry and variability in operating costs, and that calculating a fair rate for these resources is "very difficult, if not impossible" due to the lack of data on the profitability of a deep sea mining operation.

Commenter recommended a benchmarking review of both terrestrial royalties and deep sea mining royalties, including ISA proposals and Cook Islands regulations, when available.

Auction Format and Lease Size

Industry and other commenters expressed support for transparent, competitive bidding mechanisms, such as an ascending oral bid auction with low minimum bid levels. Another industry bidder favored a sealed bid format. A couple of industry commenters expressed support for allowing companies to bid on multiple tracts.

Commenters suggested potential lease sizes:

- Any lease should be limited to a very, very small area of less than 1 km^2 per every 1600 km^2 due to the potential risk of environmental damage;
- 75,000 km^2 leases would be consistent with other ISA exploration contracts; and
- Minimum areas of 25,000 km^2 if smaller areas are necessary.

Lease Contraction Clauses

Commenters reasoned that leases should include an automatic and binding contraction clause to reduce the leased area if economic, environmental, or other damage is recorded or if other hazards occur and should be allowed to be reduced if portions of the tract are shown to not be economically viable. An industry commenter said that five years seems like a reasonable amount of time for lease contraction clauses.

Liability and Bonding Concerns

Commenters raised concerns about the liability of companies for environmental, economic, and cultural damages from their actions and recommended that BOEM require all applicants to post restoration bonds sufficient to remediate plume damage if deep sea mining ever proceeds.

Baseline Data Collection and Environmental Assessment

Many commenters emphasized the lack of comprehensive baseline data in the RFI area. A commenter said that the eastern margin of American Samoa's EEZ lacks publicly available high-resolution bathymetric data. The commenter said that there are no publicly available data on mineral contents from anywhere within the eastern American Samoa EEZ currently under consideration for leasing.

Commenters said that baseline data are needed to characterize habitats, document species and their interactions, and quantify existing anthropogenic impacts on the local deep sea ecosystem so that impacts from deep sea mining can be prevented and mitigated.

Survey Technologies and Methodologies

An industry commenter described various technologies for underwater mapping, positioning, and monitoring, including Autonomous Underwater Vehicles (AUVs), underwater positioning and communication systems, seabed mapping technology, water column acoustic technology, and inspection and monitoring technology.

RFI Area Information

A commenter said that the National Oceanic and Atmospheric Administration (NOAA) Ocean Exploration Cooperative Institute recently conducted two expeditions to map and sample the area that contains the RFI area, during which the high-resolution surveys for the eastern abyssal plain region of the American Samoa EEZ noted the presence of manganese nodules.

The same commenter recommended extending the lease sale area beyond the area of interest identified in the unsolicited request as indicated by a diagram in their comment letter. Another commenter recommended expanding the RFI area near the eastern limit of OCS Mining Area Block 1 to include additional prospective tracts as defined by the coordinates identified in their comment letter.

A commenter suggested comprehensive exclusion of seafloor sulfide and cobalt-rich crust seabed mineral resources from consideration for future mining leases and discussed the invasive effects mining would have on the area. Some commenters stated that the RFI should focus only on polymetallic nodules.

Seabed Hazards

A commenter said that the most notable hazards and environmentally and geologically sensitive areas are the shelf areas that have a significant change in bathymetry and the seamounts, which should be treated as exclusionary zones for any proposed activity. A commenter expressed concern that deep sea mining will negatively harm unidentified shipwrecks or aircraft wreck sites by either accidental extraction due to placement and activities and other possible disruptions in the seabed and ocean chemistry caused by deep sea mining. A few commenters discussed concern regarding volcanic areas and impacts of earthquakes along subduction zones.

Disruption to Subsea Cables

An industry commenter said that deep seabed mining poses risks to the Southern Cross Cable Network (SCCN), including disturbance or abrasion of the cables through contact with minerals and sediments during exploration and extraction, and impedes access to the water column and seafloor during repairs and recovery when the SCCN goes out of service. Another industry commenter stated that the installation of a subsea telecommunications cable is scheduled for September 2025. According to the commenter, the cable will traverse the southern portion of the RFI lease block area and expressed concern about the potential for deep seabed mining to damage subsea cables both within and adjacent areas of deep seabed mining operations. The commenter also provided details regarding the Bulikula subsea cable system under construction.

Other Uses of the RFI Area

Commenters stated that other uses of the RFI area include ports and shipping, marine tourism, marine trades, commercial and recreational fishing, marine navigation, and ocean recreation. Additional uses include education and research in marine science.

Impacts on Ecosystems and Species

Rose Atoll and Other Areas of Concern

Multiple commenters described the Rose Atoll as one of the most pristine atolls in the world, supporting unique ecosystems rich in biodiversity and expressed concerns about the proximity of the RFI area to the Rose Atoll. Commenters reasoned that many of the species living in the Rose Atoll are threatened or endangered, and that the area provides a critical habitat for these animals.

A few commenters asserted that areas of special concern, such as the Rose Atoll and Swains Island, also provide subsistence resources and are of cultural significance to American Samoans.

A commenter requested that any form of the process does not occur within 50 miles of any of the islands of American Samoa, Rose Atoll, and Swains Island.

Commenters expressed concerns about:

- The Phoenix Island Protected Area (PIPA);

- The Muli‘āva unit of the National Marine Sanctuary of American Samoa (NMSAS), which overlays the Rose Atoll Marine National Monument;
- The Vailulu’u Seamount, the only hydrothermally active seamount within American Samoa's waters that could eventually breach the surface within decades;
- The Malulu Seamount, saying that much less is known about this deeper feature; and
- Swains Island, Ta’u Island, and Aunu’u Island.

Air and Water Quality

A group of Indigenous Pacific Islanders, as part of a form letter campaign, stated that onshore processing facilities and increased vessel traffic could introduce respiratory and other health issues.

Several commenters described sediment plumes as detrimental to water quality first, by disturbing and redistributing sediment on the seafloor and smothering benthic communities while mining and second, by discharging any unwanted mud, silt, and debris from the above-surface mining vessel. Commenters said that, with ocean currents, sediment discharge and plumes can travel hundreds of miles or kilometers.

Several commenters said that mining could release heavy metals and toxins into the water.

Pelagic and Benthic Communities

A commenter shared concerns over the health of different phytoplankton and zooplankton species that live in the pelagic habitats of America Samoa, stating that plankton form the base of the food web, with the larvae of many marine species, including most coral reef invertebrates, feeding on them. A few commenters shared concerns over disruptions to migrations and natural movements throughout the water column caused by mining. A commenter stated that deep sea mining activities could disrupt the migratory pathways and alter foraging behaviors of pelagic species like tuna, marine mammals, and turtles.

A commenter wrote that there is a major gap in knowledge regarding the species that inhabit the abyssal, bathypelagic, and mesopelagic zones, along with the role that these species play in endangered species survival, atmospheric qualities, or the health of commercial fisheries.

Several commenters discussed the biodiversity and sensitivity of benthic communities, including endemic and rare species, as well as countless undescribed and undiscovered benthic species. Commenters referenced scientific expeditions that found American Samoa’s deep sea biological communities to be distinct from other regions in the Pacific, with unique assemblages of deep sea sponges, echinoderms, and corals. Citing the length of recovery and growth time in benthic communities and habitats, several commenters remarked that the impacts from deep sea mining will be essentially permanent.

Commenters stated that American Samoa is home to hundreds of coral species, with estimates ranging from 200 to over 300 and wrote that coral reefs provide habitat for algae and other abundant invertebrates such as crustaceans, mollusks, tunicates, and sponges. Commenters remarked that there are over 900 species of reef-associated fish in American Samoa.

Commenters likewise described the ecosystem services that nodules offer benthic communities. A commenter said that up to 50 percent of larger macrofauna, like corals and sponges, live directly on nodules. More generally, another individual said that around half of all deep water species rely on nodules for some part of their development, such as deep sea octopuses, who deposit their eggs on nodules. Considering nodules as important habitats, several commenters wrote that the disturbance of nodules could threaten different forms of marine life.

Environmental Sensitivity

Commenters generally discussed the relative environmental sensitivity and marine productivity in and around the American Samoa RFI, including but not limited to rich and biodiverse ecosystems, abundance of distinct species, some of which are endangered, and important national monuments, like Rose Atoll.

A commenter discussed in detail critical ecosystem services in the RFI area that support biodiversity and broader ocean processes, especially carbon cycling and the role of deep sea microbes in immobilizing and detoxifying metals and reasoned that deep sea mining could interrupt these processes and disrupt ecological connectivity.

Commenters generally discussed the environmental impacts of seabed mining, including but not limited to damage to habitats, sediment disturbance, impacts on fisheries and tourism, food chain disruptions, effects on fish density, lack of ecosystem recovery and even permanent ecological and biodiversity loss, and more.

Fish and Essential Fish Habitat

Commenters discussed fish species in American Samoa that could be impacted by deep sea mining:

- Species occurring within coral reefs or in Rose Atoll and Swains Island;
- International fishery-important tuna species; and
- Other migratory species like grouper and swordfish.

A Federal agency described the Essential Fish Habitat (EFH) for Pacific pelagic fisheries as the marine water column from the surface to a depth of 1,000 meters, and from the shoreline to the outer boundary of the EEZ for juveniles and adults, while the surface to 200 meters of depth is designated EFH for egg/larval stages. They added that, for the American Samoa Bottomfish fishery, the water column from the surface to a depth of 400 meters is designated EFH for all life stages.

Impact Producing Factors (IPFs)

Noise and Light Pollution, Vibrations

Several commenters said that noise from equipment, such as riser and lift systems, collector vehicles, and above-surface vessels, can impact the behavior of species who use sound to navigate and communicate. A public interest organization reasoned that further research must be done to understand if the noise transmitted by mining equipment can be mitigated. Commenters said that the lights from mining support vessels may attract and disorient seabirds and disrupt bioluminescence and disorient the behavior of diving cetaceans, vertically migrating zooplankton, and seafloor invertebrates. Commenters said that seafloor equipment will produce vibrations, which may disturb organisms that bury or attach themselves to the seafloor.

Vessel Traffic and Deep Sea Vehicles

Commenters stated that increased vessel traffic could disrupt the movements of migratory species and elevates the risk of ship strikes for marine species. Several commenters stated that the movement and impact of mining vehicles cause direct destruction to benthic communities and habitats from dredging and trawling that damages the seafloor. Several commenters referenced past studies showing little ecosystem recovery or growth following vehicle impacts.

Cross-Boundary Impacts

Commenters expressed concern about cross-boundary effects on:

- The Cook Island waters from mining in American Samoa waters;
- The island of Tonga's tourism and economy; and
- Sea life within the Phoenix Island Protected Area.

Mitigation

A commenter said that it would be difficult to mitigate the pollution of intertidal zone habitats. A public interest organization asked that BOEM take appropriate measures to minimize the adverse and cumulative effects of deep sea mining. An individual asserted that there are no "scientifically validated methods" to mitigate damage from deep sea mining. A public interest organization asserted that the mitigation strategies proposed by Impossible Metals are "lacking in substantive detail." An industry commenter discussed their core technology program for minimizing ecological disruption while mining critical minerals, which includes low-impact system design, environmental monitoring via an autonomous underwater vehicle, and a collaborative oversight framework.

Endangered Species Act (ESA), Marine Mammal Protection Act (MMPA), NEPA, Coastal Zone Management Act (CZMA), National Historic Preservation Act (NHPA)

Commenters generally discussed the intent and need of the ESA and the incidence of endangered species in and around the waters of American Samoa, including green, hawksbill, leatherback, and olive ridley sea turtles, numerous species of dolphins and whales, the bumphead parrotfish, coral species, and several "candidate species" being considered for listing as endangered or threatened. A commenter asserted that deep sea mining in the RFI area would require consultation with National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service under the ESA due to the presence of numerous ESA-protected species, federally protected critical habitat for ESA-listed species, and likely harm to ESA-listed species from deep sea mining.

A commenter asserted that the proposed deep sea mining in the project area would violate the MMPA, unless BOEM were to specifically obtain take authorization.

Commenters reasoned that BOEM should prepare a programmatic Environmental Impact Statement (EIS) to comply with NEPA before issuing mineral leases. They added that under NEPA, BOEM must also include measures to potentially mitigate adverse effects from deep sea mining, and that it cannot "short-circuit" the NEPA process under any emergency procedures. An industry commenter recommended that BOEM consider a comprehensive assessment of the costs/benefits of deep sea mining versus traditional, land-based mining during the NEPA required alternatives analysis.

A couple of commenters expressed concern that deep sea mining and OCS mineral leasing would likely conflict with the goals of the American Samoa Coastal Zone Management Program, which protects marine resources and cultural heritage. The commenters stated that such activities could present a legal barrier under the CZMA, which requires Federal actions affecting the coastal zone to be consistent with approved territorial programs.

A couple of commenters asserted that the proposed program would trigger Section 106 of the NHPA, under which BOEM is required to consider the effects of its actions on historic properties and to consult with relevant stakeholders. Some commenters added that consultation with American Samoa's historic

preservation office and other Samoan parties must occur before any issuing of leases, and that consultation must be coordinated with NEPA review.

Cultural and Socioeconomic Information

Cultural Significance of the Ocean to Samoan Identity; Traditional Governance and Sovereignty

Several commenters remarked that the ocean is not only a resource but a fundamental part of Samoan identity (Fa'asinomaga) and cultural heritage. The commenters described the ocean as an ancestor, provider, protector, and living entity that connects Samoans across generations and islands. Commenters stated that Fa'aSamoa (Samoan way of life) is deeply intertwined with the ocean through traditional practices, ceremonies, legends, and spiritual beliefs that date back approximately 3,000 years.

Several commenters described the traditional Matai system (chiefly system) and Fa'amatai as governance structures that have managed marine resources sustainably for generations. A commenter remarked on Customary Marine Tenure as a traditional approach where village Matai maintain stewardship over marine resources from shoreline to reef flat, including spatial and temporal bans on specific areas or species and protocols for outsiders requesting permission to harvest resources.

Subsistence and Commercial Fisheries

Numerous commenters expressed concern that deep sea mining would threaten subsistence fishing practices that are essential for food security in American Samoa, stating that fishing provides a significant portion of protein in traditional diets.

Several commenters stated that fishing accounts for approximately 20 percent of all jobs in the territory and 18 percent of total labor income, with each dollar's worth of fish landed generating $3.30 in additional output in the local economy. A few commenters stated that the cannery accounts for 99.5 percent of American Samoa's exports and 84 percent of private employment in the territory. A commenter said that in 2023, the American Samoa longline fishery generated an estimated $2.82 million in landed value. A commenter stated that American Samoa exports roughly $353 million in tuna annually, with a projected value of $17.65 billion over 50 years.

Numerous commenters expressed concern about the potential impacts of deep sea mining on fisheries, including from sediment plumes that could increase the concentration of suspended particles in the water column, directly disrupting tuna physiology and harming the plankton and micronekton that form the base of their food supply. Other concerns include release of metals and toxins, noise and light pollution, and disruption to EFH and HAPC.

A few commenters expressed support for deep sea mining as a means of economic diversification away from the tuna canning industry on which it is heavily reliant. A commenter stated that leasing and development of critical minerals in the EEZ offshore American Samoa could create skilled jobs, support critical infrastructure, and generate sustained economic value in the region.

Impacts on Other Industries

A commenter stated that the National Park of American Samoa attracted 28,893 visitors in 2016, generating $1.68 million in spending and supporting 21 local jobs, with visitor spending increasing in 2022. The commenter further stated that neighboring Samoa has seen strong gross domestic product (GDP) growth (9.2 percent in Fiscal Year 2023, 9.4 percent in Fiscal Year 2024) driven by a tourism

rebound, and that visitors are drawn by the culture, history, relaxing atmosphere, and the clean environment.