



Proposed Critical Minerals Project Offshore Virginia *A Non-Technical Summary*



(NASDAQ:OMEX)



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ACRONYMS AND ABBREVIATIONS

BOEM – Bureau of Ocean Energy Management

DOI – U.S. Department of the Interior

DoW – U.S. Department of War

EA – Environmental Assessment

EEZ – Exclusive Economic Zone

EFH – Essential Fish Habitat

EIS – Environmental Impact Statement

GLDD – Great Lakes Dredge & Dock Corporation

HAPC – Habitat Areas of Particular Concern

HMS – Heavy Mineral Sands

km² – Square Kilometers

NEPA – National Environmental Policy Act

NOSI – National Offshore Sand Inventory

OCS – Outer Continental Shelf

OCSLA – Outer Continental Shelf Lands Act

PSO – Protected Species Observer

RFI – Request for Information and Interest

TSHD – Trailing Suction Hopper Dredge

U.S. – United States

USACE – U.S. Army Corps of Engineers

USGS – United States Geological Survey

UXO – Unexploded Ordnance



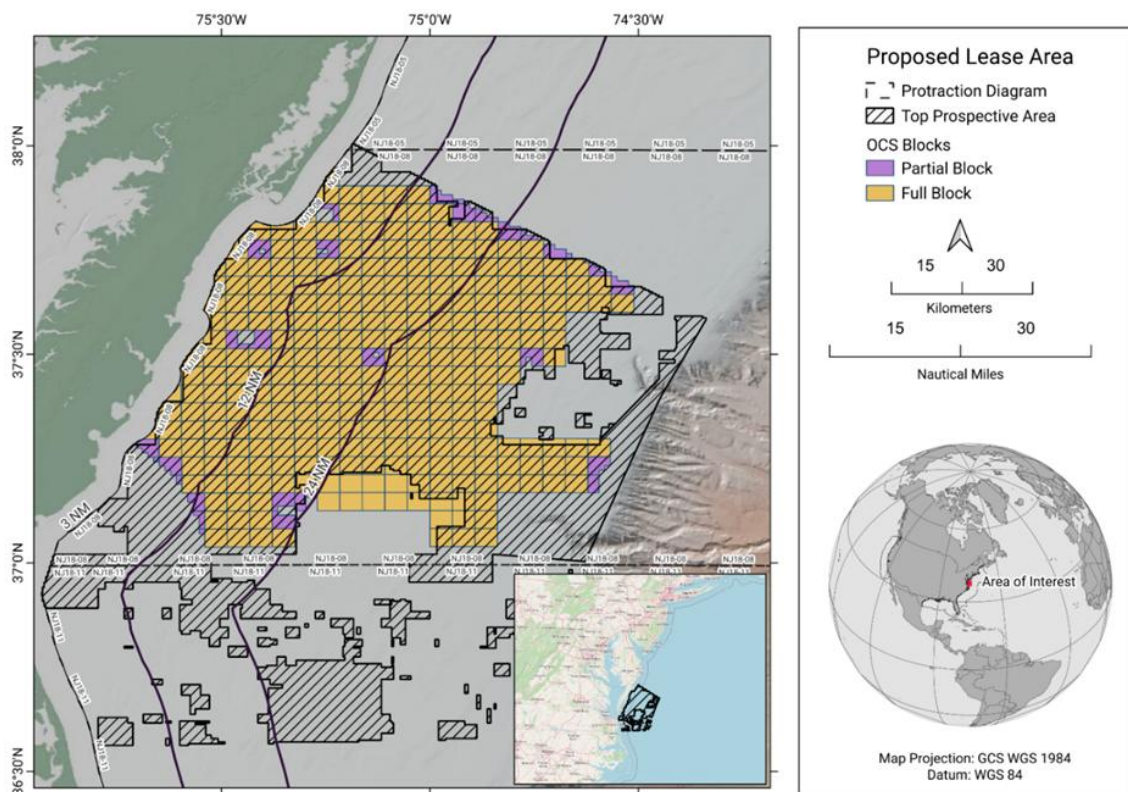
INTRODUCTION

A Summary of Odyssey's Request

Odyssey Marine Exploration (Odyssey) is a U.S.-based leader in ocean resource exploration and development with more than 30 years of science-led operating experience in marine environments.

Odyssey has submitted an unsolicited request asking the Bureau of Ocean Energy Management (BOEM) under the U.S. Department of the Interior (DOI) to consider holding a lease sale that would authorize marine mineral exploration in a carefully selected offshore area off of the Virginia coast.

The proposed area of interest covers approximately 6,000 km² and is located several miles offshore in water depths generally between 15 and 300 feet (5-90 meters). If a lease is awarded to Odyssey, the area of highest interest is 1,000 km² and if the project were to go into production dredging would impact an estimated area of less than 2 km² per year.



A map of the proposed lease area requested by Odyssey in its unsolicited request of Marine Mineral Exploration and Development Rights to the U.S. Department of the Interior's (DOI) Bureau of Ocean Energy Management (BOEM).

The purpose of this request is to advance and validate existing evidence of domestic U.S. supplies of heavy mineral sands (HMS), which contain strategically important minerals essential to national security and economic resilience. HMS host titanium, zirconium, and monazite (containing rare earth elements)—critical inputs for aerospace, defense, electronics, clean energy, and advanced manufacturing.

As global competition for a finite supply of critical minerals intensifies, demand for these materials is projected to rise faster over the coming decades than at any time in history, driven by global population growth, advancing technologies, and the everyday systems Americans rely on. In this context, it has become essential for the United States (U.S.) to plan ahead rather than scramble later, ensuring that Americans and the industries they depend on have access to a stable, affordable, and secure supply.



As a beneficial byproduct of HMS exploration and any potential future recovery, non-mineralized sand and aggregate resources may also be identified. These materials are widely used for coastal resilience, beach nourishment, construction, and environmental restoration.

As part of its initial unsolicited lease request to the Bureau of Ocean Energy Management (BOEM), Odyssey identified and proposed an offshore area for consideration. Odyssey selected the proposed offshore area using a proprietary, comprehensive desktop analysis that combined existing geological studies, public datasets, and prior sampling conducted by federal and state agencies, universities, and industry. This work identified offshore areas in the region where certain critical mineral resources are more likely to occur. Odyssey then applied its own independent analysis to refine the area of interest, focusing on locations with stronger indications of mineral presence while avoiding sensitive locations or specific areas with conflicting uses. The result is a targeted area suitable for further scientific exploration and BOEM's potential subsequent issuance of a Request for Information and Interest (RFI).

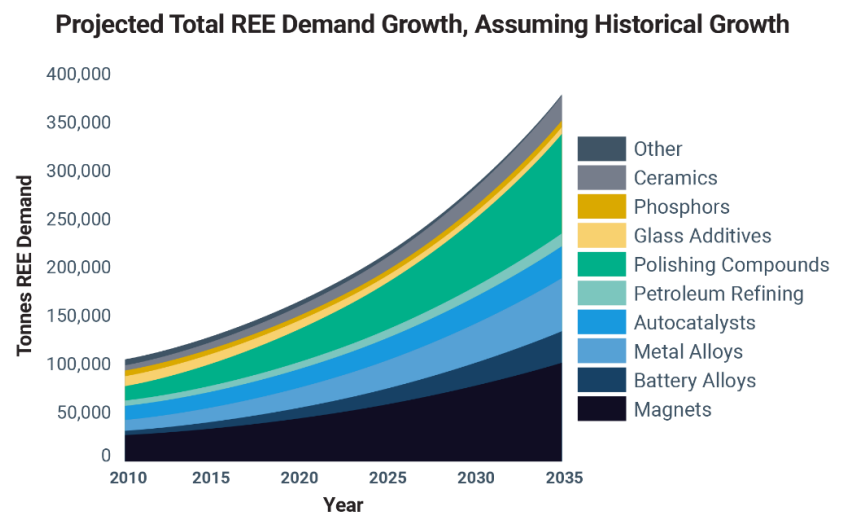
This request does not seek authorization for mining. If a lease were issued, it would allow early-stage scientific exploration activities, such as surveying and sampling, to better understand the area's resource potential. Any future consideration of commercial mineral recovery would require additional regulatory approvals, environmental review, and a separate decision-making process. The request initiates a transparent federal review process—guided by scientific study, public input, and environmental safeguards under the National Environmental Policy Act (NEPA)—through which BOEM will evaluate whether exploration should proceed and under what conditions.

The U.S. cannot build a clean, secure future without raw materials—but how and where those materials are sourced matters. Ocean mineral exploration offers a practical way to help meet this growing need within U.S. jurisdiction by relying on regulated offshore surveying and dredging practices that have been used safely for decades to support beach nourishment and navigation. If advanced through the federal review process, the project could help strengthen domestic critical mineral supply chains, support coastal resilience efforts, create high skilled jobs, and expand scientific understanding of the MidAtlantic marine environment.

Building Mineral Independence for a More Secure Future

The urgency to secure domestic supplies of critical minerals like titanium, zirconium, and rare earth elements, is underscored by the U.S. Government's 2025 List of Critical Minerals, which now includes zirconium among the 60 minerals deemed essential to the nation's economy, national security, and supply chain resilience. As global demand continues to grow and supply chains remain concentrated overseas, expanding responsible access to these materials within U.S. jurisdiction is vital to sustaining long-term economic strength, technological leadership, and strategic independence.

Titanium, zirconium, and rare earth elements are critical minerals, which collectively contribute to a key pillar of America's manufacturing and industrial base with the U.S. importing the vast majority of its rare earth element, creating a vulnerability in key sectors.



*Forecast global REE demand through 2035 assuming historical growth trends.
Source: Alonso et al., 2012*



These materials are indispensable to aerospace and defense systems, electric vehicles, renewable energy technologies, medical devices, and electronics. Yet despite their importance, the U.S. remains heavily dependent on foreign suppliers—many in regions prone to geopolitical instability or trade manipulation.

According to the U.S. Geological Survey (USGS):

- **Titanium:** More than 90% of U.S. titanium sponge consumption in 2024 came from imports, primarily from Japan, Kazakhstan, and Saudi Arabia.
- **Rare Earth Elements:** Nearly 80% of U.S. rare earth element consumption relies on imports, with China supplying approximately 70%.
- **Zirconium:** Identified by the USGS as a single point of failure due to the lack of primary domestic production and heavy reliance on imported zircon concentrates largely originating from South Africa, Australia, and Senegal.

Reliance on imported critical minerals exposes the United States to supply disruptions driven by geopolitical tensions, export restrictions, and trade uncertainty. These risks can impact industrial output, raise costs, weaken defense readiness, and slow the deployment of advanced technologies. As a result, strengthening secure domestic sources of critical minerals has emerged as an important strategic priority for economic resilience, national security, and long-term technological leadership.

The offshore region included in Odyssey’s request is prospective for several high value critical materials that underpin national security, economic competitiveness, and advanced technologies. Developing domestic sources—subject to rigorous scientific study and environmental review—offers a path to reduce foreign dependence, improve supply chain resilience, and strengthen U.S. strategic autonomy.

For workers, it supports domestic manufacturing and technical jobs. For everyone, it reduces exposure to global disruptions that can raise everyday costs and limit product availability.

Heavy Mineral Sands Overview

Heavy mineral sands (HMS) are naturally occurring sand deposits enriched in dense, valuable minerals such as ilmenite and rutile (sources of titanium), zircon, and monazite (which contains rare earth elements). These minerals are significantly heavier than common quartz sand grains. Over long periods of geological time, natural forces—wind, waves, currents, and changing sea levels—cause these heavier minerals to separate from lighter sands and accumulate in concentrated sediment layers.

HMS deposits typically form in coastal plains, nearshore areas, and shallow marine environments, where wind, waves and current action repeatedly sort sediments. Many of today’s offshore deposits were once ancient beaches or barrier systems that became submerged as sea levels rose.

These deposits are important because they provide the raw materials used across aerospace, defense, advanced manufacturing, medical devices, electronics, clean energy technologies, and everyday consumer products. The minerals can be separated from ordinary sand using gravity, magnetic, and electrostatic processes—common commercial methods that do not require chemical processing.





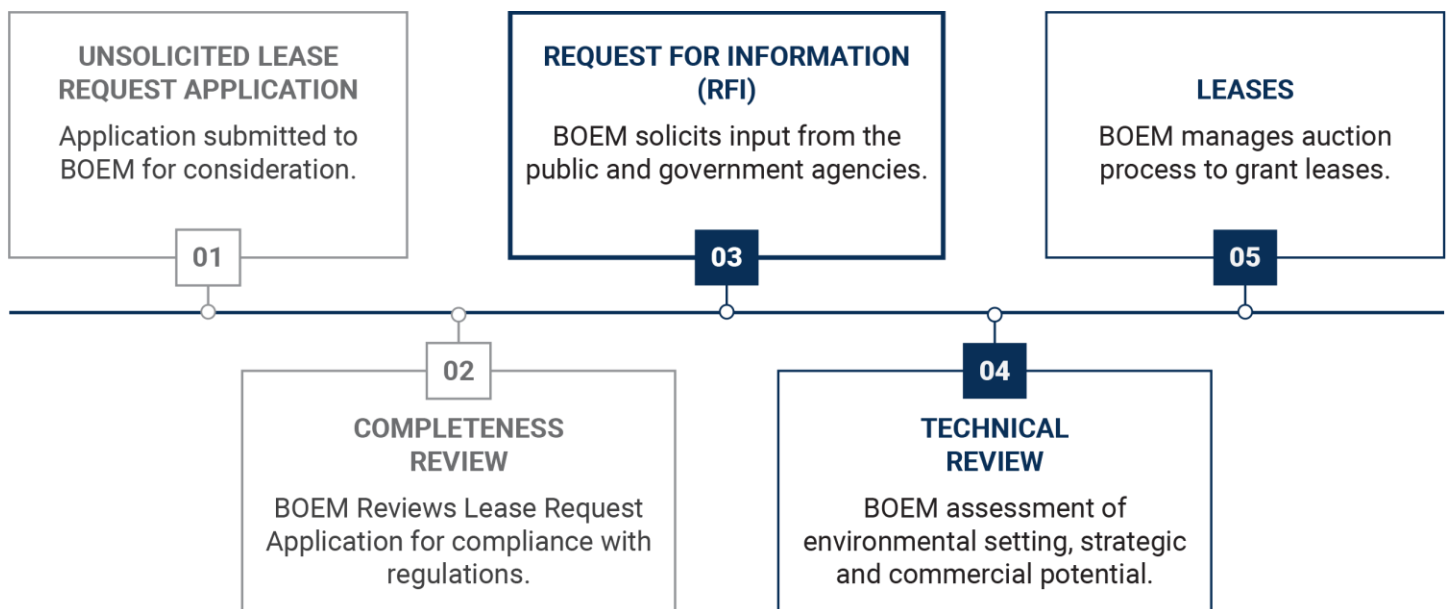
PROPOSAL

What Happens Now: An Overview of the BOEM Review Process

The federal review process occurs in stages and is designed to move carefully, transparently, and only advance development activities to the next step once scientific and public input has been considered.

BOEM is the federal agency responsible for managing marine minerals on the U.S. Outer Continental Shelf (OCS). Submitting a request does not create a lease nor does it authorize any exploration or development in a lease area. It simply requests BOEM to begin evaluating whether an area should move into a formal leasing process.

Any exploration activities would be planned and conducted in close coordination with relevant federal, state, and local stakeholders from the outset of the process. This includes coordination with the U.S. Department of War (DoW) and related military authorities, as well as other ocean users and regulatory agencies, to ensure compatibility with existing uses of the area and to avoid interference with military training, readiness, navigation, and other operations vital to national defense and Virginia's maritime economy.



From Request to Potential Lease Sale

When BOEM receives a request, it may:

- Review the request and existing geological and environmental data.
- Decide whether to move forward with further steps, which can include:
 - Issuing a Request for Information and Interest (RFI) or similar notice
 - Seeking public comment and input from tribes, states, territories, and local communities
 - Coordinating with other federal and state agencies

If, after this analysis and public input, BOEM determines that offering an area for lease is appropriate, it can proceed to design a competitive lease sale under federal law.



Lease Issuance Is Not Dredging Approval

Following a lease sale, BOEM may issue one or more leases to successful bidders during an auction process.

Even at this point, a lease:

- Does not automatically authorize extraction, and
- Does not allow a company to begin development on its own.

Instead, any significant activity—including exploration, bulk sampling, testing, or commercial production—requires BOEM to review and approve specific plans.

Required Plans: Delineation, Testing, and Development

After review, before operations can occur, a lessee must submit detailed plans that BOEM reviews for technical, environmental, and safety adequacy:

- **Delineation Plan** – Outlines how the company will explore and define the resource (e.g., mapping, coring, sampling).
- **Testing Plan** – Describes pilot-scale extraction or bulk sampling used to validate engineering and processing methods.
- **Development Plan** – Provides the full commercial development proposal, including dredging methods, transport, processing, mitigation, and monitoring.

Whether any future development proceeds will ultimately depend on the outcome of environmental review, regulatory approvals, and public input. Each plan must be submitted to and approved by BOEM before it can be implemented. BOEM may prepare an Environmental Assessment (EA) or Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA), including public comment periods and consultation with other agencies and Indigenous and local communities.

What Is NEPA?

The National Environmental Policy Act (NEPA) is a foundational U.S. environmental law that requires federal agencies to carefully evaluate the potential environmental impacts of proposed actions before decisions are made.

Under NEPA, agencies like BOEM must:

- Assess potential environmental, social, and economic effects
- Seek input from the public, stakeholders, and other government agencies
- Use science and data to inform decision-making

NEPA does not predetermine outcomes or authorize activities on its own. Instead, it ensures that decisions are transparent, informed, and made with a clear understanding of potential impacts and safeguards.

For marine mineral exploration, NEPA provides a structured process through which scientific study, environmental protection, and public participation guide whether—and under what conditions—activities may proceed.



What We Are Proposing

If BOEM grants a lease, and Odyssey is awarded that lease, we would begin with a structured exploration program that uses standard tools such as high-resolution seafloor mapping, sonar surveys, and shallow coring to confirm whether HMS is present in concentrations suitable for future development. All activities would require BOEM oversight, multi-year NEPA review, and strict environmental impacts and mitigation steps defined.

These activities generally have limited and localized environmental impacts. Per the Jones Act (Merchant Marine Act of 1920), operations, if approved, would be conducted using U.S. built, U.S. flagged research vessels crewed by U.S. citizens. All activities would also comply with applicable federal environmental and safety laws as well as permitting requirements, including mitigation measures for marine mammals and sea turtles. Odyssey will work in partnership with Great Lakes Dredge & Dock (GLDD), the largest U.S. dredging company and an experienced operator in the Mid-Atlantic region. Odyssey's work would proceed through four clearly defined phases, with each stage advancing only after required regulatory approvals are secured and environmental reviews confirm that further activity can be undertaken responsibly. All work would be conducted in close coordination with relevant agencies, with opportunities for public involvement at each step of the process.

Phase 1: Preliminary Activities

If a lease is granted to Odyssey, we would begin by addressing any remaining data gaps identified through collaboration with BOEM. Activities include:

- High-resolution sonar mapping of the seafloor.
- Shallow sediment sampling to understand geology and biology.
- Surveys that help identify any cultural or archaeological resources or potential hazards.

These activities use low-energy acoustic tools, not oil-and-gas-style seismic air guns. Scientific studies show these technologies have localized and temporary effects and are widely used in U.S. oceanographic research, coastal engineering, and federal mapping programs. All preliminary work will comply with federal rules and regulations.

Phase 2: Delineation

The Delineation Plan is a BOEM-approved scientific program that maps where minerals are located, how deep they occur, and whether they might be recoverable and commercially viable. This phase typically lasts 12 months and uses:

- Multibeam sonar and sub-bottom profiling
- Magnetometer surveys to detect hazards
- Coring tools to collect sediment samples
- Laboratory testing to understand mineral grade and processing behavior

Work is conducted from standard research vessels equipped for 24-hour scientific operations. These studies also help identify any archaeological sites or unexploded ordnance (UXO). Initial database reviews show no known cultural resources or UXO sites within the requested area.



Phase 3: Pilot Testing

If Delineation data show promising HMS resources, Odyssey may request BOEM approval for a Pilot Testing Plan. This plan must undergo environmental review and public comment before being approved.

Pilot testing would involve collecting a bulk amount (several cubes or tonnes) of material to evaluate dredging performance and mineral processing methods. Testing could use:

- A research vessel with grab samplers and coring tools
- A small-scale dredging vessel—typically a trailing suction hopper dredge (TSHD)—that is already widely used for U.S. navigation dredging and beach renourishment

Because only small areas are disturbed, pilot tests are expected to have limited and temporary environmental impacts, consistent with similar type projects globally.

Phase 4: Development Plan / Commercial Production

Commercial development would only be considered if:

- 1) Scientific data confirm the resource,
- 2) Environmental review supports proceeding, and
- 3) BOEM approves a detailed Dredging Plan through a rigorous NEPA process.

Dredging: A Familiar Process Used Every Day Along the U.S. Coast

If this project advances through BOEM’s regulatory process and is approved for development after extensive exploration, Odyssey expects to use the same type of dredging equipment that is already widely used along U.S. coastlines today. Specifically, operations would rely on trailing suction hopper dredges (TSHDs)—vessels that have been used safely for decades to maintain ports, keep shipping channels open, and restore eroding beaches. TSHDs are specifically designed to handle large volumes of sediment efficiently while limiting disturbance to the immediate work area.

Odyssey has a collaboration agreement with Great Lakes Dredge & Dock Corporation, the nation’s largest dredging contractor and a long-standing federal partner for navigation and coastal resilience projects. GLDD has extensive experience operating in the Chesapeake Bay and surrounding waters, where it has helped maintain more than 300 miles of navigation channels that support regional commerce and national supply chains.

These vessels are well understood by regulators and have a long operating history along U.S. coastlines. They are routinely used for essential public purposes, including maintaining navigation channels and shipping lanes, supporting port deepening and harbor maintenance, restoring beaches and enhancing coastal resilience across Virginia, Maryland, Delaware, New Jersey, and the broader Mid-Atlantic, and recovering marine sand and aggregate in shallow-water environments.

Based on current planning, Odyssey anticipates that a TSHD would be the primary vessel used in any approved operation. Depending on project design, the dredging process could involve a single vessel that both collects material from the seabed and delivers it to shore, or a coordinated operation where one vessel recovers material and others transport it to port. The final configuration would be determined through the BOEM review process and informed by site conditions, economic considerations, and input from cooperating agencies.



Beneficiation and Processing

HMS consist of loose, unconsolidated sediments, which allow them to be processed using established techniques. Odyssey, working with leading engineering firms, has identified a beneficiation strategy with a proven track record in HMS recovery.

Key beneficiation methods include:

- Particle sizing
- Gravity separation
- Magnetic separation

For this project, processing in Phase 1 would be limited to the production of a bulk HMS concentrate. Downstream mineral separation (e.g., individual ilmenite, zircon, or monazite products) is not proposed at this stage and would occur, if at all, at a separate facility outside the scope of this application.

These processes are already used in U.S. HMS operations and have a long history of successfully producing commercial-grade titanium, zirconium, and monazite (hosting rare earth elements).

PROJECT BENEFITS

Environmental Impact Mitigation

Odyssey and its dredging partner, Great Lakes Dredge & Dock Company (GLDD), approach project execution with safety and environmental responsibility as core values, reflecting a shared commitment to embedding environmental sustainability into operations. Any exploration, testing, or potential future recovery work would be designed to use proven, regulated methods and the most sustainable practices that are practical for the setting.

For this project, a key priority of Odyssey's is to fully understand the local environment—how the seafloor, water, and wildlife interact—before any dredging activity is proposed. The company plans and executes work in a way that:

- Carefully characterizes the marine environment and existing uses,
- Designs measures to avoid, minimize, and monitor potential impacts, and
- Involves regulators, scientists, stakeholders, and the public in a transparent and collaborative way.

All activities would be overseen by Odyssey's Chief Environmental Scientist, who is responsible for environmental planning and performance. This role includes directing baseline studies, defining monitoring programs, designing mitigation measures, and reporting results to BOEM and other relevant agencies and scientific institutions.

Odyssey is committed to ongoing environmental monitoring and "adaptive management"—meaning that as new information becomes available, project practices and safeguards can be adjusted to help ensure impacts remain within what has been reviewed and approved by regulators. This includes measures such as vessel speed limits, whale-avoidance protocols, and the use of independent Protected Species Observers (PSOs) during at-sea operations to watch for marine mammals and sea turtles.

If a lease is issued, Odyssey would work closely with BOEM and other federal agencies to confirm local conditions and inform environmental impact assessments before any pilot or commercial activities are performed. All activities would require BOEM oversight, NEPA review, and mitigation plans.

These protections are designed not just to satisfy regulations, but to reflect our shared values around wildlife, fisheries, and ocean health.



A Productive but Carefully Selected Region

The area being considered lies within the Mid-Atlantic Bight, a biologically productive marine region in the western North Atlantic. This broader region supports:

- Important commercial and recreational fisheries (e.g., menhaden, blue crab, oysters, flounder, striped bass),
- Seabirds that use the Atlantic Flyway,
- Marine mammals, including dolphins and whales, and
- Sea turtles.

The coastline near the request area includes tidal marshes, bays, barrier islands, soft-sediment seabed, and scattered artificial reefs (such as shipwrecks), which provide habitat for a wide variety of fish and invertebrates. The offshore waters included in the requested area include soft-sedimented seabed. Some isolated locations within the requested area may contain other features or habitat types; this will be identified during exploration and no commercial dredging will be performed in such areas.

Parts of this broader region have been designated as Essential Fish Habitat (EFH) for many species and life stages, reflecting the importance of these waters to U.S. fisheries and coastal communities.

Because of this ecological richness, Odyssey's proposed lease area was carefully screened to avoid the most sensitive habitats and uses. Based on available federal and state data:

- The requested blocks do not overlap with Habitat Areas of Particular Concern (HAPC) or deep-sea coral protection areas.
- The area does not include marine sanctuaries, national wildlife refuges, or designated critical habitats.
- The seabed is dominated by sand-rich, low-relief habitats and is not expected to host hard-coral reef communities.
- Known artificial reefs and wreck "fish havens" are outside the requested lease area.

Some overlap with broader EFH designations is unavoidable, but the requested area was chosen to ensure exploration and dredging activities stay clear of the most vulnerable or specially managed habitats while still allowing potential resources to be evaluated.

How Wildlife Will Be Protected, if a Lease is Granted to Odyssey

Because whales, dolphins, sea turtles, and important fish species are present in the region, Odyssey recognizes that careful planning and safeguards are essential. The company will:

- Comply with all existing protections such as mandatory vessel speed limits in Seasonal Management Areas (for example, to reduce ship-strike risk to North Atlantic right whales).
- Follow any additional guidance related to Dynamic Management Areas when right whales are present.
- Use Protected Species Observers (PSO) to watch for marine mammals and sea turtles during at-sea operations, even if not strictly required, when recommended by Odyssey's Chief Environmental Scientist or external experts.



- Incorporate routing, timing, and operational adjustments to reduce disturbance to sensitive species and habitats, including compliance measures if transiting near any designated habitat or fisheries management areas.

The same technologies used every year to rebuild beaches, strengthen coastlines, and maintain U.S. ports would be adapted for mineral recovery. These operations are tightly regulated and routinely incorporate safeguards such as:

- Speed restrictions to protect marine mammals
- Protected species observers
- Seasonal environmental work windows
- Noise-reduction practices
- Real-time monitoring and adaptive management

Because these methods are familiar, well-regulated, and grounded in decades of science, the environmental interactions of dredging are both manageable and highly predictable compared to new or untested offshore technologies.

Economic Benefits That Extend Beyond the Waterfront

If scientific, environmental, and regulatory reviews support moving the project forward and a lease is granted, offshore mineral development could deliver meaningful economic benefits for Virginia and the broader region. The work would support jobs both offshore and on land—from vessel crews and port operations to logistics, processing, research, and administrative roles—bringing steady income to local businesses and service providers. These activities would unfold over many years, offering long-term, sustained economic activity rather than short-term booms and helping strengthen coastal economies over time.

Beyond employment, the project could improve U.S. supply chain security by developing domestic sources of materials such as titanium, zirconium, and rare earth elements—resources that currently rely heavily on foreign suppliers. A more reliable domestic supply supports industries including aerospace, defense, manufacturing, and agriculture, while reducing exposure to global disruptions that can raise costs or limit availability.

In addition, nonmineralized sand recovered as a byproduct of operations could be used for beach restoration and coastal resilience projects, supporting storm protection, infrastructure durability, and long-term public cost savings. Similar dredging techniques are already widely used along U.S. coastlines for navigation dredging, beach nourishment, and offshore sand recovery. If you have ever visited a beach where sand was added to widen the shoreline, you have experienced beach nourishment. Across the United States, sand is routinely dredged from offshore areas and placed on eroding beaches to help protect coastal communities, roads, and critical infrastructure from storm surge and erosion. These projects have been carried out safely for decades under strict environmental oversight and are widely used as part of coastal resilience and hurricane protection efforts.

Ongoing exploration and monitoring would also generate new scientific data, benefiting universities, regulators, and planners responsible for managing marine and coastal resources. Over time, this information can support better decision-making around coastal management, environmental protection, and the responsible use of offshore resources.



Social Benefits: Investing in People and Coastal Communities

The potential social benefits of the project extend beyond economics to the people and communities involved. Over time, offshore operations, environmental monitoring, logistics, processing, and administrative activities could support a meaningful number of skilled jobs, along with additional employment across supporting sectors such as transportation and services. Because the project would be developed over multiple phases, these opportunities would be expected to emphasize long-term workforce development rather than short-term or temporary employment.

Partnerships with colleges, vocational programs, and training providers could help local residents gain new skills, certifications, and pathways into maritime, technical, and environmental careers. Many of these skills—particularly those related to vessel operations, dredging, environmental monitoring, and coastal restoration, are transferable to other industries, strengthening workforce resilience across the Southeast. Income generated by these jobs circulates through local communities, supporting small businesses, housing, and services. At the same time, scientific and environmental monitoring efforts and offshore data and sample collection would expand public knowledge of the ocean environment, supporting education, conservation planning, and informed decision-making. Data could support academic research and provide a long-term source of information for oceanographic and environmental study programs. The project will offer social value by strengthening career pathways, supporting community well-being, and deepening understanding of the marine environment.

The Added Benefit of Sand for Coastal Protection and Infrastructure

In addition to mineral resources, the proposed lease area contains marine sand—an increasingly valuable material that supports coastal protection, storm impacts, and critical infrastructure. For coastal communities, sand is not an abstract resource; it is what restores beaches, reinforces shorelines, and helps protect homes and infrastructure during severe weather. Coastal communities in Virginia already rely on marine sand for these purposes, and the seafloor in the requested area consists of sand similar to that used in current coastal resiliency projects. Also, the requested area abuts zones identified by BOEM as suitable for sand dredging, underscoring the suitability of sand from the requested area in supporting strategic initiatives.

If the project advances, this work could create a predictable, domestic source of sand for communities along the Mid-Atlantic coastline. This would be particularly meaningful for Virginia’s coastal counties, which regularly require renourishment to combat erosion and maintain storm defenses. A local supply shortens transport distances, reduces delivery timelines, and provides decision-makers with greater certainty during emergency response or recovery events.

Odyssey has established a partnership with Great Lakes Dredge & Dock (GLDD), the United States’ leading dredging company, to support this element of the project. GLDD has a long track record operating in and around Virginia’s offshore waters, including beach restoration and coastal infrastructure programs. Their involvement ensures that any sand recovery would be executed by a technically capable operator with strong environmental and safety practices, consistent with federal standards and industry best practice.

Sand’s value extends well beyond shoreline protection. It is a foundational material for roads, concrete, asphalt, industrial fill, and urban construction. In 2024, U.S. producers supplied nearly 900 million tonnes of construction sand and gravel, worth over \$12 billion, reflecting the country’s continuing investment in infrastructure, housing, and transportation systems. A reliable domestic source of offshore sand supports these national priorities by diversifying supply and reducing reliance on constrained or environmentally sensitive terrestrial sources.

As Odyssey advances its evaluation of the lease area, sand is being considered an important co-product alongside mineral development. Both overburden and the non-mineralized sediment fraction within heavy mineral sand deposits may be suitable for infrastructure use or sold as construction-grade material.



Similarly, the non-mineralized sediments separated during mineral processing could have applications in commercial construction or coastal projects. This approach aligns with the objectives of the National Offshore Sand Inventory (NOSI), which seeks to identify, catalog, and make responsible use of offshore sand resources to strengthen both economic and environmental resilience.

In this way, the project could support multiple national goals at once—improving domestic access to critical minerals while providing a dependable source of sand for restoration, infrastructure, and preparedness across the eastern United States.



Beach nourishment in Virginia Beach, Virginia, where sand is dredged from offshore and placed along the shoreline to restore eroded beaches and strengthen coastal resilience. Projects like this have been carried out safely for decades under federal and state environmental oversight to protect communities, infrastructure, and public beaches. Photo Courtesy of City of Virginia Beach.



THE PEOPLE BEHIND THE PROJECT: WHO WE ARE



Odyssey Marine Exploration

Odyssey Marine Exploration, Inc. (NASDAQ: OMEX) is a global leader in ocean exploration with over 30 years of experience. The company is committed to the sustainable and responsible discovery, validation, and advancement of seafloor critical mineral projects. Its diversified portfolio spans subsea phosphate deposits for fertilizers and polymetallic nodules for battery metals—addressing global priorities from food security to energy and technology innovation. Offering comprehensive research, marine operations, and regulatory compliance support, Odyssey works with governments and seafloor rights holders worldwide. Odyssey develops its projects in collaboration with a global network of partners, academics, and industry professionals who share its commitment to environmentally sound solutions for obtaining minerals that address present and future global challenges.



Great Lakes Dredge and Dock

Great Lakes Dredge & Dock Company, LLC (GLDD), is North America's dredging industry leader, the largest provider of marine dredging, and the only U.S. company with substantial overseas operations. GLDD regularly performs BOEM-permitted dredging and coastal restoration projects under federal environmental review.

GLDD owns and operates a diverse dredging fleet comprised of numerous specialized maritime vessels, and operates marine yards in five locations nationwide. Bringing innovation and high-quality workmanship to its projects, and guarding its reputation for safety consciousness, GLDD serves its customers by studying and anticipating their needs and then responding with appropriate equipment and the finest, best-trained dredging talent in the business. Dredging generally addresses the creation or restoration of navigable waterways, the construction of maritime infrastructure for international commerce, or the protection, restoration, or reclamation of shoreline land masses through the removal or placement of soil, sand, or rock. The U.S. dredging market generally consists of three types of work: capital projects, beach nourishment and restoration, and maintenance dredging. Since its founding in 1890, GLDD has been a leader and innovator in these markets, with many patents and new technologies to its credit.