



BUDGET JUSTIFICATIONS

The United States
Department of the Interior
and Performance Information
Fiscal Year 2021

BUREAU OF OCEAN ENERGY MANAGEMENT

NOTICE: These budget justifications are prepared for the Interior, Environment and Related Agencies Appropriations Subcommittees. Approval for release of the justifications prior to their printing in the public record of the Subcommittee hearings may be obtained through the Office of Budget of the Department of the Interior.



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BUREAU OF OCEAN ENERGY MANAGEMENT

FY 2021 BUDGET JUSTIFICATION

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FISCAL YEAR 2021 BUDGET

Bureau of Ocean Energy Management

Preface

“Offshore energy development is about furthering America’s energy security, ensuring fair market value to the taxpayers, and producing domestic energy in an environmentally responsible manner. We all benefit from a strong offshore energy program, which provides thousands of well-paying jobs, as well as affordable and reliable energy Americans need to heat homes, fuel our cars, and power our economy.”

— *Department of the Interior Acting Assistant Secretary, Land and Minerals Management Casey Hammond, October 7, 2019*

Americans are enjoying strong economic growth, in part due to sound use of the Nation’s abundant natural resources. The Administration’s America-First Offshore Energy Strategy calls for boosting domestic energy production to stimulate the Nation’s economy and ensure our energy security, while providing responsible environmental stewardship. Implementation of these goals aligns with the Bureau of Ocean Energy Management’s (BOEM) mission, the statutory mandate that is provided principally by the Outer Continental Shelf (OCS) Lands Act, 43 U.S.C. 1331 et seq. BOEM carries out the authority provided by the OCS Lands Act to manage the Nation’s offshore energy and mineral resources in a balanced way that promotes environmentally and fiscally responsible development through oil and gas leasing, renewable energy development, and marine mineral leasing, all of which incorporate rigorous, science-informed review. BOEM supports the Administration’s goal to increase domestic energy and mineral production by providing access to resources located on the OCS through programs that enable continued exploration and production.

BOEM’s FY 2021 budget supports ongoing efforts and important initiatives vital to BOEM’s mission and Administration priorities, including advancing energy security, creating high paying jobs, supporting economic prosperity, and ensuring the reliability and affordability of domestic energy. With this request, BOEM proposes to focus resources in the following areas:

- **National OCS Oil and Gas Leasing Program.** BOEM conducts activities pursuant to Executive Order 13795 (*Implementing an America-First Offshore Energy Strategy*), which states: “It shall be the policy of the United States to encourage energy exploration and production, including on the Outer Continental Shelf, in order to maintain the Nation’s position as a global energy leader and foster energy security and resilience for the benefit of the American people, while ensuring that any such activity is safe and environmentally responsible.” Foundational to the Administration’s goals is BOEM’s responsibility for developing and implementing the National OCS Oil and Gas Leasing Program (National OCS Program). BOEM continues to support the Administration’s America-First Offshore Energy Strategy through OCS oil and gas exploration and production, while ensuring conservation stewardship.

- **Renewable Energy.** In recognition of the role renewable energy can play in securing the Nation’s energy independence and supporting economic growth, BOEM continues to advance renewable energy through its leasing program and streamlining its permitting and National Environmental Policy Act (NEPA) processes. The budget underscores the role renewable energy plays in supporting the America-First Offshore Energy Strategy by increasing BOEM’s capacity to undertake research activities and foster stakeholder engagement. For instance, BOEM recognizes the importance of science and outreach efforts to address critical information needs on the effects of offshore wind development on fisheries, and will use information developed through analyses of cumulative impacts and fisheries to inform FY 2021 decision-making. BOEM continues to work diligently to support renewable energy development spurred by the renewable energy goals of Coastal States.
- **Marine Minerals.** The OCS Lands Act authorizes BOEM to convey, on a noncompetitive basis, the rights to OCS sediment resources to Federal, State, and local government agencies for shore protection, beach or coastal wetlands restoration projects, or for use in construction projects funded or authorized by the Federal Government. BOEM continues to focus on the creation of a National Offshore Sand Inventory (Sand Inventory) that identifies sources of sand and other sediment to construct projects vital to the Nation’s economy, coastal environment and infrastructure. Expanding the Sand Inventory is critical to the Nation’s coastal restoration and resiliency efforts as it enables BOEM to proactively plan for the increasing demands for OCS resources and emergency needs as they arise. Though still a nascent component of BOEM’s marine minerals activities, BOEM continues to partner with other Federal agencies to develop an OCS Critical Mineral Inventory to assess the Nation’s supply of critical minerals, potentially reducing the Nation’s vulnerability to economic disruption as well as negative national security impacts caused by a lapse in imports.
- **Environmental Analysis.** The need for energy must go hand-in-hand with responsible environmental stewardship. Science is vital to BOEM’s mission to manage offshore energy and mineral resources in an environmentally and economically responsible manner. BOEM conducts its environmental analyses in a transparent, coordinated, and streamlined fashion to ensure that decisions regarding potential environmental impacts are informed by the best available science. BOEM will continue to utilize environmental science as the foundation for sound policy decisions.

The FY 2021 budget reflects a careful analysis of the resources needed to advance the Administration’s priorities and develop the Bureau’s capacity to execute its functions responsibly and efficiently.

FISCAL YEAR 2021 BUDGET

Bureau of Ocean Energy Management

Bureau of Ocean Energy Management Mission

The mission of the Bureau of Ocean Energy Management is to manage development of the Nation's offshore energy and mineral resources in an environmentally and economically responsible way.

General Statement

The core statutory mandate of the Bureau of Ocean Energy Management (BOEM) is provided by the Outer Continental Shelf (OCS) Lands Act, 43 U.S.C. § 1331 et seq. The OCS Lands Act, in conjunction with the Submerged Lands Act, 43 U.S.C. § 1301 et seq., defines the OCS as “all submerged lands lying seaward and outside” of the seaward boundaries of a State and “subject to the jurisdiction and control of the United States.” In practice, this means that the OCS extends from three nautical miles offshore a State (nine nautical miles in the case of Texas and Florida’s Gulf of Mexico coast) to at least the outer limits of the U.S. Exclusive Economic Zone. The OCS Lands Act gives the Secretary of the Interior responsibility and policy guidance for the administration of mineral exploration and development of the OCS. The Energy Policy Act of 2005 (P.L. 109–58) amended the OCS Lands Act to authorize the Department to manage the development of renewable energy. To carry out this mission, BOEM manages OCS energy and mineral resources, including: OCS leasing, inventories of oil and gas reserves, resource and economic evaluation, review and administration of oil and gas exploration and development plans, geological and geophysical (G&G) permitting, risk management and financial assurance, conveyance of sand and gravel resources, renewable energy development, National Environmental Policy Act (NEPA) analysis, and environmental studies.

BUDGET AND ORGANIZATIONAL STRUCTURE

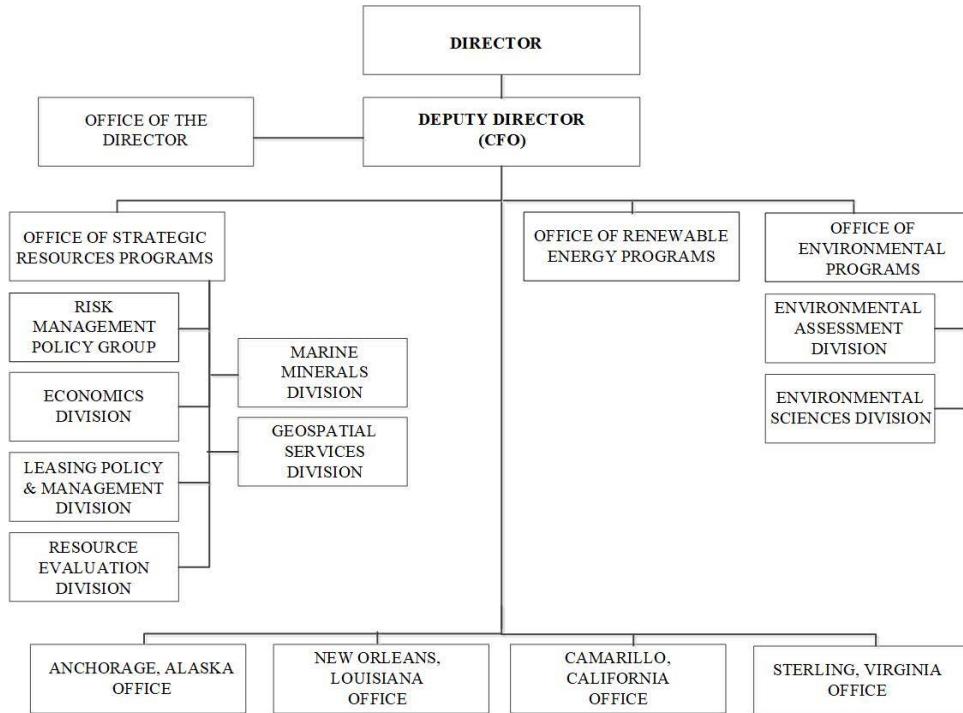
Budget activities for BOEM are funded through the Ocean Energy Management account and support resource evaluation, planning, and leasing of the Nation's OCS energy and mineral resources in a balanced way that promotes economic development, energy independence, and environmental protection. The Ocean Energy Management account is comprised of Conventional Energy, Renewable Energy, Environmental Programs, Marine Minerals, and Executive Direction activities.

Functions and funds within these activities are divided among program offices located at headquarters and regional offices, as shown in Figure 1 below. Policy and administrative functions for each mission area (conventional energy, renewable energy, marine minerals, and environmental programs) are managed through three offices headquartered in the Greater Washington, D.C. area and focus on national offshore

General Statement

leasing strategy and the development of comprehensive environmental analyses and science. BOEM's Anchorage, Alaska Office; New Orleans, Louisiana Office; and, Camarillo, California Office, implement Bureau policy, manage regional leasing activity, conduct region-specific analyses, and coordinate stakeholder outreach and engagement.

Figure 1: BOEM Organizational Chart



Headquarters and regional offices work together to implement BOEM's various activities. In addition, strong partnerships with other Federal agencies, State and local governments, Tribal governments, environmental and other interest groups, the general public, and the oil and gas and renewable energy industries enable BOEM to coordinate activities to fulfill its resource management responsibilities.

FY 2021 BUDGET REQUEST

Funding for BOEM is requested through the Ocean Energy Management account, which consists of net discretionary appropriations and offsetting collections (comprising of a portion of OCS rental receipts and cost recovery fees). In FY 2021, BOEM requests \$188.8 million in total budget authority. BOEM's Request includes \$125.8 million in net current appropriations and \$63.1 million in offsetting collections, as shown in Table 1. The budget request supports the President's Management Agenda Workforce Cross-Agency Priority Goal #3, Developing a Workforce for the 21st Century.

Table 1: Summary of BOEM Budget Request

Summary of BOEM FY 2021 Budget Request (Dollars in Thousands)				
Bureau of Ocean Energy Management	2019 Actual	2020 Enacted	2021 Request	vs. 2020 Enacted
Net Current Appropriation	129,687	131,611	125,760	-5,851
Offsetting Collections	49,579	60,000	63,055	3,055
Total Budget Authority	179,266	191,611	188,815	-2,796
Offsetting Collections				
Rental Receipts	47,455	58,000	61,282	3,282
Cost Recovery Fees	2,124	2,000	1,773	-227
Total Offsetting Collections	49,579	60,000	63,055	3,055
Ocean Energy Management				
Conventional Energy	61,799	62,961	60,487	-2,474
Renewable Energy	20,720	23,325	26,465	3,140
Marine Minerals		5,729	8,781	3,052
Environmental Programs	79,774	82,457	75,875	-6,582
Executive Direction	16,973	17,139	17,207	68
Total Budget Authority	179,266	191,611	188,815	-2,796

Note: Offsetting collections in the 2020 Enacted column reflect CBO scoring and match the amounts included in the enacted appropriations language. The 2021 President's Budget Appendix differs slightly due to scoring differences between OMB and CBO. Total budget authority for this account (appropriations and offsetting collections) matches both the appropriation and the President's Budget Appendix. A more detailed explanation of scoring differences can be found in Appendix A of the Department's 2021 Budget in Brief.

FY 2021 BUDGET HIGHLIGHTS

The FY 2021 budget reflects funding needed for BOEM to carry out its mission. Changes relative to the FY 2020 Enacted Budget are shown in Table 2 and described in greater detail below.

Table 2: List of Budgetary Changes in FY 2021

Bureau of Ocean Energy Management Budgetary Changes for FY 2021 President's Budget*							
Activity	Program Change	Offsetting	+	Approp	=	Total BA	FTE
BOEM FY 2020 ENACTED		60,000		131,611		191,611	609
Multiple Activities	Internal Transfers	+3,055		-3,055		+0	
Multiple Activities	2021 Fixed Costs		+2,009		+2,009		
Multiple Activities	GrantSolutions Enterprise System		+46		+46		
Conventional / Env.	National OCS Program		-12,500		-12,500		
Renewable Energy	Research & Stakeholder Engagement		+2,944		+2,944		
Marine Minerals	National Offshore Sand Inventory		+2,988		+2,988	+2	
Environmental Programs	Environmental Studies		+1,925		+1,925		
Executive Direction	Ethics Program Transfer		-208		-208	-1	
FY 2021 Budgetary Changes		+3,055		-5,851		-2,796	+1
BOEM FY 2021 PRESIDENT'S BUDGET		63,055		125,760		188,815	610

* Changes are not listed in priority order.

Technical Internal Transfers (+\$3,055,000/ -\$3,055,000; 0 FTE). Technical adjustments in FY 2021 reflect an increase in estimated offsetting collections paired with a commensurate decrease in net current appropriations, and these changes are spread proportionally across budget activities. There are no programmatic changes associated with this shift.

Fixed Costs (+\$2,009,000). Fixed cost increases are fully funded in BOEM's FY 2021 budget. These costs include increases to support changes in Federal health and retirement benefits and workers' compensation, rent to the General Services Administration, and payments to the Department through its Working Capital Fund.

GrantSolutions Enterprise System (+\$46,000; 0 FTE). Funding supports the allocated share of operating costs for the GrantSolutions enterprise system to improve the processing and transparency of grants and cooperative agreements across Interior. Cost allocations are based on an algorithm of use factors.

The National OCS Oil and Gas Leasing Program (-\$12,500,000; 0 FTE). These funds, used to support the development and implementation of the 2019-2024 National OCS Oil and Gas Leasing Program (National OCS Program), are not needed at this time, as development of the program is currently on hold. The request does not presume a particular decision on the next National OCS Program.

Renewable Energy Research and Stakeholder Engagement (+\$2,944,000; 0 FTE). These funds enable BOEM to conduct valuable environmental research and stakeholder outreach to support the growing demand for renewable energy activity. BOEM conducts environmental and technical reviews of renewable energy activities plans and decides whether to approve, approve with modification, or disapprove plans. The results of the research are used to inform policy decisions, environmental analysis, mitigation, and monitoring protocols on environmental and cultural issues. A portion of the funding supports renewable energy stakeholder engagement, statutorily required by the Energy Policy Act of 2005, and provides additional resources for BOEM to coordinate and consult with Federal, Tribal, State, and local agencies throughout the renewable energy development process.

National Offshore Sand Inventory (+\$2,988,000; +2 FTE). Requested resources enable the further development of BOEM's Sand Inventory. Sand and gravel resources on the OCS are critical for the long-term success and cost-effectiveness of many shore protection, beach nourishment, and wetlands restoration projects along the Gulf and Atlantic coasts, with an emerging interest in the Pacific and Alaska regions. Funding supports additional data acquisition and personnel needed for the continuing development of the Sand Inventory.

Environmental Studies Program (+\$1,925,000; 0 FTE). BOEM's Environmental Studies Program supports the science that is the foundation for ensuring safe and sound operations, fostering conservation of resources, and minimizing impacts on the environment. All regulatory oversight and activities require associated resources to conduct the highly detailed analyses necessary to support Bureau decisions and ensure environmentally responsible exploration and development. With these funds, BOEM will be better equipped to conduct the environmental studies that support conventional energy, renewable energy and marine minerals information needs and inform BOEM science and policy decisions. The

Environmental Studies Program supports the Administration's desire for environmentally and economically responsible development of domestic energy resources.

Ethics Program Transfer (-\$208,000; -1 FTE). The 2021 budget supports needed reforms to strengthen the culture of ethics within Interior. Over the last two years, Interior has taken several steps to enhance the emphasis on ethics in the Department, including increasing the number of ethics officers and maximizing vigilance regarding the obligation of the Department's leaders and employees to hold themselves and their colleagues accountable for ethical conduct. Ethics is a top priority in all decision making and operations.

This past summer, Secretary Bernhardt continued this commitment to transform Interior's ethics program by signing Secretarial Order 3375, which restructures the ethics program by unifying disparate bureau ethics programs into a centrally-managed office under the Solicitor. The Order streamlines the reporting structure for ethics personnel, establishes the Departmental Ethics Office, and clarifies roles and responsibilities for the Department's employees. The FY 2021 budget implements this reorganization to restructure the ethics program by transferring bureaus' ethics funding and FTEs to the Departmental Ethics Office in the Office of the Solicitor budget.

ADMINISTRATION PRIORITIES

GOOD ACCOUNTING OBLIGATION IN GOVERNMENT ACT REPORT

The Good Accounting Obligation in Government Act (GAO-IG Act, P.L. 115-414) enacted January 3, 2019, requires that Agencies report the status of each open audit recommendation issued more than one year prior to the submission of the Agency's annual budget justification to Congress. The Act requires Agencies to include the current target completion date, implementation status, and any discrepancies on closure determinations.

The Department of the Interior leadership takes audit follow-up very seriously and considers our external auditors, to include the Government Accountability Office (GAO) and Office of the Inspector General, valued partners in not only improving the Department's management and compliance obligations but also enhancing its programmatic and administrative operations. As stewards of taxpayer resources, the Department applies cost-benefit analysis and enterprise risk management principles in recommendation implementation decisions.

The Department's GAO-IG Act Report is available at the following link: <https://www.doi.gov/cj>

SUSTAINABLY DEVELOPING OUR ENERGY AND NATURAL RESOURCES

Through early planning, thoughtful mitigation, and the application of sound science, BOEM is working to ensure the Administration’s America-First Offshore Energy Strategy is applied in a manner that fosters environmentally and economically responsible development of the Nation’s offshore energy and mineral resources, while diligently seeking ways to improve efficiency through the use of technology, shared services, and best practices.

In FY 2017, BOEM initiated efforts to develop a new National OCS Oil and Gas Leasing Program (National OCS Program), pursuant to Executive Order (EO) 13795 – *Implementing an America-First Offshore Energy Strategy* – and SO 3350 – *America-First Offshore Energy Strategy*. On January 4, 2018, the Department announced the 2019-2024 National OCS Oil and Gas Leasing Draft Proposed Program, which proposes 47 potential lease sales for consideration – the largest number of lease sales ever proposed for the National OCS Program’s five-year lease schedule – in 25 of the 26 OCS planning areas. The next phases in the National OCS Program development include publication of the Proposed Program, followed by a 90-day comment period; and the Proposed Final Program, followed by the approval of the Final Program (occurring at least 60 days after submittal of the Proposed Final Program to the President and Congress). Concurrent with the development of the Proposed Program, BOEM will prepare a Draft Programmatic Environmental Impact Statement, pursuant to the National Environmental Policy Act (NEPA), to inform program decisions. The Final Programmatic Environmental Impact Statement will be published concurrent with the Proposed Final Program.

Until the new National OCS Program is approved, BOEM will continue to implement the 2017-2022 Outer Continental Shelf Oil and Gas Leasing Program. BOEM held two lease sales in FY 2019: region-wide Gulf of Mexico Sale 252 (held on March 20, 2019; total bonus for leased tracks more than \$231 million) and region-wide Gulf of Mexico Sale 253 (held on August 21, 2019; total bonus for leased tracks more than \$154 million).

In recognition of the role renewable energy can play in increasing U.S. energy security and supporting national economic growth, BOEM’s FY 2021 budget proposes to increase funding for certain renewable energy activities to meet the demands triggered by the Bureau’s leasing program and allow for the streamlining of its permitting and NEPA processes. BOEM continues to work diligently to support renewable energy development spurred by the renewable energy goals of many Coastal States. BOEM has 15 active commercial wind leases along the Atlantic Coast, which if fully developed, has the technical potential to support over 21 gigawatts of generation capacity. Included within this total are the three Massachusetts commercial leases from BOEM’s December 13, 2018, lease sale, which resulted in \$405.1 million in bonus bid revenue. BOEM is in the planning stages to identify additional potential lease areas offshore Hawaii, California, New York/New Jersey, and North/South Carolina. BOEM is currently processing six construction and operations plans, and expects to receive several more from renewable energy lessees in the coming year. In its work with Coastal States and other stakeholders, BOEM will continue to adhere to EO 13807 – *Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects* – and continue to identify ways to make the construction and operations plan review process as efficient and effective as possible.

BOEM's offshore resource management mission extends to overseeing the conveyance of OCS marine minerals. Through its Marine Minerals Program, BOEM makes available sand and gravel resources to protect and improve coastal resources and infrastructure, and has the authority to oversee the leasing and development of critical mineral resources on the OCS. Pursuant to its mandate, BOEM seeks to identify and mitigate the impacts of conveying OCS marine minerals on the marine, coastal, or human environment. Sand and gravel resources have helped restore hundreds of miles of coastline and protect billions of dollars of infrastructure, as well as important ecological habitat. The FY 2021 budget proposes additional funding to expand the Bureau's understanding of these finite resources through the continued development of the Sand Inventory. Although a nascent component of the Marine Minerals Program, stewardship of OCS critical minerals is becoming increasingly important given the role these minerals could play in the Nation's economic security. In response to the directives outlined in EO 13817 – *A Federal Strategy To Ensure Secure and Reliable Supplies of Critical Minerals* – and SO 3359 – *Critical Mineral Independence and Security* – BOEM is partnering with other Federal agencies to initiate development of a National Offshore Critical Mineral Inventory. BOEM is the sole steward of these finite, public resources, and hence it is imperative that it improves its knowledge on the location and amounts of these critical mineral resources in order to manage their use effectively.

GENERATING REVENUE AND ENSURING FAIR MARKET VALUE

Ensuring the receipt of fair market value for OCS resources is mandated by the OCS Lands Act and is one of BOEM's critical responsibilities. Regional offices, with headquarters coordination and oversight, perform the functions necessary to thoroughly assess the oil and gas potential and fair market value of OCS tracts offered for lease. Only tracts located within leasing areas identified in the National OCS Program are available for lease. The bid review process incorporates geological and geophysical data along with reserve, resource, engineering, and economic information, which is provided by BOEM economists, into a sophisticated discounted cash flow computer model that estimates economic value of the corresponding tract. The goal of that model is to achieve independent estimates of fair market value of tracts receiving bids. Since 1984, bid adequacy reviews and fair market value determinations have resulted in an average rejection rate of bids of approximately 3.7 percent, and consistently have resulted in higher returns in subsequent sales for tracts that have had their high bids in previous sales rejected on grounds of bid insufficiency. From 1984 through 2019, BOEM rejected total high bids of approximately \$654 million. Subsequently, the same blocks were re-offered and drew high bids of \$1.9 billion, for a total net dollar gain of approximately \$1.2 billion, and a return on rejected high bid amounts of almost 190 percent.

As of January 1, 2020, BOEM manages about 2,680 active oil and gas leases on over 14.2 million OCS acres. As noted above, all of these leases were awarded following completion of the post-sale bid evaluation process to ensure fair market value was received for each lease. Offshore Federal production in FY 2019 reached approximately 683 million barrels of oil (a record high) and 1.03 trillion cubic feet of gas, almost all of which was produced in the Gulf of Mexico. This accounted for about 16 percent of all domestic oil production and 3 percent of domestic natural gas production. Annually, this production generates billions of dollars in revenue for State and local governments, as well as U.S. taxpayers, while supporting hundreds of thousands of jobs. Offshore oil and gas leasing and production activities are a significant source of revenue for the Federal Government. In FY 2019, conventional energy generated \$103 million in rent, \$407 million in bonuses, and \$5 billion in royalties from production.

BOEM also ensures a fair return for the American taxpayer for the revenue generated by BOEM's renewable energy activities. As required by the Energy Policy Act of 2005, BOEM has established payment terms to ensure a fair return to the U.S. Treasury for the rights conveyed by OCS renewable energy leases and grants. In FY 2019, \$5.9 million in rent and \$405 million in bonuses were collected on OCS renewable energy leases. In total, BOEM has generated over \$473 million in bonus bids from renewable energy lease sales it has conducted through the competitive leasing process. Revenue data is generated by the Office of Natural Resources Revenue and can be found on the [Natural Resources Revenue Data page](#).

CREATING A CONSERVATION STEWARDSHIP LEGACY

In the execution of its statutory mission, BOEM seeks to be a model for how the development of energy goes hand-in-hand with responsible stewardship of the environment. Environmental research, assessment, and studies are critical to the successful management of offshore energy and mineral resources. BOEM strives to streamline and refine its permitting and NEPA processes, consistent with SO 3355 – *Streamlining National Environmental Policy Act Reviews and Implementation of Executive Order 13807*. In accordance with SO 3355, BOEM's priorities will focus on infrastructure investments for exploration and production on the OCS, and the required environmental analyses will be conducted in a transparent, coordinated, and streamlined fashion to ensure that decisions concerning infrastructure projects are informed by the best available science. Consistent with that approach, BOEM's FY 2021 budget funds crosscutting environmental research that will support BOEM's decision-making and policy needs and priorities. This funding, along with leveraged resources, will allow BOEM to collect valuable data useful not only to BOEM, but also to other stakeholders including other Federal agencies and State and local governments.

STAKEHOLDER OUTREACH AND ENGAGEMENT

Stakeholder outreach and engagement on all BOEM activities are statutorily mandated and critically important to all of BOEM's conventional energy, renewable energy, environmental, and marine mineral activities. The OCS Lands Act calls for public involvement and comment at multiple points throughout the process of developing a five-year National OCS Oil and Gas Leasing Program, and under the Energy Policy Act of 2005, BOEM is required to coordinate and consult with Federal, Tribal, State, and local agencies throughout the renewable energy process. BOEM's Marine Minerals Program also coordinates with governmental partners and stakeholders as it facilitates access to and manages the Nation's OCS non-energy marine minerals. Effective stakeholder engagement throughout all activities enables BOEM to obtain scientifically credible, independent and objective perspectives on research and monitoring related to the interaction between OCS energy and mineral development and other offshore activities and resources. Communication with local communities is necessary to ensure natural resource decisions reflect the input of citizens potentially affected by proposed activity.

STRATEGIC OBJECTIVE PERFORMANCE INFORMATION

The FY 2018-2022 Department of the Interior Strategic Plan, in compliance with the principles of the Government Performance and Results (GPRA) Modernization Act of 2010, provides a set of mission objectives, goals, strategies and corresponding metrics that provide an integrated and focused approach

for tracking performance across a wide range of DOI programs. While the DOI Strategic Plan for FY 2018-2022 is the foundational structure for the description of program performance measurement and planning for the FY 2021 President’s budget, further details for achieving the Strategic Plan’s goals are presented in the DOI Annual Performance Plan and Report. Bureau and program-specific performance plans for FY 2021 are fully consistent with the goals, outcomes, and measures described in the FY 2018-2022 version of the DOI Strategic Plan and related implementation information in the DOI Annual Performance Plan and Report.

Bureau Contribution. Within the DOI Strategic Plan for FY 2018–2022 (DOI Strategic Plan), BOEM is responsible for tracking and reporting four GPRA measures under Mission Area Two – *Generating Revenue and Utilizing Our Natural Resources*. This mission area focuses on providing access to and managing energy, non-energy minerals, and other resources on public lands and the OCS. It highlights the Department’s commitment for responsibly developing energy and ensuring America’s economic security. BOEM’s measures for this mission area are tracked and reported within two goal areas: *Goal One: Ensure energy and economic security for America*; and *Goal Two: Ensure access to mineral resources*.

Implementation Strategy and Performance Metrics. The following narrative provides an overview of the two goals BOEM supports within the DOI Strategic Plan and the associated performance indicators. Results for the performance indicators are included within the Performance Overview Table located at the back of the Conventional Energy, Renewable Energy, and Marine Mineral chapters, based on which budget activity they support. Additional information on the performance indicators is provided within the DOI Annual Performance Plan and Report.

➤ **Goal 1: Ensure Energy and Economic Security for America**

Goal One highlights the Department’s role as a steward and manager of America’s natural resources. BOEM is responsible for tracking and reporting three performance indicators under *Strategy One – Promote safe and robust oil, gas, coal, and renewable energy resource development*. The Strategic Plan references this Strategy by stating, “Oil, gas, coal and renewable energy form the cornerstones of our Nation’s energy base, and the DOI will continue to expand production of both offshore and onshore conventional and renewable U.S. energy resources while ensuring safety and reliability through efficient permitting, appropriate standards, assessment and oversight. As demand for energy resources grows, agencies within the DOI, such as BOEM, Bureau of Safety and Environmental Enforcement (BSEE), Bureau of Indian Affairs, Bureau of Land Management, Office of Surface Mining Reclamation and Enforcement, and U.S. Geological Survey conduct work that is increasingly critical to understand the exploration, development, quality, supply, and use of our energy resources.” This Strategy echoes BOEM’s mission as do the measures associated with it.

Table 3: Performance: Generating Revenue and Utilizing Our Natural Resources

Key GPRA Performance Indicators	2019 Actual	2020 Target	2021 Target
Number of megawatts of approved capacity authorized (that year) on public land and the Outer Continental Shelf (OCS) for renewable energy development while ensuring compliant environmental review	0	20 MW	890 MW
Percentage of Exploration and Development Plan reviews completed within statutory timelines	81%	100%	100%
Percent of offshore lease sale processes completed pursuant to the Secretary's approved National Outer Continental Shelf (OCS) Oil and Gas Leasing Program (National OCS Program)	100%	100%	100%

➤ Goal #2: Ensure Access to Mineral Resources

Goal Two notes the importance of non-energy mineral resources. Within this goal, BOEM's activities support *Strategy One – Manage non-energy mineral development*. The DOI Strategic Plan states, “DOI promotes energy security, environmental protection, and economic development through responsible, science-informed management of mineral resources... BOEM’s Marine Minerals Program provides sand and gravel resources to protect and improve coastal infrastructure and the environment locally, regionally and nationally.” BOEM contributes to this Strategy by tracking the number of non-energy minerals lease requests for OCS sand and gravel that are processed for coastal restoration and resilience projects. Results for this measure are presented in the below table.

Table 4: Performance: Manage Non-Energy Mineral Development

Key GPRA Performance Indicators	2019 Actual	2020 Target	2021 Target
Number of sand and gravel requests processed for coastal restoration projects	7	8	8

FISCAL YEAR 2021 BUDGET

Bureau of Ocean Energy Management

Bureau Budget Tables

Table 5: Budget at a Glance

Bureau of Ocean Energy Management
(Dollars in Thousands)

Bureau of Ocean Energy Management	2019 Actual	2020 Enacted	2021 Internal Transfers	2021 Fixed Costs	2021 Program Changes	2021 Request
Net Current Appropriation	129,687	131,611	-3,055	+2,009	-4,805	125,760
Offsetting Collections	49,579	60,000	+3,055		-	63,055
Total Budget Authority	179,266	191,611	-	+2,009	-4,805	188,815
Offsetting Collections						
Rental Receipts	47,455	58,000	+3,282	-	-	61,282
Cost Recovery Fees	2,124	2,000	-227	-	-	1,773
Total Offsetting Collections	49,579	60,000	+3,055			63,055
Ocean Energy Management						
Conventional Energy	61,799	62,961	-	+1,003	-3,477	60,487
<i>Change in Appropriated Dollars</i>			<i>-1,411</i>			
<i>Updated Rental Receipt Estimates</i>			<i>+1,638</i>			
<i>Updated Cost Recovery Estimates</i>			<i>-227</i>			
<i>National OCS Program</i>					<i>-3,500</i>	
<i>GrantSolutions Enterprise System</i>					<i>+23</i>	
Renewable Energy	20,720	23,325	-	+191	+2,949	26,465
<i>Change in Appropriated Dollars</i>			<i>-313</i>			
<i>Updated Rental Receipt Estimates</i>			<i>+313</i>			
<i>Renewable Energy Research & Stakeholder Engagement</i>					<i>+2,944</i>	
<i>GrantSolutions Enterprise System</i>					<i>+5</i>	
Marine Minerals	-	5,729	-	+63	+2,989	8,781
<i>Change in Appropriated Dollars</i>			<i>-102</i>			
<i>Updated Rental Receipt Estimates</i>			<i>+102</i>			
<i>National Offshore Sand Inventory</i>					<i>+2,988</i>	
<i>GrantSolutions Enterprise System</i>					<i>+1</i>	
Environmental Programs	79,774	82,457	-	+482	-7,064	75,875
<i>Change in Appropriated Dollars</i>			<i>-787</i>			
<i>Updated Rental Receipt Estimates</i>			<i>+787</i>			
<i>National OCS Program</i>					<i>-9,000</i>	
<i>Environmental Studies Program</i>					<i>+1,925</i>	
<i>GrantSolutions Enterprise System</i>					<i>+11</i>	
Executive Direction	16,973	17,139	-	+270	-202	17,207
<i>Change in Appropriated Dollars</i>			<i>-442</i>			
<i>Updated Rental Receipt Estimates</i>			<i>+442</i>			
<i>Ethics Program Transfer</i>					<i>-208</i>	
<i>GrantSolutions Enterprise System</i>					<i>+6</i>	
Total Budget Authority	179,266	191,611	-	+2,009	-4,805	188,815
Full Time Equivalents (FTE)	553	609	-		+1	610

Note: The FY 2021 Request level begins with the 2020 Enacted Budget as the base and incorporates internal transfers, fixed costs, and the program changes.

Note: Offsetting collections in the 2020 Enacted column reflect CBO scoring and match the amounts included in the enacted appropriations language. The 2021 President's Budget Appendix differs slightly due to scoring differences between OMB and CBO. Total budget authority for this account (appropriations and offsetting collections) matches both the appropriation and the President's Budget Appendix. A more detailed explanation of scoring differences can be found in Appendix A of the Department's 2021 Budget in Brief.

Table 6: Summary of Requirements

Bureau of Ocean Energy Management (Dollars in Thousands)									
	2019 Actual FTE Amount	2020 Enacted FTE Amount	2021 Fixed Costs	Internal Transfers FTE Amount	Total Program Changes FTE Amount	2021 Request FTE Amount	2021 Request vs. 2020 Enacted FTE Amount		
Ocean Energy Management									
Conventional Energy	270	61,799	304	62,961	+1,003	-3,477	304	-2,474	
Direct Appropriation	52,524	48,896		-1,411	-3,477			-3,885	
Rental Receipts	7,151	12,065		+1,638				+1,638	
Cost Recoveries	2,124	2,000		-227				-227	
Renewable Energy	58	20,720	58	23,325	+191	-2,949	58	+3,140	
Direct Appropriation	16,179	17,384		-313	-2,949			+2,827	
Offsetting Collections	4,541	5,941		+313				+313	
Marine Minerals	19	5,729	19	+63	+2	+2,989	21	+2	+3,052
Direct Appropriation	3,679	3,679		-102	+2	+2,989		+2,950	
Offsetting Collections	1,850			+102				+102	
Environmental Programs	140	79,774	146	82,457	+482	-7,064	146	-6,582	
Direct Appropriation	48,256	49,258		-787	-7,064			-7,369	
Offsetting Collections	31,518	33,199		+787				+787	
Executive Direction	85	16,973	82	17,139	+270	-1	-202	-1	+68
Direct Appropriation	12,728	12,194		-442	-1	-202		-374	
Offsetting Collections	4,245	4,945		+442				+442	
Total, OEM	553	179,266	609	191,611	+2,009	-	+I	-2,796	
Offsetting Collections									
Rental Receipts									
Cost Recovery Fees									
Net Appropriation, BOEM	553	129,687	609	131,611	+2,009	-3,055	+I	-5,851	

Note: Offsetting collections in the 2020 Enacted column reflect CBO scoring and match the amounts included in the enacted appropriations language. The 2021 President's Budget Appendix differs slightly due to scoring differences between OMB and CBO. Total budget authority for this account (appropriations and offsetting collections) matches both the appropriation and the President's Budget Appendix. A more detailed explanation of scoring differences can be found in Appendix A of the Department's 2021 Budget in Brief.

Table 7: Fixed Costs and Internal Realignments

Bureau of Ocean Energy Management
Justification of Fixed Costs and Internal Realignments
(Dollars In Thousands)

Fixed Cost Changes and Projections	2020 Change	2020 to 2021 Change
Change in Number of Paid Days	+320	-373
This column reflects changes in pay associated with the change in the number of paid days (-1 day) between FY 2020 and FY 2021, from 2,096 hours in FY 2020 to 2,088 hours in FY 2021.		
Pay Raise	+0	+1,501
The President's Budget for FY2021 includes one quarter of a planned 3.1% pay raise and three quarters of a planned 1% pay raise for FY 2021.		
Employer Share of Federal Employee Retirement System	+172	+913
The change reflects the directed 1.3% increase in the employer contribution to the Federal Employee Retirement System.		
Departmental Working Capital Fund	+134	-1
The change reflects the final FY 2021 Central Bill approved by the Working Capital Fund Consortium.		
Worker's Compensation Payments	-3	-64
The amounts reflects final chargeback costs of compensating injured employees and dependents of employees who suffer accidental deaths while on duty. Costs for the FY 2021 will reimburse the Department of Labor, Federal Employees Compensation Fund, pursuant to 5 U.S.C. 8147(b) as amended by Public Law 94-273.		
Unemployment Compensation Payments	+9	+0
The amounts reflect projected changes in the costs of unemployment compensation claims to be paid to the Department of Labor, Federal Employees Compensation Account, in the Unemployment Trust Fund, pursuant to Public Law 96-499.		
Rental Payments	+383	+33
The amounts reflect changes in the costs payable to General Services Administration (GSA) and others for office and non-office space as estimated by GSA, as well as the rental costs of other currently occupied space. These costs include building security; in the case of GSA space, these are paid to Department of Homeland Security (DHS). Costs of mandatory office relocations, i.e. relocations in cases where due to external events there is no alternative but to vacate the currently occupied space, are also included.		
Baseline Adjustments for O&M Increases	+0	+0
In accordance with space maximization efforts across the Federal Government, this adjustment captures the associated increase to baseline operations and maintenance requirements resulting from movement out of GSA or direct-leased (commercial) space and into Bureau-owned space. While the GSA portion of fixed costs will go down as a result of these moves, Bureaus often encounter an increase to baseline O&M costs not otherwise captured in fixed costs. This category of funding properly adjusts the baseline fixed cost amount to maintain steady-state funding for these requirements.		

Internal Realignments and Non-Policy/Program Changes (Net-Zero)	2021 (+/-)
Conventional Energy - direct appropriations/offsetting collections	-1,411/+1,411
This is a technical adjustment to reflect a change in the composition of BOEM's budget, due mostly to a shift in the portion of the budget funded through direct appropriations versus offsetting collections.	
Renewable Energy - direct appropriations/offsetting collections	-313/+313
This is a technical adjustment to reflect a change in the composition of BOEM's budget, due mostly to a shift in the portion of the budget funded through direct appropriations versus offsetting collections.	
Marine Minerals - direct appropriations/offsetting collections	-102/+102
This is a technical adjustment to reflect a change in the composition of BOEM's budget, due mostly to a shift in the portion of the budget funded through direct appropriations versus offsetting collections.	
Environmental Programs - direct appropriations/offsetting collections	-787/+787
This is a technical adjustment to reflect a change in the composition of BOEM's budget, due mostly to a shift in the portion of the budget funded through direct appropriations versus offsetting collections.	
Executive Direction - direct appropriations/offsetting collections	-442/+442
This is a technical adjustment to reflect a change in the composition of BOEM's budget, due mostly to a shift in the portion of the budget funded through direct appropriations versus offsetting collections.	
Total, Fixed Costs and Related Changes in 2021	+2,009

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FISCAL YEAR 2021 BUDGET

Bureau of Ocean Energy Management

Conventional Energy

Table 8: Conventional Energy Budget Summary

	2019 Enacted	2020 Enacted	Internal Transfers	Fixed Costs	Program Changes	2021 Request	vs. 2020 Enacted
Conventional Energy (\$000) <i>FTE</i>	61,799 293	62,961 304	-	+1,003	-3,477 -	60,487 304	-2,474 -

Management of the oil and gas resources of the Outer Continental Shelf (OCS) is governed by the OCS Lands Act (43 U.S.C. 1331 *et seq.*), which sets forth procedures for OCS conventional energy leasing, exploration, development, and production. BOEM manages the development of offshore energy and mineral resources in an environmentally and economically responsible manner. BOEM promotes energy independence, environmental protection, and economic development through responsible management of these offshore resources informed by the best available science.

For conventional energy, this begins with the preparation of the National OCS Oil and Gas Leasing Program. BOEM's work includes assessments of the oil and gas resource potential on the OCS, inventories of oil and gas reserves, and economic evaluations of OCS submerged lands to ensure the receipt of fair market value for U.S. taxpayers. Carrying out these responsibilities requires balancing the energy demands and mineral needs of the Nation with the protection of the human, marine, and coastal environments. The FY 2021 budget for Conventional Energy will support high priority offshore oil and gas development activities, including leasing, plan administration, economic analyses, and resource evaluation.

The FY 2021 budget will support:

- **National OCS Oil and Gas Leasing Program:** As required by Section 18 of the OCS Lands Act, BOEM prepares the National OCS Oil and Gas Leasing Program (National OCS Program) which sets forth a schedule for proposed offshore oil and gas lease sales over a five-year period. The National OCS Program is designed in a manner to best meet the Nation's energy needs while carefully considering factors to balance the potential for accessing oil and gas resources with the potential for adverse impacts from such activity.
- **Lease Administration:** The OCS is a significant source of oil and gas for the Nation's energy supply. BOEM is responsible for administering more than 14 million OCS acres presently leased.

Currently, producing leases on the OCS account for about 16 percent of all domestic oil production and 3 percent of domestic natural gas production.

- **Plan Review:** When a lessee submits an exploration plan, development operations coordination document, or development and production plan, BOEM conducts a thorough review prior to approval. Exploration plans describe all exploration activities planned by an operator as well as the timing of these activities. Development operations coordination documents¹ and development and production plans both describe the lessee's proposed activities, the location of each proposed well and/or structure, a proposed schedule, and an analysis of any offshore and onshore impacts that may occur.
- **Geological and Geophysical Surveys:** Conventional energy geological and geophysical (G&G) surveys are conducted to obtain data for oil and gas exploration and production and aid in siting offshore structures. The data is also used in bid evaluation to ensure the receipt of fair market value for the leasing of public lands.
- **Resource Evaluation:** The resource evaluation program supports BOEM's conventional energy program through critical technical and economic analysis. The primary program objective is to identify areas of the OCS that are most promising for oil and gas development.
- **Fair Market Value:** As mandated by the OCS Lands Act, BOEM ensures receipt of fair market value for oil and gas leases. Once a lease sale is completed and the high bidders for each tract are publicly announced, BOEM follows specific bid adequacy procedures to ensure that the government receives fair market value utilizing a two-phase evaluation process. A determination of bid adequacy is made within 90 days after the lease sale is held.
- **Mapping:** Accurate OCS boundary lines are a foundational requirement for BOEM's OCS planning and leasing activities. Pursuant to the Office of Management and Budget's Circular A-16 ("Coordination of Geographic Information and Related Spatial Data Activities"), BOEM is responsible for producing and maintaining the official offshore cadastre for the OCS of the United States.
- **Marine Cadastre:** The Energy Policy Act of 2005 (P.L. 109-58) directs the Secretary of the Interior to establish an OCS Mapping Initiative to assist in decision making related to energy uses on the OCS. To accomplish this, BOEM and the National Oceanic and Atmospheric Administration (NOAA) jointly manage the [MarineCadastre.gov](#) portal, which provides authoritative and regularly updated ocean information to users, including offshore boundaries, infrastructure, human use, energy potential, and other data sets. This system is widely used by the public, environmental groups,

¹ Development operations coordination documents are used in the Central and Western Gulf of Mexico in lieu of development and production plans, as allowed by the 1978 amendments to the OCSLA (43 U.S.C. 1351 (a) and (l)).

Federal regulatory agencies, regional marine planners, State intergovernmental task forces, and government organizations involved in ocean planning issues.

SUMMARY OF 2021 PROGRAM CHANGES

Program Changes from 2020 Enacted Budget	(\$000)	FTE
GrantSolutions Enterprise System	+23	
National OCS Oil & Gas Leasing Program	-3,500	
Total Program Changes	-3,477	+0

GrantSolutions Enterprise System (+\$23,000; 0 FTE). Funding supports the allocated share of operating costs for the GrantSolutions enterprise system to improve the processing and transparency of grants and cooperative agreements across Interior. Cost allocations are based on an algorithm of use factors.

National OCS Oil and Gas Leasing Program (-\$3,500,000; 0 FTE). These funds, used to support the development and implementation of the 2019-2024 National OCS Oil and Gas Leasing Program (National OCS Program), are not needed at this time, as development of the program is currently on hold. The request does not presume a particular decision on the next National OCS Program.

PROGRAM OVERVIEW

As the Nation's OCS energy and mineral resource manager, BOEM administers a comprehensive national oil and gas leasing program that requires a progressive cycle of resource, economic, and environmental analyses, providing senior leadership with the information they need to make informed decisions. This work includes: identifying and delineating appropriate boundaries and legal descriptions; inventorying and assessing the Nation's OCS energy and mineral endowment; developing a proposed schedule for oil and gas lease sale offerings; developing financial terms to ensure the receipt of fair market value; reviewing industry plans to explore, develop, and produce oil and gas resources; ensuring lease holders have sufficient financial resources to fulfill lease obligations, such as decommissioning facilities at the end of their productive life; and ensuring that oil and gas activities are conducted in compliance with environmental laws and regulations.

These activities support the Administration's energy policies, which include expanding production of U.S. domestic oil and gas supplies and implementing regulatory and oversight efficiencies. These efforts will create a more accessible, efficient, and predictable oil and gas leasing process for government, industry, and other stakeholders.



The Na Kika platform in deepwater Gulf of Mexico.

As of January 1, 2020, BOEM manages about 2,680 active oil and gas leases on over 14.2 million OCS acres. Offshore Federal production in FY 2019 reached approximately 683 million barrels of oil and 1.03 trillion cubic feet of gas, almost all of which was produced in the Gulf of Mexico. Revenues generated from OCS conventional energy leasing and production activities are a significant source of revenue for the Federal government. In FY 2019, conventional energy generated \$103 million in rent, \$407 million in bonuses, and \$5 billion in royalties from production.

LEASING

BOEM's leasing activities include the development of the National OCS Program; the planning, preparation, and holding of individual lease sales; and, the administration of oil and gas leases.

➤ National OCS Oil and Gas Leasing Program

Under the OCS Lands Act, the Secretary of the Interior has the responsibility to prepare, periodically revise, and maintain an oil and gas leasing program to "best meet national energy needs" while balancing other important factors. The Department must prepare a national program that indicates "as precisely as possible, the size, timing, and location" of Federal offshore oil and gas leasing activity to be considered for the five-year period it covers. The National OCS Program identifies program areas, which are delineated areas of leasing interest where leases potentially may be offered and establishes a proposed schedule of lease sales over a five-year period.

Per Section 18(a)(3) of the OCS Lands Act, the National OCS Program is designed to achieve a balance of "the potential for environmental damage, the potential for the discovery of oil and gas, and the potential for adverse impact on the coastal zone." During development of the National OCS Program, BOEM requests comments from intergovernmental partners and stakeholders (including governors, Federal and State agencies, local communities, federally recognized Tribes, energy and non-energy private industry, public interest groups, and the public) to help BOEM determine which areas of the OCS have the most potential for oil and gas development and the measures that should be implemented to ensure that development is accomplished in an environmentally responsible manner. This effort ensures that management of the OCS is "conducted in a manner which considers economic, social, and environmental values of the renewable and nonrenewable resources contained in the OCS, and the potential impact of oil and gas exploration on other resource values of the OCS and the marine, coastal, and human environments" (43 U.S.C. 1344(a)(1)).

BOEM published the 2019-2024 National OCS Oil and Gas Leasing Draft Proposed Program (2019-2024 Draft Proposed Program) on January 4, 2018. The Draft Proposed Program is the first in a series of three documents issued by the Department before the Secretary takes final action to approve a National OCS Program. The 2019-2024 Draft Proposed Program includes the largest number of proposed lease sales in the history of the OCS leasing program and makes available for future exploration and development consideration more than 98 percent of undiscovered, technically recoverable oil and gas resources. The breadth of the 2019-2024 Draft Proposed Program allows for maximum flexibility, and areas being considered for leasing may be narrowed at later stages of the process, such as after additional technical and environmental analysis, public comment, and critical input and coordination with key stakeholders is complete. Public comments received on the 2019-2024 Draft Proposed Program will be considered during the next stage of the National OCS Program development process: the Proposed Program and the associated Draft Programmatic Environmental Impact Statement.

Development of a new National OCS Program is currently on hold following the U.S. District Court for the District of Alaska's ruling (Case No. 3:17-cv-00101-SLG) that the Administration's rescission of area withdrawals was not authorized and that only Congress could rescind the withdrawals made under Section 12(a) of the OCS Lands Act (43 U.S.C. 1341(a)). The majority of the withdrawals involved large amounts of acreage in the Alaska Arctic, areas that were included for leasing consideration in the 2019-2024 Draft Proposed Program. The case is on appeal to the 9th Circuit Court of Appeals. The Department continues to assess the best path forward to meet the President's objective of maintaining the Nation's position as a global energy leader and complying with our statutory mandate to prepare and maintain a leasing schedule that will best meet the Nation's energy needs.

Following the eventual publication of the Proposed Program and the Draft Programmatic Environmental Impact Statement, public comments received during a mandatory 90-day comment period will be considered in the development of the Proposed Final Program. At least 60 days following publication of the Proposed Final Program and its submission to Congress and the President for review, the Secretary may approve the National OCS Program, at which point, BOEM may begin to implement it.

➤ **Oil and Gas Lease Sales**

BOEM held two lease sales in FY 2019: Gulf of Mexico region-wide Sales 252 and 253. These were the fourth and fifth sales, respectively, in the 2017-2022 Program. Sale 252 resulted in 211 new leases covering 1.17 million acres and total bonus payments of over \$231 million. Sale 253 resulted in 147 new leases covering approximately 812,000 acres and total bonus payments of \$155 million. Two lease sales are scheduled for FY 2020: Gulf of Mexico region-wide Sale 254 (scheduled for March 18, 2020) and Gulf of Mexico region-wide Sale 256 (scheduled for August 19, 2020). The following table includes information on lease sales in the 2017-2022 OCS Oil and Gas Leasing Program. Information on sales in previous Programs can be found on BOEM's website on the [Past Five Year Programs page](#).

Table 9: Lease Sales Scheduled in the 2017-2022 National OCS Program

Sale #	Date of Sale	Area	Number of Leases Issued	Number of Acres Leased	Total Bonus for Leased Tracts
249	8/16/2017	Gulf of Mexico	81	456,256	\$110,878,165
250	3/21/2018	Gulf of Mexico	139	764,924	\$115,329,139
251	8/15/2018	Gulf of Mexico	141	784,009	\$175,489,464
252	3/20/2019	Gulf of Mexico	211	1,171,260	\$231,790,063
253	8/21/2019	Gulf of Mexico	147	811,967	\$154,994,527
254	3/18/2020	Gulf of Mexico	TBD	TBD	TBD
256	8/19/2020	Gulf of Mexico	TBD	TBD	TBD
257	3/17/2021	Gulf of Mexico	TBD	TBD	TBD
258	6/16/2021	Cook Inlet	TBD	TBD	TBD
259	8/18/2021	Gulf of Mexico	TBD	TBD	TBD
261	3/16/2022	Gulf of Mexico	TBD	TBD	TBD

➤ Lease Sale Planning Process

Each lease sale in an approved OCS Oil and Gas Leasing Program is subject to an established pre-lease evaluation and decision-making process during which interested and affected parties have opportunities to comment and provide input. Each approved lease sale is considered on a case-by-case basis, over the course of required *Federal Register* publications, sale notices, comment periods, environmental reviews, and consultations, as described in the next section. Through this extensive planning process, a proposed sale undergoes evaluations that consider reasonable alternatives, modifications, and/or restrictions to the area under leasing consideration. The Final Notice of Sale, which BOEM publishes at least 30 days prior to holding the sale, documents the Department's final decision on a sale's size, timing, and location, as well as decisions on environmental mitigation measures and lease sale fiscal terms.

The pre-leasing process has typically taken approximately two years to complete, depending on the nature of the lease sale and the complexities encountered during the planning stages. Departmental guidelines now require environmental impact statements (EIS) to be completed in 12 months, which helps reduce the overall timeframe of preparing for a lease sale to approximately 1.5 years. The following figure and narrative provide an overview of the major steps and decision points in planning for a typical oil and gas lease sale.

Figure 2: Typical Planning for a Specific Oil and Gas Lease Sale

- Call for Information and Nominations:** BOEM requests comments from the public on the area being considered for leasing and solicits information on environmental issues that should be analyzed. In addition, potential bidders are invited to nominate areas of interest within those areas identified for leasing consideration.
- Area Identification:** Based on information received in response to the Call for Information and Nominations, BOEM identifies an area for further leasing consideration and environmental analysis. BOEM is required to publicly announce its Area Identification decision in the *Federal Register*.
- Notice of Intent:** BOEM will issue a Notice of Intent to alert the public that an EIS review pursuant to National Environmental Policy Act (NEPA) will be conducted. The notice provides a description of the Proposed Action and possible alternatives to the Proposed Action, as well as a description of the scoping process, and any scheduled meetings for the scoping of the NEPA document. A Notice of Intent may not be issued if BOEM determines that another form of NEPA review is sufficient (i.e., Supplemental EIS, environmental assessment, or Determination of NEPA Adequacy/Memorandum for the Record).
- NEPA Review:** BOEM will prepare a Determination of NEPA Adequacy based on existing NEPA documents or will prepare a new NEPA document, either an EIS or environmental assessment, to evaluate the potential environmental impacts of the Proposed Action, alternatives to the Proposed Action, and the potential effectiveness of mitigation measures.
- Public Involvement and Comment:** For EISs or environmental assessments, BOEM will request public comment on issues that should be addressed in the NEPA document. For lease sale environmental assessments, BOEM typically chooses to solicit public comments for 30 days. For an EIS, the public is invited to participate in the NEPA scoping process and the draft document is available for public comment for 45 days.
- Government-to-Government Consultations:** BOEM will consult with federally recognized Tribes and, in Alaska, also with Alaska Native Claims Settlement Act Corporations. These consultations are conducted throughout the stages of the OCS oil and gas leasing process, or

anytime upon request.

7. **Environmental Consultations:** BOEM will conduct required consultations with Federal agencies, such as the U.S. Fish and Wildlife Service and National Marine Fisheries Service, to comply with various environmental laws such as the Endangered Species Act, the Marine Mammal Protection Act, the Magnuson-Stevens Fishery Conservation and Management Act, and others. BOEM also consults with State and Tribal historic preservation officers under the National Historic Preservation Act.
8. **Final NEPA Document:** BOEM will address substantive public comments and, if necessary, update its analysis prior to issuing a final NEPA document.
9. **Proposed Notice of Sale:** BOEM will publish a Notice of Availability of the Proposed Notice of Sale in the *Federal Register*. The Proposed Notice of Sale includes information on the sale's proposed size, timing, and location, as well as a description of proposed blocks being offered, environmental mitigations being considered, and proposed fiscal terms and conditions of the sale.
10. **Letters to the Governors:** BOEM will send copies of the Proposed Notice of Sale to Governors of affected States for their review. Pursuant to Section 19 of the OCS Lands Act, BOEM will request their comment on the proposed sale's size, timing, and location.
11. **Consistency Determination:** As required by the Coastal Zone Management Act, BOEM will provide affected Coastal States that have a federally approved State Coastal Zone Management Plan with a determination on whether the proposed lease sale is consistent, to the maximum extent practicable, with the enforceable policies of their Coastal Zone Management Act Plan.
12. **Record of Decision (for an environmental impact statement) or Finding of No Significant Impact (for an environmental assessment):** This is the final step in the NEPA process regarding BOEM's decision to hold a lease sale. The Record of Decision, or the Finding of No Significant Impact, is signed in conjunction with the Final Notice of Sale and published in the *Federal Register* at least 30 days prior to the lease sale date.
13. **Final Notice of Sale:** BOEM will publish a Final Notice of Sale in the *Federal Register* at least 30 days before the sale is held. The Final Notice of Sale includes information on the sale's size, timing, and location, bid opening, as well as a description of the blocks being offered, applicable environmental mitigations, and fiscal terms and conditions of the sale. Pursuant to Section 19 of the OCS Lands Act, BOEM will also send letters to Governors of affected States providing written reasons for accepting or rejecting each governor's recommendation and/or implement any alternative means to provide for a reasonable balance between the national interest and the well-being of the citizens of the State.

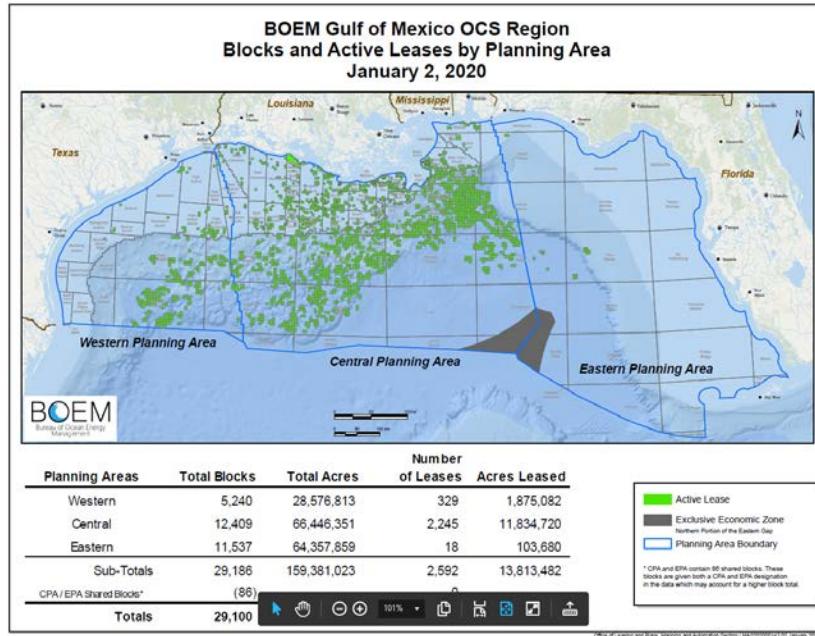
14. **Lease Sale:** BOEM will open and publicly read sealed bids submitted by qualified bidders on the day of the sale. The venue is not open to the public; rather, bids are read aloud and broadcast on the internet via live-stream.
15. **Fair Market Value Analysis:** Ensuring the receipt of fair market value for OCS resources is mandated by the OCS Lands Act and is one of BOEM's critical responsibilities. Under its bid adequacy procedures for oil and gas leases, BOEM reviews all high bids received and ensures that a bid on a specific OCS block meets fair market value criteria prior to the issuance of a lease.
16. **Lease Issuance:** BOEM will issue a lease to the highest qualified bidder if the high bid meets BOEM's fair market value criteria and following required antitrust review by the Department of Justice and the Federal Trade Commission.

➤ Lease Administration

The lease administration process encompasses a set of discrete business processes, which manage a lease from issuance to relinquishment, termination, cancellation, or expiration. Once the lease has been officially awarded, lease administration covers the legal modification of the lease contract, its supporting analysis, and services provided by BOEM under the lease contract. Also included within these processes are the qualification of corporate entities and individuals before they can acquire properties or do business on the OCS; the review and acceptance of corporate mergers, corporate changes-of-name, and business conversions; and the assignment of lease interests among qualified entities.

BOEM's New Orleans, Louisiana Office (New Orleans Office): BOEM oversees 29,186 blocks in the Gulf of Mexico. As of January 2, 2020, 2,592 blocks are leased, including 329 in the Western Planning Area, 2,245 in the Central Planning Area, and 18 in the Eastern Planning Area. The following figure provides a snapshot of the blocks and active leases within the Gulf of Mexico.

Figure 3: Gulf of Mexico Blocks and Active Leases by Planning Area



BOEM's Anchorage, Alaska Office (Anchorage Office): As of January 6, 2020, the Alaska OCS has 54 active oil and gas leases encompassing approximately 275,474 acres in the Beaufort Sea (40 leases) and Cook Inlet (14 leases). The location of the Alaska OCS leases are shown in the following maps.

Figure 4: Cook Inlet Sea Active Leases

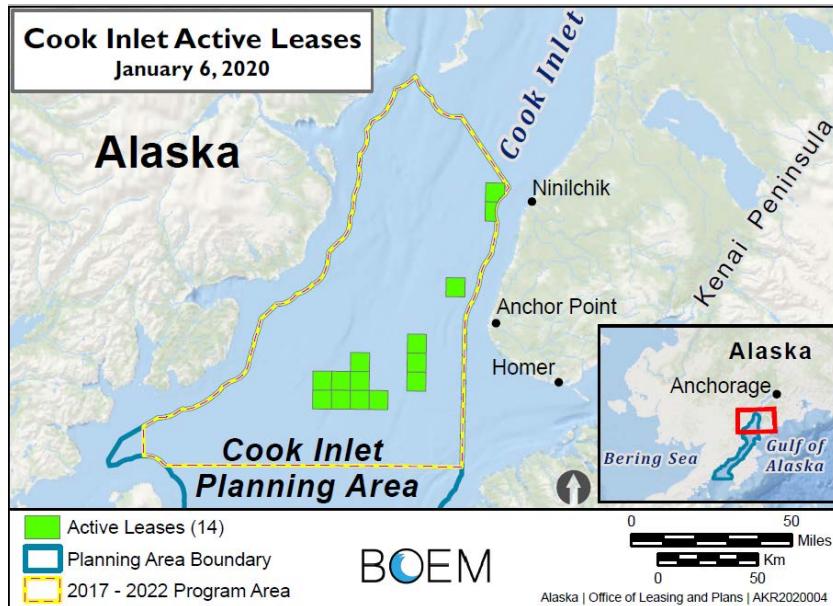
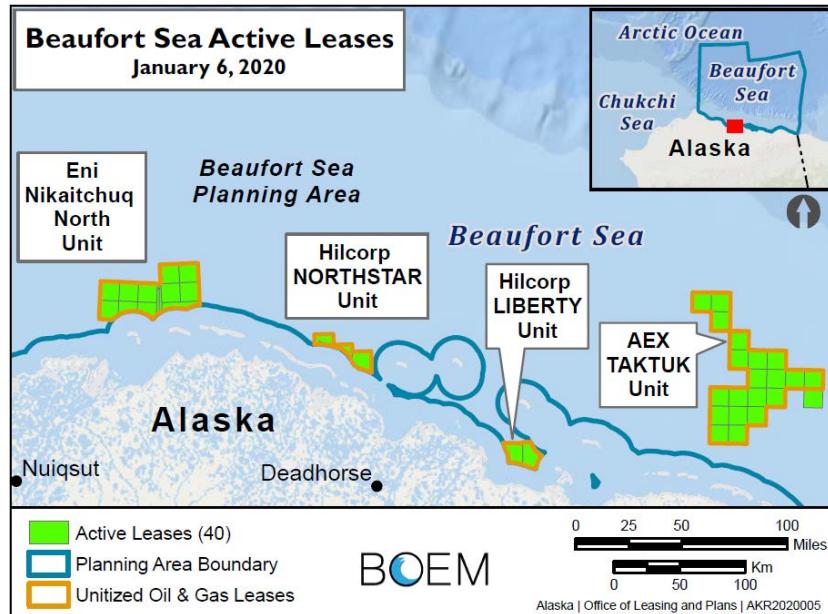
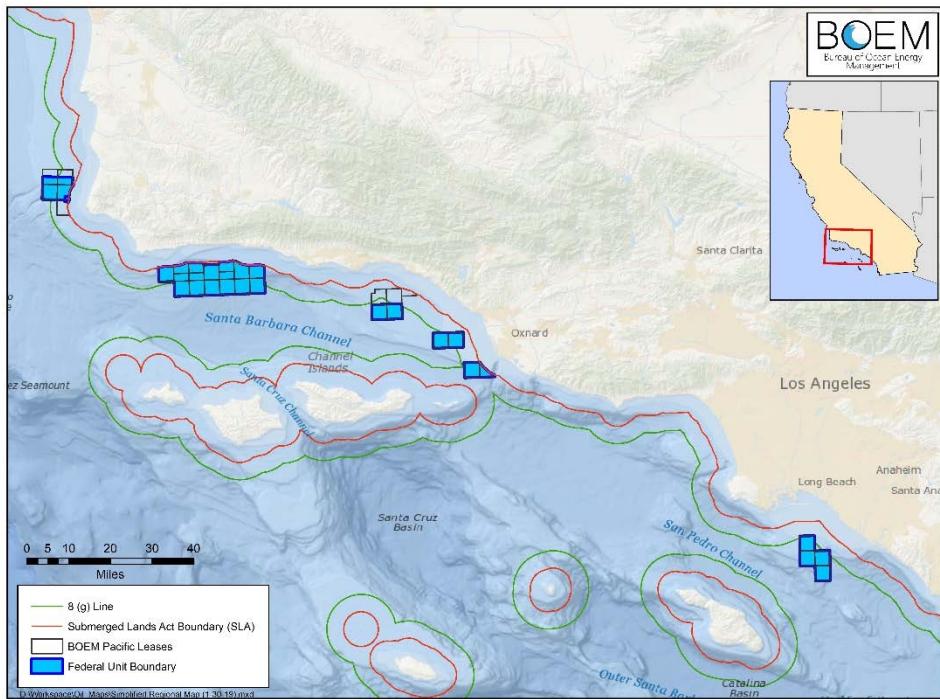


Figure 5: Beaufort Sea Active Leases

The Beaufort Sea leases include the following: 3 leases at the Liberty field; 13 leases in the Harrison Bay Block 6423 Unit (also known as Nikaitchuq North Prospect) north of the Nikaitchuq development in eastern Harrison Bay; 3 leases in the Northstar Unit (a joint State/Federal unit that is currently in production); 20 leases in the eastern Beaufort Sea in the Taktuk Unit, and one lease immediately adjacent to the Taktuk Unit. The U.S. Arctic OCS has high resource potential, but there are challenges associated with offshore oil and gas development activities in the Arctic, such as unique environmental conditions, remote location, and limited access to infrastructure.

BOEM's Camarillo, California Office (Camarillo Office): As of January 6, 2020, BOEM manages activity on 34 leases from previous lease sales, totaling 178,529 acres. The following map shows the location of the leases off the coast of Southern California.

Figure 6: Camarillo Office Active Leases



➤ **Official Boundaries**

The OCS Lands Act gives the Secretary of the Interior the authority to administer the offshore-submerged lands of the OCS for energy and minerals leasing purposes. Various court decisions, treaties, laws, policies, and procedures guide the boundary making process on the OCS. The offshore-submerged lands of the OCS are subdivided into parcels referred to as OCS blocks. No submerged lands may be offered for lease that are not under the jurisdiction of the Federal government, and no such submerged Federal lands may be offered for lease or sale by either a foreign country or a U.S. Coastal State. The development and maintenance of accurate OCS boundary lines are a foundational requirement for all BOEM OCS leasing activities. Through its mapping and boundary functions, both in headquarters and in the regional offices, BOEM is responsible for producing and maintaining the official offshore cadastral for the OCS of the United States.

The current focus of this work is modernizing the tools and methods used to update block and boundary data in support of OCS leasing. Using Geographic Information System (GIS) software tools, block and boundary data that was previously stored only in BOEM's Technical Information Management System has been transferred to multiple regional geodatabases, where it can be more efficiently updated (e.g., when new boundaries are established) and maintained in the Boundary Delineation System Database. Using GIS for these processes has dramatically reduced the time and effort that is required when using the legacy Technical Information Management System Block and Boundary mapping tools. Boundary

Delineation System routines are now used to perform mathematical offshore boundary computations in preparation of OCS Leasing Maps, Official Protraction Diagrams, and Supplemental Official OCS Block Diagrams depicting OCS block information, the Submerged Lands Act, Limit of “8(g) Zone” and corresponding area measurements.

➤ **Geospatial Services Coordination**

In order to engage in effective planning, leasing, and permitting activities that result in sound ocean management decisions, BOEM programs need geospatial data that describe the uses and resources that collectively make up the ocean space. U.S. coastal zones and offshore areas provide the backdrop for a wide spectrum of marine activities including mining sand for beach nourishment, military training, protection of important species, vessel transit, commercial fishing and fisheries management, and conventional and renewable energy development. Every ocean user and activity has the potential to affect others, and these interactions need to be understood and considered. Coordination of mission-critical geospatial data that informs decision making brings clarity to the crowded marine space and supports America’s most pressing ocean economic, security, and environmental interests.

Using the framework of a Geospatial Services Strategic Plan, the BOEM Geospatial Information Officer coordinates with all of BOEM’s program and regional offices, and relevant BSEE Information Technology (IT) and Geospatial staff. This work includes ensuring the adequacy of supporting technologies and infrastructures, developing and implementing appropriate mapping/data/metadata standards, and ensuring compliance with applicable Federal directives and requirements, including provisions of the OPEN Government Data Act and Geospatial Data Act. Implementing the terms of the OPEN Government Data Act, the BOEM Geospatial program focuses on treating data as an asset, requiring and prioritizing new data for public disclosure, machine readability, open licensing, and discoverability through [data.gov](#) and [MarineCadastre.gov](#). Similarly, as prescribed by the Geospatial Data Act, BOEM is promoting greater access and use of government data, establishing enforceable standards for geospatial data, and working to better coordinate among Federal, State, local, and Tribal governments, the private sector, and institutions of higher learning.

➤ **MarineCadastre.gov**

The [MarineCadastre.gov](#) project, a joint initiative between BOEM and NOAA, is a web-based, integrated marine information system that provides an authoritative source of ocean information, including offshore boundaries, infrastructure, ocean uses, habitat distribution data, energy potential, and other data sets important to both large regional ocean planning efforts and project-specific planning. While originally created to comply with Section 388 of the Energy Policy Act of 2005, which mandated a comprehensive digital mapping initiative for decision-making on the OCS, MarineCadastre.gov is now also providing the geospatial framework needed for broader ocean planning. BOEM’s MarineCadastre.gov program has repeatedly been recognized for its collaborative stewardship efforts and is constantly evolving and expanding to include relevant issue-driven data and tools. For example, the project received the 2017 Federal Geographic Data Committee Doug D. Nebert National Spatial Data Infrastructure Champion of



The [MarineCadastre.gov](#) website provides comprehensive geospatial data and information to facilitate ocean planning efforts.

recommendations for making the most needed geospatial data available to the public so that these data can be searched via MarineCadastre.gov and/or other regional data providers.

MarineCadastre.gov information is provided as immediately viewable map data, downloadable GIS formatted data, and as map services. Most data are available directly from the authoritative source or are updated regularly from the source(s). MarineCadastre.gov has three primary focus areas: web map viewers and ocean planning tools; spatial data registry; and technical support and regional capacity building. In addition to the data sets provided by other authoritative data providers – such as NOAA, U.S. Fish and Wildlife Service, U.S. Geological Survey, and U.S. Coast Guard – the MarineCadastre.gov includes a variety of BOEM/BSEE data sets. Users inside and outside of BOEM have access to the most up to date versions of lease maps, protraction diagrams, leased blocks, OCS blocks, boundaries, pipelines, wells, and other BOEM/BSEE generated GIS data important to BOEM's stakeholders for marine and energy development planning purposes. Several regional ocean portal projects use the data and services provided through the MarineCadastre.gov project, fulfilling BOEM's vision for the project to be the first place to find authoritative coastal and marine data.

The MarineCadastre.gov project has also created some widely used data tools. These include four Automatic Identification System vessel traffic data tools, BOEM Environmental Studies Program Information System, Ocean Law Search, and the recently-developed Ocean Reporting Tool. The Ocean Reporting Tool provides quick dashboard statistics for more than 90 data layers, most of which are available in MarineCadastre.gov's viewer or data registry. The MarineCadastre.gov National Viewer also received a significant technical update to enhance the user experience and the types of data services that can be pulled into the system from the various authoritative sources.

As of FY 2020, the MarineCadastre.gov is managing 26 data collections and 310 individual data layers. Additionally, 67 data layers were internally developed and/or maintained. A new contract to process

the Year Award. It is also mentioned in the President's Executive Order on *Ocean Policy to Advance the Economic, Security, and Environmental Interests of the U.S.* (EO 13840) as the type of geospatial data portal that should be used to make agency data available for regional ocean planning. BOEM's MarineCadastre.gov project team was tasked to work with the White House Ocean Policy Committee to develop an analysis of regional data needs via a "Data Scoping Study." This study now informs the Ocean Policy Committee's efforts to guide agency data providers in implementing its

2018 and 2019 Automatic Identification System data, critical to informing BOEM's renewable energy leasing and plan approval processes, is in progress, and analysis should be available starting the second quarter of FY 2020. Story maps and special purpose maps are live online maps with surrounding narratives to help explain the details and uses of the maps for their intended audiences. Most of the maps are a composite of authoritative data found on MarineCadastre.gov and localized data from other sources. Currently, the Marine Cadastre program maintains 21 special maps. These include seven thematic, five regional, and nine story maps. They can all be found on the [MarineCadastre.gov National Viewer](#). Website traffic ranged between 11,500 to 14,500 hits each quarter. Requests for MarineCadastre.gov map services have been consistent during FY 2019, ranging between 400,000 - 900,000 service hits per month. Response times increased 127 percent in FY 2019, compared to FY 2018. BOEM-hosted services hits were up 30 percent in FY 2019.

PLANS

Each of BOEM's regional offices manages the review and approval process for all exploration plans, development and production plans, or development operations coordination documents within their respective OCS waters. In conducting plan reviews, BOEM examines the proposed exploration, development, and production activities to ensure they conform to regulatory performance standards, comply with Federal laws, are safe, adhere to sound conservation practices, protect the rights of the U.S. Government, do not unreasonably interfere with other uses of the OCS, and do not cause undue harm to the human, marine, and coastal environment. This oversight ensures that industry follows all applicable laws, regulations, and lease terms when exploring for and developing oil and gas resources on the OCS.

For existing leases, BOEM conducts in-depth reviews of plans within required timeframes to ensure that planned activities are approved and conducted in a timely manner, in accordance with applicable laws, regulations, and lease terms. BOEM works to ensure that the review process is rigorous, efficient, and predictable. BOEM designates specific plan coordinators to ensure consistency throughout the review process. During plan review, BOEM evaluates the potential environmental impacts of the proposed activities pursuant to the OCS Lands Act and NEPA. Analyses include reviews of shallow hazards and seafloor features, resource conservation, financial assurance, worst-case discharge, air quality, water quality, archaeological concerns, environmental resource concerns, subsistence use concerns, and military and security issues. These analyses provide information to support plan decisions and aid in the development of approval conditions to help protect the environment and facilitate multiple uses of the OCS.

The following figures illustrate typical plan review and approval processes for exploration and development of OCS oil and gas resources.

Figure 7: Processes for Oil and Gas Exploration Activities

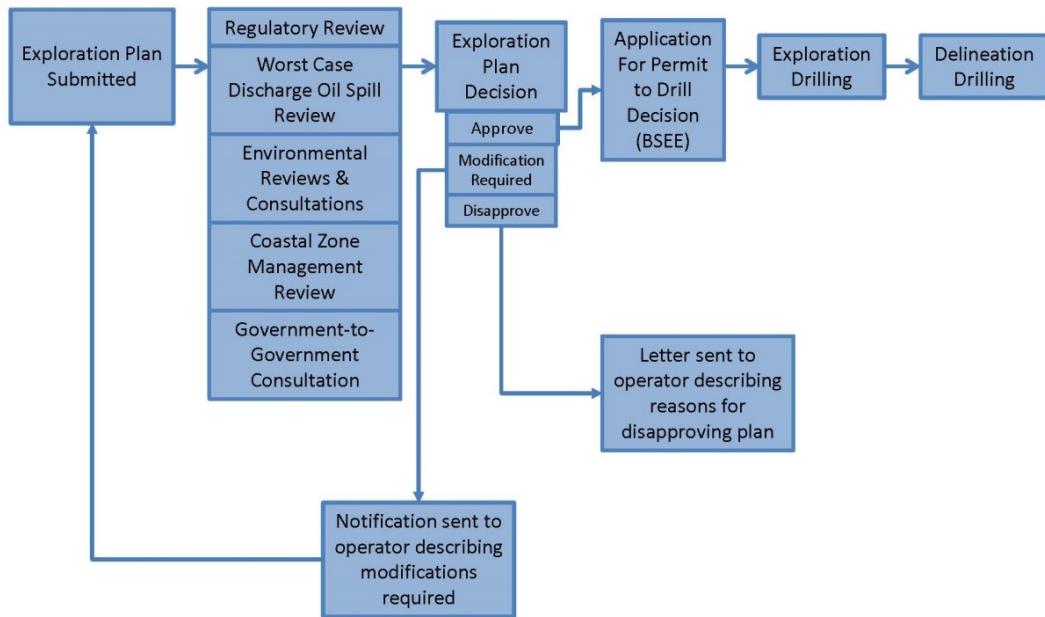
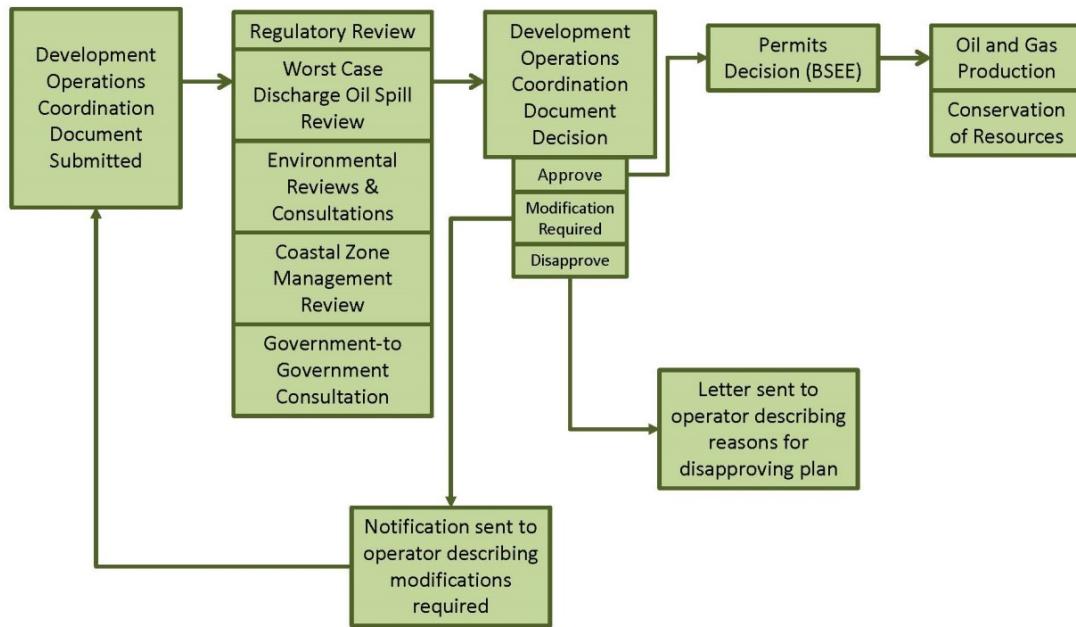


Figure 8: Processes for Oil and Gas Development Activities



Note: This figure reflects the process for development operations coordination documents in the New Orleans Office. The Anchorage Office and the Camarillo Office follow a similar process for development plans and receive development and production plans rather than development operations coordination documents.

New Orleans Office: The number of plans reviewed in calendar year 2019 remained at approximately the same level as the previous year, which continues a modest upward trend for plan activity seen since 2016. There has been an increase in the review of plans being submitted for deep-water activities that include multiple lease blocks, which is a change from previous years where plans typically included only one or two lease blocks. BOEM has seen activity start to rebound since 2016 due to higher oil prices. Although activity continues to remain lower than levels seen in the recent past, the long-term outlook for projects remains favorable. The following table shows all plan submittals – initial, supplemental, revised, modifications, amendments, and post-approval – received from 2010 through 2019, as well as plans estimated to be received in calendar years 2020 and 2021.

Table 10: Recent Plan Review Activities in the Gulf of Mexico

Calendar Year	# EPs	# DOCDs
2010	408	431
2011*	907	837
2012	170	327
2013	504	616
2014	509	601
2015	542	473
2016	336	248
2017	305	423
2018	293	448
2019	336	401
2020**	350	500
2021**	350	500

* The increase in 2011 is due to heightened standards on information requirements on exploration plans (EP) and development operations coordination documents (DOCD).

** The number of plans noted in 2020 and 2021 are estimated.

BOEM also reviews and processes applications for rights-of-use and easement. Rights-of-use and easement are granted to operators to construct or maintain platforms and other installations at OCS sites on which the operator does not have an OCS lease, if the proposed activities would facilitate the development of leased resources. Prior to granting a right-of-use and easement request, BOEM must review and approve a plan outlining the proposed activities to ensure these activities conform to sound conservation practices and are carried out in a safe and environmentally sound manner to prevent harm or damage to any natural resource or human, marine, or coastal environment. In FY 2019, BOEM received 24 right-of-use and easement requests and completed 15 reviews. BOEM anticipates receiving approximately 20 requests in both FY 2020 and FY 2021.

Anchorage Office: BOEM received an exploration plan for Lower Cook Inlet and has initiated the plan completeness review. The exploration program is structured to evaluate the oil and gas potential of some

of the 14 leases acquired in the 2017 Cook Inlet Lease Sale 244.

In October 2018, BOEM approved the development and production plan for the Liberty Prospect, located in the Beaufort Sea in the OCS waters northeast of Prudhoe Bay. The activities described in the approved development and production plan, if executed, will result in the first solely Federal OCS oil and gas development in the U.S. Arctic OCS, which is expected to help lay the foundation for future OCS oil and gas activity in the nearshore Beaufort Sea. Responsible and safe development of the Liberty Prospect will require continued engagement by BOEM, BSEE, and other Federal agencies. In August 2019, BP announced that it had agreed to sell all Alaska operations and interests to Hilcorp for \$5.6 billion, including BP's interest on the Liberty project and remaining interest at Northstar.

Northstar is a joint Federal/State of Alaska unit located in the Beaufort Sea about 12 miles northwest of Prudhoe Bay, producing since 2001. BP was the original lessee and operator of Northstar. Hilcorp has operated the field since 2014, which produces about 11,000 barrels of oil per day. BOEM will continue to review and monitor Federal production activities at Northstar and may need to conduct some additional NEPA analysis if operations expand.

In August 2017, BOEM approved an exploration plan for up to four extended reach wells from an existing island facility in State waters that would penetrate the Federal OCS. Drilling for the first well commenced in December 2017. In April 2018, BOEM approved a revision to the exploration plan, which augmented the multi-year, winter-only OCS drilling schedule with additional drilling and related activities that were allowed to take place in the summer of 2018. Eni US Operating Company completed drilling the first well in April 2019 and BOEM anticipates Eni will drill additional exploration wells from the Spy Island Drill Site in 2020.

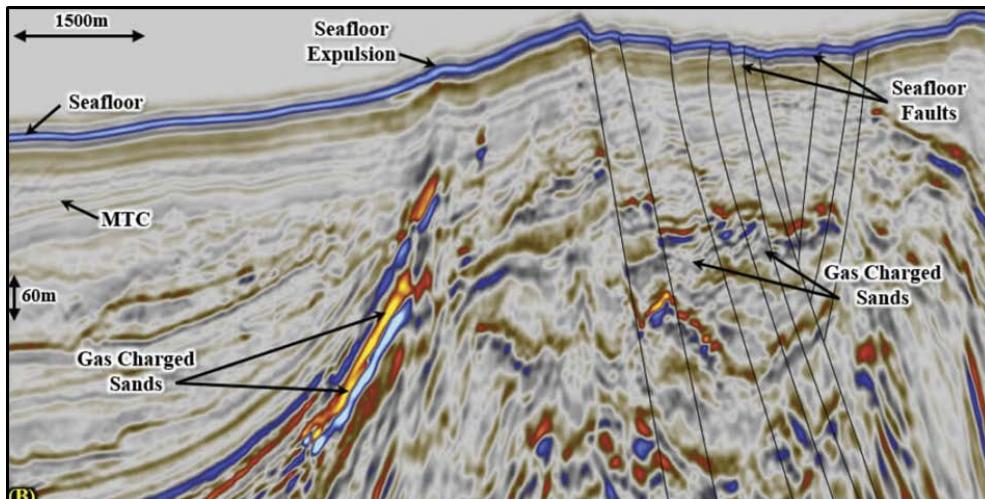
Per Executive Order and DOI policy, BOEM initiates and engages in government-to-government consultations with federally recognized Tribes and government-to-Alaska Native Claims Settlement Act corporations in planning activities that may have a substantial direct effect on those entities.

Camarillo Office: Proposed activities on active leases periodically require update or revision to approved development and production plans. One right-of-use and easement plan was submitted to BOEM in FY 2019. BOEM anticipates review of one additional right-of-use and easement plan and one revised or supplemental development and production plan in FY 2020. BOEM also expects to receive one revised or supplemental development and production plan in FY 2021.

➤ **Geological & Geophysical Reviews**

BOEM is responsible for reviewing all oil and gas exploration and development plans for potential hazards that may be encountered in conducting the proposed drilling activity. BOEM geoscientists identify and evaluate the potential risks of surface and subsurface geologic hazards (e.g., shallow faults, shallow gas pockets, shallow water flows, abnormal pressure zones, lost circulation zones, seeps, ice

gouges, strudel scour, etc.) and man-made obstructions (e.g., pipelines, cables, debris, ship wrecks, etc.). In addition, geophysical reviews are performed to evaluate shallow hazards (seafloor and near seafloor) associated with operators' applications for pipeline rights-of-way and associated permits. To analyze these applications/requests, BOEM uses G&G data (e.g., 2D and 3D seismic data, and high-resolution side scan sonar data) to understand the geologic and geophysical environment in the area. As part of its review, BOEM evaluates and verifies operators' submissions and interpretations, such as their identification and assessment of potential geohazards and archaeological resources in the area that may be affected by exploratory and development drilling, installation of structures, laying pipelines, and other ancillary activities related to the plans. In addition, geoscientists evaluate the potential risk of encountering hydrogen sulfide. The G&G reviews provide a detailed evaluation of operators' geohazards analyses, shallow hazards assessment, archaeological resources, and are used to determine mitigations to be applied to plan and permit approvals.



Seismic Data Showing Shallow Geohazards

Source: [NCS SubSea](#)

BOEM provides BSEE, upon request, with subsurface expertise and assistance with regulatory review of applications for drilling permits. For example, BOEM geoscientists conduct G&G evaluations that include broaching analyses that support BSEE's review and approval of operators' applications for permit to drill for wells. The integrity of the well design is evaluated by BSEE, and if a determination is made that the well may fail at a certain casing point, geoscientists conduct a broaching analysis. A typical broaching analysis takes one to two weeks, depending on the complexity of the geology, and involves the evaluation of subsurface stratigraphic and structural conditions. The purpose of the analysis is to determine if escaping hydrocarbons from a failed casing shoe (a short steel sleeve attached to the bottom of a string of casing to help guide and protect the casing) will be trapped in the formations, or potentially reach the seafloor at some point in time.

New Orleans Office: In FY 2019, BOEM conducted approximately 153 geological and 145 geophysical reviews in support of exploration plan and development operations coordination document reviews; 30 high-resolution survey reviews; 83 reviews of applications for permit to drill; and 72 pipeline reviews for

BSEE. In the future, increasingly complex analyses will need to be conducted to identify potential geohazards because of the higher resolution data that is being collected for complex projects, especially those occurring in deep-water. BOEM anticipates the number of reviews to increase by 10 to 20 percent in FY 2021. In FY 2019, BOEM completed broaching analyses on six proposed wells to help support BSEE's reviews. BOEM anticipates up to five broaching analyses each in FY 2020 and FY 2021.

Anchorage Office: In FY 2020, BOEM will support BSEE in reviewing the Pebble Mine Pipeline Right-of-Way shallow hazard and archeological G&G surveys. Also in FY 2020, BOEM geoscientists and petroleum engineers will review G&G information and exploration and development scenarios in support of the EIS for the Cook Inlet Sale 258, scheduled to occur on June 16, 2021. Staff will also re-evaluate the geologic and production scenarios of offshore plays (a group of oil fields or prospects in the same region that are controlled by the same set of geological circumstances) to estimate their potential volumes of Technically and Economically Recoverable Oil and Gas Resources in preparation for the upcoming 2021 National Resource Assessment.

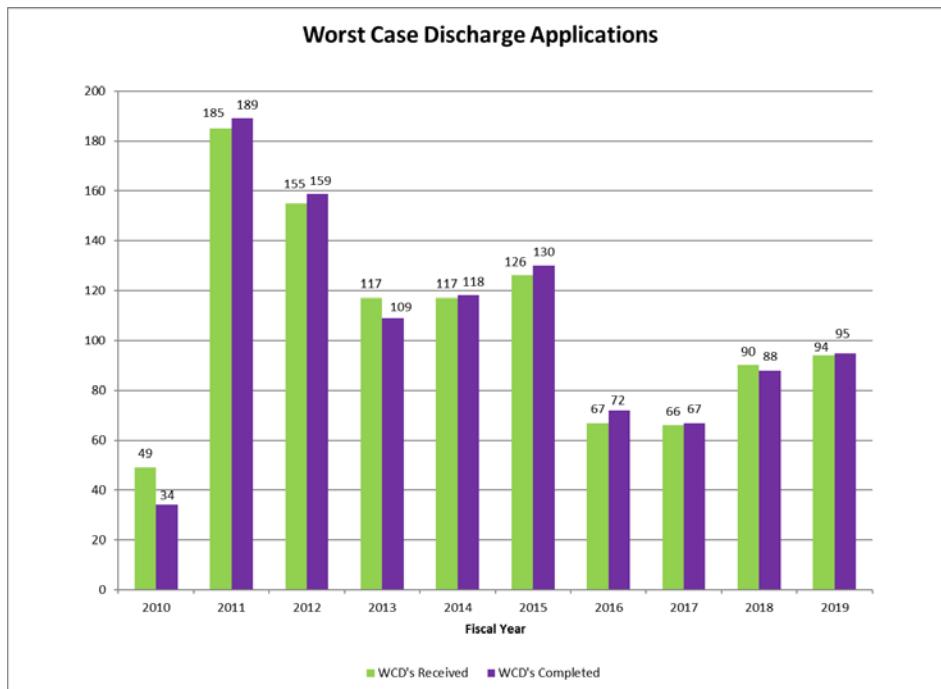
Camarillo Office: BOEM is updating guidelines for shallow hazards investigations on OCS leases which will provide G&G information for operators to efficiently collect and report their findings.

➤ **Worst-Case Discharge**

Operators and lessees are required to submit worst-case discharge calculated volumes and associated data as part of every exploration plan and development and production plan. BOEM defines a worst-case discharge for exploratory and development drilling operations as the daily rate of an uncontrolled flow of oil and gas from all producible reservoirs that are simultaneously exposed to an open wellbore. The package of reservoirs exposed to an open borehole with the greatest discharge potential is considered the worst-case discharge scenario.

Each regional office is responsible for worst-case discharge verifications and decision documentation associated with plans in their respective regional areas. BOEM geoscientists and engineers independently verify the validity of the volume calculations, assumptions, and analogs used by the operator for the worst-case discharge. BOEM's worst-case discharge model outputs are used by BSEE in reviewing oil spill response plans and making application for permit to drill decisions.

New Orleans Office: BOEM made determinations on 95 worst-case discharge verifications in FY 2019. During FY 2020 and FY 2021, BOEM anticipates the number of worst-case discharge analyses to increase to 100 and 110 respectively, although the workload will depend on the drilling activity in the Gulf of Mexico. With drilling on the shelf reaching a plateau, the activity level is expected to be driven primarily by deep-water drilling. The following figure depicts the number of worst-case discharge determination requests received and reviewed for completeness, and the number of analyses completed in each year since the program's inception in 2010.

Figure 9: Worst-Case Discharge Analyses Completed in the New Orleans Office

BOEM continues to develop trend parameters for deep-water exploration and development drilling for critical reservoir and fluid properties for the worst-case discharge analysis in order to enhance the efficiency of the process while maintaining the regulatory oversight needed to ensure an adequate response to an uncontrolled blowout. BOEM has worked with Louisiana State University and the University of Oklahoma to research worst-case discharge analysis options and provide recommendations.

BOEM continues to review its worst-case discharge analysis methodology and integrate recommendations from the Louisiana State University and University of Oklahoma studies to improve the accuracy of calculating the volume of an uncontrolled blowout. BOEM awarded the Louisiana State University another research contract in August 2017 to further the development of the “LSU Flow Model.” The “LSU Flow Model” provided BOEM with wellbore flow models exclusively developed for multiphase flows in large-diameter pipes and high-velocity flows experienced in worst-case discharge analyses. Work is ongoing to incorporate the flow correlation developed by LSU into BOEM’s worst-case discharge modeling software. In September 2017, BOEM awarded the University of Oklahoma a contract to investigate the application of sonic velocity to worst-case discharge analyses. In October 2018, the University of Oklahoma concluded their study and provided BOEM several reports and a new worst-case discharge tool. BOEM is analyzing this tool to determine how to best incorporate it into our existing numerical models. In May 2019, BOEM hosted a meeting to share information with members of the Offshore Operator’s Committee, during which the Louisiana State University and University of Oklahoma presented their findings and flow model/tool.

Anchorage Office: BOEM regularly works with operators to clarify the various input parameters and assumptions in reservoir flow simulation models used to produce their worst-case discharge estimates. In July 2018, BOEM reviewed and verified the worst-case discharge determination for the first exploration well that was completed in April 2019 under the Eni exploration plan. During FY 2020, BOEM anticipates completing worst-case discharge analyses for a second Eni well and for proposed drilling in Cook Inlet resulting from exploration of the leases issued under Lease Sale 244 in 2017.

Camarillo Office: With no new recent leasing offshore the Pacific, the worst-case discharge analyses are conducted over mature fields only. A standard operating document was adopted for the worst-case discharge analyses conducted in FY 2019. BOEM completed two worst-case discharge analyses in FY 2019 and anticipates a similar level of activity in FY 2020.

➤ **Oil Spill Financial Responsibility Program**

The financial responsibilities associated with the development of OCS resources are enormous. Just as BOEM must protect the American taxpayer from entities that fail to meet their lease, grant, or permit obligations, BOEM must also ensure that these same entities have the financial resources to pay for cleanup and damages that could be caused by oil discharges from their OCS facilities.

Under the Oil Pollution Act, BOEM is authorized to adjust for inflation the limit of liability for OCS facilities, including pipelines. The limit of liability for damages from OCS facility spills is capped at \$137.66 million— the maximum allowed under the Oil Pollution Act. BOEM performs a thorough review and oversight of industry oil spill financial responsibility filings, which are required before any drilling activities are approved. BOEM uses the information to (1) ensure Oil Pollution Act compliance by lessees and owners and operators of covered facilities, (2) establish eligibility of designated applicants for oil spill financial responsibility certification, and (3) establish reference and contact information for potentially responsible parties, their designated agents and guarantors. The program currently oversees approximately 96 companies covering 3,924 facilities with financial coverage in excess of \$7.5 billion.

RISK MANAGEMENT PROGRAM

BOEM continues to strengthen its risk management capabilities to address changing market conditions by tracking the financial profiles of companies in distress and obtaining financial assurance on specific leases as necessary. Through these efforts, along with a full review of the existing financial assurance framework pursuant to EO 13795 - *Implementing an America-First Offshore Energy Strategy* - and SO 3350 - *America-First Offshore Energy Strategy*, BOEM has been engaged with BSEE and industry to discuss relevant issues and concerns and has submitted a draft proposed financial assurance rule to OMB's Office of Information and Regulatory Affairs for review. Through this rule-making effort, BOEM will enhance its comprehensive risk management and financial assurance regulatory framework, with the goal of ensuring the U.S. taxpayer does not have to pay for liabilities related to noncompliance

by lessees and grant holders with OCS obligations, including the decommissioning of OCS facilities. Characteristics of the companies operating on the OCS have changed over the years, with large companies transferring sunset properties to small companies. Since 2009, there have been 30 bankruptcies of corporations with OCS activities. Accordingly, one potential risk is that a company becomes financially insolvent and the U.S. Government and the American taxpayer are forced to pay for decommissioning a facility.

The cost of decommissioning a facility is based on the type and number of various components (e.g., pipelines, structures, wells), various factors (e.g., water depth, location), the condition of the facilities (e.g., age, rust, toppled, damaged), and market conditions (e.g., rig availability and cost). For instance, contingent liabilities associated with the decommissioning of all facilities on the OCS are currently estimated to be approximately \$32.8 billion. In frontier territories, such as the Arctic, the cost of decommissioning a single platform may be twice that of a Gulf of Mexico facility in comparable depth on the continental shelf due to climate, sea ice, and remoteness. Additionally, a single OCS wind energy project may include hundreds of offshore wind turbines and associated structures and include many miles of buried cable that will be subject to site clearance and costly decommissioning requirements. These are just some examples of the conditions that have spurred the need for the U.S. Government to take a more proactive approach to the development and management of a national risk policy and financial assurance program.

As a steward of OCS resources, BOEM manages a variety of financial and physical risks associated with OCS activities. Some of these risks are intrinsically related to financial assurance and loss prevention to the U.S. Government and the American taxpayer. BOEM performs robust and continuous risk monitoring to help mitigate impacts of financial uncertainty, credit risk, project failures, legal liability, accidents, and natural disasters.

RESOURCE EVALUATION

BOEM conducts analyses to identify areas of the OCS that are the most promising for conventional energy development. To accomplish this, BOEM:

- Acquires G&G data/information through the regulation of pre-lease permitted exploration of the OCS;
- Delineates and develops estimates of the quantities of undiscovered technically and economically recoverable resources that may exist and the volume of reserves discovered and likely to be produced;
- Tracks the volume of discovered reserves, produced reserves, and the remaining reserves by field;
- Forecasts future industry activity levels and develops scenarios for the leasing program; and
- Determines the adequacy of high bids received for individual tracts offered for lease to ensure the Nation receives fair market value for the tracts.

BOEM's evaluation of geological, engineering, and geophysical data and information provides the inputs

to the economic and statistical analyses that inform leasing policies and program decisions, such as the design of financial terms for lease sales. Program analyses assist in exploration and development plan decisions and help reduce the risk of safety and environmental concerns in OCS development decision-making.

➤ **Resource Assessment**

As one of the first steps in the leasing process, BOEM identifies resources associated with geologic plays and areas on the OCS that offer the highest potential for oil and gas development and production. Following the identification of hydrocarbon plays, BOEM assesses each play's hydrocarbon potential and its economic viability with complex computer modelling and methodologies. The assessment process incorporates specific geologic, petroleum engineering, and economic data and information. In addition to helping BOEM estimate undiscovered hydrocarbon resources, these studies help BOEM identify environmental and operational constraints and assist in lease sale decision-making. BOEM also estimates the amounts of oil and gas likely to be discovered and produced and generates potential scenarios of future exploration, development, and production activities. BOEM tracks the resources and acres offered annually, compared to what was planned for the year, and analyzes the results to inform the National OCS Program and individual lease sale decisions. Resource estimates support analyses of potential impacts of policy decisions, legislative proposals, and industry activities, as well as NEPA analyses.

The scale of the assessment activities ranges from large (i.e., regional or OCS-wide) to small (i.e., lease sale specific, such as individual prospects and lease tracts). In the early stages of this process, the focus is on regional areas, but as more data and information are acquired, the focus shifts to lease sales and prospect-specific areas to be offered for lease, or that are related to a specific issue (e.g., moratoria, marine sanctuaries, quantitative analysis of legislative proposals). Once a lease sale area has been identified, BOEM's geologists and geophysicists perform detailed subsurface mapping and analyses to estimate the resource potential of individual prospects within that area. These prospect-specific data, maps, and analyses are also used to determine parameters for post-sale bid analyses in support of fair market value evaluations.

BOEM provides a comprehensive national assessment of undiscovered oil and gas resources in five-year intervals. BOEM's most recent National Assessment, the 2016a National Assessment of Undiscovered Oil and Gas Resources of the U.S. Outer Continental Shelf (2016a Assessment), represents a thorough appraisal that considers relevant data and the best available information and builds upon previous assessment efforts on the OCS. In its 2016a Assessment, BOEM estimates that the United States OCS contains a mean of 90.55 billion barrels of undiscovered technically recoverable oil and a mean of 327.58 trillion cubic feet of undiscovered technically recoverable natural gas. The resource information and analysis included in the 2016a Assessment is critical to informing BOEM's leasing efforts, specifically, the ongoing development of the next National OCS Oil and Gas Leasing Program. For additional information, the document is available online as a [fact sheet](#).

In FY 2019, BOEM offices continued the effort for the expected release of BOEM's 2021 National Assessment of Undiscovered Oil and Gas Resources of the U.S. Outer Continental Shelf by executing a comprehensive work plan, compiling pricing and economic information, updating cost databases and taxation assumptions, and updating methodology for estimating the exploration chance of success within a geologic play. The development of the 2021 Assessment is a large effort requiring long lead times, typically between two to five years to complete. Analysis of geologic history, regional stratigraphy, major geologic trends, major structural features, source rocks, reservoir rocks, seals and trapping mechanisms and petroleum exploration history is conducted. In addition, the application of risk and probability theory and statistical analysis is used to develop resource estimates. In FY 2019, BOEM offices also began to assess the potential for undiscovered oil and gas resources through development of updated geologic play assessments. Updates include compiling information from recent OCS wells, leasing and development trends, global geologic analogs, and significant technology improvements. This work will continue in FY 2020 and culminate in early FY 2021 with national and regional office publications supporting the 2021 National Assessment.

New Orleans Office: To support the development of the 2021 Assessment, the Gulf of Mexico Region is tasked with assessing the resources located in the Atlantic OCS and Gulf of Mexico OCS. Teams of geoscientists and engineers for both basins have been formed. BOEM created work plan and project management plan documents, and developed and adopted a standardized methodology for assessing play and prospect risk, which all BOEM regions adopted. The work includes identifying and determining if geologic conditions exist for the accumulation of oil and gas, and whether a basin may be oil or gas-prone.

Anchorage Office: BOEM is responsible for all reservoir and field analyses of the OCS in Alaska as well as all shallow hazard reviews for exploration and development plans and subsequent applications for permit to drill for BSEE. For the 2021 National Assessment, BOEM geoscientists have been revising the geologic risk assessment forms to provide more consistency between the regional offices in the subjective interpretation of the geologic information used in the determination of resources.

Camarillo Office: In FY 2019, BOEM re-evaluated key G&G inputs and risk methodologies supporting resource evaluation. Currently BOEM and the U.S. Geological Survey are working to apply modern seismic processing on vintage seismic data and to obtain high-resolution geophysical data over existing fields. These efforts are expected to provide insights on resource characterization and shallow hazards in mature and undeveloped areas of the Pacific Region.

➤ Reserves Inventory Program

The OCS Lands Act requires the Department to "conduct a continuing investigation... for the purpose of determining the availability of all oil and gas produced or located on the Outer Continental Shelf." To meet this requirement, BOEM develops independent estimates of economically recoverable amounts of oil and gas contained within discovered fields by conducting field reserve studies. The reserve estimates undergo continuous revisions to reflect new information obtained from development and production

activities. BOEM is responsible for continually updating volumetric estimates on over 1,300 fields in the Gulf of Mexico. During FY 2019, approximately 4,931 reservoirs were interpreted, revised, and added to the inventory. BOEM anticipates similar reserves inventory workloads in FY 2020 and FY 2021.

Reserve studies are critical inputs to determining the Nation's OCS oil and gas endowment, conducting resource assessments, generating analog information for bid adequacy determinations, and informing the review of industry plans and requests. The geologic and engineering information supports other program activities within the Department, including development and preparation of the National OCS Program and cooperative efforts with the Department of Energy and its Energy Information Administration. For example, BOEM's reserves inventory and resource assessment information supports the Energy Information Administration's National Energy Modeling System, used for preparation of forecasts within its Annual Energy Outlook.

New Orleans Office: Reserves inventory personnel review conservation information document submissions, which BOEM requires to ensure operators exploit all economic reservoir accumulations discovered rather than producing only the most prolific zones and bypassing marginally economic zones. The review and analysis of conservation information documents allows for the maximum ultimate recovery and full development of economic reserves and resources, while ensuring fair monetary compensation for the Federal Government. During FY 2019, BOEM evaluated 17 initial and supplemental conservation information documents and 8 revised conservation information documents. During FY 2020 and FY 2021, BOEM anticipates evaluating approximately 17 initial and supplemental conservation information documents and 10 revised conservation information documents annually.

In FY 2019, BOEM published the *Estimated Oil and Gas Reserves, Gulf of Mexico OCS Region, December 31, 2017* (OCS Report BOEM 2019-026) report. This report provides estimates of oil and gas reserves in the Gulf of Mexico OCS, considering reserves additions and revisions, and produced volumes. Reserves estimates are derived from individual reservoirs, based on geologic, geophysical and engineering data, and aggregated to the field, protraction, and planning area levels.

Anchorage Office: BOEM continues to support BSEE in the oversight of production allocation issues for the Northstar field production unit, which produces oil from both State of Alaska and Federal OCS leases. In FY 2019, BOEM also completed and provided the Alaska OCS Region 10-year Oil and Gas Production Forecast that contributes to BOEM's 10-year estimate of Federal OCS royalty receipts. This estimate includes future production forecasts resulting from future developments that are thought likely to occur within the next 10 years. During FY 2020, BOEM will complete similar forecasts for the FY 2021 President's Budget Request.

Camarillo Office: BOEM's annual Field Reservoir and Reserve Estimates report, which breaks down the area's reserves and known resources by field and productive zones, provides a brief update on reserves and production between releases of the more comprehensive Estimated Oil and Gas Reserves report. During FY 2019, BOEM completed the calendar year 2018 Field Reservoir and Reserve Estimates report,

which is published on the BOEM webpage. Typically, reports of preceding calendar year oil and gas production volumes lag by six months. BOEM anticipates that reporting of the calendar year 2019 production volumes will be complete by the third quarter of FY 2020. Therefore, BOEM anticipates the calendar year 2019 reserves report will be completed and published in fourth quarter FY 2020.

➤ **Permitting of Prelease/Off-Lease Exploration**

BOEM works to ensure that OCS energy-related prelease exploration, prospecting, and scientific research operations do not interfere with other ocean users, lease operations, or other permitted uses of the area. Permits to acquire prelease G&G data identify specific parameters for each activity, including the area of interest, the timing of acquisition, the use of approved equipment and methods, and required environmental compliance measures. For each approved application, the operator receives a signed copy of the permit that outlines requirements regarding reporting, submission, inspection and selection of data, reimbursement, disclosure of information, possible sharing of data with affected States, contact information for coordinating activities with affected stakeholders, and policies regarding permit modifications. Pursuant to the EO 13795 and SO 3350, BOEM is considering approaches to streamline permitting for seismic data collection. Adherence to BOEM's processes and regulations ensures exploration and research activities are conducted in a safe and environmentally sound manner.

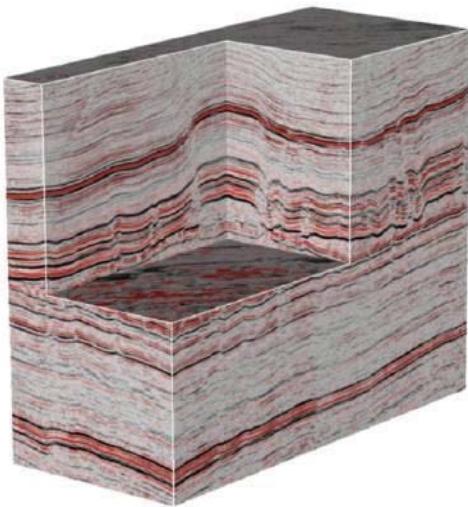
New Orleans Office: BOEM continues to process permits for oil and gas exploration activities. During FY 2019, BOEM evaluated and issued 57 permits. During FY 2020, BOEM anticipates evaluating and issuing approximately 54 permits, and various permit modifications, with most of the permits issued for high-resolution and deep penetration seismic surveys. BOEM estimates it will evaluate and issue approximately 50 permits during FY 2021. BOEM anticipates the number of permit applications to remain comparatively low, reflecting conservative levels of industry exploration activity based on projected oil and gas prices.

Anchorage Office: BOEM will continue to process permits for oil and gas exploration activities. In FY 2018, BOEM approved an application for a G&G permit to conduct an aero-gravity and magnetic survey in Cook Inlet. In FY 2019, BOEM issued a permit to collect 3D seismic data in the Cook Inlet Planning Area. Activities under the permit were completed in October 2019. Future permit activity is expected at up to three permits per year, primarily for seismic surveys for off-lease exploration. BOEM ensures that all permittees adhere to statutory requirements (including the Marine Mammal Protection Act and the Endangered Species Act) and conducts required government-to-government consultations (e.g., Tribal and Alaska Native Claims Settlement Act Corporations). BOEM will acquire any new data as a result of future seismic surveys for BOEM geoscientists to use for resource assessment and fair market value evaluation.

Camarillo Office: BOEM continues to monitor an operator's activities associated with the seismic permit application submitted in December 2017. During FY 2019, the operator conducted high-resolution geophysical surveys to investigate potential archeological impacts associated with the proposed seismic survey, tentatively scheduled to commence in FY 2020.

➤ **G&G Data Acquisition and Analysis**

The acquisition and analysis of G&G data are critical to identifying potential resources on the OCS. This enables BOEM to identify areas favorable for the accumulation of hydrocarbons and develop estimates of resource volumes and economic values of these accumulations. These estimates are used to focus OCS leasing on areas of high potential, as well as to help ensure fair market value in lease sale bid evaluations.



Processed 3D seismic data showing oil and gas reservoirs below salt formations in the Gulf of Mexico

The majority of BOEM business processes where oil and gas resources are assessed – such as the reserve inventory program, fair market value analysis, and resource assessment – are based on the analysis of large volumes of G&G data. The primary source of the G&G data BOEM uses is acquired by the oil and gas industry. As a condition of the permit that BOEM issues prior to each industry activity (such as seismic data acquisition), companies are required to provide a copy of the G&G data and information to BOEM upon request after completion of data acquisition. BOEM uses the data internally, while maintaining them in a proprietary term that generally ranges from 2 to 25 years. The extensive amount of acquired data and information are used by BOEM and BSEE geologists, geophysicists, and petroleum engineers to perform a variety of analyses leading to resource estimates, reserve inventories, and determining leased tract fair market value.

Atlantic OCS: BOEM supports both the acquisition of modern, robust scientific information about the scope and location of potential oil and gas resources in the Atlantic and the resolution of significant potential conflicts between oil and gas activity and other important OCS uses in these areas, including military, fishing, and vessel traffic uses as well as environmental and infrastructure concerns. As directed by SO 3350, BOEM is expediting the “consideration of appealed, new, or resubmitted seismic permitting applications for the Atlantic.”

To date, three Atlantic G&G permits for airborne gravity/magnetic surveys have been issued. They were issued in FY 2015, FY 2016 and the latest permit was issued in November of FY 2020. NOAA issued Incidental Harassment Authorizations on November 30, 2018, for five deep penetration seismic surveys proposed off the Atlantic coast. BOEM expects to issue its permit decisions for at least some of these surveys in FY 2020. There is currently a lawsuit challenging issuance of the NOAA authorizations in the U.S. District Court for the District of South Carolina.

New Orleans Office: Both BOEM and industry are expanding their use of 3D technology to study and evaluate the complex geologic picture of the Gulf of Mexico. The data provided by this technology is

used to inform decisions regarding offshore resource development. Because it oversees a large number of active leases, BOEM acquires, analyzes, and manages a vast collection of G&G data. BOEM currently manages data from approximately 2,771 three-dimensional surveys, 529 two-dimensional surveys, and other critical data sources encompassing a total volume of 215 terabytes of 32-bit SEGY data. The volume of seismic data managed by BOEM increased by 9.8 terabytes during FY 2019. To manage all of this data effectively, BOEM invests in data management solutions (servers, disk space, Hierarchical Storage Management, database development) needed to store, archive, manage, and deliver geophysical data to BOEM and BSEE users, as well as other stakeholders (e.g., other Federal agencies and the public).

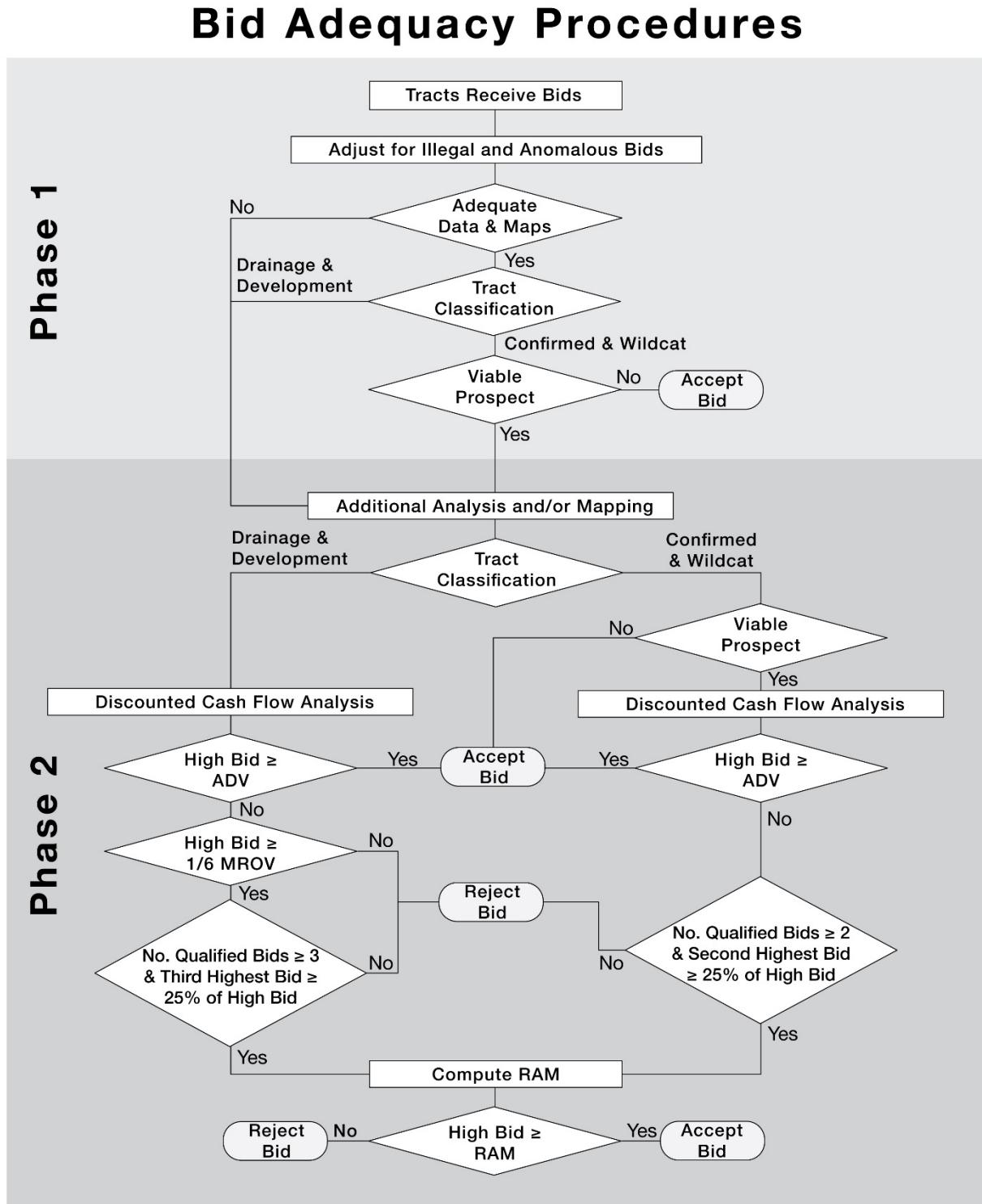
Anchorage Office: BOEM continues to acquire and manage G&G data needed to support mission functions, such as the review of exploration and development and production plans, the development of the National Assessment, lease sale EIS scenarios, National OCS Program scenarios, lease sale fair market value determinations, and worst-case discharge determinations. As of January 2019, BOEM's Anchorage Office manages data from approximately 23 3D seismic surveys, 235 2D seismic surveys, and other critical G&G data sources, with a total volume of 980 gigabytes of SEGY data plus TIFF images of historical 2D seismic data. In FY 2020, BOEM will obtain a newly-collected 3D seismic survey from the Cook Inlet Planning Area. This will be the first new data from this planning area acquired by BOEM since 2005 and will allow BOEM geoscientists a fresh look at the area's hydrocarbon potential.

Camarillo Office: In FY 2019, BOEM set up a multi-year cooperative agreement with California State University Northridge's Center for Geospatial Science and Technology. This cooperative agreement helps BOEM explore innovative ways to make data readily useable and accessible. Work flows are being developed for data visualization and machine learning with a previously created G&G database.

➤ **Fair Market Value and Bid Adequacy**

Ensuring the receipt of fair market value for OCS resources is mandated by the OCS Lands Act and is one of BOEM's critical responsibilities for oil and gas leasing. Under its bid adequacy procedures, BOEM reviews all oil and gas lease sale bids and evaluates all blocks using either tract-specific bidding factors or detailed tract-specific analytic factors to ensure that fair market value is received for each OCS lease issued. The bid adequacy process relies on evidence of market competition and in-house estimates of tract value. The bid review process incorporates G&G data along with reserve, resource, engineering, and economic information, into a sophisticated discounted cash flow computer model that estimates economic value of the corresponding tract. The goal of that model is to achieve independent estimates of fair market value on tracts receiving bids. If a bid is rejected and a company appeals the rejection, BOEM's experts review the appeal and make a recommendation to the Director.

Figure 10: Flow Chart for Post-Sale Evaluation Procedures in Areawide Sales



Since 1983, **bid adequacy** reviews and fair market value determinations have resulted in an average bid rejection rate of 4 percent. From 1983 through 2019, BOEM rejected approximately \$731 million in total high bids. Bid adequacy procedures have consistently resulted in higher returns in subsequent sales for tracts bid on and rejected in previous sales. Subsequently, the same blocks were re-offered and drew high bids of \$1.9 billion, a total net dollar gain of \$1.2 billion and a return on rejected high bid amounts of 190 percent. The fair market value determinations from bids received in BOEM's most recent sale, Gulf of Mexico Sale 253 held in August 2019, show a net reject gain of over \$47 million on the 17 previously rejected tracts receiving bids.

New Orleans Office: In FY 2019, BOEM conducted two sales: Gulf of Mexico region-wide Sale 252 and Gulf of Mexico region-wide Sale 253. Under the 2017-2022 OCS Oil and Gas Leasing Program, BOEM will hold two Gulf of Mexico region-wide Sales in FY 2020, Sales 254 and 256. Bids received during these lease sales undergo fair market value determinations. This process is conducted within a 90-day period following each sale. BOEM analyzes all available engineering and geologic data in addition to the current economic parameters to determine value of the resources on the tract. BOEM uses a proprietary computer model that incorporates the Monte Carlo (range-of-values) technique to calculate the fair market value.

Anchorage Office: The approved 2017-2022 OCS Oil and Gas Leasing Program currently includes one lease sale in Alaska, in the Cook Inlet Planning Area (Lease Sale 258 in 2021). BOEM continues to provide the Bureau of Land Management with fair market value analyses for National Petroleum Reserve-Alaska lease sales and may provide similar services for any future sales in the 1002 area of the Coastal Plain of the Arctic National Wildlife Refuge.

ECONOMIC EVALUATION

As mentioned above, a critical component of BOEM's mission is to ensure the receipt of fair market value for OCS natural resources. To accomplish this, BOEM employs an interdisciplinary team that provides economic analyses for the Department of the Interior, other Federal agencies, and Congress. To ensure receipt of fair market value, BOEM designs fiscal and lease terms for OCS lease sales; develops various resource-economic evaluation approaches; prepares bid adequacy guidelines, procedures and economic inputs; and coordinates reviews of appeals of bid rejection decisions. BOEM's economic analysis expertise is often called upon to analyze and implement regulatory and legislative actions affecting OCS leasing, exploration, development, and production activities that generate significant supplies of domestic oil and gas, resulting in the receipt of billions of dollars each year to the U.S. Treasury. BOEM also undertakes studies, as needed, to analyze and address specific policies and compilations of data affecting overall OCS program responsibilities and initiatives.

➤ **Economic Analysis and Revenue Estimates**

BOEM conducts economic analyses to support the development of regulations, evaluation of policies for lease terms, and conditions and bidding systems for oil and gas and renewable energy lease sales.

BOEM's work supports internal and Department-wide projects, such as the development of the National OCS Oil and Gas Leasing Program, and other Federal agency projects, such as the U.S. Department of Transportation's assessment of fair market rental value for construction of offshore liquefied natural gas ports. BOEM's economic experts review and design policies and methods for forecasting receipts from offshore energy programs, including the estimation of the manner and rate at which reserves and resources of oil and gas are discovered and produced. BOEM generates the receipt estimates used to project revenue and offsetting collections amounts identified in the President's annual budget process and mid-year review process. BOEM's economists also annually assess the present value of the future Federal royalty stream of OCS proven reserves for use in the Nation's accounting statements.

➤ **Economic Modeling for Policy and Decision-Making**

BOEM's efforts contribute significantly to the development of national energy strategies. The Bureau develops and maintains economic and statistical models and databases that are the basis for lease sale design, National OCS Program formulation, resource evaluation, post-sale and operational activities, rulemaking, revenue sharing, and royalty relief programs. The economic assumptions and scenarios that BOEM generates are used in post-sale tract evaluations, national resource assessment studies, and in applications submitted for royalty relief. BOEM also provides economic analyses and fiscal forecasts for energy leasing policies, regulatory and legislative alternatives, and national energy strategies. Finally, BOEM's economic models inform BOEM's resource needs by projecting rental receipt estimates, which contribute toward BOEM's offsetting collection total.

OUTLOOK FOR CONVENTIONAL ENERGY

In FY 2020, BOEM will continue to meet its statutory and regulatory mandates to oversee OCS oil and gas resource development, including: allowing for appropriate access to those resources; safeguarding a fair return to taxpayers through economic evaluation and analysis of offshore natural resources; enhancing its risk management program; and, ensuring that development takes place in an environmentally responsible manner. Access to OCS energy and mineral resources will continue to be a priority, particularly as BOEM works to meet the President's objective of maintaining the Nation's position as a global energy leader, and BOEM will continue to comply with our statutory mandate to prepare and maintain a leasing schedule that will best meet the Nation's energy needs. Looking forward, BOEM's Conventional Energy activities will continue to meet the high standards set forth by the Administration, Congress, and the public through successful planning, leasing, and protection of the Nation's OCS resources.

FISCAL YEAR 2021 BUDGET

Bureau of Ocean Energy Management

Renewable Energy

Table 11: Renewable Energy Budget Summary

	2019 Enacted (\$000) FTE	2020 Enacted 58	Internal Transfers	Fixed Costs	Program Changes	2021 Request 58	vs. 2020 Enacted +3,140
Renewable Energy	20,720	23,325	-	+191	+2,949	26,465	-

Renewable energy development activities include the siting and construction of offshore wind facilities on the Outer Continental Shelf, as well as the development of other forms of offshore renewable energy resources such as wave and current energy. BOEM facilitates the responsible development of renewable energy resources on the Outer Continental Shelf through conscientious planning, stakeholder engagement, comprehensive environmental analysis, and sound technical review. In FY 2021, BOEM will continue to advance its renewable energy program through an informed leasing effort, as well as through the streamlining of its permitting and NEPA processes. BOEM is also continuing its focus on reviewing proposals for potential renewable energy projects spurred by the renewable energy goals of Coastal States.

The FY 2021 budget will support:

- **Competitive Lease Auctions/Sales:** A commercial lease gives the lessee the exclusive right to seek BOEM approval for the development of the leasehold and does not automatically give the lessee the right to construct any facilities. BOEM has conducted 8 lease sales and has issued sixteen commercial wind energy leases. In FY 2019, BOEM held one lease sale for three leases offshore Massachusetts generating over \$405 million. Over the next two fiscal years, BOEM plans to hold two lease sales, one in the Atlantic in the New York Bight and one in the Pacific offshore California, and at least one lease sale offshore the Carolinas in FY 2021.
- **Review of Site Assessment and Construction and Operations Plans:** A Site Assessment Plan contains the lessee's detailed proposal for the construction of a meteorological tower and/or the installation of meteorological buoys on the leasehold. A Construction and Operations Plan is a detailed plan describing the lessee's proposal to construct and operate a wind energy project on the lease. BOEM must conduct environmental and technical reviews of any plan and decide whether to approve, approve with modification, or disapprove the plan. As of November 2019, BOEM is currently processing six construction and operations plans and expects to receive four to six more over the next 12 months.
- **Stakeholder Engagement:** By meeting with and engaging stakeholders, BOEM ensures awareness of potential issues and controversy and uses the opportunity to resolve these issues in a timely

manner, as well as improve efficiency. Through this consultation, areas suitable for renewable energy development can be identified while multiple-use and environmental conflicts within a specific area can be mitigated. The fishing industry has significant concerns regarding the potential impacts of offshore wind energy development to fish, fish habitat, and fishing. BOEM takes those concerns very seriously. In 2019, BOEM signed a Memorandum of Understanding with The Responsible Offshore Development Alliance and the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service to explore potential collaborations on areas of mutual interest with respect to the fishing industry.

- **Intergovernmental Coordination and Collaboration:** To help inform BOEM's planning and leasing process, BOEM established 15 intergovernmental renewable energy task forces that consist of Federal agencies and State, local, and Tribal governments. Most recently, BOEM established a Gulf of Maine Intergovernmental Renewable Energy Task Force in December 2019 that includes representatives from Maine, New Hampshire, and Massachusetts. BOEM also chairs an interagency permitting workgroup to ensure a coordinated Federal approach to reviewing project plans. In addition, Memoranda of Understanding exist with Department of Energy, the Federal Energy Regulatory Commission (FERC), BSEE, the U.S. Fish and Wildlife Service (FWS), the Department of Defense, U.S. Coast Guard, NOAA, and the State of California. Through this coordination, BOEM achieves efficiencies for the agencies and applicants as they navigate the leasing and planning process.
- **Science and Technology Research:** The Renewable Energy Program is supported by a substantial investment in research. Current projects include those aimed at setting design standards for offshore renewable energy facilities appropriate for U.S. waters. The results of BOEM's scientific and technology research are used to inform policy decisions, environmental analysis, mitigation, and monitoring protocols on environmental and cultural issues.

SUMMARY OF 2021 PROGRAM CHANGES

Program Changes from 2020 Enacted Budget	(\$000)	FTE
GrantSolutions Enterprise System	+5	
Renewable Energy Research & Stakeholder Engagement	+2,944	
Total Program Changes	+2,949	+0

GrantSolutions Enterprise System (+\$5,000; 0 FTE). Funding supports the allocated share of operating costs for the GrantSolutions enterprise system to improve the processing and transparency of grants and cooperative agreements across Interior. Cost allocations are based on an algorithm of use factors.

Renewable Energy Research and Stakeholder Engagement (+\$2,944,000; 0 FTE). The FY 2021 budget supports a substantial investment in research and stakeholder engagement. The results of BOEM's renewable energy scientific and technology research are used to inform policy decisions, environmental analysis, mitigation, and monitoring protocols on environmental and cultural issues. The

budget also supports an increase in stakeholder engagement as provided under the Energy Policy Act of 2005, which statutorily requires BOEM to coordinate and consult with Federal, Tribal, State and local agencies throughout the renewable energy development process.

PROGRAM OVERVIEW

The OCS has significant potential as a source of new domestic energy generation from renewable energy resources. Section 388 of the Energy Policy Act of 2005 gave the Secretary of the Interior the authority to issue leases, easements, and rights-of-way on the OCS for activities that produce or support production, transportation, or transmission of energy from sources other than oil and gas.

Section 388 also authorized the Secretary to permit OCS activities that repurpose facilities currently or previously used for activities authorized under the OCS Lands Act.

Renewable energy and alternate use projects may include wind, wave, and ocean current energy projects, as well as projects that make alternative use of existing oil and gas platforms in Federal waters.

In 2009, BOEM published its renewable energy regulations, implementing section 388 of the Energy Policy Act of 2005. These regulations established a framework for orderly, safe and environmentally responsible OCS renewable energy development and for providing for a fair return for use of OCS lands. Also in 2009, the U.S. Department of the Interior and FERC signed a Memorandum of Understanding that provided for joint regulation of potential OCS wave and ocean current projects.

Since these regulations were put in place, BOEM has worked diligently to facilitate renewable energy development spurred by renewable energy goals of Coastal States. To date, BOEM has conducted eight competitive wind energy lease sales for areas offshore the Atlantic coast and there are fifteen active commercial wind energy leases offshore of Delaware, Maryland, Massachusetts, New Jersey, New York, North Carolina, Rhode Island, and Virginia. Additionally, BOEM is in the early planning stages to identify additional potential lease areas off the coasts of New York, New Jersey, California, and the Carolinas.



Block Island Wind Farm



Block Island Wind Farm
(Deepwater Wind)

BOEM also manages transmission and research projects related to wind energy development on the OCS. In 2014, BOEM executed its first transmission right-of-way grant offshore Rhode Island for the Block Island Wind Farm, which became the first operational wind facility offshore the U.S. in late 2016. In 2015, BOEM executed its first wind energy research lease in U.S. Federal waters with the Commonwealth of Virginia's Department of Mines, Minerals and Energy. Final action on the research lease was completed by BOEM in 2019 and the facility is expected to be operational in 2020. The two-turbine research project will be the first installed on the OCS and will inform the development of a proposed commercial lease offshore Virginia.

Along the Pacific coast, BOEM received unsolicited lease requests to develop wind facilities offshore Hawaii and California. BOEM is engaged in the planning process for potential lease sales offshore both of those States. A Call for Information and Nominations has been published to begin the

leasing process offshore California. BOEM is currently processing one unsolicited research lease request offshore Oregon for a marine hydrokinetic technology testing facility.

BOEM also ensures the American taxpayer receives fair return for the use of OCS resources. As required by the Energy Policy Act of 2005, BOEM has established payment terms to ensure a fair return to the U.S. Treasury for the rights conveyed by OCS renewable energy leases and grants. In FY 2019, \$5.9 million in rent and \$405 million in bonuses were collected on OCS renewable energy leases. In total, BOEM generated over \$473 million in bonus bids from renewable energy lease sales it has conducted through the competitive leasing process. Revenue data is generated by the Office of Natural Resources Revenue and can be found on the [Natural Resources Revenue data page](#).

➤ Offshore Energy Sources

Wind is currently the predominant source of offshore renewable energy being developed in the United States. Offshore winds tend to flow at higher sustained speeds than onshore winds, making offshore turbines more efficient than their onshore counterparts. The following figure shows areas along the coasts of the Atlantic, Pacific, and Gulf of Mexico that have the greatest technical potential for offshore wind energy production based on wind speeds.

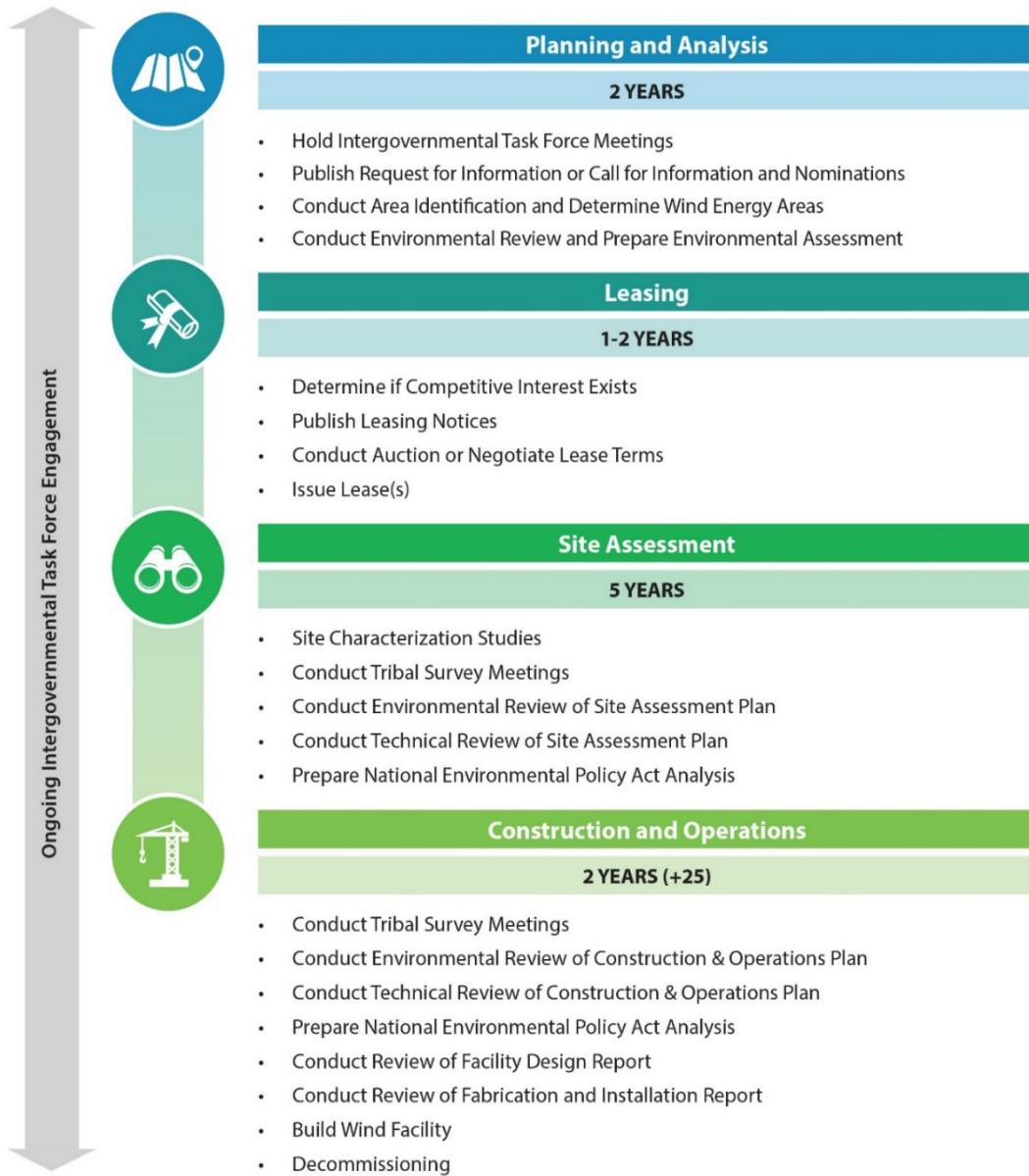
According to the National Renewable Energy Laboratory's *2016 Offshore Wind Resource Assessment for the United States*, after considering the available wind resource and the technical limits of current technology, offshore wind has a potential capacity of 2,058 gigawatts for the contiguous United States and Hawaii. This translates to an energy generation potential of 7,203 terawatt-hours per year, which is almost double the electricity consumption of the U.S. The *National Offshore Wind Strategy* has identified significant potential public benefits associated with offshore wind development, including an estimated \$440 million in annual lease payments into the U.S. Treasury, approximately \$680 million in annual property tax revenues, and 160,000 gross jobs in coastal regions. BOEM currently has 15 active commercial leases in the Atlantic which collectively have the potential to support more than 21 GW of energy generating capacity – enough to power almost 7.5 million homes.

In the future, BOEM anticipates development of renewable energy on the OCS could also come from ocean waves and ocean currents. BOEM is currently evaluating a research lease request for a national wave energy testing facility in Oregon that could help advance the development of marine hydrokinetic technologies.

RENEWABLE ENERGY AUTHORIZATION PROCESS

Under the renewable energy regulations, the identification of Wind Energy Areas, the issuance of leases, and subsequent review of energy development activities on the OCS is a staged decision-making process. BOEM's renewable energy authorization process is comprised of four distinct phases: (1) planning and analysis; (2) issuance of a lease or grant; (3) site assessment; and (4) construction and operations. BOEM involves other Federal agencies (e.g., BSEE, FWS, NOAA, Department of Defense, and U.S. Coast Guard) and State, local and Tribal governments throughout all phases of renewable energy development. Figure 11 outlines BOEM's process for authorizing wind energy leases.

Figure 11: Phases of BOEM's Offshore Wind Energy Authorization Process



- The **Planning and Analysis phase** seeks to identify suitable areas for wind energy leasing consideration through collaborative, consultative, and analytical processes that engage stakeholders, Tribal governments, and State and Federal agencies. In this phase, BOEM coordinates with stakeholders to deconflict potential renewable energy lease areas with existing uses on the OCS. After identifying Wind Energy Areas, BOEM conducts environmental compliance reviews and consultations with Tribes, States, and natural resource agencies to consider reasonably foreseeable impacts associated with leasing (e.g., site characterization surveys and site assessment activities). Once the environmental review and consultations are completed for a Wind Energy Area, BOEM may proceed to the leasing phase.

- The **Leasing phase** results in the issuance of a commercial wind energy lease or right-of-way grant for energy transmission projects. Leases and grants may be issued either through a competitive or noncompetitive process. BOEM will publish a notice in the *Federal Register* to announce potential future leasing and solicit interest in leasing a specific area of the OCS. If more than one qualified entity is interested in leasing the area identified in the notice, BOEM will move forward with its competitive leasing process, otherwise, BOEM may proceed non-competitively. A commercial lease gives the lessee the exclusive right to seek BOEM approval for the development of the leasehold. The lease does not provide the lessee the right to construct particular facilities; rather, the lease provides the right to use the leased area to develop its site assessment and construction and operations plans, which must be approved by BOEM before the lessee can move on to the next stage of the process. Right-of-way grants authorize the holder to install cables, pipelines and associated facilities that involve the transportation or transmission of electricity or other energy products from renewable energy projects.
- The **Site Assessment phase** includes the submission of a site assessment plan, which contains the lessee's detailed proposal for the construction of a meteorological tower and/or the installation of meteorological buoys on the leasehold to conduct site assessment studies. The lessee's site assessment plan must be approved by BOEM before the lessee conducts these activities. BOEM may approve, approve with modification, or disapprove a lessee's site assessment plan. It is during this phase that the lessee would conduct site characterization surveys to support the development of its construction and operations plan.
- The **Construction and Operations phase** includes the submission of a construction and operations plan, detailing the construction and operation of a wind energy project on the lease. BOEM requires a general activities plan, similar to a construction operations plan, for facilities constructed under a limited lease or right of way. BOEM conducts environmental and technical reviews of these plans and decides whether to approve, approve with modification, or disapprove the plan. At the end of the lease or grant term, the developer must decommission facilities in compliance with BOEM regulations.

PLANNING AND ANALYSIS

Under the Energy Policy Act of 2005, BOEM is statutorily required to coordinate and consult with Federal, Tribal, State, and local agencies throughout the renewable energy development process. BOEM establishes intergovernmental task forces as a critical component of its planning and outreach activities. The task forces facilitate intergovernmental communications regarding OCS renewable energy activities to ensure that information needs, multiple-use concerns, and associated solutions are identified early in the leasing process.

The task forces continue to be a useful tool in helping to inform decision-making as BOEM considers areas of the OCS for renewable energy leasing and development and as BOEM evaluates project plans on existing leases. Such task forces are established in States or regions where the Governor(s) contacted BOEM to express interest in development of offshore renewable energy or at BOEM's suggestion after receipt of an unsolicited proposal offshore that State. To date, BOEM has established a total of 15

intergovernmental task forces in Maine, the Gulf of Maine, Massachusetts, Rhode Island, New York, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Florida, Oregon, Hawaii, and California. These task forces have helped identify areas of significant promise and interest for offshore development, in addition to providing early identification and steps toward resolution of potential conflicts. In response to a request from the Governor of New Hampshire, in FY 2019 BOEM worked with the States of New Hampshire, Maine, and Massachusetts to develop the fifteenth task force – the Gulf of Maine Task Force. The Gulf of Maine Task Force was officially established in December 2019.

Additionally, BOEM utilizes professional meeting facilitation support during stakeholder outreach to improve its efficiency, ensure awareness of potential issues and controversy, and optimize the time available for its staff to service existing leases and work other projects. The facilitation contracts support renewable energy task force meetings in the Atlantic and Pacific, public meetings on NEPA documents (e.g., scoping meetings and meetings during the comment period on an environmental assessment or draft environmental impact statement), as well as stakeholder engagement events.

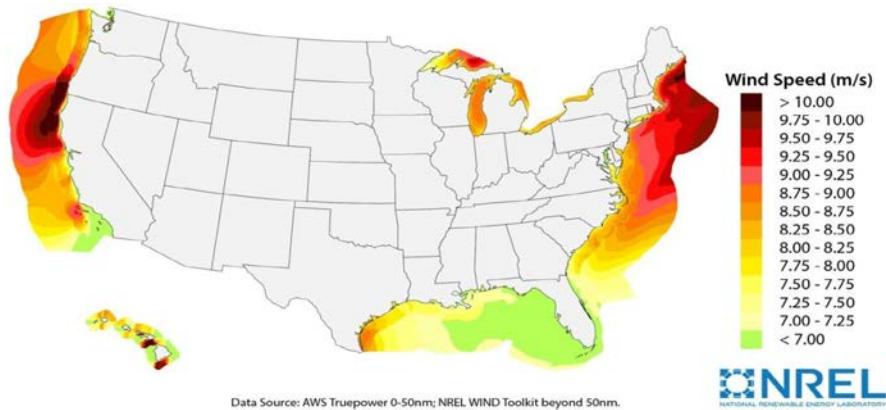
During FY 2019, BOEM continued to leverage the use of webinars to replace some of its in-person meetings moderated by trained facilitators, to reduce the cost and time demands that frequent in-person meetings place upon the government and the stakeholder community. BOEM plans to continue this practice in FY 2020.

➤ **Identification of Wind Energy Areas**

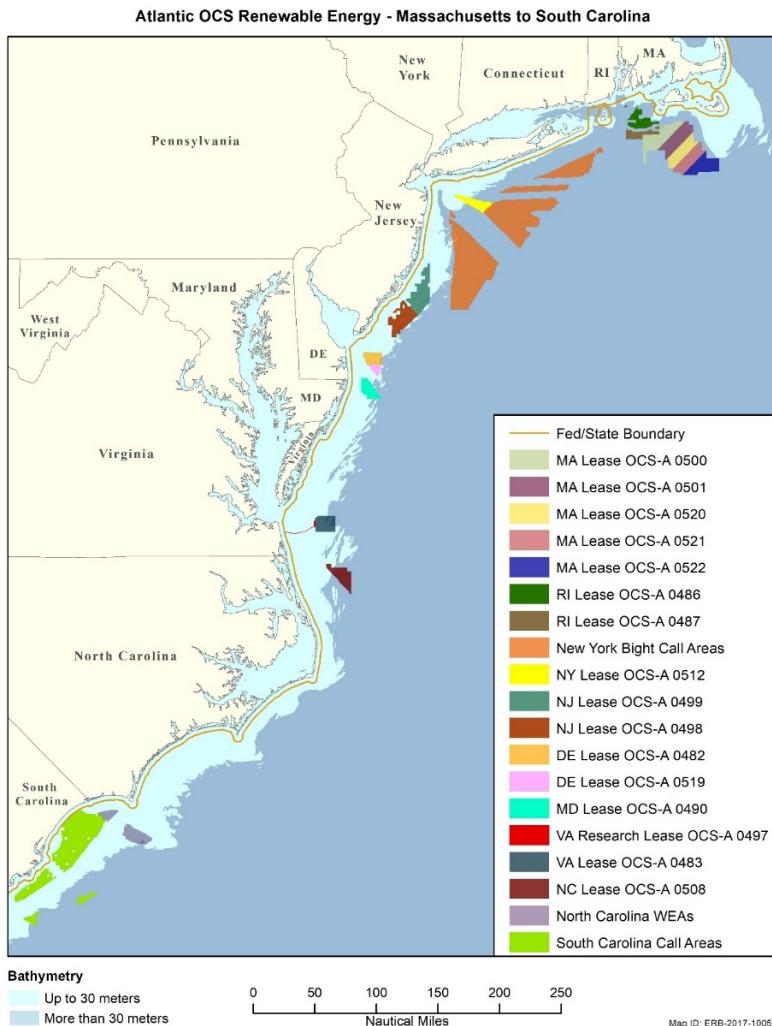
A key element of the Planning and Analysis phase is the identification and refinement of Wind Energy Areas, which are areas on the OCS that appear to be particularly suitable for renewable energy development due to fewer potential multiple-use and environmental conflicts, such as conflicts from commercial vessel traffic, fishing or other uses, feeding or calving areas for endangered species, and high concentrations of birds. Through consultation with BOEM’s intergovernmental task forces and its Call for Information and Nominations process, BOEM has identified Wind Energy Areas on the OCS offshore Massachusetts, Rhode Island, New York, New Jersey, Maryland, Virginia, and North Carolina.

In FY 2019, BOEM made significant progress within the New York Bight offshore New York and New Jersey through Task Force meetings and additional stakeholder engagement. In FY 2020, BOEM expects to complete efforts to identify Wind Energy Area(s) within the New York Bight and offshore California. In addition, BOEM will continue planning and leasing efforts offshore North Carolina, South Carolina, and Oregon in FY 2020 and FY 2021. The existing leases, Wind Energy Areas, and Call for Information and Nominations Areas along the Atlantic and Pacific coasts are shown in the following maps.

Current studies in the Gulf of Mexico Region have identified areas for potential wind energy development in the Gulf OCS. Larger wind turbines and local support services help to increase the feasibility for development in the Gulf. One study identified offshore wind in the Gulf of Mexico to have the technical resource potential of 638 gigawatts. When considering all U.S. States and considering only sites with average wind speeds of greater than 7 meters per second (m/s) (15.7 miles per hour [mph]) and water depths less than 1,000 m (3,280 ft), three of the top four States with the highest offshore wind resource capacity are within the Gulf of Mexico: Louisiana, Texas, and Florida.

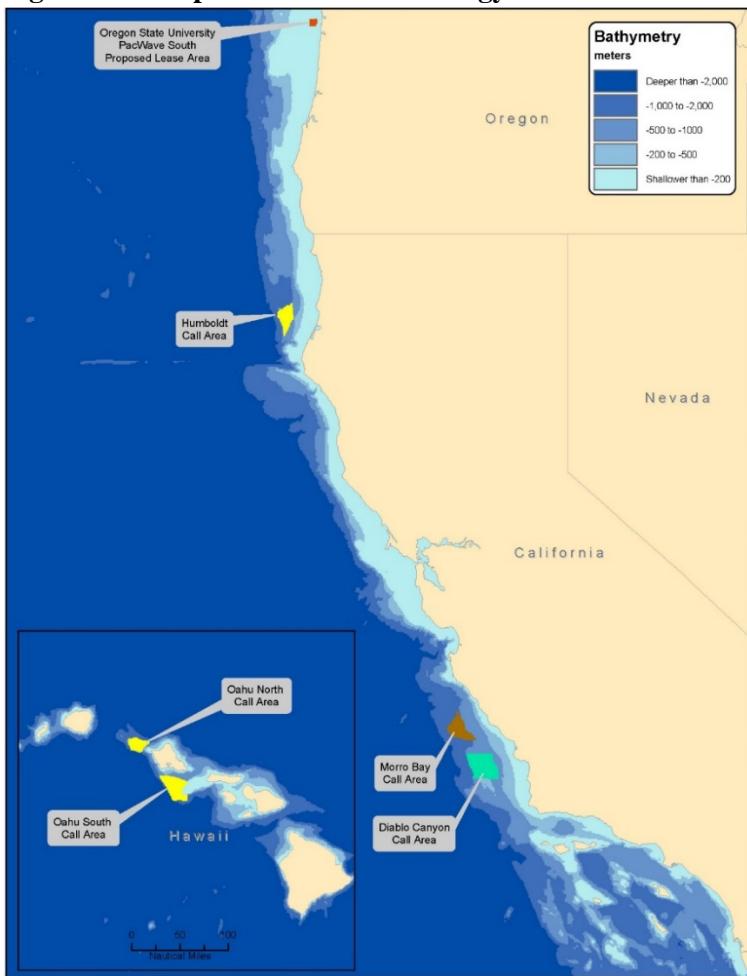
Figure 12: Wind Speed Map for the U.S. Technical Resource Area (100m Height)

National Renewable Energy Laboratory (www.nrel.gov/docs/fy16osti/66599.pdf)

Figure 13: Atlantic Renewable Energy Leases, Wind Energy Areas, and Call Areas

BOEM, Office of Renewable Energy Programs

Figure 14: Proposed Renewable Energy Leases and Call Areas Along the Pacific



BOEM, Office of Renewable Energy Programs

LEASE AND GRANT ISSUANCE

➤ Activity on the Atlantic OCS

Although BOEM has jurisdiction over various types of offshore renewable energy, the major interest offshore the Atlantic coast lies in the development of offshore wind energy. In FY 2019, BOEM held an auction for three lease areas offshore Massachusetts which resulted in a record \$405.1 million in high bids. BOEM is currently in the planning phase for identifying additional lease areas in the New York Bight, with these activities expected to continue in FY 2020. Through FY 2019, BOEM is managing 15 active commercial wind leases along the Atlantic coast, covering over 1.7 million acres on the OCS. In FY 2019, BOEM added three additional active leases, containing nearly 390,000 additional acres, offshore Massachusetts. If fully developed, these 15 leases could support approximately 21.1 gigawatts of power to supply nearly 7.7 million homes.

BOEM will work on the Area Identification process for areas in the New York Bight, offshore California, and offshore the Carolinas in FY 2020, after which it will prepare environmental assessments.

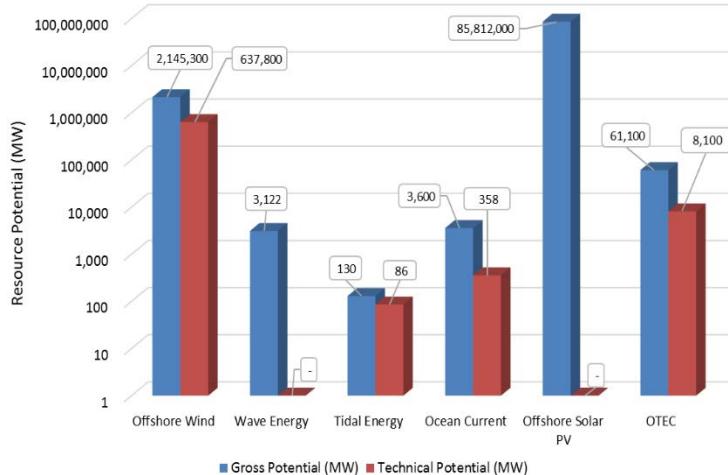
BOEM has the authority within its existing regulations to issue limited leases to other Federal agencies and to States for the purpose of conducting research that supports the future production, transportation, or transmission of renewable energy. Research leases require no fees and have a negotiated lease term. BOEM has one active research lease offshore the Virginia coast. BOEM's review of the facility design report and installation report for this project was completed in FY 2019, with construction and operations of two wind turbines proposed in FY 2020.

BOEM is authorized to issue right-of-way grants that allow developers to build electricity transmission lines that connect renewable energy installations to the onshore electrical grid. The first producing offshore wind project in the U.S. is in Rhode Island State waters and includes transmission lines that cross the Federal OCS. BOEM is currently evaluating an unsolicited right-of-way grant request proposing the transmission of renewable energy on Atlantic OCS lands offshore New York and New Jersey to determine if the competitive or non-competitive process would be appropriate to consider grant issuance. Additionally, BOEM received an application to develop the Southern New England Southern Grid, an offshore transmission network connecting to Massachusetts, Rhode Island, and Connecticut, which is under initial review.

➤ BOEM's New Orleans, Louisiana Office

BOEM's New Orleans, Louisiana Office is continuing to lay the foundation for potential offshore renewable energy development in the Gulf of Mexico. BOEM has met with the Gulf Coast States and local government (City of New Orleans) to assess their interest. Past meetings with the States of Texas, Louisiana, Mississippi, and Alabama were very positive and began the initial steps of opening communications for future renewable energy development but have not yet led to any policy decisions. In FY 2020, BOEM will publish two Gulf of Mexico OCS renewable energy reports. The first report is a survey and assessment of renewable energy in the Gulf of Mexico OCS. The second report focuses on offshore wind and incorporates regional economic modeling and site-specific analysis. Using resource adequacy (gross potential), technology readiness, and cost competitiveness, the best outlook for near-term (2030) offshore renewable energy development in the Gulf of Mexico is offshore wind. Offshore wind in the Gulf of Mexico has the technical resource potential of 638 gigawatts. The Gulf Coast States combined comprises 32 percent of the shallow-water offshore wind potential in the U.S.

Figure 15: Gulf of Mexico Renewable Energy Gross and Technical Potential



A Jobs and Economic Development

Impact modeling analysis was also performed to determine the economic impact of developing and

operating a single 600 MW offshore wind farm in the Gulf of Mexico. The results of the Jobs and Economic Development Impact modeling show up to 4,470 total jobs created during construction and 150 annual jobs during operating years. Construction would contribute \$445 million in gross domestic product, and another \$14 million during operating years, to the economy.

Figure 16: Gulf of Mexico Jobs and Economic Development Impact Model



Meanwhile, BOEM is also working with industry on concepts relating to alternative uses of existing oil and gas infrastructure. Section 388 of the Energy Policy Act of 2005 provides the Secretary of the Interior's authority to allow an offshore oil and gas structure, previously permitted under the OCS Lands Act, to remain in place after oil and gas activities have ceased so that the structure can be used for other energy and marine-related activities such as research, renewable energy production, and aquaculture.



Fabrication of Block Island Foundations by
Gulf Island Fabricators, in Houma, LA

As of October 2019, the Gulf of Mexico OCS contained over 1,800 offshore oil and gas facilities, making this a possible option to continue the use of existing infrastructure. BOEM continues to meet with industry on various alternative use ideas.

The Gulf of Mexico has many offshore oil and gas support services companies (boat yards, fabrication yards, etc.) that could be utilized to support the U.S. offshore renewable energy industry. This has already been witnessed, as Gulf Island Fabricators in Houma, Louisiana built the foundations for the Block Island Project (Rhode Island) and a meteorological tower supporting U.S. Wind's proposed activities in the Atlantic offshore Maryland. The area also has a very large workforce with training and experience in the marine environment. This offers the offshore oil and gas industry opportunities to diversify and further its economic and job-creating investments in local communities.

➤ **BOEM's Camarillo, California Office**

With several commercial wind lease requests active in Hawaii, BOEM published a Call for Information and Nominations in 2016 to initiate the competitive planning and leasing process. BOEM continues to work in coordination with State partners, Federal agencies, and interested stakeholders to determine if any Wind Energy Area is feasible offshore Hawaii and on a path forward for offshore wind planning.

BOEM received two unsolicited lease requests for wind projects offshore California, one near Morro Bay on the central coast, and one on the north coast near Humboldt Bay. BOEM initiated the competitive leasing and planning process offshore California with publication of a Call for Information and Nominations in October 2018 and received 14 nominations. There is competitive interest in all of the Call Areas and BOEM plans to complete the Area Identification process in FY 2020.

In Oregon, BOEM is cooperating with FERC to review a research lease request for a grid-connected wave energy test site on the OCS offshore Newport. BOEM has determined there is no competitive interest in the requested area and is moving forward with the noncompetitive lease process. Since the project is a wave energy test facility requiring a FERC license, BOEM serves as a cooperating agency on the environmental review of the proposal. FERC is processing the license application and applicant prepared draft environmental assessment filed in 2019. A BOEM lease and FERC license decisions may then be expected in FY 2020.

SITE ASSESSMENT

Commercial lease holders have up to approximately five years after lease issuance to conduct site assessment activities and submit a construction and operations plan. When a site assessment plan is submitted, BOEM determines whether the previous environmental assessment conducted to inform BOEM's leasing decision also adequately considered the environmental consequences of the activities proposed in the lessee's site assessment plan. If BOEM determines that the analysis in the environmental assessment adequately considers these consequences, then no further NEPA analysis would be required before the site assessment plan is approved. If, on the other hand, BOEM determines that the analysis in the environmental assessment is inadequate for that purpose, BOEM would prepare an additional NEPA analysis before issuing a decision on the site assessment plan. If a proposed meteorological buoy(s) is found to have no individually or cumulatively significant effect on the human environment, and BOEM determines that no extraordinary circumstances exist under which the buoy may have a significant environmental impact, BOEM may comply with its NEPA obligations through the use of an existing Departmental categorical exclusion for nondestructive data collection. In some cases, additional consultation may be necessary, such as consultation under section 106 of the National Historic Preservation Act for some areas of the Atlantic OCS.

BOEM has approved eight site assessment plans to date offshore Massachusetts (2), Rhode Island, Maryland, Virginia, New Jersey, New York; and Delaware, with two additional plans under review for activities offshore New Jersey and North Carolina.

CONSTRUCTION AND OPERATIONS PLANS

Before any wind energy facility can be built on an OCS lease, the lessee must submit a detailed plan for the construction and operation of the project, along with supporting data. BOEM will then conduct environmental and technical reviews of the construction and operations plan and mandated consultations, before deciding whether to approve, approve with modification, or disapprove the plan.

As illustrated in the Phases of BOEM’s Offshore Wind Energy Authorization Process (Figure 13), at any given time, multiple projects exist in each phase concurrently, with the greatest workload occurring at the construction and operations phase. To date, BOEM has conducted eight competitive wind energy lease sales for areas offshore the Atlantic Coast and there are fifteen active commercial wind energy leases. Until 2018, no leasing projects had reached the construction and operations phase. Currently, these leases are rapidly moving toward the development phase, requiring labor-intensive plan reviews, as well as extensive outreach and stakeholder engagement at each step. Each construction and operations plan review requires as many as 16 subject matter experts to conduct in-depth environmental and technical assessments. Two construction and operations plans were submitted to BOEM in FY 2018 and three in FY 2019. Current lessees have told BOEM to anticipate receiving up to six more construction and operations plans through FY 2020. BOEM now anticipates it will be actively processing approximately nine construction and operations plans in FY 2021.

The environmental review of these plans is taking the form of an environmental impact statement and will provide additional opportunities for public involvement. These reviews will be conducted consistent with EO 13807 — *Establishing Discipline and Accountability in Environmental Review and Permitting Process for Infrastructure Projects*— and SO 3355 —*Streamlining National Environmental Policy Act Reviews and Implementation of Executive Order 13807*. In addition, three projects are “covered” under Title 41 of the Fixing America’s Surface Transportation Act; those projects are South Fork Wind farm, Bay State Wind, and Ocean Wind.

BOEM initiated environmental impact statements for the Vineyard Wind Project and South Fork Wind Farm in FY 2018 and FY 2019, respectively. These environmental impact statements, expected to be completed in FY 2020 and FY 2021, consider the reasonably foreseeable impacts on physical, biological, and socioeconomic resources from the construction, operation, maintenance, and decommissioning of these projects, and include multiple opportunities for public involvement. Preparation of additional environmental impact statements will begin in mid-FY 2020.

INTERGOVERNMENTAL COORDINATION AND COLLABORATION

Offshore wind has the potential to play an integral role in our future energy portfolio. It is therefore critical that Federal Government agencies work together, along with States and other key stakeholders, to ensure the responsible development of this technology.

In addition to the establishment of BOEM intergovernmental task forces, the Department and BOEM are taking additional steps to ensure efficient and effective coordination. For instance, BOEM has Memoranda of Understanding with the Department of Energy, FERC, BSEE, FWS, Department of Defense, U.S. Coast Guard, NOAA, and the State of California. BOEM and FERC responsibilities intersect for marine hydrokinetic projects, with BOEM issuing commercial marine hydrokinetic leases and FERC issuing licenses for construction and operation of these projects. The agencies have worked together to achieve efficiencies for both the agencies and potential applicants.

In Spring 2016, the Offshore Wind Permitting Subgroup was established to identify opportunities to improve interagency coordination regarding permitting of offshore wind projects. The Subgroup is

chaired by the Department of the Interior, led by BOEM and is focused on more effective and efficient collaboration around the Federal review and approval of construction and operating plans, as BOEM is currently processing six construction and operating plans and anticipates receiving up to six more construction and operating plans in FY 2020 and FY 2021. Information shared in the group allowed BOEM to develop a detailed regulatory roadmap for the development of offshore wind and streamline the review and approval process. Since 2016, participation in the monthly Subgroup meetings has more than doubled from approximately 40 representatives to over 100. BOEM held an in-person meeting of the subgroup in November of 2017 and is planning a second in-person meeting for FY 2020 to further improve interagency coordination.

As another example of collaboration, BOEM and BSEE developed guidance for industry regarding processes to select certified verification agents and create facility design reports and plans for fabrication and installation of renewable energy facilities. Additionally, BOEM and BSEE coordinate on the selection of renewable energy technology research projects; the results will be critical in creating design standards for offshore renewable energy facilities based on the unique atmospheric and oceanographic conditions of the U.S. offshore areas.

RESEARCH, DATA COLLECTION, AND STAKEHOLDER ENGAGEMENT

BOEM's Renewable Energy Program is supported by investments in research, data collection and stakeholder engagement. In some cases, areas that are appropriate for renewable energy development have never been studied for such development; and for some areas, there is a dearth of information about the physical and biological environment. BOEM has worked closely with a broad spectrum of agencies, universities and stakeholders to identify the critical data gaps and independently, or through partnerships, sought to fund studies to increase our knowledge about the marine environment in and around potential renewable energy development locations. To benefit from lessons learned, BOEM has also reached out to European countries with more mature renewable energy programs to learn from their experience.



Information gathering through the Real-time Opportunity for Development Environmental Observations program

BOEM also consults with federally recognized American Indian Tribes. In February 2017, BOEM held a Government to Government consultation meeting with the Santa Ynez Band of Chumash Indians Elders Council. BOEM also conducted formal Government to Government consultations with the Mashpee Wampanoag Tribe in February and August 2019, and with the Narragansett Indian Tribe in August 2019. Another Government-to-Government meeting was held with the Shinnecock Indian Tribe in September 2019. Additional Government-to-Government consultations are planned with the Mashantucket Pequot Tribal Nation; the Mohegan Tribe of Indians of Connecticut; and the Wampanoag Tribe of Gay Head (Aquinnah) in 2020. It is also possible that formal consultation will be held with the Aroostook Band of

Micmacs; the Houlton Band of Maliseet Indians; the Passamaquoddy Tribe-Indian Township; the Passamaquoddy Tribe-Pleasant Point; and the Penobscot Nation in the upcoming year as initial planning for offshore wind is undertaken for the Gulf of Maine.

BOEM's Tribal outreach also includes Tribal participation in Section 106 of the National Historic Preservation Act and NEPA. BOEM consults with Tribes to identify the potential effects to historic and traditional cultural properties, and ways to avoid or mitigate effects to those properties. Tribes are invited to be cooperating agencies under NEPA, due to their knowledge of the natural and historic environment that may be effected by offshore wind development.

The continued need to pursue information to facilitate access to the OCS for renewable energy development and to ensure that such development is environmentally appropriate is a high priority for BOEM. Environmental and scientific research supporting BOEM's renewable energy efforts are funded through both BOEM's Renewable Energy and Environmental Programs budget activities.

Renewable energy environmental research – funded through the Renewable Energy activity – supplements the studies funded through BOEM's Environmental Studies Program. This research augments what had been done previously for offshore oil and gas and marine minerals, but with specific focus on renewable energy applications.

To ensure full environmental review, BOEM has spent more than \$65 million since FY 2008 on environmental studies that address renewable energy issues, either solely or in addition to other OCS resource activities. The *2018 Atlantic Science Year in Review*, which is a review of studies completed in calendar year 2018, is available on the [BOEM website](#). BOEM completed several studies of the Block Island Wind Farm which will be used to inform future environmental reviews of construction and operations plans. These studies address the issues of the effects of renewable energy development on fishing and fisheries including: economic effects, baseline fishery information, and endangered Atlantic Sturgeon. In FY 2019, studies will continue ongoing work to monitor bird movements around wind turbines, evaluate the responses of fish and cetaceans to sound, and collect baseline information about the distribution of birds, marine mammals, and other species in the marine environment. During FY 2020, BOEM intends to continue funding baseline monitoring, wildlife tracking, and development of post-construction monitoring techniques.

➤ Data Collection through Cooperative and Interagency Agreements

In accordance with the OCS Lands Act, BOEM is working cooperatively with States by leveraging funds to collect important information about the offshore environment that meets both the needs of BOEM and the States. In FY 2019, BOEM continued or executed cooperative agreements with State partners through matching funds and interagency agreements to inform future planning and decision-making. For instance, BOEM is continuing to work with NOAA and FWS to collect necessary baseline information about wildlife to inform the consultation process for endangered species. Additionally, BOEM, the Commonwealth of Massachusetts, and the State of Rhode Island are working collaboratively with a wide variety of interested parties to jointly fund \$1 million in fisheries-related research across southern New England in FY 2020.

➤ **Renewable Energy Workshops and Conferences**

Stakeholder engagement is integral to BOEM’s renewable energy planning and leasing efforts. When input from stakeholders and experts is needed on a specific topic, BOEM hosts a workshop to bring together representatives from industry and from academic and government sectors. The following are some highlights of recent events.

- BOEM has continued to reach out to the fishing community regarding current and future renewable energy development activities. Specifically, BOEM presented at six regional fishery management council meetings, held four “open office” events concurrent with fishery management council meetings, and participated in seven issue-based meetings in cooperation with State partners.
- BOEM, in collaboration with the U.S. Coast Guard, held the first ever Offshore Wind and Commercial Vessel Traffic Industry Knowledge Exchange in March 2018 that assembled Federal and State agencies, vessel operators, harbor and port administrators, industry associations and, offshore wind energy developers to develop a common understanding of operational challenges and potential for coexistence facing both industries. The workshop materials and summary report are both available on [BOEM’s website](#). BOEM is planning to hold a second workshop in spring 2020 to build on lessons learned from the first workshop as well as the subsequent experience gained through reviews of submitted Navigational Safety Risk Assessments.

In addition to these events, BOEM partners with State governments to keep them engaged and apprised of potential and upcoming activities off their coasts. Partnerships ensure the inclusion of all appropriate stakeholder groups when moving through various stages of development.

➤ **Guidelines for Developers and Applicants**

BOEM issues guidelines to clarify and provide a general understanding of the information required in order to adequately address the impacts of offshore renewable energy projects to the environment. The guidelines for survey information on avian resources, spatial data, benthic habitats, fish, marine mammals, and sea turtles on the Atlantic OCS were developed with input from FWS, NOAA, and the Marine Mammal Commission. BOEM published updates to the benthic habitat, fisheries and marine mammal and sea turtle guidelines in June 2019.

In FY 2019, BOEM developed updates for site assessment plans and several of its survey guidelines to address specific data requirements for meteorological buoys and drafted guidelines for marking and lighting renewable energy structures offshore. BOEM hosted a webinar to obtain industry input on the draft guidelines in November 2019 and will work to finalize the guidance in FY 2020.

➤ **Technology Assessment and Research Studies**



A full-scale prototype of the WindFloat device

Recent projects continue to build on the lessons learned from developers of commercial wind projects offshore Europe, while focusing on the unique operating environment of the U.S. OCS. International structural design standards have been reviewed and research gaps have been identified that include the anticipated effects of hurricanes and open-ocean breaking waves, as well as the structural integrity of floating wind turbines under reasonably foreseeable ocean conditions. Data on meteorological and oceanographic (“metocean”) conditions need to be obtained across U.S. regions to ensure that these new structures are designed to the appropriate parameters.

Results of BOEM’s technology assessment and research projects provide guidance to BOEM subject matter experts and industry

regarding data collection activities in support of project development and assist the industry in refining engineering designs for offshore structure foundations for the varying geologic and oceanographic conditions that exist offshore the U.S. and ensure greater long-term stability and survivability of wind farm facilities. These projects also provide information and guidance for BOEM and program stakeholders on wind resource measurement, marking and lighting for offshore structures to aid air and vessel navigation, and mitigation of potential impacts on coastal, military and vessel radar instrumentation. This increased reliability enhances BOEM’s ability to achieve mission goals of safe and reliable production of offshore wind energy.

Results from a metocean data measurement study provide data necessary to develop a U.S. based standard for incorporation of metocean data into a wind farm facility design. BOEM’s work with the National Renewable Energy Laboratory updates existing recommended practices (American Wind Energy Association Offshore Compliance Recommended Practices 2012) and develops new recommended practices for the following areas of offshore wind farm design: metocean data measurement, geotechnical and geophysical data collection, and floating technologies. This multi-year effort initiated in October 2017 assembled more than 100 experts across the spectrum of the offshore wind industry for online collaboration throughout the year and face to face meetings in April and October 2018 and 2019 with additional meetings planned in 2020. Online and remote collaboration is ongoing and BOEM projects this effort will culminate in late 2020 with recommended design standards for the U.S. offshore wind industry submitted to the American Wind Energy Association to review and process for endorsement by the American National Standards Institute. This review process should be final in 2021.

In FY 2018, BOEM contracted the study “Survey and Assessment of the Ocean Renewable Energy Resources in the U.S. Gulf of Mexico” to provide a comprehensive feasibility assessment of multiple offshore renewable energy technologies in the Gulf of Mexico and to inform BOEM’s strategic plans related to possible OCS renewable energy leasing activities. The study determined that, when compared to all types of offshore renewable energy, offshore wind has the best gross potential, technology readiness, and cost competitiveness for development in the Gulf of Mexico.

Alaska represents an important proving ground for developing cost effective marine wave and tidal renewable energy technologies. In FY 2018, the “Alaska Wave Energy Converter Impact Assessment” study was awarded and involves BOEM, in partnership with the University of Alaska, Fairbanks, assisting the State of Alaska in its effort to assess the feasibility and potential environmental effects of a wave energy converter project in the Gulf of Alaska. This work continued throughout FY 2019 and will continue into FY 2020.

OUTLOOK FOR RENEWABLE ENERGY

Through detailed planning and analysis and partnerships with other governmental agencies and stakeholders, BOEM’s Renewable Energy Program is meeting the needs of our partners nationwide and will continue to do so in FY 2021. Offshore wind energy is poised to generate significant benefits for the U.S. and help the Nation create jobs and achieve energy security. It is an abundant domestic energy resource that could contribute significantly to meeting State Renewable Portfolio Standards and to economic growth and job creation. Located close to major coastal load centers, offshore wind provides an alternative to long-distance transmission or development of onshore electricity generation in land-constrained regions.

Offshore wind leasing activities, including commercial leases, research leases, and right-of-way grants, have increased, and will contribute domestic renewable energy to a diverse energy portfolio and enhance economic activity in a diverse array of sectors that will supply and support the construction, service, and maintenance of the facilities. Developers are actively moving forward preparing construction and operations plans for their projects along the Atlantic coast, and State interest in pursuing offshore renewable energy development is readily apparent in States’ increased involvement in BOEM’s intergovernmental renewable energy task forces. Also, recent technological advances and successful deployment of floating wind turbines have spurred increased activity on the Pacific coast. BOEM continues to demonstrate science-informed decision-making through environmental research and studies, which directly benefit BOEM, other energy and mineral programs, renewable energy stakeholders, and individual States.

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FISCAL YEAR 2021 BUDGET

Bureau of Ocean Energy Management

Marine Minerals

Table 12: Marine Minerals Budget Summary

	2019 Enacted (\$000) FTE	2020 Enacted 19	Internal Transfers	Fixed Costs	Program Changes	2021 Request +2	vs. 2020 Enacted +2
Marine Minerals	-	5,729	-	+63	+2,989 +2	8,781 21	+3,052 +2

The OCS Lands Act designates BOEM as the Federal authority for overseeing the use of non-energy marine minerals across almost 2.5 billion acres of the OCS. BOEM's Marine Minerals Program is responsible for facilitating access to and managing these crucial OCS resources. BOEM's marine minerals mission involves environmentally responsible stewardship, mineral resource exploration and leasing activities, coordination with governmental partners, engagement of stakeholders, and scientific research to improve decision making and manage risk.

The Bureau may convey, on a noncompetitive basis, the rights to sand and other sediment to Federal, State, and local government agencies for shore protection, beach and wetlands restoration projects, or other construction projects funded or authorized by the Federal Government.

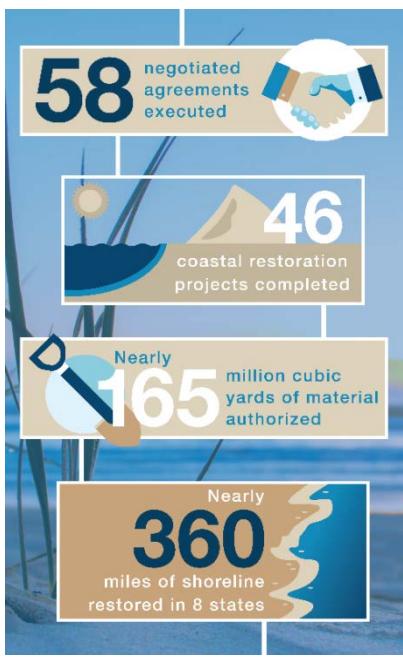
BOEM also oversees competitive, commercial leasing for critical and other strategic minerals located on the OCS. In support of President Trump's EO 13817 — *A Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals* — BOEM continues to investigate which of the currently-identified 35 critical minerals, such as cobalt, manganese, and rare-earth elements, may be located on the OCS.

The FY 2021 budget will support:

- **Use of Sand Resources:** As of January 1, 2020, BOEM has conveyed the rights to almost 165 million cubic yards of OCS sediment and executed 58 negotiated agreements for projects in eight States that have restored almost 360 miles of coastline. BOEM expects to authorize additional mineral exploration and leasing for qualified projects in FY 2021.



BOEM monitors Ellis Island hopper dredge for sand offshore Ship Island, MS



- **National Offshore Sand Inventory:** BOEM continues to invest in and develop its National Offshore Sand Inventory, especially in priority areas along the Gulf of Mexico and south Atlantic. The National Offshore Sand Inventory helps BOEM and its partners identify the location and character of sand reserves that may be appropriate for use in beach renourishment, coastal restoration, and infrastructure protection efforts. The National Offshore Sand Inventory enables BOEM to act quickly and responsibly in emergency or post-storm situations. BOEM also uses information provided by the National Offshore Sand Inventory to identify and manage multiple use conflicts and avoid or minimize environmental impacts from dredging activities.
- **Marine Mineral Information System:** BOEM built, manages, and uses the Marine Minerals Information System (MMIS) as a central repository of marine minerals data. BOEM populates the MMIS with data from National Offshore Sand Inventory activities, as well as project-specific leasing and monitoring activities. The MMIS is publicly available and enables BOEM to provide stakeholders with reliable information on sand and gravel resources on the OCS. BOEM will continue to populate, maintain, and host the MMIS during FY 2021.

SUMMARY OF 2021 PROGRAM CHANGES

Program Changes from 2020 Enacted Budget	(\$000)	FTE
GrantSolutions Enterprise System	+1	
National Offshore Sand Inventory	+2,988	+2
Total Program Changes	+2,989	+2

GrantSolutions Enterprise System (+\$1,000; 0 FTE). Funding supports the allocated share of operating costs for the GrantSolutions enterprise system to improve the processing and transparency of grants and cooperative agreements across Interior. Cost allocations are based on an algorithm of use factors.

National Offshore Sand Inventory (+\$2,988,000; +2 FTE). The FY 2021 budget supports an increase in resources to enable the further development of the National Offshore Sand Inventory (Sand Inventory). Requested resources would be used for data acquisition to identify approximately three to five sand resource areas that could be used for beach nourishment and coastal restoration projects. Requested FTE would support increased leasing and environmental activities associated with the growing demand for OCS sediment resources. A fully developed Sand Inventory would enable the Federal Government to achieve and leverage pre-disaster readiness around the country and responsibly facilitate access to compatible sand before or after emergencies. The Sand Inventory also supports an increased need for

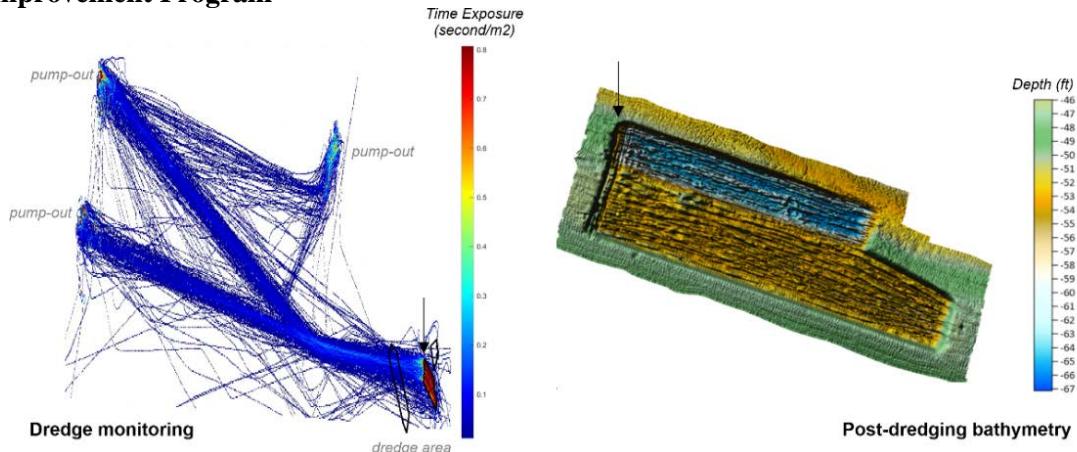
material in federally authorized project recovery activities associated with the United States Army Corps of Engineers coastal storm risk management projects, flood control and coastal emergency projects, as well as projects sponsored entirely by local governments. Proactively identifying potential resource areas for projects saves the American taxpayer money by knowing resource location and quantity up-front as well as reducing dredging costs by identifying potential resources closer to project locations.

PROGRAM OVERVIEW

With a base budget of \$5.7 million, BOEM will:

- Manage the exploration and development of OCS sand and gravel resources;
- Identify sand resources for future use and advance the National Offshore Sand Inventory;
- Continue to populate, maintain, and host the MMIS;
- Engage stakeholders and coordinate with key partners on potential projects;
- Conduct environmental reviews, consultations (e.g., Endangered Species Act), and research;
- Design dredge plans and associated stipulations to ensure smart borrow area use;
- Develop leasing agreements which incorporate the dredge plans;
- Oversee monitoring of dredging activities; and,
- Explore the potential for critical minerals on the OCS.

Figure 17: Monitoring data for Petit Bois Borrow Areas Used in the Mississippi Coastal Improvement Program



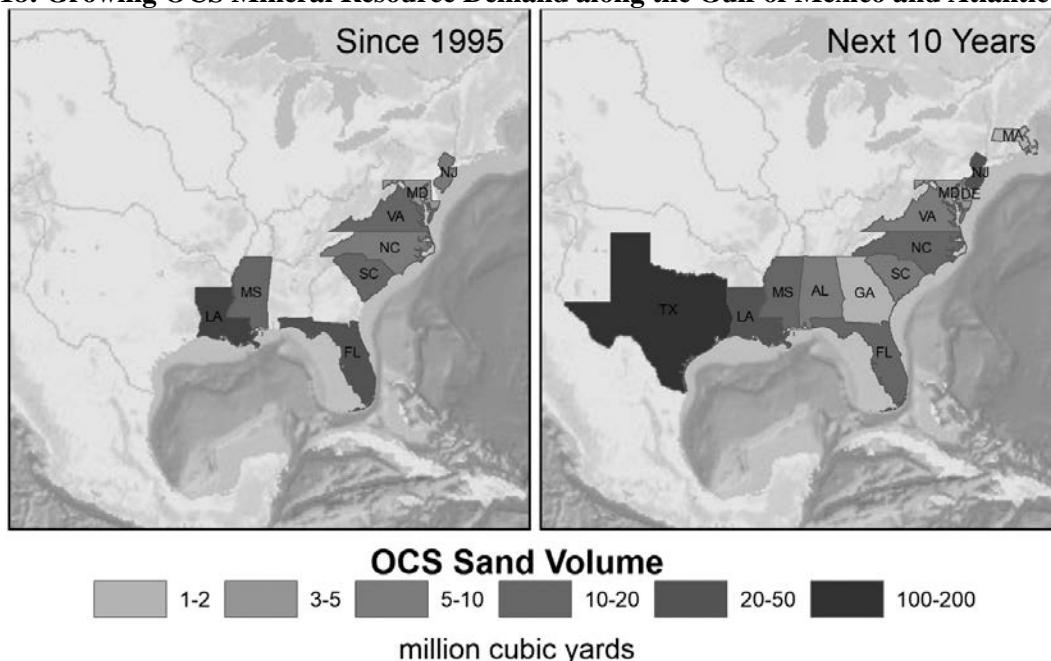
(Left) “Red” areas in dredge monitoring data show dredging activities, whereas “blue” areas show transit to “multi-colored” pump-out locations. (Right) Post-dredging bathymetry of the borrow area shows dredge furrows and a maximum seafloor depression of about 15 feet. Arrow is same location.

On average, BOEM executes approximately five marine minerals geological and geophysical survey authorizations and six lease agreements or amendments per year. Project scope and costs vary depending on factors such as proximity of the borrow area to the project location and whether sufficient environmental information already exists to support needed environmental reviews. Each year BOEM sponsors about \$1.5 million dollars in strategic research focused on the identification and responsible use of new OCS sand resources.

GROWING DEMAND FOR MARINE MINERALS

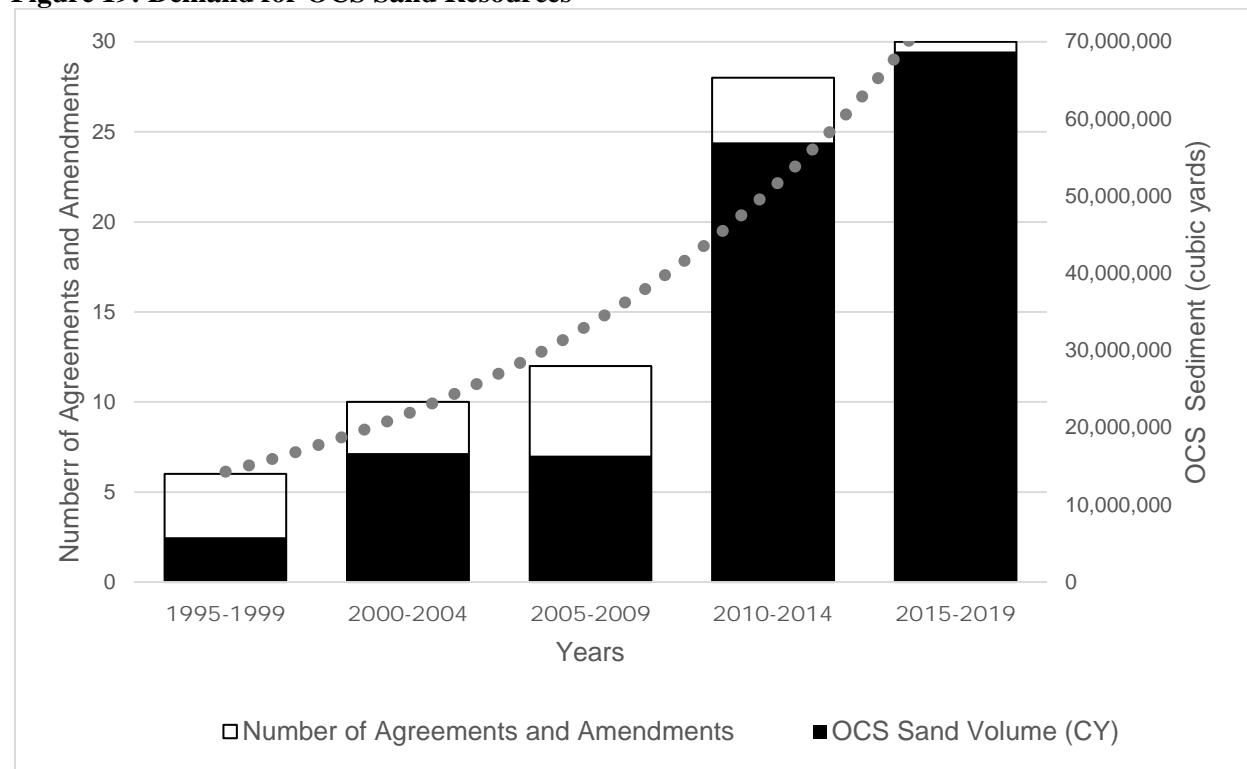
OCS sand and sediment resources are critical to the long-term success and cost-effectiveness of many shore protection, beach nourishment, and wetlands restoration projects along the Gulf of Mexico, Atlantic, and Pacific coasts. Over the last 25 years, BOEM has received an increasing number of requests for OCS sand and sediment, a greater geographic distribution of these requests, and a commensurate increase in the volume allocated each year. These trends are driven by diminishing resources in State waters and frequent tropical and winter storms along the Atlantic and Gulf of Mexico coasts (e.g., Hurricanes Florence and Michael in 2018 and Dorian in 2019). Over the next ten years, BOEM expects project partners to request the use of almost 300 million cubic yards across 13 States. Timely access to OCS resources is critical to restoration and recovery efforts in the aftermath of natural disasters.

Figure 18: Growing OCS Mineral Resource Demand along the Gulf of Mexico and Atlantic Coasts



Anticipated demand over the next ten years is more than 1.5 times the last 25 years.

The availability of proven, technically-recoverable sand is limited in comparison to future demand. As resources in State waters are depleted, there is increased pressure on resources in Federal waters. Further, coastal planners recognize the benefit of adding to the near-shore coastal sediment budget by bringing in OCS resources, instead of simply moving sediment around within the active sediment transport system. Knowing where resources are and how much material is available up-front reduces project construction timelines and costs, as sources do not have to be discovered and characterized, or identified, as part of a project's schedule or budget. BOEM continues to address this need through development of the National Offshore Sand Inventory. With early identification of sand resources, BOEM facilitates the restoration and protection of shoreline infrastructure vital to the Nation's security, economy, and ecosystems, as well as beach and coastal wetlands restoration projects. BOEM continues to work proactively with partners, such as the U.S. Army Corps of Engineers, and State and local governments to identify and provide sand for projects so that communities can recover quickly from storms and be better prepared for future events.

Figure 19: Demand for OCS Sand Resources

Demand for OCS resources continues to grow dramatically.

In FY 2019, BOEM managed more than ten active lease agreements, including six new agreements for OCS sand for beach nourishment and coastal restoration projects in Louisiana, Mississippi, Florida, North Carolina, and Virginia. BOEM anticipates receiving another 5 to 10 requests for new agreements and amendments in FY 2020 and FY 2021 for projects in Virginia, North Carolina, South Carolina, Louisiana, Florida, and potentially Texas. In the Gulf of Mexico, increased availability of funds associated with fines and penalties from the Deepwater Horizon oil spill and increased Gulf of Mexico Energy Security Act revenue sharing have resulted in an increased number of coastal restoration projects using OCS sand. There are no near-term projects expected in the Pacific States or Alaska. To advance the National Offshore Sand Inventory, BOEM funds resource investigations in coastal areas experiencing chronic erosion, such as the Gulf of Mexico, south and mid-Atlantic, and central California.

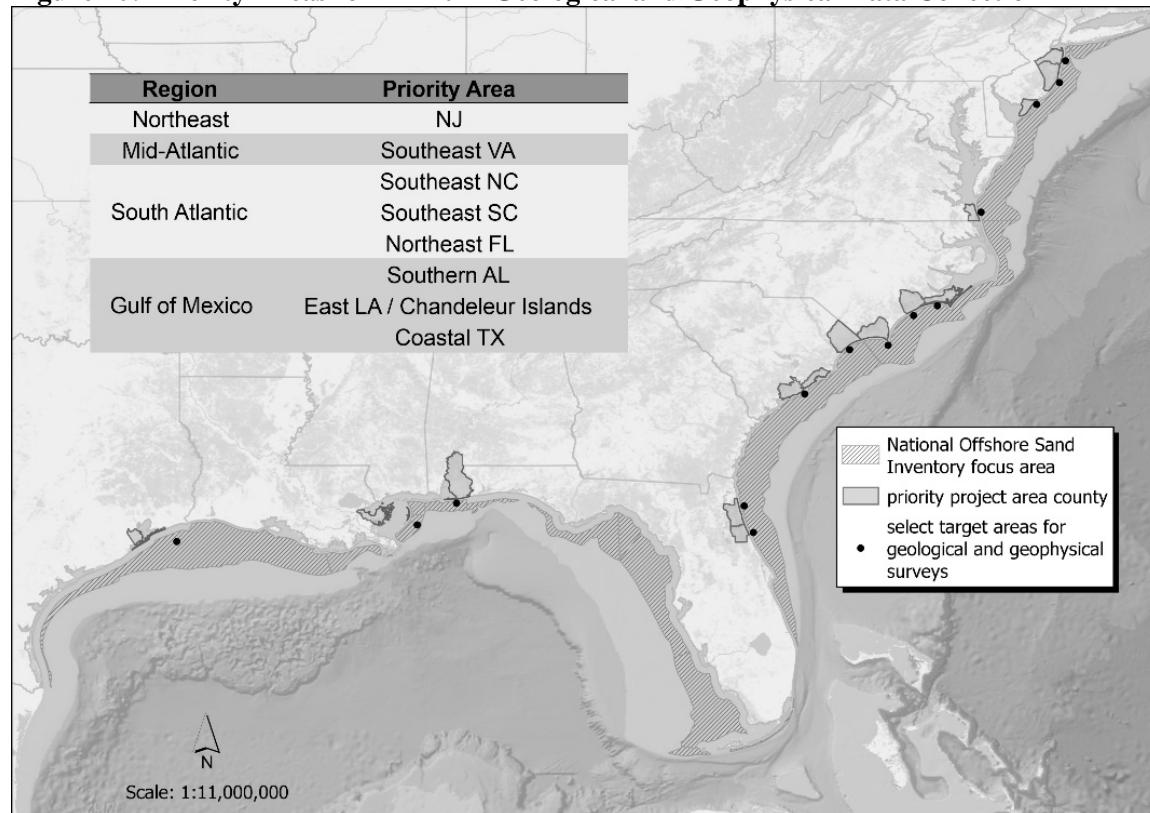
As a responsible environmental steward, BOEM strives to ensure that any potential environmental impacts associated with OCS marine minerals activities are avoided or mitigated. The Bureau complies with the requirements of NEPA and consults with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service on endangered species and essential fish habitat prior to the conveyance of OCS resources. Additionally, BOEM ensures coastal consistency and undertakes archaeological resources reviews to protect important, sometimes singular cultural artifacts. BOEM also funds targeted environmental studies (through the Environmental Programs budget activity) to provide new information to evaluate the effects of specific proposed dredging operations, and design better mitigation measures to minimize the effects of dredging. BOEM has invested more than \$50 million over the past 25 years on world-class scientific research, both environmental and resource evaluation, that informs resource stewardship and leasing decisions concerning the use of OCS sand resources.

➤ National Offshore Sand Inventory

As the steward of OCS non-energy mineral resources, one of BOEM's top priorities is to advance the National Offshore Sand Inventory — a comprehensive, data-driven catalog of the location and character of OCS sand reserves.

Currently, BOEM is focusing on identifying OCS sediment resources to address shore protection, beach nourishment, and wetlands restoration projects along the Gulf and Atlantic coasts. BOEM and partner agencies have completed studies and developed tools that analyze and identify areas of high coastal risk along the Atlantic and Gulf coasts. In general, these risk assessments consider critical infrastructure, habitat, and communities at risk and are identified through meaningful engagement with State and local government stakeholders. BOEM uses these results, as well as gap analyses prepared by cooperative agreement partners, to identify priority areas that would benefit from additional data about nearby sand resources. For instance, in collaboration with the U.S. Army Corps of Engineers (USACE) and through participation in the South Atlantic Coastal Study (SACS) and *Sand Availability and Needs Determination* (SAND) initiative, BOEM continues to identify priority areas for future resource identification from North Carolina to Mississippi. Similarly, BOEM is partnering with the State of Texas and other Federal agencies to implement the 2019 Texas Coastal Resiliency Master Plan, a comprehensive program calling for more than 100 million cubic yards of sand to protect and restore the Texas shoreline.

Figure 20: Priority Areas for FY 2021 Geological and Geophysical Data Collection



Priority areas to invest in state-of-the-art geological and geophysical data collection in FY 2021 to support the National Offshore Sand Inventory.

Each year, BOEM advances the National Offshore Sand Inventory by collecting and processing new geophysical and geological data. That data is used by BOEM and key partners to identify additional sediment resources in those priority areas. New data is integrated with existing information to improve the Bureau's understanding of how much resource is available and refine plans for how the resource can be responsibly used over the life of a project.

BOEM Marine Mineral Partnerships

Federal Agencies

National Aeronautics and Space Administration; National Oceanic and Atmospheric Administration; United States Army Corps of Engineers; United States Fish and Wildlife Service; United States Geological Survey; United States Navy.

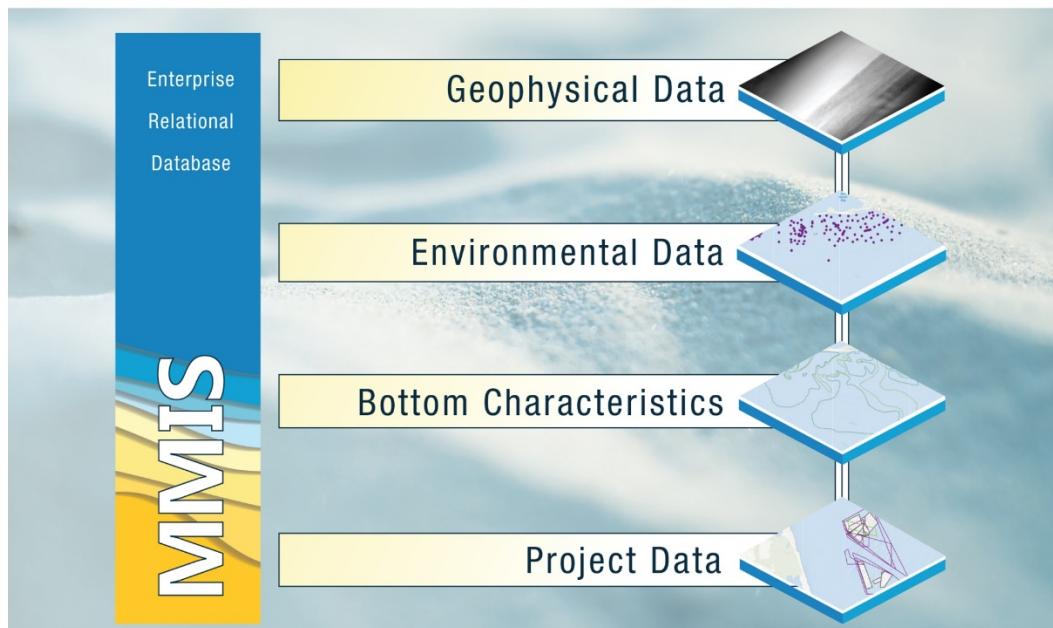
State Agencies and Geological Surveys

Alabama; California; Delaware; Florida; Georgia; Louisiana; Maine; Maryland; Massachusetts; Mississippi; New Hampshire; New Jersey; New York; North Carolina; Rhode Island; South Carolina; Texas; Virginia.

Universities

Columbia University, Lamont-Doherty Earth Observatory; East Carolina University; Louisiana State University; Stony Brook University; University of Delaware; University of Florida; University of Georgia; University of Maine; University of Massachusetts; University of New Hampshire; University of New Orleans; University of Rhode Island; University of Southern Mississippi; University of Texas; Virginia Institute of Marine Science.

BOEM uses the MMIS to collect, process, analyze, maintain, store, and disseminate marine minerals data, including our National Offshore Sand Inventory. The MMIS also helps prevent future marine use conflicts, such as the potential for submarine fiber optic cables and transmission lines from offshore wind facilities to cross important sand resource areas. Ultimately, the MMIS supports Bureau and stakeholder decisions regarding the use and sustainability of offshore sand resources by proactively identifying potential locations and amounts of sand and helps to shorten recovery efforts after hurricanes and other natural disasters.

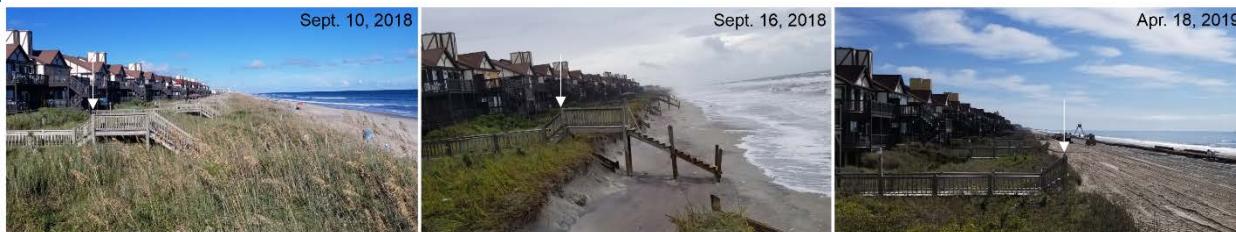


➤ **Responding to Natural Disasters**

BOEM continues to be a key player in restoration and recovery following natural disasters. BOEM's immediate efforts include: communication with stakeholders in areas of need, site analysis and resource availability, resource compatibility analysis, and identification of site-specific environmental concerns. In the aftermath of a hurricane, the scale and volume of requested sand projects often increases by 30 percent. This is because post-disaster projects generally encompass larger project areas and require a larger volume of resources to mitigate significant storm-related losses and support additional protection measures (i.e., dunes) to reduce future damages. Consequently, the scope of information needed to process project requests increases substantially after major storms.

Project Profile: Restoration of Bogue Banks (NC) following Hurricane Florence

Hurricane Florence passed by the popular beaches of Bogue Banks, North Carolina in September 2018, causing severe beach and dune erosion. A previously planned project was quickly reimagined to replenish the severely eroded reaches in the municipalities of Emerald Isle and Indian Beach, and unincorporated Salter Path.



Project sponsors reclaimed sediment from the Morehead City Harbor navigation channel previously disposed in the Morehead City Ocean Dredged Materials Disposal Site (ODMDS) on the OCS.

BOEM characterized the sand and silty material that had been placed there during prior disposal events. This allowed the project team to determine the extent and compatibility of beach quality sand and acquire the volume needed for a redesigned project.

BOEM was able to help the project team return much-needed sand to the littoral system from which it originated.

➤ **Protecting Federal Infrastructure and National Defense**

Building on more than 30 years of experience, BOEM continues to partner with coastal communities, States and other Federal agencies to facilitate critical coastal infrastructure projects, including some that are key to our Nation's defense and economy.



*national
security
facilities*



*critical coastal
infrastructure
and economies*



*NASA and AF
operated
launch
facilities*



*key energy
and port
facilities*



*Roads and
transportation
infrastructure*



*DOI and State
parks and
lands*

These include –

- Caminada Headlands (Grand Isle, Louisiana): this project protects the petroleum storage, transport, and support facilities associated with Port Fourchon, which services over 90 percent of Gulf of Mexico deepwater oil production.



Caminada Headlands after shoreline restoration (2015)

- National Aeronautics and Space Administration (NASA) Wallops Island Flight Facility (Wallops Island, Virginia): this project protects approximately \$1 billion in launch pads and associated infrastructure, as well as test and training facilities.



NASA Wallops Island, VA (2010)



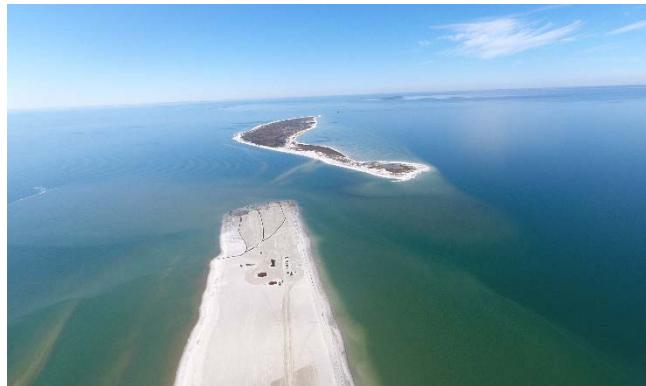
NASA Wallops Island, VA (2014)

- Navy Dam Neck Facility (Virginia Beach, Virginia): this project protects approximately \$135 million of assets, including training facilities, housing, and support facilities.
- Patrick Air Force Base (Canaveral, Florida): this project protects fighter, tactical, and transport aircraft and SPACE Coast launch facilities.
- Long Beach Island (Long Beach Island, New Jersey): this 12-mile project protects public streets, utilities, and commercial properties, and maintains the public beach.
- Mississippi Coastal Improvements Program: BOEM, the National Park Service, the U.S. Army Corps of Engineers Mobile District, and the State of Mississippi are working together on a multi-phase project restoring Ship Island. Ship Island is part of the Gulf Islands National Seashore.

Project Profile: Restoration of Ship Island, Mississippi

The USACE partnered with the National Park Service to prepare the Mississippi Coastal Improvement Program (MsCIP) Comprehensive Barrier Island Restoration Plan in 2016. The plan identified a multi-phase strategy to restore severely eroded and fragmented portions of the Gulf Islands National Seashore.

In 1969, Category 5 Hurricane Camille cut Ship Island in two, creating the Camille Cut. In 2005, Hurricane Katrina expanded and deepened the pass. Almost 50 years since Hurricane Camille, 7.1 million cubic yards of OCS sediment was used to fill the 2.4 mile-wide Camille Cut during the first phase of the project in 2018-2019. Filling the breach is part of a long-term commitment to improve the health and ecosystem of Mississippi Sound.



BOEM worked with the USACE and USGS to identify ten different OCS sediment resource locations offshore the project area, totaling 19.6 million cubic yards. Completion of the second phase of repairing Ship Island and barrier breaches should occur in 2020.

Once all phases are completed, this will be the largest coastal restoration project constructed in the U.S. to date. This project also directly benefits the three Mississippi coastal counties (Hancock, Harrison, and Jackson) that were devastated by Hurricanes Katrina and Rita.

➤ Interagency Coordination

In the aftermath of Hurricanes Harvey, Irma, and Maria, the USACE South Atlantic Division initiated the South Atlantic Coastal Study (SACS), a regional analysis of coastal risk from North Carolina through Mississippi. The USACE identified priority locations where beach nourishment projects should be implemented to address vulnerabilities. BOEM continues work with a subgroup to develop the *Sand Availability and Needs Determination* (SAND). This initiative involves examining all existing and proposed Federal and non-Federal beach nourishment projects and determining the sand volume needs and current availability of offshore sediment to support long-term coastal resilience and protection. In FY 2021, BOEM will build on the SACS and SAND initiatives to ensure that new OCS geophysical and geological data acquisition is aligned with coastal project needs in the region.

BOEM also works with sister DOI bureaus to assist in beach nourishment, coastal and wetlands restoration and infrastructure protection efforts. The USGS is an important partner and collaborator on offshore sand resource evaluation. For example, BOEM and USGS are currently working on geologic mapping and sand identification offshore Ocean Beach, California, an erosional hotspot south of San Francisco Bay. In FY 2019 and FY 2020, USGS and BOEM also partnered on a multi-year study of

loggerhead sea turtle behavior in the shallow Gulf of Mexico, tagging and tracking sea turtles safely relocated during BOEM-authorized restoration projects.

CRITICAL MINERALS

Critical minerals are a new focal area for BOEM's Marine Minerals Program. President Trump's Executive Order 13817 – *A Federal Strategy To Ensure Secure and Reliable Supplies of Critical Minerals* – and Secretarial Order 3359 – *Critical Mineral Independence and Security* – directed Interior to inventory and identify new supplies of terrestrial and marine mineral resources. These critical minerals are essential to the economic and national security of our Nation, and the supply chain for these minerals is vulnerable to disruption.

Offshore mineral deposits such as manganese nodules, ferromanganese crusts, and seafloor massive sulfides contain several of the currently designated 35 critical minerals (83 FR 23295, May 18, 2018). BOEM, USGS, and NOAA continue to work together to determine which areas of the OCS have potentially significant critical mineral resources, with a focus on cobalt, manganese, and rare earth elements. These minerals are essential cathode components in Lithium-ion batteries and are used in a range of applications from personal electronics to electric vehicles to military uses.

Manganese Nodules	Ferromanganese Crust	Seafloor Massive Sulfides
 Source: USGS	 Source: USGS	 Source: NOAA
Manganese nodules include the critical minerals cobalt, manganese, titanium, and rare earth elements. Approximately the size of potatoes, they grow slowly by hydrogenation and/or diagenesis at 2-10 mm/million years.	Ferromanganese crusts precipitate on rock surfaces in the deep sea (typically 600-7,000 m) on the flanks of seamounts. The cobalt-rich crusts have similar mineralogy to the nodules, but are richer in both iron and cobalt.	SMS are deposits of metal-bearing minerals that form on and below the seabed as a consequence of the interaction of seawater with a heat source (magma). The active mineral deposits form chimneys or "black smokers."

BOEM plays a lead role in the *National Science and Technology Council Critical Minerals Subcommittee*. On June 4, 2019, the Subcommittee released a report in response to Executive Order 13817 ([A Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals](#)). Agencies represented on the Subcommittee, such as BOEM, are working on implementation of the six Calls to Action and associated goals described in the report.

The Bureau ensures potential OCS marine mineral resources are considered for the benefit of our national security and domestic economy. It is important to note that promising critical mineral deposits may exist in the Pacific insular areas (e.g., Guam and American Samoa), although, under the OCS Lands Act as

currently written, BOEM currently has no authority to authorize exploration or issue leases offshore U.S. insular areas.

In FY 2020, multiple Federal agencies leveraged available funding to help launch BOEM's National Offshore Critical Mineral Inventory. Also, in FY 2020, BOEM, USGS and NOAA kicked off a multiyear collaboration effort to fund the first U.S.-based critical mineral expedition since the early 1980's and explore the massive sulfide mineralization and associated ecosystems of the deepwater Escanaba Trough offshore northern California. The Escanaba Trough is a deepwater, sediment-covered seafloor spreading center with large massive sulfide deposits. In FY 2021, BOEM plans to work with NOAA, USGS, the Department of Energy, and the Defense Logistics Agency to create a comprehensive critical mineral assessment plan focusing on the Aleutian Arc and associated seamounts offshore Alaska.

Despite increased interest from industry, the military, and the international community, the quantity and characteristics of the critical resources on the OCS remain uncertain. There is an urgent need to identify areas that have high economic potential but low ecological value, making them suitable for further exploration and leasing. Domestically-sourced critical minerals could reduce the Nation's vulnerability to economic disruption and negative national security impacts caused by a lapse in imports used in manufacturing, defense, and other sectors.

OUTLOOK FOR MARINE MINERALS

The role of BOEM as the Nation's steward of OCS non-energy mineral resources is expected to dramatically grow over the next decade. Ongoing development along the coast, storm activity, sea level rise, and diminishing sand sources in State waters contribute to the expected increasing demand. In the next five years, BOEM expects new requests from at least four additional States that have not previously used OCS sand, plus continuing requests from historic users. Continued future development of the National Offshore Sand Inventory, National Offshore Critical Mineral Inventory, and MMIS are critical to support BOEM's role as environmental steward and resource manager.

The Nation's demand for secure and reliable domestic sources of critical minerals and other strategic minerals expands demand for BOEM's information and services. BOEM's critical mineral activities will require partners and additional investment to support the long-term goals of reducing dependence on foreign sources, improving the balance of trade, supporting job creation, generating royalty income, and enhancing national security.

FISCAL YEAR 2021 BUDGET

Bureau of Ocean Energy Management

Environmental Programs

Table 13: Environmental Programs Budget Summary

		2019 Enacted	2020 Enacted	Internal Transfers	Fixed Costs	Program Changes	2021 Request	vs. 2020 Enacted
Environmental Programs	(\$000) FTE	79,774 145	82,457 146	-	+482	-7,064 -	75,875 146	-6,582 -

BOEM's Environmental Programs activity informs decision-makers and the public about the potential impacts of OCS energy and mineral activities on the marine, coastal, and human environment. Funding supports scientific research needed to inform policy decisions regarding energy and mineral development on the OCS. Focus on environmental science ensures transparent and accessible integration of applied science with BOEM's environmental analyses in support of programmatic decisions.

The FY 2021 budget will support:

- **National OCS Oil and Gas Leasing Program:** The planning and execution of proposed lease sales outlined in the National OCS Oil and Gas Leasing Program (National OCS Program) is supported by environmental studies, which provide the foundation for science-informed decisions, as well as environmental analyses, outreach, and coordination with stakeholders. Funding will also support activities such as: NEPA analyses; Endangered Species Act Section 7 and Essential Fish Habitat consultations; and Coastal Zone Management Act coordination. The National OCS Program, and its environmental component, is a priority area for BOEM and supports the President's desire for environmentally and economically responsible development of domestic energy resources.
- **Environmental Assessments and National Environmental Policy Act (NEPA) Reviews:** The framework mandate for reviewing potential environmental impacts, NEPA, ensures public participation in the review and decision process and provides transparency about environmental effects to both public and private entities. BOEM's NEPA analyses are in accordance with NEPA implementing regulations of the Council on Environmental Quality and DOI. Additionally, BOEM's environmental assessments provide essential environmental information for decisions related to conventional energy activities, renewable energy activities, and the proposed leasing of sand and gravel resources.
- **Environmental Studies Program:** As outlined in the OCS Lands Act, BOEM works to integrate the information needs from multiple scientific disciplines with respect to energy and mineral resources on the OCS. Understanding the impacts of conventional and renewable energy as well as mineral development upon the OCS remains this Program's key emphasis.

- **Partnerships:** To pool resources for more information to be generated at a lower cost, BOEM leverages funds and expertise through partnerships within the Department and with other Federal agencies, States, and academic institutions. By contributing funds and in-kind resources, BOEM and its partners extend the scope of their research to obtain more and better information. From FY 2014 to FY 2019, BOEM provided over \$91 million to Federal partners to conduct BOEM-designed scientific environmental work. In FY 2019, the Program finalized 31 studies, 9 of them through partnerships.

SUMMARY OF 2021 PROGRAM CHANGES

Program Changes from 2020 Enacted Budget	(\$000)	FTE
GrantSolutions Enterprise System	+11	
National OCS Program	-9,000	
<u>Environmental Studies Program</u>	+1,925	
Total Program Changes	-7,064	+0

GrantSolutions Enterprise System (+\$11,000; 0 FTE). Funding supports the allocated share of operating costs for the GrantSolutions enterprise system to improve the processing and transparency of grants and cooperative agreements across Interior. Cost allocations are based on an algorithm of use factors.

National OCS Oil and Gas Leasing Program (-\$9,000,000; 0 FTE). These funds, used to support the development and implementation of the 2019-2024 National OCS Oil and Gas Leasing Program (National OCS Program), are not needed at this time, as development of the program is currently on hold. The request does not presume a particular decision on the next National OCS Program.

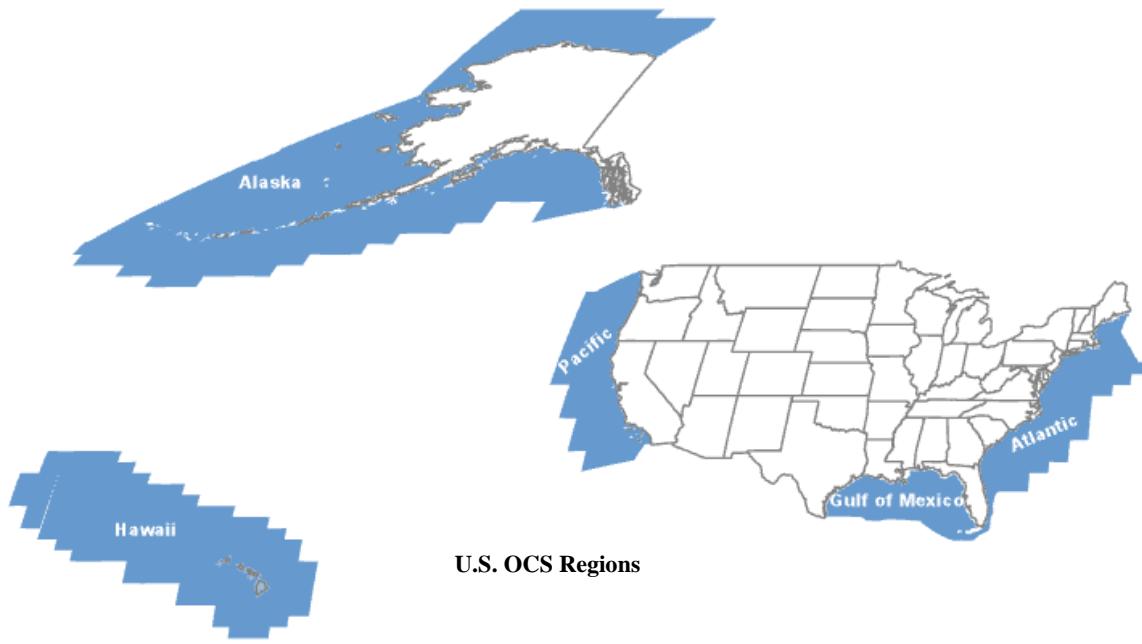
Environmental Studies Program (+\$1,925,000; 0 FTE). Section 20 of the OCS Lands Act requires BOEM to consider the impacts from OCS development on the marine, coastal, and human environments. The FY 2021 budget supports environmental studies to enable research and leveraging of funds through partnerships and collaborative efforts to advance scientific progress on renewable energy, conventional energy and marine minerals, and provide information for mission critical decision making. BOEM also utilizes the information collected to inform environmental reviews and consultations with Tribes, States, and natural resource agencies. This program supports the Administration's desire for environmentally and economically responsible development of domestic energy and mineral resources.

PROGRAM OVERVIEW

BOEM assesses the potential environmental and social impacts of exploration and development of energy and mineral resources on the OCS: conventional energy sources (i.e., oil and gas), renewable energy resources (i.e., wind, wave, and current energy), and non-energy minerals such as sand and gravel. The Program develops, funds, and manages scientific research and conducts long-term monitoring to facilitate

identification and implementation of relevant measures (e.g., identification of biologically important areas that need protection) for avoiding or reducing impacts of activities. This information supports and guides decision-making not just within BOEM, but also by other government authorities, industry and the public.

The Program includes the environmental assessment function and environmental studies function, organized administratively into the Office of Environmental Programs in the Washington, DC, area (comprising the Environmental Sciences Division and the Environmental Assessment Division), and includes components within the Office of Renewable Energy Programs and BOEM regional offices (New Orleans, Louisiana Office; Anchorage, Alaska Office; and, Camarillo, California Office; Atlantic OCS environmental studies and assessments are managed through headquarters and the New Orleans Office). BOEM's environmental science program is managed as a single account through the Environmental Programs budget activity.



The environmental staff works in teams, with leadership provided by those whose backgrounds and capabilities best address the issues at hand. BOEM is committed to continuous staff improvement and recruitment and retention of the best available talent. BOEM employs staff in diverse fields: marine and coastal biology; chemical, biological, and physical oceanography; avian and marine mammal biology; acoustic science; geology; meteorology; risk modeling; sociology; marine archaeology; anthropology; economics; and environmental policy. BOEM is committed to partnerships with Federal, State, and local governments; federally recognized Tribes and other organizations of indigenous peoples; and other stakeholders, including academia, non-profit organizations, and businesses.

In FY 2020, BOEM will begin to develop centers of expertise to expand bureau capacity to proactively address priority scientific issues requiring specialized expertise and garner substantial stakeholder interest. By centralizing expertise and functions while still distributing service through the organization, the centers drive the consistency, collaboration, innovation, and leadership essential to advancing the understanding and management of highly technical issues. They establish 'first in class' operations to

serve all BOEM programs and stakeholders while positioning BOEM for future success. BOEM will establish three centers of expertise — Center for Marine Acoustics; Center for Marine Air Quality; and Center for Oil Spill Risk. Each center will drive consistent and sustainable assessment, policy and science solutions across BOEM regions and programs. This will establish BOEM as a driving force within the regulatory community, and appropriately inform and influence future policy solutions. In FY 2020, BOEM will develop strategic plans for each center, begin identifying staff for the Center for Marine Acoustics, and strengthen partnerships with the U.S. Navy and NOAA/National Marine Fisheries Service (NMFS) to understand more fully the sound propagation and behavioral modelling components that will need to be developed within BOEM. In FY 2021, BOEM will begin implementation of the centers of expertise strategic plans.

➤ **Statutory Mandates**

At the very core of BOEM's Environmental Program is its mission to implement numerous and diverse statutes and executive orders, including, but not limited to the following:

Outer Continental Shelf Lands Act
The Environmental Studies Program was initiated in 1973 by Section 20 of the OCS Lands Act to support the OCS oil and gas leasing program and was further amended in 1978. The OCS Lands Act directs BOEM to consider impacts from OCS development on the marine, coastal, and human environments. Impacted areas include those within the OCS where energy and minerals resources are explored and produced, and areas well beyond the OCS that may be directly or indirectly impacted by OCS development. The marine environment extends landward to salt marshes and wetlands. The coastal environments include the terrestrial ecosystem from the shoreline inward to the boundaries of the coastal zone. The human environment includes the physical, social, cultural, and economic components that determine the state, condition, and quality of living conditions, employment, and health of those affected.
National Environmental Policy Act
The National Environmental Policy Act (NEPA) provides BOEM's framework mandate for reviewing potential environmental impacts, ensuring public participation in the review and decision process, and providing disclosure about environmental effects to decision-makers and the public.
Endangered Species Act
The Endangered Species Act requires that BOEM not take any action likely to jeopardize the continued existence of any species listed as endangered or threatened or to destroy or adversely modify critical habitats of listed species. If an action by BOEM may affect a listed species or its designated critical habitat, BOEM is required to consult with either the National Marine Fisheries Service (NMFS) or the FWS, depending on the species and habitat potentially affected, to assess an action's level of potential effect and what protective measures must be put in place for the action to occur. Such analyses require significant levels of scientific depth and quality, clarity in assessment, and coordination with NMFS and FWS.
Marine Mammal Protection Act
The Marine Mammal Protection Act requires BOEM and other agencies to avoid injuring marine mammals or disrupting their behavior if there is more than a "negligible impact" on the species. Avoiding and mitigating the potential harm from geophysical surveys is a key area of focus for BOEM.

Other Laws Considered Throughout BOEM Activities (note, this is not a comprehensive list)

The Energy Policy Act of 2005 (EPAct; P.L. 109-58): amended OCS Lands Act to add renewable energy to DOI's (and BOEM's) development and environmental protection responsibilities.

Coastal Zone Management Act: requires BOEM actions that have reasonably foreseeable effects on any land or water use or natural resource of the coastal zone be consistent with the enforceable policies of a Coastal State's federally approved Coastal Management Program.

Magnuson-Stevens Fishery Conservation and Management Act: requires BOEM to consult with National Marine Fisheries Service regarding potential adverse effects on Essential Fish Habitat from proposed actions and measures to minimize those effects to fish, fisheries, and the habitats upon which they depend.

Clean Air Act: requires BOEM to assess air emissions and evaluate air quality impacts when preparing environmental reviews for proposed offshore oil and gas exploration, development, and production plans. In addition, air quality impacts must be assessed for renewable energy lease issuance and associated site characterization surveys, and activity plans.

Clean Water Act: requires BOEM to ensure that an applicant has applied for the appropriate individual National Pollutant Discharge Elimination System Permit, if necessary, or the applicant's plan complies with the appropriate general National Pollutant Discharge Elimination System Permit(s).

National Historic Preservation Act: requires BOEM to consider potential effects of their undertakings on eligible or listed historic properties, provide the Advisory Council on Historic Preservation a reasonable opportunity to comment, and minimize or avoid adverse effects through modification and mitigation. BOEM must assume responsibility for the preservation of historic properties owned or controlled by BOEM.

Migratory Bird Treaty Act: prohibits BOEM from the "take" of any bird covered under the Act, which includes all native species and excludes introduced species. Take is defined as: "to pursue, hunt, shoot, wound, kill, trap or collect or attempt to pursue, hunt, wound, kill, trap, capture or collect" any migratory bird without a permit issued by the U.S. Fish and Wildlife Service.

Tribal Consultations under Executive Order 13175- The EO requires BOEM to consult with Tribal governments on all prelease and post-lease decisions that significantly or uniquely affect their communities.

ENVIRONMENTAL ASSESSMENTS



Environmental information supports BOEM decision-making

BOEM's environmental assessments provide essential information for decisions related to conventional energy activities, such as authorization of geological and geophysical exploration; planning for the National OCS Program; lease sales; exploration and development plans; as well as more specific authorizations and permits, including decommissioning. Similarly, BOEM reviews proposed leasing and site assessment, construction and operation, and other plans under the Renewable Energy Program, as well as proposed leasing of sand and gravel resources under the Marine Minerals Program. BOEM's environmental analyses not only evaluate potential environmental impacts and alternatives to proposed actions, but also identify measures to mitigate impacts that potentially may be incorporated into requirements through regulatory vehicles such as permit conditions, lease stipulations, terms and conditions of plan approval, and notices to lessees.

➤ Programmatic Environmental Analyses

BOEM's programmatic environmental analyses and comprehensive planning form the centerpiece to the development of a National OCS Program. BOEM prepares analytic documents to address the potential impacts of activities it oversees. These include NEPA documents such as environmental impact statements (EISs) that address "significant" impacts and environmental assessments that address "non-significant" impacts of a project, plan, policy or program associated with a proposed project. These documents provide a focused analysis of potential environmental issues and impacts, highlighting areas that may be sensitive to impacts and may warrant consideration of mitigation or protection. BOEM uses a phased approach to environmental review wherein National or Programmatic-level analyses are prepared first, followed by increasingly site-specific analyses at subsequent stages of approval for things such as decisions on geophysical survey and geological sampling permit applications, operators' plans for exploration and development, and other related industry activities.

In FY 2019, BOEM worked closely with the Council on Environmental Quality and the DOI Office of Environmental Policy and Compliance and the DOI Deputy Secretary's Office to implement environmental streamlining efforts under EO 13807 — *Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure* — and SO 3355 — *Streamlining National Environmental Policy Reviews and Implementation of Executive Order 13807*. This work entailed the examination and reworking of timelines associated with environmental analyses and reviews to fit within streamlined schedules, as well as a determination of which of BOEM's Federal actions would be considered major infrastructure projects that would require enhanced coordination such as EIS work.

for renewable energy construction and operations plans. In FY 2020, the Program will continue to coordinate streamlining efforts and conduct effective environmental analyses in a timely, coordinated, and transparent manner.

During FY 2019, BOEM continued preparation of the next National OCS Oil and Gas Leasing Program as directed by EO 13795 — *Implementing an America-First Offshore Energy Strategy* — and prepared a draft programmatic environmental impact statement (Programmatic EIS). This document analyzed the potential impacts of a National OCS Program and considered comments received on the Draft Proposed Program. In March 2019, development of a new National OCS Program was put on hold following the U.S. District Court for the District of Alaska's ruling (Case No. 3:17-cv-00101-SLG) that President Trump's rescission of area withdrawals declared by President Obama was not authorized and that only Congress could rescind the withdrawals made under Section 12(a) of the OCS Lands Act (43 U.S.C. 1341(a)). The Department continues to assess the best path forward to meet the President's objective of maintaining the Nation's position as a global energy leader and complying with our statutory mandate to prepare and maintain a leasing schedule that will best meet the Nation's energy needs. The current National OCS Program for 2017-2022 will expire at the end of June 2022; therefore, preparation of environmental analyses is scheduled to begin in FY 2020 and continue through FY 2021 to ensure that there is no lapse in Programs.

During FY 2019, BOEM prepared environmental reviews for lease sales under the 2017-2022 National OCS Program in the Gulf of Mexico. In addition, BOEM began work on the EIS for the first lease sale scheduled in the 2019-2024 Draft Proposed Program in the Beaufort Sea in anticipation of a new 2019-2024 National OCS Program. Once the Secretary determines that development of the new National OCS Program is no longer on hold, BOEM will prepare new environmental review documents for lease sales in that Program during FY 2020 and FY 2021. Ongoing environmental review work will also continue as needed in support of Gulf of Mexico sales scheduled for 2020-2022 under the current 2017-2022 National OCS Program.

BOEM's review of lease sales, site-specific projects, and other proposals requires advanced coordination with other expert stakeholders, such as NMFS, FWS, and NPS. Consultation with resource agencies helps BOEM identify effective mitigation practices to avoid or minimize harm to protected or managed species and habitat. BOEM must incorporate the results of these consultations within its decisions and authorizations. Additionally, geological and geophysical (G&G) permits issued by BOEM require operators to obtain incidental take authorizations for marine mammals from NMFS. Per the streamlining imperative identified in EO 13795 and SO 3350, BOEM and NMFS held a joint kick-off meeting in July 2019 to develop a detailed Endangered Species Act and Marine Mammal Protection Act streamlining plan. In FY 2020, BOEM and NMFS will continue to develop details and mechanisms to implement the streamlining effort. In FY 2021, BOEM will implement the final streamlining plan to expedite Marine Mammal Protection Act incidental take authorization requests and Endangered Species Act consultations for G&G permits across all three of its programs.

➤ **Assessments in the Atlantic OCS**

BOEM conducts environmental analyses in the Atlantic OCS for conventional and renewable energy activities and marine mineral activities.



Block Island Wind Farm offshore Rhode Island

In FY 2018, BOEM initiated planning and preparation for new lease sale EISs for conventional energy that may be needed if new areas are included in the next National OCS Program. To support these efforts, BOEM held public meetings to gather stakeholder input. During FY 2019, the 2019-2024 National OCS Program development and subsequent implementation was placed on hold.

Much of BOEM's renewable energy efforts have centered on potential wind energy in the Atlantic OCS. Currently, BOEM oversees 15 active commercial wind energy leases in the Atlantic OCS, held a lease sale on December 13, 2018, and approved 8 Site Assessment Plans to date. BOEM prepares

environmental assessments to support its leasing decisions, including lease areas and stipulations. In FY 2020 and FY 2021, BOEM is planning environmental assessments for potential lease sales in the New York Bight and offshore the Carolinas, Oregon, and California. In addition to considering the impacts of site characterization surveys that would result from lease issuance, these environmental analyses also programmatically consider site assessment activities (i.e., installation and operation of meteorological buoys). BOEM conducts NEPA analysis on construction and operations plan submissions, which take the form of EISs. BOEM currently is processing five construction and operations plans for commercial-scale wind energy facilities offshore Rhode Island, Massachusetts, Delaware, and New Jersey, and anticipates receiving up to six construction and operations plans in FY 2020 for commercial-scale wind energy facilities offshore Maryland, New York, Rhode Island, and Massachusetts. The EISs for the Vineyard Wind Project and the South Fork Wind Farm were initiated in FY 2018 and FY 2019, respectively.

➤ **Assessments in the Gulf of Mexico OCS**



Killer whale observed in the Gulf Stream

Due to the high volume of oil and gas activity, BOEM prepares hundreds of NEPA documents and completes thousands of resource-specific reviews every year. The need for OCS sand and gravel for coastal restoration and beach renourishment projects in the Gulf of Mexico, as well as offshore the Atlantic Coast, has also increased in recent years, leading to an increase in the preparation and reviewing of NEPA documents in support of these activities.

In FY 2019, BOEM documented the NEPA adequacy of the *Gulf of Mexico OCS Lease Sale Final Supplemental Environmental Impact Statement 2018* and subsequently published two Records of Decision to support Gulf of Mexico Lease Sales 252 and 253. In anticipation of the release of a new National OCS Program, BOEM prepared a draft supplemental EIS for lease sales that would occur under the new Program through proposed lease sale 261. These sales were previously analyzed under the existing Multisale EIS. However, BOEM discontinued this Supplemental EIS, as no supplementation triggers had been reached. Additionally, BOEM began preparation of the documentation of NEPA adequacy for lease sale 254.

In FY 2019, BOEM ensured NEPA compliance for 550 submittals of plans and ancillary activity notification, G&G permit applications, pipeline permit applications, and structure removal permit applications, by conducting site-specific environmental reviews for each submittal. The site-specific environmental review process includes subject matter expert reviews and consideration for extraordinary circumstances. The determination is then made whether to conduct further environmental review by completing a site-specific environmental assessment document or apply a categorical exclusion. Site-specific environmental assessment documents were completed for 46 plans, 50 G&G permit applications, 12 ancillary activity notifications, and 108 structure removals applications. Categorical exclusions were applied to 181 plans, 129 pipeline applications, and 24 G&G applications. In FY 2020 and FY 2021, BOEM anticipates the number of environmental reviews to increase slightly each year.

➤ Assessments in the Alaska OCS

BOEM recently received an exploration plan for some of the 14 existing leases in Cook Inlet and has started the plan review process. BOEM will be initiating NEPA analysis in the spring of 2020 for a lease sale scheduled for the Cook Inlet planning area in 2021. BOEM, in order to identify information needs, continues to evaluate what information is available to support NEPA analyses associated with potential future oil and gas activities in the Arctic and Cook Inlet, as well as in other planning areas that have potential oil and gas resources.

Additionally, in FY 2019, BOEM completed an environmental assessment for a geological and geophysical permit for a marine seismic survey in Cook Inlet. BOEM also provided assistance with NEPA analyses to BLM and the Exxon Valdez Oil Spill Trustees Council.

Finally, in FY 2020, BOEM anticipates conducting NEPA analyses to support decision-making on geological and geophysical and/or exploration activities on some of the 14 leases in Cook Inlet and the 40 leases in the Beaufort Sea. BOEM will also provide NEPA and consultation support to BSEE for oil spill drill exercises.



Beluga whales in the open ocean

➤ **Assessments in the Pacific OCS**

BOEM's Camarillo Office conducts environmental analyses for conventional energy activities. At the beginning of FY 2020 and continuing to present, there are 34 active oil and gas leases offshore California. BOEM's conventional energy assessments continue to focus on development and production from the 34 active leases as well as anticipating upcoming decommissioning proposals for 5 of the 23 existing platforms, an anticipated seismic survey, and participation in the National OCS Program. These NEPA activities will support both BOEM and BSEE and include the development of NEPA documents, assisting in the development of, and compliance with, mitigation measures, and review of the measures' effectiveness.

BOEM also focuses on renewable energy environmental analysis and will continue working with agencies and other stakeholders to advance research to support decisions regarding commercial renewable energy projects on the California, Oregon, and Hawaii OCS. BOEM received a research lease request for a grid-connected wave energy test facility on the OCS offshore Newport, Oregon. The lease requires a license from the Federal Energy Regulatory Commission (FERC) in addition to BOEM approval; BOEM is cooperating with FERC on the environmental review before making a leasing decision. BOEM joined with FERC as a cooperating agency for the environmental assessment associated with the project. A preliminary draft environmental assessment was published in the summer of 2018, and the final environmental assessment is expected in early FY 2020.

BOEM received three unsolicited lease requests from two different companies for commercial-scale floating wind developments offshore Oahu, Hawaii. The Department of Defense and BOEM are coordinating to determine if any wind energy areas are feasible offshore Hawaii. Accordingly, BOEM plans to delay the environmental assessment for an offshore wind lease sale and will continue evaluating the possibility of conducting a Hawaii wind lease sale in 2021 or later.

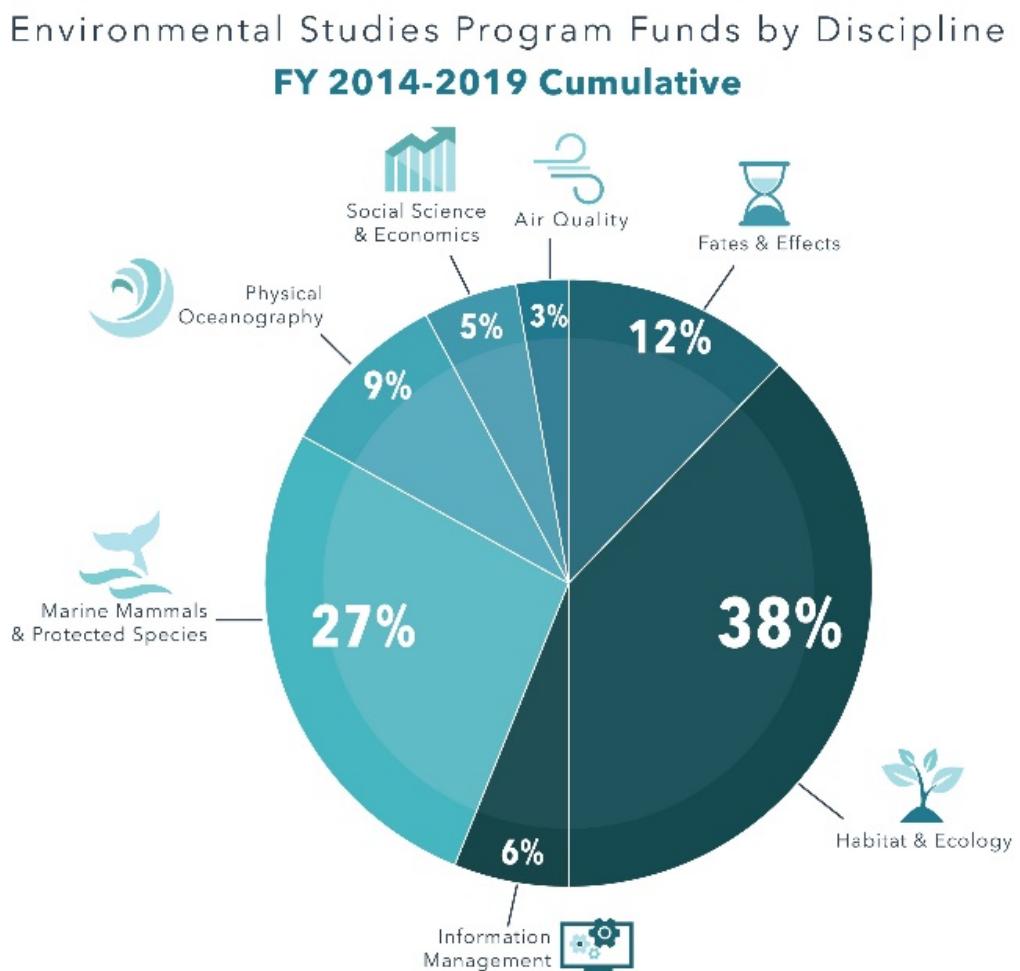
In California, BOEM received two unsolicited lease requests for offshore wind projects, one near Morro Bay on the central coast, and one on the north coast near Humboldt Bay. In October 2018, BOEM published a Call for Information and Nominations in response, identifying potential wind energy leasing areas and is working toward an environmental assessment followed by a potential lease sale in FY 2021.

ENVIRONMENTAL STUDIES PROGRAM

The OCS Lands Act 1978 amendments mandated that the Department have a comprehensive environmental studies program to provide sound scientific analysis of the potential impacts of offshore development, and an Oil and Gas Information Program to provide offshore operators and Federal and State governments with data and information from OCS activities. BOEM provides a large amount of the baseline information available for the assessment and management of impacts on human, marine, and coastal environments of the OCS and affected coastal areas. BOEM monitors these environments through the collection of data and the identification of changes. Using the information gathered, BOEM works to identify potential impacts on marine organisms and the environment resulting from potential OCS activity.

BOEM follows a Strategic Framework that asks three key questions: what does BOEM need to know, what strategic questions should be posed, and what criteria should be used to prioritize studies for addressing these questions? To ensure that selected studies address these questions, BOEM carefully evaluates potential studies and works with the National Academy of Science's Committee on Offshore Science and Assessment to develop its annual studies development plan. To make available the best possible information, the scope of BOEM's environmental studies extend across multiple disciplines with respect to OCS energy and mineral resources (see figure below). In addition, BOEM considers studies independently underway to design and implement effective research for decision-making. A major, continuing emphasis is on the impacts of conventional and renewable energy and mineral development, as well as on monitoring efforts, analyses to improve baseline characterizations, and analyses of trends. Research to understand the release, transport, fate, and effects of oil and other materials that may be discharged or spilled in the marine environment and on spill response is also a priority, conducted in close cooperation with BSEE's oil spill program. The Environmental Studies Program's *Strategic Framework*, which provides the details of the studies development process, can be found on the BOEM website.

Figure 21: Environmental Studies Program Funds by Discipline, FY 2014–2019 Cumulative



Note: This chart includes obligations for all studies supporting environmental information needs for all energy types and marine minerals.

➤ **Research Partnerships**

The valuable data collected through BOEM's Environmental Studies Program are used not only within BOEM but also by stakeholders, including other Federal agencies and State and local governments. To generate more information at a lower cost, BOEM leverages its resources and expertise through partnerships within the Department and with other Federal agencies, States, and academic institutions. Leveraging resources to satisfy common scientific needs is a central component of BOEM's approach to gathering robust scientific information for its decisions and consultation processes. Considering BOEM does not possess assets such as ships, autonomous underwater vehicles, etc., partnerships are necessary in order to achieve BOEM's applied science mission. By contributing personnel, equipment, facilities, and funds, BOEM and its partners can extend the scope of research to obtain maximum results. From FY 2013 to FY 2019, BOEM provided over \$91 million to Federal partners to conduct BOEM-designed scientific environmental work. In FY 2019, the Program finalized 31 studies, 9 of which were conducted through partnerships.

Partnerships with Federal agencies, such as the National Science Foundation, NOAA, and FWS, are typically established through interagency agreements and through the National Oceanographic Partnership Program (NOPP), a collaborative community of Federal agencies working to improve knowledge of the ocean environment.



A young, molting Pomarine Jaeger observed over the Atlantic Ocean

For example, during FY 2019 and through FY 2022, BOEM is supporting the Deep Sea Exploration to Advance Research on Coral/Canyon/Cold seep Habitats (DEEP SEARCH) research study. This study is a multiyear, multiagency study conducted to characterize the deep-sea ecosystems of the U.S. mid- and south Atlantic. NOPP is sponsoring this study, which is funded through an interagency partnership between the NOAA, BOEM, and USGS. In the past three years, the study team has collected over 2,800 biological and geological samples and mapped over 14,966 square kilometers of seafloor. In 2019, while exploring methane cold seeps 36 miles offshore North Carolina, scientists discovered 85 linear miles of *Lophelia* coral offshore South

Carolina and chemosynthetic vestimentiferan tubeworms, marking the first time ever that tubeworms have been observed in this part of the Atlantic.

In FY 2020 BOEM continues to lead the Marine Arctic Ecosystem Study—a partnership of Federal, State, Tribal, industry, academic, and non-governmental organizations. The study goal is to advance our understanding of ecosystem structure and function in the Chukchi and Beaufort shelves. This goal includes identifying ecosystem drivers and associated responses, from zooplankton to marine mammals, as well as characterizing biophysical and chemical interactions. A particular focus is on increasing our understanding on the combined dynamics of ocean currents, eddies, and river plumes, as well as testing new technology to assess whether it can better associate marine mammal presence with environmental conditions. NOPP launched the project, which is being conducted with partners on both sides of the U.S.-

Canadian border. The data from the project will be used to understand better ecosystem structure and function, which also are relevant for climate change studies conducted through a collaboration with the Alaska Ocean Acidification Center.

Another example of a successful partnership has been the collaboration between BOEM and NASA to develop the next generation of animal telemetry. BOEM is partnering with NASA to leverage space-based transceivers aboard small satellites, called CubeSats, as a low-cost method to improve animal tracking. Available space-based assets for tracking ocean animal movement rely on limited spatial and temporal coverage, proprietary technology, and limited bandwidth. Marine animals, such as sea turtles that migrate hundreds and even thousands of miles, may come to the surface only occasionally—providing a narrow window of time to locate tagged animals and transmit data. To better track marine mammal movement, NASA and BOEM are evaluating an innovative, low-cost, and open source solution that could increase receiving options, expand the number of data providers, and lead to more affordable data acquisition. This study is investigating the feasibility of transitioning to a more robust system that leverages CubeSats on an open standard common operating framework.

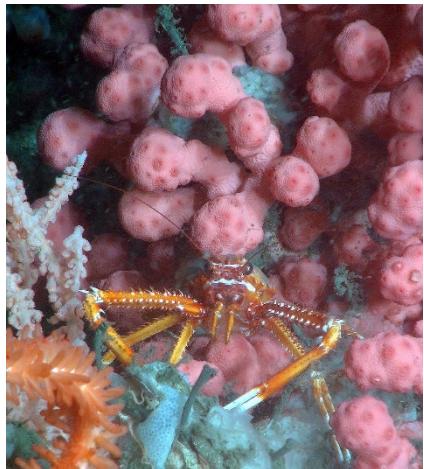
BOEM also supports collaborations with the academic community through the Coastal Marine Institutes located at the University of Alaska Fairbanks and Louisiana State University. As part of the Alaska Coastal Marine Institute, the University of Alaska Fairbanks is beginning the process of identifying new studies for FY 2020. New studies in FY 2020 are addressing topics such as the utilization of the under-ice habitat by Arctic Cod in the western Arctic Ocean; evaluating new assessment approaches for coastal ice seal haulout areas and behavior in the Alaskan Beaufort Sea; and, developing a better understanding of kelp forests in the Boulder Patch of the Beaufort Sea. Another Coastal Marine Institute study through Louisiana State University is providing a better understanding and quantification of the post-dredging evolution of OCS sediment borrow areas by collecting new physical oceanographic, geological, and geophysical data at two borrow areas offshore Louisiana. The study will evaluate how to best utilize Gulf of Mexico OCS sand resources while minimizing the impacts to oil and gas pipeline infrastructure. BOEM funded \$1,053,000 in FY 2019 and plans on funding approximately \$190,000 in FY 2020 for continuing cooperative agreements with Coastal Marine Institute partners.

Through the Cooperative Ecosystem Studies Unit (CESU) Network, BOEM can improve the scientific base for managing the OCS through access to a collaborative network of Federal and academic researchers and technical experts. Many projects include opportunities to train students and contribute to the next generation of environmental science leaders. BOEM's Camarillo Office has a few ongoing studies within the CESU Network, primarily with the University of California and the California State University systems. For example, a continuing study on *Net Environmental Benefits Analysis of Pacific Platform Decommissioning Scenarios*, a joint effort among BOEM, BSEE, and the University of California Santa Barbara, is providing valuable information on the potential use of a Rigs-to-Reef program in California. Another ongoing BOEM study within the CESU Network is Multi-Agency Rocky Intertidal Network (MARINe), which is monitoring rocky intertidal sites adjacent to OCS production facilities along the Pacific coast, allowing BOEM to directly assess potential and real impacts from OCS operations. The Anchorage Office has several ongoing studies within various CESUs. Highlighted studies include work on *Model-based Essential Fish Habitat (EFH) Descriptions for Arctic Cod, Saffron Cod and Snow Crab in the Alaska Arctic; Landfast Ice in the Beaufort and Chukchi Seas and Under Ice*

Circulation Processes on the Beaufort Sea Shelf, and Impacts of Sedimentation and Drivers of Variability in the Boulder Patch Community Beaufort Sea. BOEM funded \$3.4 million in FY 2019 and plans on funding approximately \$1.7 to \$2.0 million in FY 2020 for continuing cooperative agreements with CESU institutions.

➤ **National Studies**

The studies development plan includes research relevant to decision-making at all levels of government organizations, and many studies are of global interest. These national studies are managed centrally by BOEM's Office of Environmental Programs, though BOEM staff from its regional and program offices participate and may lead projects. The fundamental distinction of national studies is their intention to address issues of broad interest rather than specific interest to a region or program.



Spiny Lobster in Coral

In FY 2020, BOEM will focus research to better understand how certain marine mammals, sea turtles, and zooplankton interact with sound. These studies will allow BOEM, through its Center for Marine Acoustics, to model more accurately the potential effects of sound from Federally-permitted or authorized activities on the OCS. Additionally, BOEM will fund studies to provide updated information to support air quality and oil spill modeling efforts conducted through the BOEM's Center for Marine Air Quality and the Center for Oil Spill Risk and Impacts.

BOEM's national studies include a long-term partnership with the Smithsonian's National Museum of Natural History to preserve biological specimens acquired from federally funded research, including sequenceable DNA, and to maintain and provide quality assurance for the research databases associated

with the specimens. BOEM's long-term partnership with the Smithsonian National Museum of Natural History provides valuable information, especially with regard to deep sea benthic ecology so that OCS leasing, exploration, and development activities can be conducted while ensuring these sensitive ecosystems are avoided. Many of these invertebrates have not had DNA sequencing and thus must be identified and archived appropriately for scientific posterity.

BOEM has enhanced the public dissemination of environmental data sets, reports, and other study products maintained by BOEM on its website, the Environmental Studies Program Information System (<https://marinecadastre.gov/espis/>). These efforts and others support the government-wide Open Data Initiative to make data from research available to the public. BOEM has a long-standing commitment to ensuring that publications and samples are archived to meet future information needs.

➤ **Atlantic OCS Studies**

In the Mid- and South Atlantic planning areas, BOEM continues to plan and conduct studies. Baseline studies are of special importance in this frontier region and need to span the relevant geographic area of

interest (all the way out to ultra-deep waters) and the variety of biological, chemical/physical, and socioeconomic issues relevant to BOEM environmental analyses. Partnerships with other Federal agencies play an important role in ongoing baseline studies, including the Atlantic Marine Assessment Program for Protected Species, now in its third phase, and the Mid-Atlantic Deepwater Canyons and Shipwrecks study, involving NOAA, FWS, Navy, and USGS. In the future, BOEM plans to implement long-term environmental monitoring capabilities in Atlantic deep waters to assess the present state of the environment and possible trends over time related to natural and human-induced variability. An interdisciplinary monitoring approach will be adopted to understand biological species densities and distributions, the physiochemical mechanisms driving change, and human use of the environment. These measurements will test the efficacy of mitigations, such as for minimizing noise impacts on marine mammals, and will contribute to oil spill risk analysis, air quality, and predictive-fisheries modeling.

During FY 2021, BOEM will continue to address impacts of energy development on marine life. These studies will include research on the impacts of sound on fish and sea turtles, monitoring construction activities at wind facilities, and improving our knowledge base about seabirds. The Atlantic Deepwater Ecosystems Observatory Network (ADEON) continues into FY 2021 and provides much-needed baseline data within this area and will provide capability for monitoring long-term environmental changes and testing BOEM mitigations. ADEON serves the advancement of the Renewable Energy Program by providing needed environmental and socio-economic information to inform future development.

For FY 2021, BOEM will continue to collect baseline information about the marine environment in support of future offshore energy development. Studies will address key questions in support of post-construction onsite environmental mitigation measures for offshore wind.

➤ **Gulf of Mexico OCS Studies**

Long-term environmental monitoring is combined with experimental research to give OCS decisions a firm scientific base. Studies analyze and explore the ocean ecology from coastal marsh to ocean abyss, recognizing that oil and gas activities affect all habitats and that new technologies are facilitating activities in deeper waters. BOEM is especially challenged to provide the information and oversight needed for developing these new frontiers, as biological and other environmental information currently is sparse and often outdated.

In FY 2020, BOEM will continue a variety of monitoring activities. The long-term coral reef monitoring program at the Flower Gardens Banks National Marine Sanctuary is in the process of being extended to FY 2022. This long-standing monitoring program has demonstrated that oil and gas production can co-exist with a healthy, productive marine coral ecosystem, ensuring the long-term health of the sanctuary.

A passive acoustic monitoring study through FY 2020 has started to establish a long-term passive acoustic monitoring database using moored acoustic recorders at permanent stations throughout the Gulf of Mexico. Knowledge



Juvenile Spotted Drum and Boulder Coral

gained from using passive acoustic monitoring to observe sperm whale populations will contribute to the protection of the species while allowing seismic activity to proceed in the Gulf in an environmentally sound manner.

The ongoing Gulf of Mexico Marine Assessment Program for Protected Species study continues surveying protected seabirds, sea turtles, and marine mammals. The study focuses on collecting seasonal data on the abundance, distribution, and behavior of marine mammals, sea turtles, and seabirds throughout the Gulf of Mexico exclusive economic zone, providing spatially explicit data to inform decisions. This study closely coordinates its activities with ongoing passive acoustic monitoring studies. The study results will inform FY 2021 studies and beyond with up-to-date survey information about protected seabirds, sea turtles, and marine mammals so that ongoing oil and gas production can proceed with minimal impact to the environment.

Several new studies implemented in FY 2019 and continuing into FY 2020 will assess air quality modeling, seafloor adaptive management strategies, and recreational use of OCS infrastructure. The information from these studies will support multiple aspects of all three BOEM programs and inform future studies. A preliminary study examining coastal ambient air quality monitoring will inform environmental analyses for future NEPA and help BOEM evaluate air quality model predictions used to determine compliance with the National Ambient Air Quality Standards. This information will increase the accuracy of the air quality model and clarify the actual impact at the shoreline, producing a more realistic understanding of the contribution of OCS oil and gas production. A wind-tunnel study will conduct experiments to obtain information on oil platform downwash in order to simulate and model air flow and air dispersion in the atmospheric boundary layer. Results from this study will produce better impact predictions and provide for realistic regulatory recommendations. A socioeconomic study will examine the recreational uses of OCS infrastructures, improving BOEM's cumulative analyses of overall decommissioning trends and recreational impacts. The information collected from this study will support the environmental analyses of future decommissioning activities and provide a better understanding of the economic impacts of all decommissioning activities including the Rigs-to-Reef program.

➤ Alaska OCS Studies



Walrus haulout near Point Lay, Alaska

BOEM's studies in the Anchorage Office currently focus on foundational research in the Beaufort Sea, Chukchi Sea and the Cook Inlet Planning Areas. Strengthening collaborative research opportunities is a priority, including the incorporation of traditional knowledge in decision-making. Other priorities include data synthesis, updating and improving oil spill risk analysis models, a comprehensive synthesis of impacts to marine mammals from oil and gas activities in the Alaska OCS, improving ice forecast modeling, and generating a revised baseline for subsistence activities in North Slope communities. For FY 2020, the Alaska Office received 65 study ideas from stakeholders, including public and private academic institutions; the general public; consultants; Tribal governments; and Federal agencies such as NOAA and the USGS.

To identify effects of development in the Arctic and other lease areas, BOEM continues to develop a wide range of studies, taking an integrated approach and using new technologies that facilitate research in the harsh Arctic environment to understand the effects on these critical resources and the people dependent upon them. Studies with an Arctic focus in FY 2020 will seek to extend the monitoring conducted in several recently completed projects in the Beaufort and Chukchi Seas (to better understand river overflow on sea ice and strudel scour, improve our understanding of subsistence activities, as well as effects from changes in ocean currents and sea ice, and a northward migration of species).

In FY 2020, BOEM will address anticipated activities in the Cook Inlet area with two new studies, the first will monitor the acoustic environment adjacent to rivers in lower Cook Inlet, an area important for Beluga whales; and the second will quantify sea otter abundance, distribution, and foraging intake, using innovative and traditional methodologies.

Studies in FY 2021 will seek innovative ways to extend the monitoring conducted in several recently completed projects in the Beaufort and Chukchi Seas (trace metal concentrations, marine mammal movements and behaviors, incorporating traditional knowledge, subsistence activities, and effects from changes in ocean currents and sea ice).

➤ **Pacific OCS Studies**

Within the Pacific OCS Planning Areas, which include the OCS offshore California, Oregon, Washington, and Hawaii, BOEM studies continue to evolve in response to the changes in: (1) the geographic areas of activity and study; (2) the emphasis of disciplines highlighted for research; (3) the information needs for the mature oil- and gas-producing area offshore California; (4) focus to include frontier areas for renewable energy offshore California, Oregon, and Hawaii; and (5) prospective interest in marine minerals. The Camarillo Office's responsibility encompasses ongoing oil and gas operations, potential renewable energy development from wind and marine hydrokinetic energy, and marine minerals (i.e., sand, gravel, and critical minerals). Partners play a key role in Pacific studies. For FY 2020, the Camarillo Office received 41 study ideas from stakeholders, including universities, consultants, Federal agencies (NOAA, FWS, USGS, and the Department of Energy's National Renewable Energy Laboratory), State agencies (California and Oregon), a Tribal government, and non-profit organizations.

For conventional energy, the Camarillo Office's study priorities include continued monitoring of environmental conditions adjacent to oil and gas activities offshore California and collecting environmental and socioeconomic information to prepare for decommissioning. Other study priorities include refining information about environmental conditions and biological communities in areas of potential renewable energy development offshore California and obtaining baseline information in areas



BOEM intertidal study monitoring mussels in Northern California

of renewable energy potential offshore Hawaii. The Camarillo Office works closely with the Marine Minerals Division to evaluate growing interest in Pacific sand and gravel as well as critical minerals.

In FY 2020, BOEM anticipates starting several new studies to inform expected decisions regarding offshore wind energy and oil and gas decommissioning. Examples include (1) a West Coast marine mammal passive acoustic monitoring program using drifting buoy technology, (2) a stakeholder-suggested study focused on migratory pathways of Black Brant (a bird species that winters off central and northern California), and (3) a partnership with USGS and NOAA to support a major West Coast deepwater mapping and habitat characterization initiative.

Planned FY 2021 new starts will be identified following stakeholder input. However, BOEM's Pacific scientists and managers are already discussing data and information needs as well as opportunities associated with the Motus Wildlife Tracking System, an international collaborative network that uses coordinated automated radio-telemetry arrays to study movements of small flying organisms including birds and bats, and new investment in the evolution of a Pacific marine biodiversity observing network.

OUTLOOK FOR ENVIRONMENTAL PROGRAMS

Looking forward, BOEM will continue to manage OCS oil and gas, marine minerals, and renewable energy development using the best available environmental analyses, studies, and partnerships conducted through BOEM's Environmental Programs. These efforts are vital to ensuring that the potential impacts of OCS activities on the environment are understood and that appropriate protective measures are applied. In direct support of BOEM activities, the Environmental Programs will continue to focus the use of cross-cutting and regional environmental analyses for all OCS regions and activities, and will create and expand centers of expertise focusing on complex issues such as marine acoustics, air quality, and oil spill risk and impacts. BOEM will continue to integrate science needs across programs and resources in order to effectively and timely inform decision-makers. To these ends, BOEM will utilize partnerships and will align and develop those partnerships to create an informed collaborative community with an interest in OCS resources and a desire to protect the environment. BOEM's focus and dedication to using the best available and most up-to-date, science-based environmental information will continue, providing effective environmental safeguards for the development of OCS energy and mineral resources.

FISCAL YEAR 2021 BUDGET

Bureau of Ocean Energy Management

Executive Direction

Table 14: Executive Direction Budget Summary

	2019 Enacted	2020 Enacted	Internal Transfers	Fixed Costs	Program Changes	2021 Request	vs. 2020 Enacted
Executive Direction <i>FTE</i>	(\$000) 82	16,973 82		+270	-202 -1	17,207 81	+68 -1

This activity funds Bureau-wide leadership, direction, management, coordination, communications strategies, outreach, and regulatory development. It includes functions such as: managing the budget planning and execution processes, Freedom of Information Act activities, overseeing official documents, international affairs, managing administrative services, bureau-wide information technology management and governance, congressional and public affairs, policy analysis, and regulations.

The FY 2021 budget will support:

- **Strategic Leadership:** Bureau-wide policy guidance and leadership, including the implementation of administrative priorities and policies.
- **Budget:** Manage the budget formulation and execution processes, from the development of the annual budget justification through the expenditure of appropriated funds, in conformance with all necessary policies, regulations, and statutes.
- **Freedom of Information Act:** Freedom of Information Act officers within BOEM work to ensure the timely resolution to any request as well as staying up to date with any legislative actions that pertain to Freedom of Information Act policy.
- **Public Affairs:** Coordinate internal and external communications, including outreach to State and local governments and other stakeholders.
- **Congressional Affairs:** Liaise for BOEM on all Congressional and legislative matters that relate to BOEM's programs, including coordination with the Department of the Interior and other Federal executive agencies.
- **International Affairs:** Continue advancing BOEM's Office of International Affairs, which fosters cooperation with other Nations and enables access to their institutional knowledge for offshore energy and mineral resources. By sharing information regarding best practices and then considering such information in its domestic operations, BOEM promotes its domestic mission to manage development

of U.S. Outer Continental Shelf energy and mineral resources in an environmentally and economically responsible way.

- **Program Coordination:** Oversee and coordinate Bureau-level programs with BOEM offices and regions, including administrative policies and procedures. In FY 2020, BOEM will continue implementing its strategic human capital plan, including improved onboarding for new employees and programs for employee development, such as the Navigating Leadership Program. BOEM will also continue the implementation and evaluation of progress made towards goals identified in the Corrective and Preventative Action Plan to prevent and eliminate harassment.
- **Information Technology:** Bureau-wide information technology management and governance ensuring that technology aligns with mission delivery requirements.
- **Regulatory and Policy Coordination:** Manage BOEM's national regulatory policy and provide analysis of programmatic and management initiatives.

SUMMARY OF 2021 PROGRAM CHANGES

Program Changes from 2020 Enacted Budget	(\$000)	FTE
GrantSolutions Enterprise System	+6	
Ethics Program Transfer	-208	-1
Total Program Changes	-202	-1

GrantSolutions Enterprise System (+\$6,000; 0 FTE). Funding supports the allocated share of operating costs for the GrantSolutions enterprise system to improve the processing and transparency of grants and cooperative agreements across Interior. Cost allocations are based on an algorithm of use factors.

Ethics Program Transfer (-\$208,000; -1 FTE). The 2021 budget supports needed reforms to strengthen the culture of ethics within Interior. Over the last two years, Interior has taken several steps to enhance the emphasis on ethics in the Department, including increasing the number of ethics officers and increased vigilance regarding the Department's leaders and employees obligation to hold themselves and their colleagues accountable for ethical conduct. Ethics is a top priority in all decision making and operations.

This past summer, Secretary Bernhardt continued this commitment to transform Interior's ethics program by signing Secretarial Order 3375, which restructures the ethics program by unifying disparate bureau ethics programs into a centrally-managed office under the Solicitor. The Order streamlines the reporting structure for ethics personnel, establishes the Departmental Ethics Office, and clarifies roles and responsibilities for the Department's employees. The FY 2021 budget implements this reorganization to restructure the ethics program by transferring bureaus' ethics funding and FTEs to the Departmental Ethics Office in the Office of the Solicitor budget.

PROGRAM OVERVIEW

➤ Office of the Director

The Office of the Director includes the BOEM Director and Deputy Director and their immediate staff, as well as the offices of the Regional Directors and their immediate staff. These components of the BOEM staff are responsible for providing policy guidance and overall leadership within the BOEM organization, managing official documents, international affairs, and Freedom of Information Act requests.

➤ Office of Public Affairs

The Office of Public Affairs is responsible for BOEM's internal communication, traditional and social media relations, communication strategy development and outreach. Public Affairs staff coordinates the implementation of an effective and inclusive outreach program to numerous target audiences, including State and local governments, the energy industry, related trade associations, the environmental community, Tribes, energy consumer groups and the public.

➤ Office of Congressional Affairs

The Office of Congressional Affairs serves as the primary point of contact with Congress and is responsible for the coordination of all communication and outreach with Congressional offices, as well as ensuring the effective exchange of information. The Office of Congressional Affairs serves as the liaison for BOEM on all Congressional and legislative matters that relate to BOEM's programs, including managing coordination with the Department of the Interior and other Federal executive agencies.

➤ Office of Budget and Program Coordination

The Office of Budget and Program Coordination is responsible for managing the budget formulation and execution processes, as well as administrative services. The organization assesses current budgetary resources, provides recommendations for program and budget initiatives to senior BOEM executive staff, manages the personnel allocation system, and formulates and assists in the defense of BOEM's budget submissions to the Department, OMB, and Congress. The organization is responsible for overseeing coordination with administrative service providers in the management of BOEM administrative activities and serves as the point of contact for any service-related questions. In addition, the office is responsible for emergency management, strategic human capital planning, administrative policies and procedures, and talent management. The Office of Budget and Program Coordination is also responsible for Bureau-wide information technology management and governance ensuring that technology aligns with mission delivery requirements. Responsibilities in this area include the oversight of new and ongoing information technology initiatives, improved service delivery through application development, technology refresh, data governance, privacy and records management.

➤ Office of Policy, Regulation and Analysis

The Office of Policy, Regulation and Analysis serves as the principal office to lead and oversee BOEM's

national regulatory, policy, and evaluation programs and provides the Director with independent review and analysis of programmatic and management initiatives. The Office of Policy, Regulation and Analysis leads and provides oversight for Bureau cross-program initiatives to ensure consistent BOEM-wide implementation that directly support Congressional, Presidential, Departmental, and Bureau directives, laws, orders, guidance, proposals, and mandates. The Office of Policy, Regulation and Analysis provides BOEM oversight in several critical areas including regulatory planning, development, and promulgation; inter-agency coordination; policy and directives management; activity-based costing; strategic and performance planning; cost recovery; and internal control management, program evaluation, and compliance.

FISCAL YEAR 2021 BUDGET

Bureau of Ocean Energy Management

Appropriations Language

Below is the Appropriations language for the Ocean Energy Management account within BOEM. In FY 2021, BOEM proposes no changes to this language. However, BOEM does propose changes to existing General Provisions.

OCEAN ENERGY MANAGEMENT

For expenses necessary for granting and administering leases, easements, rights-of-way and agreements for use for oil and gas, other minerals, energy, and marine-related purposes on the Outer Continental Shelf and approving operations related thereto, as authorized by law; for environmental studies, as authorized by law; for implementing other laws and to the extent provided by Presidential or Secretarial delegation; and for matching grants or cooperative agreements, [\$191,611,000] \$188,815,000, of which [\$131,611,000] \$125,760,000, is to remain available until September 30, [2021] 2022 and of which [\$60,000,000] \$63,055,000 is to remain available until expended: Provided, That this total appropriation shall be reduced by amounts collected by the Secretary and credited to this appropriation from additions to receipts resulting from increases to lease rental rates in effect on August 5, 1993, and from cost recovery fees from activities conducted by the Bureau of Ocean Energy Management pursuant to the Outer Continental Shelf Lands Act, including studies, assessments, analysis, and miscellaneous administrative activities: *Provided further*, That the sum herein appropriated shall be reduced as such collections are received during the fiscal year, so as to result in a final fiscal year [2020] 2021 appropriation estimated at not more than [\$131,611,000] \$125,760,000: *Provided further*, That not to exceed \$3,000 shall be available for reasonable expenses related to promoting volunteer beach and marine cleanup activities. (*Department of the Interior, Environment, and Related Agencies Appropriations Act, 2020*)

Explanation of Appropriations Language

The following provides a provision-by-provision explanation and citation of authority for each component of the appropriations language.

1. *For expenses necessary for granting and administering leases, easements, rights-of-way and agreements for use for oil and gas, other minerals, energy, and marine-related purposes on the Outer Continental Shelf and approving operations related thereto, as authorized by law;*

This provision authorizes BOEM to expend funds for specific, mission-related purposes pursuant to BOEM's primary authorization, the OCS Lands Act, as amended, as well as myriad additional statutes that guide its activities, such as the National Environmental Policy Act of 1969 (NEPA), the Submerged Lands Act of 1953, the Energy Policy Act of 2005, and others.

2. *...for environmental studies, as authorized by law;*

This provision authorizes BOEM to expend funds for environmental studies, pursuant to law. Specifically, BOEM's Environmental Studies Program function was established in 1973 by the OCS Lands Act, which directed the Secretary of the Interior, now through BOEM, to –

“ . . . conduct a study of any area or region included in any oil and gas lease sale or other lease in order to establish information needed for assessment and management of environmental impacts on the human, marine, and coastal environments of the Outer Continental Shelf and the coastal areas which may be affected by oil and gas or other mineral development in such area or region.”

43 U.S.C. §1346(a)(1).

“ . . . to predict impacts on the marine biota which may result from chronic low level pollution or large spills associated with Outer Continental Shelf production, from the introduction of drill cuttings and drilling muds in the area, and from the laying of pipe to serve the offshore production area, and the impacts of development offshore on the affected and coastal areas.”

43 U.S.C. §1346(a)(3).

“ Subsequent to the leasing and developing of any area or region, [to conduct] such additional studies as he deems necessary and shall monitor the human, marine, and coastal environments of such area or region in a manner designed to provide time-series and data trend information which can be used for comparison with any previously collected data for the purpose of identifying any significant changes in the quality and productivity of such environments, for establishing trends in the areas studied and monitored, and for designing experiments to identify the causes of such changes.” 43 U.S.C. §1346(b).

3. *...For implementing other laws and to the extent provided by Presidential or Secretarial delegation;*

This provision authorizes BOEM to expend funds on activities related to its mission that are delegated to the Bureau by either the President of the United States or the Secretary of the Interior. For instance, Section 388 of the Energy Policy Act of 2005 gives the Secretary of the Interior the authority to issue leases, easements, and rights-of-way on the OCS for activities that produce or support production, transportation, or transmission of energy from sources other than oil and gas. The Secretary has delegated

this responsibility to BOEM, and this provision allows BOEM to fund renewable energy activities on the OCS on behalf of the Secretary.

4. ...and for matching grants or cooperative agreements,

This language provides authority for BOEM to utilize matching grants or cooperative agreements to carry out mission-related functions. BOEM uses cooperative agreements with Federal and non-Federal partners to conduct environmental studies and to implement renewable energy and OCS sand projects.

5. ...\$188,815,000, of which \$125,760,000 is to remain available until September 30, 2022 and of which \$63,055,000 is to remain available until expended:

This provision identifies the amount of BOEM's total budget authority for FY 2021 (\$188,815,000). Of this total budget authority, \$125,760,000 is designated as two-year money, to be available from FY 2021 through the end of FY 2022. Meanwhile, \$63,055,000 of BOEM's budget authority – the amount associated with offsetting collections – is designated as no-year money with no expiration date. This enables BOEM to use no-year money to fund long-term projects like environmental studies.

6. ...Provided, That this total appropriation shall be reduced by amounts collected by the Secretary and credited to this appropriation from additions to receipts resulting from increases to lease rental rates in effect on August 5, 1993, and from cost recovery fees from activities conducted by the Bureau of Ocean Energy Management pursuant to the Outer Continental Shelf Lands Act, including studies, assessments, analysis, and miscellaneous administrative activities:

Since 1995, annual appropriations language has provided BOEM (and its predecessor bureaus) authority to keep rental revenues above the \$3.00/acre rate in effect on August 5, 1993, up to an annual cap, to fund current operations. This provision allows BOEM to use these rental receipts – as well as cost recovery fees for specific activities authorized by the OCS Lands Act, as authorized by the Independent Offices Appropriations Act – to partially fund mission-related activities. A listing of the specific cost recovery services and associated fees can be found on BOEM's website in the [“Fees for Services” section](#).

7. ...Provided further, That the sum herein appropriated shall be reduced as such collections are received during the fiscal year, so as to result in a final fiscal year 2021 appropriation estimated at not more than \$125,760,000:

This provision pertains to the availability of offsetting collections. The timing difference between the collection of rents and cost recovery fees and the availability of the funding for use as offsetting collections created significant operational challenges for the Bureau, so the language was amended to include this “safety clause” in FY 2014. The language allows BOEM to derive initial funding from the general fund of the Treasury, with amounts returned to the general fund at the end of the year once all collections have been received.

8. ...Provided further, That not to exceed \$3,000 shall be available for reasonable expenses related to promoting volunteer beach and marine cleanup activities.

This provision has been included annually since 1998 (P.L. 105-83) and authorizes BOEM to expend up to a certain amount for the promotion of volunteer beach and marine clean-up activities.

GENERAL PROVISIONS

The language provided below reflects General Provisions that are directly applicable to BOEM. For a complete, detailed discussion of the Department's proposed General Provisions, please refer to the General Provision section of the Office of the Secretary FY 2021 budget justification.

➤ DECOMMISSIONING ACCOUNT

BOEM requires companies operating on the OCS to provide financial assurance to cover lease obligations, primarily for decommissioning of facilities when they are no longer supporting production. Through the OCS Lands Act (43 U.S.C. 1338a), BOEM is further authorized to call for the forfeiture of that financial assurance and collect bonds or other security forfeitures from an OCS permittee, lessee or right-of-way holder that does not fulfill the requirements of its permit, lease, or right-of-way or does not comply with the regulations of the Secretary. Such forfeitures cover the cost to the U.S. of any improvement, protection, or rehabilitation work rendered necessary by the action or inaction that lead to the forfeiture. The determination to call for the forfeiture of a bond or security is made by the Regional Director for the BOEM regional office where the lease, permit or right-of-way is managed. Once collected, forfeited moneys are credited to BOEM's Ocean Energy Management (OEM) account to remain available until expended, and any funds in excess of the amount expended in performing the necessary work are returned to the permittee, lessee, or right-of-way holder.

During the reorganization of the Minerals Management Service into three separate entities, the specific authorities regarding bond forfeitures were not clearly assigned or updated. As a result, BOEM has the authority to call bonds and collect the associated funds, but BSEE is responsible for ensuring the necessary decommissioning work is done. Because the statute identifies the ROMM account (which is now the OEM account, i.e., BOEM's operating account) as the one in which funds would be collected, BSEE does not have the authority to spend the money. While BOEM can utilize a reimbursable service agreement to effectively transfer funds from the OEM account to BSEE, this is neither a practical nor efficient long-term solution.

Proposal: BOEM proposes to separate collections of forfeitures (of bonds or other securities) and bankruptcy distributions or settlements (associated with failure to perform or noncompliance) from the appropriations in its OEM account and administer them through a new Treasury account. To accomplish this, BOEM requests authority to transfer such funds to this new account and to direct all future such funds to the new account as well. BOEM will work with the Department, OMB, and Treasury to establish the Treasury account in which decommissioning funds can be managed, but in order to utilize this new account for the collection and administration of funds specific to decommissioning activities, the

underlying statute will need to be amended. Therefore, BOEM requests the following language be included either as an administrative or general provision:

SEC. 114. The fifth and sixth provisos under the amended heading “Royalty and Offshore Minerals Management” for the Minerals Management Service in Public Law 101-512 (104 Stat. 1926, as amended) (43 U.S.C. Sec. 1338a) are further amended by striking and replacing them with –

“Notwithstanding section 3302 of title 31, any moneys hereafter received as a result of the forfeiture of a bond or other security by an Outer Continental Shelf permittee, lessee, or right-of-way holder that does not fulfill the requirements of its permit, lease, or right-of-way or does not comply with the regulations of the Secretary, or as a bankruptcy distribution or settlement associated with such failure or noncompliance, shall be credited to a separate account established in the Treasury for decommissioning activities and shall be available to the Bureau of Ocean Energy Management without further appropriation or fiscal year limitation to cover the cost to the United States of any improvement, protection, rehabilitation, or decommissioning work rendered necessary by the action or inaction that led to the forfeiture or bankruptcy distribution or settlement, to remain available until expended: Provided further, That amounts deposited into the decommissioning account may be allocated to the Bureau of Safety and Environmental Enforcement for such costs: Provided further; That any moneys received for such costs currently held in the Ocean Energy Management account shall be transferred to the decommissioning account: Provided further, That any portion of the moneys so credited shall be returned to the bankruptcy estate, permittee, lessee, or right-of-way holder to the extent that the money is in excess of the amount expended in performing the work necessitated by the action or inaction which led to their receipt or, if the bond or security was forfeited for failure to pay the civil penalty, in excess of the civil penalty imposed.”

An alternative, though less desirable approach, would be the inclusion of a provision authorizing BOEM to transfer funds to BSEE for these purposes.

Explanation of Proposed Change: The requested language would do the following:

- 1) Clarify the treatment of funds from bankruptcy settlements in addition to bond forfeitures.
- 2) Amend this provision in the OCS Lands Act (43 USC 1338a) to add the word “decommissioning” to the list of purposes for which the funds in this account can be collected and used. This is because “decommissioning” is the term used in the BSEE and BOEM regulations and by the oil and gas industry, and adding it to the statute clarifies the purposes for which the funds in this new account shall be used.
- 3) Allow BOEM to transfer existing funds from OEM (current account) to the new account.

This proposal seeks to simplify how these funds are accounted for in the U.S. Treasury, and it would have no impact to Federal revenues or budgetary scoring.

➤ **DISCLOSURE OF DEPARTURE OR ALTERNATE PROCEDURE APPROVAL**

SEC. 117. (a) Subject to subsection (b), beginning no later than 180 days after the enactment of this Act, in any case in which the Bureau of Safety and Environmental Enforcement or the Bureau of Ocean Energy Management prescribes or approves any departure or use of alternate procedure or equipment, in regards to a plan or permit, under 30 C.F.R. § 585.103, 30 C.F.R. § 550.141; 30 C.F.R. § 550.142; 30 C.F.R. § 250.141, or 30 C.F.R. § 250.142, the head of such bureau shall post a description of such departure or alternate procedure or equipment use approval on such bureau's publicly available website not more than 15 business days after such issuance.

(b) The head of each bureau may exclude confidential business information.

Purpose: The 2021 Budget carries forward this provision, which requires BSEE and BOEM to disclose any departure or use of alternate procedure or equipment it prescribes or approves with regard to 30 C.F.R. § 585.103, 30 C.F.R. § 550.141; 30 C.F.R. § 550.142; 30 C.F.R. § 250.141, or 30 C.F.R. § 250.142. The provision directs the Bureaus to post a description of the departure or alternate procedure or equipment use approval on their public websites no more than 15 days following the issuance.

FISCAL YEAR 2021 BUDGET

Bureau of Ocean Energy Management

Disclosure of Administrative Expenses

This appendix is provided in compliance with Section 403 of Public Law 116-94, the Consolidated Appropriations Act of 2020, which states:

DISCLOSURE OF ADMINISTRATIVE EXPENSES

SEC. 403. The amount and basis of estimated overhead charges, deductions, reserves or holdbacks, including working capital fund and cost pool charges, from programs, projects, activities and subactivities to support government-wide, departmental, agency, or bureau administrative functions or headquarters, regional, or central operations shall be presented in annual budget justifications and subject to approval by the Committees on Appropriations of the House of Representatives and the Senate. Changes to such estimates shall be presented to the Committees on Appropriations for approval.

The majority of BOEM's external assessments are associated with the costs of the shared services approach that allows the Bureau to meet its administrative and information technology needs. BOEM implements this approach through reimbursable services agreements with BSEE, which are identified in the table below. Under this arrangement, BSEE provides a full suite of administrative services including acquisition management, equal employment opportunity, finance, human resources, information technology management, management support, personnel security, and support services. Maintaining these critical administrative functions within the Department provides the following benefits:

- Minimizing duplication of administrative entities across multiple organizations and optimizing efficiency.
- Providing a centralized administrative function that can, over time, allow the Department to pursue additional efficiencies.

The Department has strongly supported the expansion of business cross-servicing as a means to strategically expand high-quality, high-value shared services to improve performance and efficiency throughout the government.

Through this effort, BOEM and BSEE support the Department's and the Administration's efforts to increase the efficiency of core operations, reduce duplication and waste, enable investments in innovation, use shared services and common infrastructure, facilitate agency collaboration and co-funding, and implement innovative approaches to budgeting and resource management. Specifically, this arrangement has the added benefit of implementing standardized practices that further increase the productivity for highly skilled resources in both bureaus. By utilizing the shared services model, BOEM and BSEE continue to improve their best practices and maximize the use of administrative funds.

BOEM and BSEE regularly evaluate these support arrangements in joint quarterly meetings, and final

costs are determined at the end of the year based on FTE levels and hours billed. BSEE's costs to provide these services are also carefully managed and jointly approved by the respective agencies. Because these costs are regularly reevaluated, estimated out-year costs are based on prior year actuals and the stated billing methodology. Amounts shown in the table below are estimates and may not reflect final agreements or end of year obligations. Additionally, because BOEM has no dedicated budget line to pay for its administrative overhead, all external assessments are paid for through internal assessments to the Ocean Energy Management account.

Table 15: Disclosure of Administrative Expenses

Bureau of Ocean Energy Management Disclosure of Administrative Expenses (<i>dollars in thousands</i>)	FY 2020 Estimate	FY 2021 Estimate
Deductions, Reserves, or Holdbacks		
External Bureau Assessments		
Administrative RSA with BSEE	20,225	20,832
IT RSA with BSEE	11,907	12,503
Solicitor Support	2,007	1,980
Working Capital Fund Centralized Billing	2,017	2,026
Working Capital Fund Direct Billing	805	829
NARA	67	69
Total, External Assessments	\$ 37,028	\$ 38,238
Internal Bureau Assessments		
Ocean Energy Management	37,028	38,238
Total, Internal Assessments	\$ 37,028	\$ 38,238

Multiple IT support contracts provide operations, maintenance, management, and enhancement services to the Enterprise and the TIMS investment. In addition to the administrative contracts with BSEE, BOEM also contracts with the Office of the Solicitor for legal support. Other external assessments include the Department's Working Capital Fund, which supports Department-wide systems, such as the Financial Business Management System, which bureaus use for accounting and finance. BOEM is also externally assessed for information archiving through the National Archives and Records Administration (NARA).

FISCAL YEAR 2021 BUDGET
Bureau of Ocean Energy Management
Employee Count by Grade
(Total Employment)

Table 16: Employee Count by Grade

Bureau of Ocean Energy Management Employee Count by Grade (Total Employment)			
	2019 Actuals	2020 Estimate	2021 Estimate
Executive Level V	0	0	0
SES	6	7	7
Subtotal	6	7	7
SL - 00	1	1	1
ST - 00	0	0	0
Subtotal	1	1	1
GS/GM -15	44	45	45
GS/GM -14	157	155	156
GS/GM -13	192	194	195
GS - 12	68	77	80
GS - 11	43	49	52
GS - 10	2	2	2
GS - 9	23	25	29
GS - 8	8	10	10
GS - 7	11	12	11
GS - 6	11	11	11
GS - 5	0	1	2
GS - 4	0	0	0
GS - 3	0	1	1
GS - 2	0	0	0
GS - 1	0	0	0
Subtotal	559	582	594
Other Pay Schedule Systems	0	0	0
Total employment (actuals & estimates)	566	590	602

Notes on this table:

- All grades presented in this table include career, career-conditional, temporary, and political employees.
- GS refers to employees covered by the General Schedule classification and pay system established under the Classification Act of 1949, as amended. (5 U.S.C. chapter 53, subchapter III, and 5 CFR part 531).
- GM refers to employees covered by the General Schedule classification and pay system who are covered by the Performance Management and Recognition System termination provisions of Public Law 103-89 (former Performance Management and Recognition System employees).
- Estimates for both FY 2020 and FY 2021 assume the hiring of a new BOEM Director.

FISCAL YEAR 2021 BUDGET

Bureau of Ocean Energy Management

List of Acronyms

BOEM	Bureau of Ocean Energy Management
BSEE	Bureau of Safety and Environmental Enforcement
CESU	Cooperative Ecosystem Studies Unit
DOI	Department of the Interior
EO	Executive Order
ESA	Endangered Species Act
FERC	Federal Energy Regulatory Commission
FTE	Full Time Equivalent
FWS	U.S. Fish and Wildlife Service
FY	Fiscal Year
GIS	Geographic Information System
G&G	Geological and Geophysical
IT	Information Technology
MMPA	Marine Mammals Protection Act
MMIS	Marine Minerals Information System
NASA	National Aeronautics and Space Administration
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOPP	National Oceanographic Partnership Program
OCS	Outer Continental Shelf
P.L.	Public Law
SO	Secretarial Order
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USGS	U.S. Geological Survey

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