Environmental Assessment

Proposed OCS Lease Sale 180, Western Gulf of Mexico

WESTERN PLANNING AREA
Environmental Assessment

Proposed OCS Lease Sale 180, Western Gulf of Mexico

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Published by
U.S. Department of the Interior
Minerals Management Service
Gulf of Mexico OCS Region

New Orleans
March 2001
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Finding of No New Significant Impacts

The Minerals Management Service (MMS) has prepared an environmental assessment (EA) for proposed Lease Sale 180 in the Western Planning Area of the Gulf of Mexico Outer Continental Shelf (OCS). The environmental assessment is conducted to determine whether or not the information and analyses in the Final EIS for Proposed Lease Sales 171, 174, 177, and 180 (multisale EIS) have changed sufficiently to warrant further analysis for proposed Sale 180 in the Western Gulf of Mexico. Because the multisale EIS examined the environmental impacts of a sale similar in size, nature, and potential level of development as Sale 180, this EA tiers off the initial multisale EIS and incorporates much of the material by reference. It also re-examines the potential environmental effects of the proposed action and alternatives based on any new information regarding potential impacts or issues that were not available at the time the FEIS was prepared.

The information and analysis presented in the multisale EIS were reviewed. Two topics were determined to have new data requiring a re-evaluation of the environmental impact analysis: socioeconomics and essential fish habitat. The new information is presented in the EA. Also presented is an analysis based on the new information, prepared to determine if the kinds, levels, or locations of impacts foreseen in the multisale EIS will significantly change.

Based on the analysis in the EA, no new significant impacts were identified for proposed Lease Sale 180 that were not already assessed in the multisale EIS, nor was it necessary to change the conclusions of the kinds, levels, or locations of impacts described in that document. Therefore, the MMS has determined that a supplemental EIS is not required and is issuing this Finding of No New Significant Impacts.

Supporting Documents:

The EA for Proposed OCS Lease Sale 180, Western Gulf of Mexico (attached).

Final Environmental Impact Statement, Gulf of Mexico, Western Gulf of Mexico OCS Oil and Gas Lease Sales 171, 174, 177, and 180, May, 1998 (available upon request).

[Signature]
Director

[Date]
I. OBJECTIVES OF THE ENVIRONMENTAL ASSESSMENT

This environmental assessment (EA) is conducted to determine whether or not the information and analyses in the multisale Environmental Impact Statement (EIS) have changed sufficiently to warrant further analysis for proposed Sale 180 in the Western Gulf of Mexico. The EA tiers off the initial multisale EIS and incorporates all of the relevant material by reference.

It also reexamines the potential environmental effects of the proposed action and alternatives based on any new information regarding potential impacts and issues that were not available at the time the May 1998, Final EIS was prepared for Lease Sales 171, 174, 177, and 180.

Federal regulations allow for several similar proposals to be analyzed in one EIS (40 CFR 1502.4). Since the Outer Continental Shelf Lands Act, Gulf of Mexico sale proposal and projected activities are very similar if not almost identical each year; therefore, the MMS prepared a single EIS for all four Western Gulf sales in the 5-Year Program. The multisale approach is intended to focus the NEPA/EIS process on any differences between the proposed sales and on any new information and issues. Although the multisale EIS addressed four proposed sale actions, the Secretary makes only one sale decision each year.

II. PURPOSE AND NEED FOR THE PROPOSAL

The purpose of this proposed action is to make available for leasing those areas that may contain economically recoverable oil and gas resources in the Western Planning Area (WPA) of the Gulf of Mexico for energy use in the United States (U.S.). The Western Gulf of Mexico constitutes one of the world’s major oil- and gas-producing areas and has proved to be a steady and reliable source of crude oil and natural gas for more than 50 years. Oil from the Gulf of Mexico can help reduce the Nation’s need for oil imports and reduce the environmental risks associated with oil tankering.

III. THE PROPOSED ACTION AND ALTERNATIVES

A. PROPOSED ACTION

The proposed Lease Sale 180 planning area includes about 28.4 million acres (ac) located 14 to 357 kilometers (km) offshore in water depths ranging from 8 to 3,000 meters (m) (Figure 1). Proposed Sale 180 would offer for lease all unleased blocks in the WPA, with the following exceptions. Excluded from the proposed action are Blocks A-375 (East Flower Garden Bank) and A-398 (West Flower Garden Bank) in the High Island Area, East Addition, South Extension. The East and West Flower Garden Banks are designated as a national marine sanctuary. Also, in light of the President’s June 1998 withdrawal of all national marine sanctuaries from oil and gas leasing, additional blocks or portions of these blocks (High Island, East Addition, South Extension, Block A-401; High Island, South Addition, Blocks A-502 and A-513; and Garden Banks 135), which lie partially within the Flower Garden Banks National Marine Sanctuary, are deferred from the proposed action. Blocks 793, 799, and 816 in the Mustang Island Area have
Figure 1. Gulf of Mexico Outer Continental Shelf Western Planning Area and Location of Some Major Cities.
been removed from the proposed action as well. The Navy identified these blocks as needed for testing equipment and for training mine warfare personnel.

The proposed action and all subsequent activities resulting from it are subject to the existing regulations and proposed lease stipulations designed to reduce environmental risks. Three stipulations that have been applied by the Secretary to certain Western Gulf Outer Continental Shelf (OCS) leases for many years are included in the analysis for the proposed actions in the Final EIS for WPA Sales 171, 174, 177, and 180 (USDOI, MMS, 1998). These are the Topographic Features, Military Areas, and the Naval Mine Warfare Area Stipulations. Section II.C.1.c. of the Final EIS discusses the effectiveness of the stipulations.

The MMS estimates that this proposed sale could result in the production of 0.01 to 0.09 billion barrels of oil (BBO) and 0.57 to 1.93 trillion cubic feet (tcf) of gas. The MMS assumes a 35-year life of the leases resulting from the proposed action. Exploratory activity takes place over a 25-year period, beginning in the year of the sale. Development activity takes place over a 29-year period, beginning with the installation of the first production platform and ending with the drilling of the last development wells. Production of oil and gas begins by the second year after a proposed action and continues through the 34th year. Final abandonment and removal activities could begin about 2011 and would continue, as structures cease producing economically, resulting in removal of all projected platforms by the last year of the life of the leases.

B. ALTERNATIVES TO THE PROPOSED ACTION

Alternative B — The Proposed Action Excluding the Blocks Near Biologically Sensitive Topographic Features: Alternative B differs from Alternative A (the proposed action) by not offering the 61 unleased blocks of the 200 total blocks that are possibly affected by the proposed Topographic Features Stipulation. All the assumptions including the potential mitigating measures and resource estimates remain the same as in the proposed action (Alternative A).

Alternative C — No Action: Alternative C would cancel the lease sale tentatively scheduled for August 2001 on the approved Outer Continental Shelf Oil and Gas Leasing Program: 1997-2002. Cancellation of the proposed Western Gulf sale would postpone or forego the opportunity for development of the estimated 0.01 to 0.09 BBO and 0.57 to 1.93 tcf of gas.

IV. IMPACT ANALYSIS

A. UPDATE OF PROJECTIONS OF POTENTIAL ACTIVITY FROM THE PROPOSED ACTION

The Final EIS for WPA Sales 171, 174, 177, and 180 (the multisale EIS) discussed projections for activities associated with a typical proposed action. Review of these projections carried out since the publication of the Final EIS indicates that the information is still valid and is therefore incorporated by reference. In general, a proposed action represents 0.5 to 1.0 percent of the Gulfwide OCS Program based on barrels of oil equivalent (BOE) resource estimates. The MMS assumes that activities associated with a proposed action represent 0.5 to 1.0 percent of Gulfwide OCS Program activities unless otherwise indicated. Based on averages for time required for exploration, development, production life, and abandonment for leases in the Gulf of
Mexico, MMS assumes a 35-year life for the leases resulting from the proposed sale. The cumulative analysis addresses current activities, current trends, and projections of these trends into the reasonably foreseeable future; but unlike a typical sale, the time period discussed varies by impact-producing factor and by resource. Activity projections by MMS become increasingly uncertain as the length of time increases for projections and the number of influencing factors increases. The MMS bases projections used to develop the proposed action and OCS Program scenarios on resource and reserves estimates as presented in the Summary of the 1995 Assessment of Conventionally Recoverable Hydrocarbon Resources of the Gulf of Mexico and Atlantic Outer Continental Shelf (Lore et al., 1996), current industry information, and observed trends. The statistics used for these observed trends have a lag time of about two years; therefore, the models using the trends also reflect two-year-old statistics. In addition, the overall historic trends average out the short-term fluctuations in activity levels of Gulf of Mexico OCS operations. The models cannot fully adjust for short-term changes in the rates of activities. Projecting short-term changes into the long term should not occur. Technological advancements in seismic surveying and the enactment of the Deep Water Royalty Relief Act are examples of short-term change contributing to the current resurgence of OCS activities in the Gulf. Increased levels of activity greater than the activity level predicted by the resources and socioeconomic models would be short-term effects. The acceleration of leasing and exploration cannot continue indefinitely. The MMS believes that the models, with continuing adjustments and refinements, adequately project Gulf OCS activities in the long term for the EIS analyses.

The development scenarios do not represent an MMS recommendation, preference, or endorsement of any level of leasing or offshore operations, or of the types, numbers, and/or locations of any onshore operations or facilities.

Estimates of total reserve/resource production related to the proposed actions plus prior and future sales (OCS Program) over the period 1998-2036 are 10.810 to 15.225 BBO and 122.23 to 170.41 tcf of gas. Estimates of total reserve/resource production related to the proposed actions plus prior and future sales (OCS Program) in the planning area over the period 1998-2036 are 1.485 to 2.735 BBO and 37.780 to 54.225 tcf of gas. This represents approximately 13 to 18 percent of the oil and 31 percent of the gas of the total Federal OCS Program.

As discussed in the WPA multisale EIS, the pace of exploration and development of oil and natural gas in the deepwater (water depths greater than 1,000 ft) Gulf of Mexico has accelerated rapidly in the last few years. In water depths exceeding 1,000 ft, the use of conventional, bottom-founded (fixed) platforms quickly becomes uneconomic. As industry makes new discoveries in deeper and deeper water, the innovative technologies used by industry continue to evolve to meet technical and economic needs for deepwater development. In most cases, production activities in deep water and shelf development use similar technology and techniques. Deep water adds a level of complexity to the project, particularly subsea developments and completions, because the facilities may be located remote from the control (host) facility and are not readily accessible.

As part of an overall deepwater strategy, MMS prepared an EA (USDI, MMS, 2000) for operations in the deepwater areas of the Gulf of Mexico OCS and on associated support activities and infrastructure. The EA found that most deepwater operations and activities are not substantially different from those associated with conventional operations and activities on the continental shelf and a programmatic environmental impact statement on regional deepwater activities on the Gulf of Mexico OCS is not required. However, some activities were found to be substantially different and were addressed by requiring specific mitigation measures, initiating a
more in-depth EA on geological and geophysical surveying, and initiating an EIS on the use of floating production, storage, and offloading (FPSO) systems. With regard to mitigating measures, a Notice to Lessees and Operators (NTL 98-11) is being modified to include a 1,000-ft buffer zone around all deepwater well sites in order to avoid potentially significant impacts from drilling discharges on high-density chemosynthetic communities. As the NTL goes through the formal review and implementation process, this mitigation is being applied on a site-by-site basis. The MMS will use the EA process as a planning and management tool to ensure appropriate environmental review of deepwater operations.

The MMS is preparing a number of environmental documents to identify and evaluate the significance of potential impacts from operations in deep water and to develop appropriate mitigation measures if needed. Deepwater seismic surveying operations are not essentially different from seismic surveying operations on the continental shelf. However, the technology used for high-energy geophysical surveys has evolved in the past several years and the potential impacts of the newer sound systems are controversial. The MMS therefore initiated a separate EA to analyze geological and geophysical activities, including seismic surveying operations on the Gulf of Mexico OCS. The EA should be completed by the end of the year. Additionally, the Notice of Intent to Prepare an EIS on the proposed use of floating production, storage, and offloading (FPSO) systems in the Gulf of Mexico was published in the Federal Register on June 10, 1999. The possible environmental effects of the use of FPSO’s are uncertain and may involve unique or unknown risks. Major issues analyzed in the EIS include the storage of large volumes of crude oil offshore, potential emissions and spills associated with oil transfer operations, disposition of associated natural gas, and risks associated with shuttle tankering of OCS oil. The Draft EIS was completed in August 2000 and the Final EIS was filed with EPA in February 2001. This EIS is a programmatic document to examine the concept of and fundamental issues associated with the petroleum industry’s proposed use of FPSO’s on the Gulf OCS. Therefore, the document addresses the proposed action generically and does not constitute a review of any site-specific development proposal. Basically, one of three decisions will be made by the MMS upon completion of the FEIS: (1) conceptual approval of FPSO’s; (2) conditional approval of FPSO’s with general restrictions or conditions; or (3) no action (i.e., no conceptual approval by the MMS at this time). In the event Alternative 1 or 2 is selected, site-specific FPSO proposals would still be subject to established MMS NEPA compliance documentation.

B. UPDATE OF INFORMATION ON THE AFFECTED ENVIRONMENT

The recent Final EIS for WPA Sales 171, 174, 177, and 180 (USDOI, MMS, 1998) provides a complete description of the affected environment for the proposed Western Gulf of Mexico lease sales. For a number of resources (geology, meteorology, air quality, water quality, coastal barrier beaches and associated dunes, wetlands, deepwater benthic communities, topographic features, marine mammals, sea turtles, coastal and marine birds, fish resources, public services, infrastructure, land use plans, sociocultural issues and environmental justice, commercial fisheries, recreational resources and beach use, archaeological resources, and coastal zone management plans), MMS has identified no new information or issues since completion of the Final EIS. The reader should refer to the above referenced document for information regarding these resources.
The following summarizes the affected environment for those resources for which we have new information that was unavailable during the preparation of the Final EIS (which included Sale 180). This includes information on population, labor, and employment and essential fish habitat (EFH). At the time the Final EIS was completed in November 1997, the requirement for the assessment of potential impacts to essential fish habitat was not yet in place, so the Final EIS did not consider EFH under a separate heading in the document. However, the offshore marine habitats considered by NMFS to be of particular importance as EFH in the WPA [i.e., topographic features (e.g., Flower Garden Banks, MacNeil Bank, Stetson Bank, etc.)] were thoroughly discussed and analyzed in the Final EIS. Potential impacts to essential (fish) habitat are also included in the commercial fisheries analysis. To ensure that EFH is clearly identified as a resource/issue in this EA, a separate discussion of EFH and its authorizing legislation has been added to this section, and a brief analysis has been included in Section IV.C.

Current Economic Baseline Data

Current crude oil and natural gas prices are substantially above the economically viable threshold for drilling in the Gulf of Mexico. As of January 19, 2001, light sweet crude lists for $32.19 per barrel on the New York Mercantile Exchange (an increase of 32.91% or $7.97 from a year ago). Henry Hub Natural Gas closed at $7.46 per million British thermal units (an increase of 243.78% or $5.29 from a year ago) (www.oilenergy.com). In addition to oil and gas prices, drilling rig use is employed by the industry as a barometer of economic activity. According to Offshore Data Services, the year-end utilization rate for all marketed mobile rigs in the Gulf of Mexico was 94.1 percent. This breaks down as a 94.4 percent utilization rate for jackups, 90.6 percent for semisubmersibles, 100 percent for drillships, and 100 percent for submersibles. Platform rigs in the Gulf recorded an 82.1 percent utilization rate (Gulf of Mexico Weekly Rig Locator, 2000). Another indicator of the direction of the industry is the exploration and development (E&D) expenditures of the major oil and gas companies. After substantially cutting their E&D budgets during the 1998 and 1999 fiscal years, major companies are once again increasing these areas on their balance sheets. According to Global Marine Chairman, President, and CEO, Bob Rose, “the outlook for 2001 is very bullish” (www.oilandgasonline.com, January 17, 2001).

The last Western Gulf of Mexico Lease Sale (Sale 177 in August 2000) resulted in 226 blocks receiving bids (an increase of 47.71% or 73 blocks from Western Sale 174 in 1999).

Of the 226 blocks receiving bids, 135 were in shallow water. This increase of 77.6 percent from the last Western Gulf Sale largely reflects the intensified interest in natural gas due to soaring prices over the last year. The 91 blocks receiving bids in deepwater (an increase of only 18.2% or 14 blocks) may have echoed the uncertainty concerning the awarding of royalty relief provisions for new deepwater fields beyond the year 2000. Since Lease Sale 177 was held, the MMS has issued new royalty relief provisions for both oil and gas production in deep and shallow waters in the Gulf of Mexico. These new rules commenced with Central Sale 178 in March 2001 and will govern sales for the next three years.

The MMS estimates that 40,086 jobs are directly dependent on the Gulf of Mexico offshore oil and gas program as of December 2000. This is an increase of 3,218 jobs from a year ago, reflecting the rise in exploration and production activity due to increasing oil and gas prices.
Socioeconomic Impact Area

The MMS defines the Gulf of Mexico impact area for population, labor, and employment as that portion of the Gulf of Mexico coastal zone whose social and economic well-being (population, labor, and employment) is directly or indirectly affected by the OCS oil and gas industry. For this analysis, the coastal impact area consists of 51 counties and parishes in the Western and Central Gulf of Mexico. Inland counties and parishes are included where offshore oil and gas activities are known to exist, where offshore-related petroleum industries are established, and where one or more counties or parishes within a Metropolitan Statistical Area (MSA) are on the coast; all counties and parishes within the MSA are included. The counties and parishes in the impact area are classified in two planning areas: the Western Planning Area (WPA) and the Central Planning Area (CPA). While 67 percent of the economic impacts from a Western Gulf of Mexico sale are projected to occur in the WPA, there are some employment, population, and labor implications associated with economic communities in the CPA. These occur mainly in Port Fourchon and Cameron, Louisiana, which service deepwater oil and gas operations.

The Western and Central Gulf of Mexico Region impact area includes the following 14 MSA’s:

**Western Gulf of Mexico**

<table>
<thead>
<tr>
<th>Texas</th>
<th>Beaumont-Port Arthur</th>
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<tbody>
<tr>
<td></td>
<td>Brazoria</td>
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<tr>
<td></td>
<td>Brownsville-Harlingen-San Benito</td>
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<tr>
<td></td>
<td>Corpus Christi</td>
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<tr>
<td></td>
<td>Galveston-Texas City</td>
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<tr>
<td></td>
<td>Houston</td>
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<td>Victoria</td>
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**Central Gulf of Mexico**

<table>
<thead>
<tr>
<th>Alabama</th>
<th>Mobile</th>
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<tbody>
<tr>
<td>Louisiana</td>
<td>Baton Rouge</td>
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<tr>
<td></td>
<td>Houma</td>
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<td></td>
<td>Lafayette</td>
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<td></td>
<td>Lake Charles</td>
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<td></td>
<td>New Orleans</td>
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<tr>
<td>Mississippi</td>
<td>Biloxi-Gulfport-Pascagoula</td>
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</tbody>
</table>

**Changes in Population**

According to Woods and Poole 1998 economic data, the most recent data available, Houston, Texas and New Orleans, Louisiana, remain the largest populated MSA’s in the impact area. The least populated MSA’s remain Lake Charles, Louisiana, and Victoria, Texas. During the time period of 1997-1998, the Biloxi-Gulfport-Pascagoula MSA experienced the largest, positive
population growth rate, 0.25 percent, while Houston's loss in population of 4,650 was the largest in numerical terms. This current data, though, does not reflect the oil and gas industry's consolidation to Houston over the last two years. Woods and Poole forecast the Houston MSA will grow at a rate of 6.8 percent over the 1998-2001 period or a change of 261,730 people. Despite the industry's exodus to Houston, the population in the New Orleans MSA is forecasted to grow 1.29 percent (Woods and Poole Economics, Inc., 2000).

How OCS Development Has Affected the Impact Area

1980 — 1989

In the oil and gas industry, drilling rig use is employed as a barometer of economic activity. Between the end of 1981 and mid-1983, drilling rig activity in the Gulf of Mexico took a sharp downturn. By 1986 the demand for mobile drilling rigs had suffered an even greater decline. Population and net migration paralleled these fluctuations in mobile drilling rig activity. Population growth rates for all coastal subareas were relatively high prior to 1983; families moved to the Gulf looking for work in the booming oil and gas industry. Lower rates of population growth accompanied the decline in drilling activity as workers were laid off and left the area in search of work elsewhere. After 1983, all subareas experienced several years of significant net migration out of the region. The negative impact on population continued until 1986 when the demand for mobile rigs declined to its lowest level in over a decade and the price of oil collapsed.

1990 — 1997

In the early to mid-1990's, the impact area experienced a major resurgence in oil exploration and drilling due to advances in technology and the enactment of the Deep Water Royalty Relief Act in 1995. The renewed interest in oil and gas exploration and development in the Gulf of Mexico produced a modest to significant recovery from the high unemployment levels experienced after the 1986 downturn. Ironically, the Gulf Coast encountered a shortage of skilled labor in the oil and gas industry due to the restructuring of the oil industry to centralize management, finance and business services, and the use of computer technology (Baxter, 1990). Additionally, potential oil and gas industry employees experienced a shadow effect (Workers who previously lost high-paying jobs in the oil industry [or oil service industry] during the 1980's downturn were reluctant to return.) The shadow effect, coupled with the shortage of skilled labor where the core problems were lack of education and/or training for requisite skills, created a situation where temporary communities of workers from out of the area (some from out of the country) were established. Furthermore, the higher skill levels required by deepwater development drilling could not be completely met by the existing area's labor force causing in-migration. Unemployment in the impact area, though, declined due to increased economic diversification by the region.

1998 — Present

In early 1998 crude oil prices were hovering near 12-year lows. This restrained the resurgence of exploration and development activity in the Gulf of Mexico. While offshore development strategy varies by company, most major oil companies, diversified firms, and small
independents cut back production and curtailed exploration projects. Several large integrated companies resorted to layoffs and mergers as ways to assail low prices: a redistribution of headquarter personnel from the New Orleans area to the Houston area occurred and unemployment in the impact area rose. Offshore drilling strategies focused on mega and large prospects, foregoing small prospects, and only considering medium prospects when prices rose (Rike, 1998). A few companies, though, took advantage of lower drilling rates during this period and increased their drilling. Concurrently, technological innovations (such as 3-D seismic, slim hole drilling, and hydraulic rigs) decreased the cost of extraction and thus stimulated the development of large or mega prospects that were still considered economic at low prices.

In March 1999, OPEC, who produces 40 percent of the world’s oil, announced crude oil production cutbacks. Full-member compliance increased oil prices to 20-year highs, encouraging moderate exploration and development spending during the 1999 fiscal year. Crude oil prices continued to increase during 2000 and now into 2001. It is generally believed that the increase in price is being driven by two major factors. First is the continued OPEC compliance to maintain prices within their current output targets of a $22 minimum and a $28 maximum barrel price. This was recently fortified by the cartel’s January 17, 2001, announcement to cut production by 1.5 million barrels per day beginning February 1, 2001, in order to increase the price. The second factor, according to the Federal Reserve Bank of Dallas, is the “world capacity to supply oil has not kept pace with the growth of oil demand spurred by a resurgent world economy. [Furthermore,] a short supply of oil tankers, rising shipping rates and low inventories of refined product and crude oil have added upward pressure to spot crude oil prices.” (Brown, 2000, page 2). The low prices throughout much of the 1990’s were too low to stimulate additions to capacity. In addition, many tankers were scrapped in the 1990’s when weak demand, low shipping rates, and increasing environmental regulation put a lot of pressure on the tanker industry (Brown, 2000, page 3).

High oil prices and Federal environmental clean air efforts have prompted fuel switching away from crude oil to natural gas. Like crude oil, the supply of natural gas did not keep up with demand, pushing prices higher. In December 2000, natural gas broke record highs closing at $10.10 per MMbtu. Matthew Simmons, industry analyst and president of Houston investment bank Simmons & Co. states, “in addition to heating about 53 percent of American homes, natural gas is also being used to generate about 16 percent of the country’s electricity — a percentage that is still growing.” Mr. Simmons believes, and many other analysts concur, that this is “a decade-long problem” (Simmons, 2000). While experts do not expect natural gas to remain near the $10 per MMbtu range, New York Mercantile Exchange gas futures contracts indicate that gas prices will probably drop to $5.50 by May 2001, but remain above $5 through the end of 2001 (Simmons, 2000).

Fishery Conservation and Management Act

In 1996 Congress, recognizing the importance of fish habitat to the productivity and sustainability of U.S. marine fisheries, added habitat conservation provisions to the Magnuson-Stevens Fishery Conservation and Management Act (FCMA) amended through October 11, 1996, 16 U.S.C. 1801-1883. This Act stated that the continuing loss of marine, estuarine, and other aquatic habitats is one of the greatest long-term threats to the viability of commercial and recreational fisheries. Habitat considerations should receive increased attention for the conservation and management of U.S. fish resources.
The FCMA directed that any fishery management plan (FMP) prepared by any Council or by the Secretary, should describe and identify essential fish habitat (EFH) for fishery resources under its authority, and minimize to the extent practicable the adverse effects on habitat caused by fishing, as well as identify other actions to encourage the conservation and enhancement of such habitat. The EFH Interim Final Rule (50 CFR) defines EFH as the water and substrate necessary for fish spawning, breeding, feeding, or growth to maturity. The Act also requires that Federal agencies consult with the Secretary of Commerce on any action authorized, funded, or undertaken by any Federal or State agency that may affect the habitat, including EFH.

**Essential Fish Habitat**

There are FMP's in the GOM region for shrimp, red drum, reef fishes, coastal migratory pelagics, stone crabs, spiny lobsters, coral and coral reefs, and highly migratory species (HMS). While there were over 450 species identified in the original FMP's, information on habitat requirements was severely limited for many species. The Gulf of Mexico FMC Generic Amendment for Addressing Essential Fish Habitat Requirements amends the first seven FMP's listed above using 26 selected managed species and the coral complex. They were chosen because they were ecologically representative of the remaining species within their respective Fishery Management Units and, in most cases, sufficient information was available to document and map their habitat associations and use. The EFH for 46 highly migratory species is designated in the U.S. Department of Commerce, National Marine Fisheries Service's (NMFS) Final Fishery Management Plan for Atlantic tunas, swordfish, and sharks (Volume II, April 1999). The EFH for many of the 46 species includes portions of the Gulf of Mexico.

**Habitat Areas of Particular Concern**

Within the EFH Interim Final Rule, the NMFS recommended that FMP's identify habitat areas of particular concern (HAPC) in EFH. They include (1) nearshore areas of intertidal and estuarine habitats with emergent and submerged vegetation, sand and mud flats, shell and oyster reefs, and other substrates that may provide food and rearing for juvenile fish and shellfish; migration routes for adult and juvenile fish and shellfish; and areas sensitive to human-induced developmental activities; (2) offshore areas with substrates of high habitat value and diversity or vertical relief that serve as cover for fish and shellfish; and (3) marine and estuarine habitat used for migration, spawning, and rearing of fish and shellfish, especially in areas adjacent to intensive human-induced developmental activities.

The GMFMC has designated nine HAPC's to date. All of these HAPC's are important with respect to corals and coral reefs and provide habitats for reef species such as snappers, groupers, and spiny lobster. The Flower Garden Banks National Marine Sanctuary is an example of one of the HAPC's.

C. IMPACTS FROM THE PROPOSED ACTION

1. Summary of Analysis Incorporated by Reference from the Multisale EIS

The multisale EIS proposed action analyzed the effects of a typical Western Gulf of Mexico lease sale by presenting a set of ranges for resource estimates, projected exploration and
development activities, and impact-producing factors for any of the proposed Western Gulf sales held over the four-year period. This EA tiers off the initial multisale EIS and incorporates that document by reference. All unleased blocks in the WPA will be available for lease under the proposed action (as described in Section III.A.), but MMS expects only a small percentage to be leased, and an even smaller percentage will actually produce oil and gas. Impacts to resource categories are as follows:

_Coastal Barrier Beaches and Wetlands:_ Sale-related activities are not expected to result in permanent alterations of barrier beach configurations. Small spills from pipeline and navigation accidents may result in the conversion of small amounts of wetlands to open water.

_Sensitive Offshore Resources:_ The MMS expects little damage to either low- or high-density chemosynthetic communities. Low-density communities are highly dispersed and widespread. High-density communities are protected by a requirement to search for their presence prior to drilling or platform placement. Little to no damage is expected to topographic features. Small areas would be impacted by operational discharges (muds and cuttings) or in the unlikely event of a seafloor blowout. Adoption of the Topographic Features Stipulation would provide for adequate protection to these areas.

_Water Quality:_ Marine and coastal waters would be degraded from discharges of drilling muds and because of greater turbidity from OCS support activities. Further degradation would occur from chronic, low-level contamination from produced-water discharges, site runoff, and maritime traffic activities.

_Air Quality:_ Emissions from operational activities are expected to have minimum effects on offshore air quality. Onshore impacts on air quality are expected to be negligible because of prevailing atmospheric conditions, the emission rates, and the distance of these emissions from shore. Onshore air quality classifications would not change as a result of these operations.

_Marine Mammals, Fisheries, Turtles, and Birds:_ Exploration and development activities could impact coastal and marine mammals and marine turtles. Coastal and marine birds are not expected to be significantly affected. Operational activities, underwater obstructions, and discharges are unlikely to cause detrimental effects to Western Gulf commercial fisheries. Accidental spills could result in a partial, short-term decrease in a commercial population, in an essential habitat, or in local fishing activity.

_Socioeconomic Conditions:_ The MMS expects this sale to add less than 1 percent to Gulf Coast population, labor force, or employment. Employment needs are expected to be primarily met by those currently employed in the oil and gas industry, as well as by unemployed, underemployed, and new employees already living in the area. However, some employment is expected to be met through in-migration due to the shadow effect and a labor force lacking requisite skills for the oil and gas and supporting industries.

The skill level required of workers in the offshore oil and gas extraction and related industries has been rising in recent years due to technological advances (particularly for development in the deep water). Additionally, the decrease in oil prices have forced the industry to employ cost-saving methods, many of which require more highly skilled personnel. This global reaction to lower prices has resulted in an international workforce.

The unusual work schedules in the oil and gas extraction industry also support employment outside of the impact area because long-distance commuting can be reasonably accomplished on such an infrequent basis. These work schedules recently have been for longer duration for cost-saving purposes (e.g., decreased transportation costs since workers are transported offshore less
frequently but for longer duration), strengthening the support for employment outside of the impact area.

Population and employment impacts from Sale 180 are not expected to result in disruptions to community infrastructure and public services. Sociocultural impacts are expected to be minimal, with some localized deleterious impacts to family life in a small number of cases resulting from the extended work schedule.

2. Updated Impact Analysis for the Proposed Action

The MMS expects impacts to the following resource categories to remain the same as those estimated in the multisale EIS and summarized above:

- Sensitive Coastal Environments
- Sensitive Offshore Resources
- Water Quality
- Air Quality
- Marine Mammals
- Coastal and marine Birds
- Commercial Fisheries
- Recreational Resources and Beach Use
- Socioeconomic Conditions
- Archaeological Resources

In December 1998, the FWS issued its opinion that the proposed multiyear sales in the Western Gulf of Mexico and activities resulting from them would not cause jeopardy to species under FWS jurisdiction. In January 1998 the NMFS issued an amendment to its opinion of November 1997. The MMS submitted information to FWS and NMFS for their review requesting they uphold the multiyear lease sale Biological Opinions. Both agencies have done so.

The following potential impacts result from the proposed action for those resources where we have new information that was unavailable when MMS wrote the Final EIS for Sales 171, 174, 177, and 180 (the multisale EIS).

Population, Labor, and Employment: The MMS expects this sale to add less than 1 percent to Gulf Coast population, labor force, or employment. It is expected that employment demands will be met with the existing population and available labor force.

The range of activity levels and impacts previously described for a normal WPA lease sale adequately addresses the range of impacts that could result from this proposed lease sale. The new information that has become available does not change the estimates of activity levels and kinds and levels of impact. No significant impacts not addressed in the Final EIS have been identified because of the addition of the new material.

Essential Fish Habitat: Effects on EFH from activities associated with proposed Lease Sale 180 could potentially result from coastal and marine environmental degradation, platform emplacement, petroleum spills, subsurface blowouts, pipeline trenching, and offshore discharges of drilling muds and produced waters.
The proposed action is projected to increase canal traffic in navigation channels to and from service bases in Louisiana and Texas. This would result in some erosion of wetlands along the channels. Should an offshore spill occur at a platform or from pipelines, estuarine wetlands could be contacted; however, due to weathering and spill response, it is unlikely that wetlands would be contacted. Should such contact occur, it would be light and localized, causing no significant wetland loss. Localized, minor degradation of coastal water quality is expected in water bodies in the immediate vicinity of coastal bases servicing the proposed lease sale. Maintenance dredging of waterways and channels would result in decreased water clarity and some resuspension of contaminants.

It is expected that coastal environmental degradation from the proposed action would have little effect on EFH. Most EFH can recuperate quickly, but any loss of wetlands as EFH is likely to be permanent. At the expected level of effect, the resultant influence on EFH from the proposed action would be negligible and indistinguishable from natural population variations.

The Topographic Features Stipulation would prevent most of the potential impacts from the proposed action on live-bottom communities/EFH from bottom-disturbing activities (anchoring, structure emplacement and removal, pipeline trenching), operational offshore waste discharges (drilling muds and cuttings, produced waters), blowouts, and offshore spills. Recovery from impacts caused by unregulated operational discharges or an accidental blowout would take place within several years. For any activities associated with the proposed action, USEPA's Region 6 will regulate discharge requirements through their NPDES discharge permit. In the unlikely event of an offshore spill, the biological resources of live bottoms would remain unharmed as the spilled substances could, at the most, reach the seafloor in minute concentrations.

The major sources of discharges associated with the proposed action to marine waters are the temporary drilling muds and cuttings and the long-term, produced-water effluent. Both of these discharges contain various contaminants of concern (e.g., trace metals and petroleum-based organics) that may have environmental consequences on marine water quality and aquatic life. Drilling mud discharges contain chemicals toxic to marine fishes; however, this is only at concentrations four or five orders of magnitude higher than those found more than a few meters from the discharge point. Offshore discharges of drilling muds will dilute to background levels within 1,000 m of the discharge point.

Produced-water discharges contain components and properties detrimental to fish resources. Moderate petroleum and metal contamination of sediments and the water column will occur out to several hundred meters downcurrent from the discharge point. Offshore discharges of produced water will disperse and dilute to background levels within 1,000 m of the discharge point.

It is expected that marine environmental degradation from the proposed action would have little effect on EFH. The impact of marine environmental degradation is expected to cause an undetectable decrease in EFH. Offshore discharges and subsequent changes to marine water quality will be regulated by USEPA NPDES permits. At the expected level of effect, the resultant influence on EFH would be negligible and indistinguishable from natural population variations.

Subsurface blowouts of wells and pipeline trenching have the potential to adversely affect EFH. Loss of well control and resultant blowouts seldom occur on the Gulf OCS (6 blowouts per 1,000 well starts; 23% result in some spilled petroleum). In addition, some sediments would be resuspended during the installation of pipelines in water depths less than 60 m. Sandy sediments would be quickly redeposited within 400 m of the trench or blowout site, and finer
sediments would be widely dispersed and redeposited over a period of 30 days or longer within a few thousand meters. Impacts from sediment resuspension would be short term and localized. It is expected that subsurface blowouts that may occur as a result of the proposed action would have a negligible effect on EFH. At the expected level of impact, the resultant influence on EFH would be negligible and indistinguishable from natural population variations.

In summary, it is expected that coastal and marine environmental degradation from the proposed action would have little effect on EFH. The impact of coastal and marine environmental degradation is expected to cause an undetectable decrease in EFH. Recovery of EFH can occur from more than 99 percent of the expected coastal and marine environmental degradation.

Due to the protection associated with the Topographic Features Stipulation, offshore live bottoms would not be impacted. Offshore discharges will be regulated by USEPA NPDES permits. At the expected level of impact, the resultant influence on EFH would be negligible and indistinguishable from natural population variations. Activities such as subsurface blowouts, pipeline trenching, and discharge of drilling muds and produced water would cause negligible impacts and would not deleteriously affect EFH. At the expected level of impact, there would be minor effects on EFH.

D. ALTERNATIVE B — THE PROPOSED ACTION EXCLUDING THE BLOCKS NEAR BIOLOGICALLY SENSITIVE TOPOGRAPHIC FEATURES

Alternative B differs from Alternative A (the proposed action) by not offering the 61 unleased blocks of the 200 total blocks that are possibly affected by the proposed Topographic Features Stipulation. All the assumptions including the potential mitigating measures and resource estimates remain the same as in the proposed action. The Final EIS for WPA Sales 171, 174, 177, and 180 describes the impacts of a lease sale on these categories. However, the impacts to some resources will differ from the impacts expected if the Secretary adopts the proposed action. These different impacts are described below.

Topographic Features: All of the 23 topographic features of the Western Gulf are located within water depths less than 200 m. These features occupy a very small portion of the entire area. Of the potential impact-producing factors to the topographic features, anchoring, structure emplacement, and structure removal would be eliminated by the adoption of this alternative. Effluent discharge and blowouts would not pose a threat because blocks near enough to the banks for these events to have an impact on the biota of the banks will have been excluded from leasing.

Sea Turtles: The overall level of activity in the full sale area associated with Alternative B is the same as that described in the summary of infrastructure and activity for the proposed action. The sources and severity of impacts for sea turtles under Alternative B are the same as those discussed for the proposed action. However, the major impact-producing factors related to Alternative B that may affect Gulf sea turtles, including structure installation, dredging, operational discharges, and explosive platform removals, would not occur within the excluded area. The effects of these activities would remain in the rest of the WPA and are expected to be primarily nonlethal and to result in few lethal impacts; the probability of an interaction is low.
E. ALTERNATIVE C — NO ACTION

Alternative C is equivalent to cancellation of a sale scheduled for a specific time period on the approved *Outer Continental Shelf Oil and Gas Leasing Program: 1997-2002*. Sales in the Western Gulf are scheduled on an annual basis. By canceling a proposed Western Gulf sale, the opportunity is postponed or foregone for development of the estimated 0.01 to 0.09 BBO and 0.57 to 1.93 tcf of gas.

Canceling a sale would eliminate the effects described for Alternative A (the proposed action). However, other sources of energy would substitute for the lost production. Principal substitutes would be additional imports, conservation, additional domestic production, and switching to other fuels. These alternatives, except conservation, would have significant negative environmental impacts of their own. These substitutes and the effects are discussed in the Final EIS for WPA Sales 171, 174, 177, and 180 and *Energy Alternatives and the Environment* (OCS Report MMS 96-0049, August 1996) and are incorporated by reference.

F. CUMULATIVE ANALYSIS

This cumulative analysis considers the effects of impact-producing factors related to the proposed action plus those related to prior and future OCS sales in the CPA and EPA, State oil and gas activities, other governmental and private projects and activities, recreational activities, and pertinent natural processes that may affect barrier beaches and dunes. Descriptions of these activities and the analysis of the effects are included in the Final EIS for WPA Sales 171, 174, 177, and 180.

**Population, Labor, and Employment:** Because of the diversified economy of coastal Texas, peak annual changes in the population, labor, and employment of two coastal subareas in the Western Gulf represent a maximum of no more than 2 percent of the levels expected in absence of the OCS Program. Although total employment impacts are high, they do not exceed peak levels of activity already experienced in the Western Gulf. However, peak annual changes in the population, labor, and employment for some coastal subareas in the Central Gulf are expected to be as high as 12.6 percent of the levels expected in absence of the OCS Program. This represents a significant impact. On a regional level, the cumulative impact from prior sales, the proposed action, and future sales on the population, labor, and employment of the counties and parishes of the Western Gulf coastal impact area is significant (approximately 1.5 to 1.9 million person-years of employment over the life of the proposed action). The incremental contribution of the proposed action to the cumulative impact level is minimal. Peak annual changes in the population, labor, and employment of all coastal subareas in the Central and Western Gulf resulting from the proposed action in the Western Gulf add less than 1 percent to Gulf Coast population, labor force, or employment. The new information acquired since the publication of the Final EIS does not alter the findings of that document, nor does it identify any new significant cumulative impacts.
V. CONSULTATION AND COORDINATION

A. SCOPING FOR THE WESTERN GULF OF MEXICO PROPOSED LEASE SALE 180, ENVIRONMENTAL ASSESSMENT

External Scoping: On December 16, 2000, the MMS published a Federal Register notice and mailed out a special information notice announcing the preparation of an environmental assessment (EA) for the Western Gulf of Mexico Proposed Lease Sale 180. In the notices, we requested that interested parties submit comments regarding any new information or issues that should be addressed in the EA. The comment period closed on January 19, 2001, and no responses were received from any agencies or individuals.

Internal Scoping: Internal scoping is an ongoing activity for all environmental projects. However, for this assessment MMS decided to document specifically whether information regarding resource estimates and oil spill modeling used in the preparation of the Final EIS for the Western Gulf of Mexico lease sales is still within the range of assumptions used in that document. The Gulf of Mexico Office of Resource Evaluation confirmed that the oil and gas resource projections and associated activities remain within the range of those projected by MMS for a "typical lease sale." The Oil Spill Risk Analysis (OSRA) group indicated that they were improving the wind and ocean current fields into the OSRA model; however, the improvements are not yet complete and a rerun of the OSRA model for this EA would yield results no different than obtained in the multisale Final EIS. Therefore, the EA for Western Gulf of Mexico Lease Sale 180 will incorporate by reference the descriptive and analysis sections that have not changed significantly.

B. CONSULTATION AND COORDINATION CALENDAR

The consultation and coordination for implementation of the multisale process began in 1996 and has continued up to the present time. A complete description of all activities and meetings is included in the EIS’s for the CPA and WPA lease sales. We have included a brief summary of those events leading up to this EA.

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<tr>
<th>Multisale Process</th>
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<tr>
<td>May 1, 1996</td>
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<tr>
<td>The MMS Gulf of Mexico OCS Region published a Federal Register notice, placed notices in Gulf Coast newspapers, and mailed out notices to governmental agencies and other interested parties requesting comments concerning the proposed multisale leasing process and multisale EIS.</td>
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<td>May 22, 1996</td>
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<td>The MMS held a public meeting in New Orleans to present the proposed multisale concept. The MMS received written comments from the State of Louisiana, the State of Alabama, the National Ocean Industries Association, POGO Producing Company, Shell Offshore Inc., Texaco Exploration and Production Inc., and The AM Group. Section V of the Final EIS (USDOI, MMS, 1998) summarizes these comments. All commentors supported the proposed process.</td>
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### July 1996
The MMS held public hearings in Houston and New Orleans to receive comments on the Draft EIS for Sales 166 and 168. These hearings also served as a formal scoping opportunity for input on the scope and significant issues related to the OCS Program and to the development of the multisale Draft EIS for proposed Central Gulf of Mexico Sales 169, 172, 175, 178, and 182. No one attended the Houston hearing and only one person, representing industry, presented testimony at the New Orleans hearing. The single commentor supported the proposed process. The MMS also conducted early coordination with appropriate Federal and State agencies and other concerned parties to discuss and coordinate the proposed multisale prelease and EIS process. Key agencies and organizations included the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS), Fish and Wildlife Service (FWS), Department of Defense, U.S. Coast Guard, USEPA, State Governors' offices, and industry groups.

### Western Gulf of Mexico Lease Sales 171, 174, 177, and 180 EIS Process

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<th>Date</th>
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<tr>
<td>January 29, 1997</td>
<td>The Call for Information/Notice of Intent (Call/NOI) for the proposed 1998-2002 Western Gulf of Mexico lease sales was published in the Federal Register. The required 45-day comment period closed on March 16, 1997. The MMS distributed additional public notices via newspaper notices, mailouts, and the Internet. The MMS received five comments in response to the Call/NOI and one comment in response to the NOI only.</td>
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<tr>
<td>September 9, 1997</td>
<td>The MMS, by memorandum to FWS and NMFS, requested formal Section 7 consultation for Lease Sales 171, 174, 177, and 180 encompassing blocks in the Western Gulf of Mexico Planning Area. The consultation included all aspects of oil and gas exploration, development, production, and abandonment activities. The FWS concluded that the proposed actions would not jeopardize the continued existence or adversely affect designated critical habitat for federally protected species under FWS jurisdiction. The NMFS concluded that the proposed multiyear lease sales and associated activities may adversely affect but are not likely to jeopardize the continued existence of listed species.</td>
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<td>Date</td>
<td>Event Description</td>
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<tr>
<td>October 28-30, 1997</td>
<td>The MMS held public hearings in Austin, Corpus Christi, and Houston, Texas, and New Orleans, Louisiana, to receive comments on the Western Gulf of Mexico Draft EIS for Lease Sales 171, 174, 177, and 180. No one presented testimony regarding the lease sales or the Draft EIS at any of the public hearings held in Texas. Only one person attended each hearing in Austin and Corpus Christi, and two people attended the hearing in Houston. The hearing held in New Orleans had one person in attendance, presenting four sets of testimony in support of the lease sale and Alternative A.</td>
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<tr>
<td>May 1998</td>
<td>The MMS completed and filed the Final EIS for Western Gulf of Mexico Lease Sales 171, 174, 177, and 180 with the USEPA. The MMS revised the document using information presented at the hearings and as a result of comments received on the Draft EIS (See Section V of the Final EIS for WPA Lease Sale 171, 174, 177, and 180 for a complete discussion of comments and responses.).</td>
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**Western Gulf of Mexico Lease Sale 180 EA Process**

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<tr>
<td>December 16, 2000</td>
<td>The announcement that MMS was beginning preparation of an EA for proposed Outer Continental Shelf Oil and Gas Lease Sale 180 was published in the Federal Register. In the notice, MMS requested interested parties to submit comments regarding any new information or issues that should be addressed in the EA. In addition, a special information request was mailed to all affected agencies. The comment period closed on January 19, 2001, and no responses were received from any agencies or individuals.</td>
</tr>
</tbody>
</table>

**VI. REFERENCES**


Rike, J. 1998. Defining social and economic issues for the year 2000 and beyond, miniaturization of petroleum technology. As presented at the Eighteenth Information
Transfer Meetings sponsored by the Minerals Management Service, Gulf of Mexico OCS Region, December 8-10, 1998, New Orleans, LA. Information Transfer Meeting Session 1J.


The Department of the Interior Mission

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

The Minerals Management Service Mission

As a bureau of the Department of the Interior, the Minerals Management Service's (MMS) primary responsibilities are to manage the mineral resources located on the Nation's Outer Continental Shelf (OCS), collect revenue from the Federal OCS and onshore Federal and Indian lands, and distribute those revenues.

Moreover, in working to meet its responsibilities, the Offshore Minerals Management Program administers the OCS competitive leasing program and oversees the safe and environmentally sound exploration and production of our Nation's offshore natural gas, oil and other mineral resources. The MMS Minerals Revenue Management meets its responsibilities by ensuring the efficient, timely and accurate collection and disbursement of revenue from mineral leasing and production due to Indian tribes and allottees, States and the U.S. Treasury.

The MMS strives to fulfill its responsibilities through the general guiding principles of: (1) being responsive to the public's concerns and interests by maintaining a dialogue with all potentially affected parties and (2) carrying out its programs with an emphasis on working to enhance the quality of life for all Americans by lending MMS assistance and expertise to economic development and environmental protection.