

## 1 INTRODUCTION

### 1.1 BACKGROUND

Section 18 of the Outer Continental Shelf Lands Act (OCSLA) of 1953 (67 Stat. 462) as amended in 1988 (43 USC 1331 *et seq.*) requires the U.S. Department of the Interior (USDOJ) to prepare a 5-year schedule that specifies, as precisely as possible, the size, timing, and location of areas to be assessed for Federal offshore oil and gas leasing on the U.S. outer continental shelf (OCS). The Federal action being evaluated is the preparation of this 5-year schedule. A schedule is needed to increase the predictability of sales in order to facilitate planning by industry, affected states, and the general public. The OCSLA also requires the 5-year leasing schedule to be developed and maintained in a manner that is consistent with several management principles. Within the USDOJ, the Bureau of Ocean Energy Management (BOEM or the Bureau) (formerly the Bureau of Ocean Energy Management, Regulation and Enforcement and prior to that, the Minerals Management Service) must manage the OCS oil and gas program to ensure a proper balance among oil and gas production, environmental protection, and impacts on the coastal zone. OCSLA defines the OCS as all submerged lands lying seaward of State coastal waters which are under U.S. jurisdiction. The BOEM is organized into four regional offices, each of which is responsible for overseeing the safe and environmentally responsible development of traditional and renewable ocean energy and mineral resources in four OCS regions: Alaska, Pacific, Gulf of Mexico (GOM), and Atlantic — for a combined total of 1.7 billion acres of the OCS.

In recent years, the OCS oil and gas resources have been subject to suspensions of activities or moratoria. In 1982, Congress imposed a moratorium on oil and gas leasing for offshore California. Over the next decade, Congress expanded the moratorium to include almost all Atlantic and Pacific planning areas. From 1990 through 2000, an Executive Withdrawal enacted by President George H. Bush was in effect on a portion of the same OCS acreage subject to the 1982 congressional moratorium. Separate and apart from the congressional moratorium, the Executive Withdrawal served to independently limit offshore development. In 1998, President Clinton extended the Executive Withdrawal through 2012. On July 14, 2008, however, President George W. Bush lifted the OCS Executive Withdrawal. On August 1, 2008, the Minerals Management Service (MMS) issued a Request for Comments for the preparation of a new 5-year OCS leasing program to cover 2010 through 2015.

On January 21, 2009, a notice for Request for Comments on the Draft Proposed 5-Year OCS Oil and Gas Leasing Program for 2010-2015 and the Notice of Intent to Prepare an Environmental Impact Statement (EIS) for the Proposed 5-Year Program Draft Proposed Program were published in the *Federal Register* (*Federal Register*, January 21, 2009, Volume 74, Number 12, pages 3631–3635). On February 10, 2010, the Secretary of the Interior extended the comment period by 180 days to September 21, 2009.

As a result of the comment period extension and the Bureau's reconsideration of existing policies and regulations in response to the Deepwater Horizon event on April 20, 2010, the time period to be covered by the new program shifted from 2010-2015 to 2012-2017. The

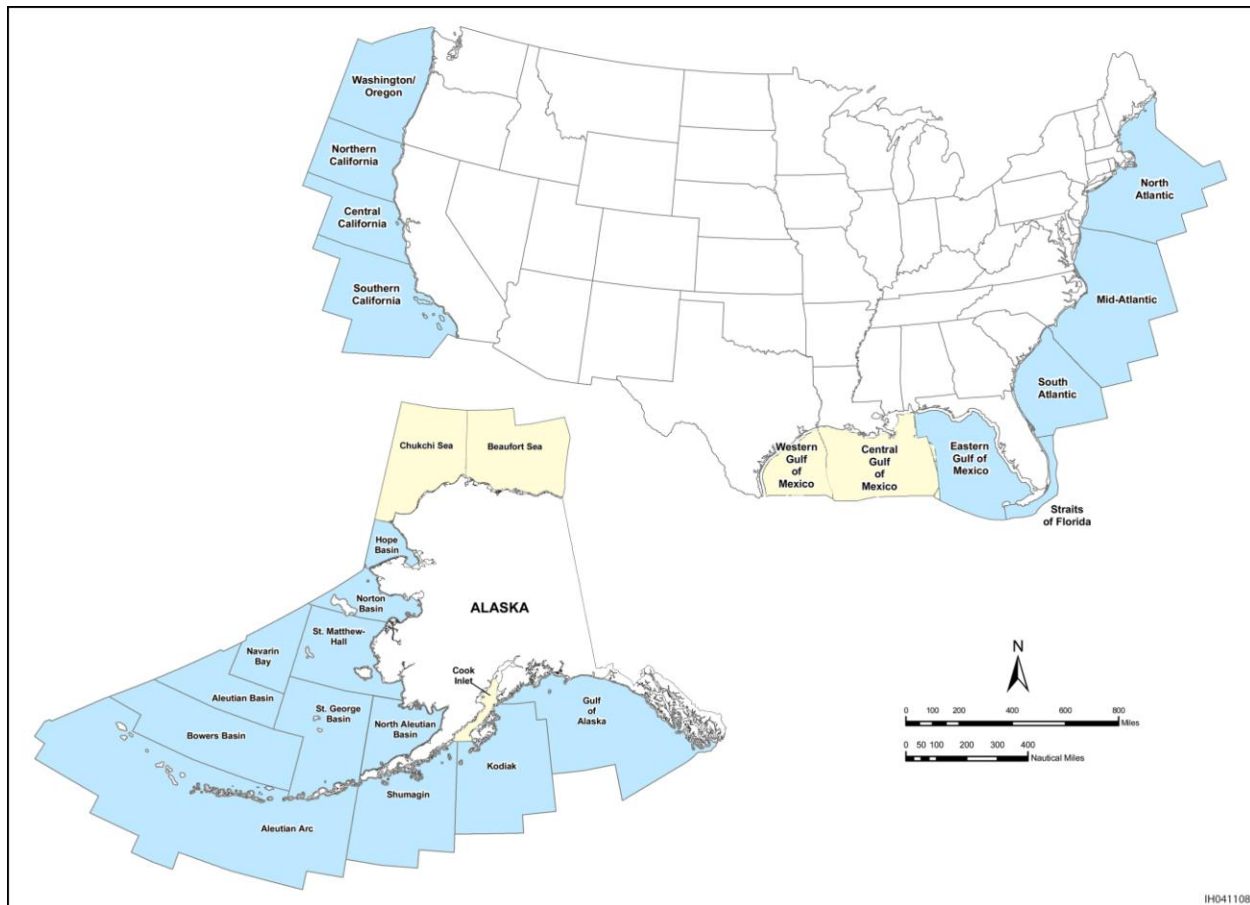
1 January 2009 Draft Proposed Plan remains the first of three draft decisions for the program (now  
2 for 2012-2017) that will replace the existing 2007-2012 program. However, in response to  
3 comments and other considerations, the Secretary has reduced the scope of the 5-year EIS to  
4 exclude several planning areas that were originally included in the Draft Proposed Plan decision.  
5

6 On April 2, 2010, the Bureau issued a Notice of Intent (NOI) to prepare an EIS with  
7 respect to the OCS Oil and Gas Leasing Program for 2012-2017 (hereafter referred to as “the  
8 Program”) and requested comments for the purpose of determining the scope of the EIS. The  
9 updated strategy limited lease sales to the following planning areas: Beaufort Sea, Chukchi Sea,  
10 Cook Inlet, the Central and Western GOM, and the area of the Eastern GOM excluded from  
11 Congressional moratoria (see Figure 1-1). The NOI also announced that scoping meetings  
12 would be held during June and early July 2010 in coastal States bordering the Mid- and South  
13 Atlantic; Western, Central, and the portion of the Eastern GOM; and at several locations in  
14 Alaska. Subsequently, on June 30, 2010, the Secretary announced that the scoping meetings  
15 were postponed until later in 2010 because of the need for BOEM to focus on reviewing and  
16 evaluating safety and environmental requirements of offshore drilling in response to the  
17 Deepwater Horizon event and that a new public comment period would later be announced. On  
18 December 1, 2010, the Secretary announced an updated oil and gas leasing strategy for the OCS.  
19 Consistent with the Secretary’s direction to proceed with caution and to focus on leasing in areas  
20 with current active leases, the area in the Eastern GOM that remains under a congressional  
21 moratorium and the Mid- and South Atlantic Planning Areas were no longer considered for  
22 potential sales and development through 2017. Therefore, scoping meetings were not held in  
23 these areas. It was also announced that the Western GOM, Central GOM, and the Cook Inlet,  
24 Chukchi Sea, and Beaufort Sea areas offshore Alaska would continue to be considered for  
25 potential leasing in the Program.  
26

27 Congress, in its yearly appropriations to the USDOJ, continues to maintain an annual  
28 moratorium on OCS oil and gas leasing in the Eastern GOM Planning Area with the exception  
29 of a small area along the boundary between the Central and Eastern Planning Areas that was  
30 excluded from the moratorium by the GOM Energy Security Act of 2006. Additionally,  
31 Presidential moratoria have withdrawn all national marine sanctuaries from leasing through  
32 June 30, 2017 (Hagerty 2011). On March 31, 2011, President Obama, under the authority of  
33 Section 12(a) of the OCSLA, withdrew the Bristol Bay area of the North Aleutian Basin for  
34 consideration of leasing through June 30, 2017. The Congressional and Presidential moratoria  
35 prohibit future oil and gas leasing but do not apply to existing leases. Although there are current  
36 leases in the Pacific region, no new OCS leasing will take place in the Pacific region under the  
37 Program.  
38

39 The BOEM has prepared this draft programmatic environmental impact statement (PEIS)  
40 to assess the environmental, social, and economic impacts associated with the Program. The  
41 following Federal, State, and local agencies are serving as cooperating agencies on the  
42 development of the PEIS, due to their special expertise:  
43

- 44 • U.S. Department of Commerce National Oceanic and Atmospheric  
45 Administration (NOAA)  
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1

2 **FIGURE 1-1 OCS Planning Areas (planning areas being considered for the Program are shown in**  
3 **yellow) See Figure 1-2 for details on the Eastern GOM Planning Area.**

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- The State of Alaska
- Alaska North Slope Borough (NSB)

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The Program is scheduled to begin in November 2012. The Program consists of a national schedule of potential OCS lease sales within 6 of the 26 OCS Planning Areas (Figures 1-1 and 1-2). The Program will be the eighth such program prepared since Congress passed the OCSLA in 1988. The Program establishes a framework for managing the OCS oil and gas leasing in a manner that accounts for all of the factors required by OCSLA. It also provides the public with a clear statement of the USDOJ's OCS leasing intentions during the period from 2012 to 2017.

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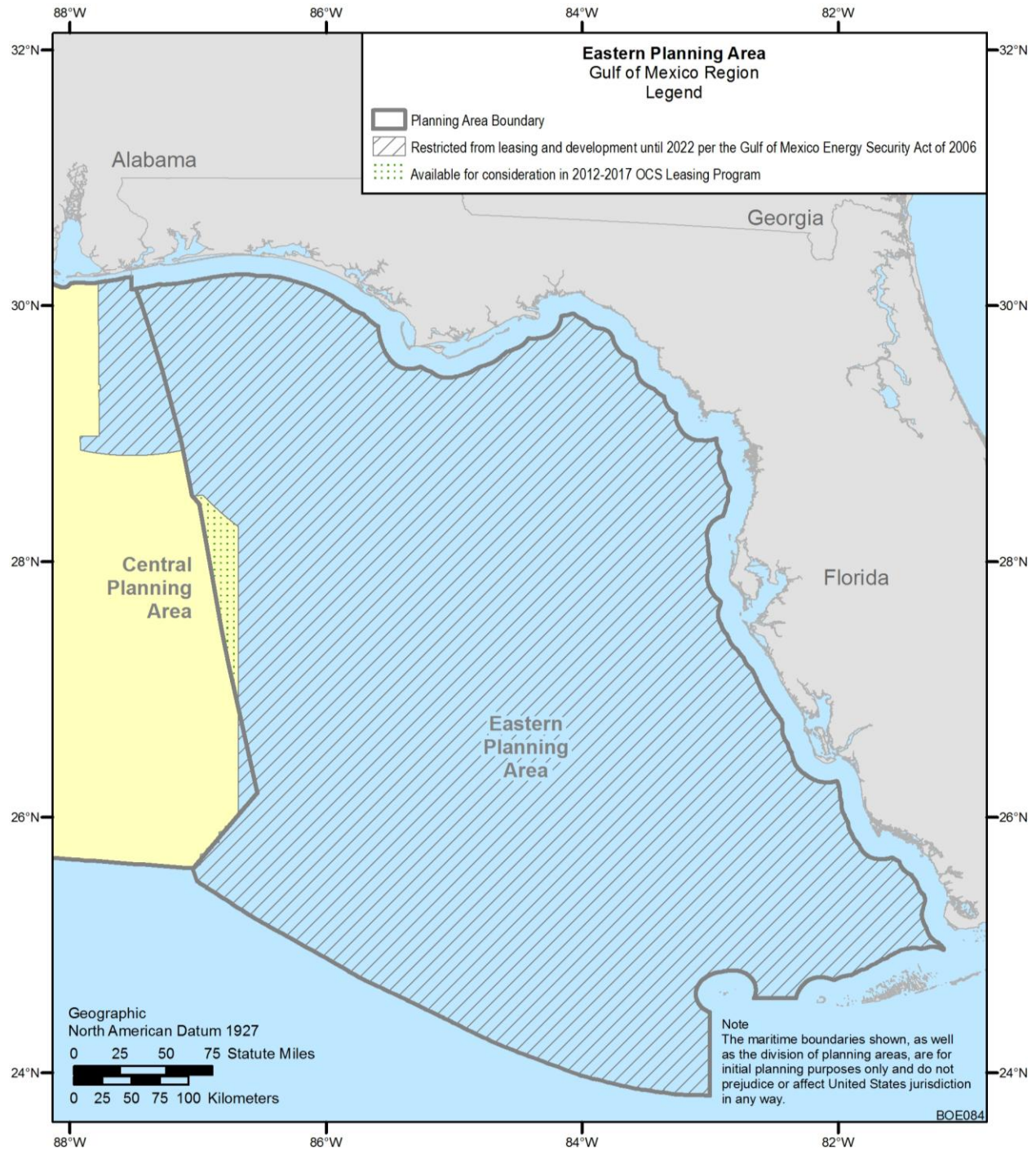
## 1.2 PURPOSE OF AND NEED FOR ACTION

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The purpose and need of preparing a schedule of potential OCS oil and gas lease sales is to “best meet national energy needs for the 5-year period following its approval” (43 USC 1344)

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**FIGURE 1-2 The Eastern GOM OCS Planning Area Showing the Portion Available for Lease Sale Consideration**

1 by balancing the potential for adverse environmental and societal impacts with the beneficial  
2 impacts of the discovery and development of oil and gas. In developing the 5-year leasing  
3 schedule, BOEM considers regional and national energy needs; leasing interests as expressed by  
4 possible oil and gas producers; applicable laws, goals, and policies of affected States, local  
5 governments, and tribes; competing uses of the OCS; relative environmental sensitivity and  
6 marine productivity among OCS regions; public input; and the equitable sharing of benefits and  
7 risks among stakeholders.

8  
9 Energy use in the United States is expected to continue to increase from present levels  
10 through 2035 and beyond (EIA 2011). For example, the U.S. consumption of crude oil and  
11 petroleum products has been projected to increase from about 19.1 million barrels (Mbbbl) per  
12 day in 2010 to about 21.9 Mbbbl per day in 2035 (EIA 2011). Oil and gas reserves in the OCS  
13 represent significant sources that currently help meet U.S. energy demands and are expected to  
14 continue to do so in the future. The benefits of producing oil and natural gas from the OCS  
15 include not only helping to meet this national energy need, but also generating money for public  
16 use. In 2009, the OCS produced 2.5 trillion cubic feet (Tcf) of natural gas and more than  
17 590 Mbbbl of oil and condensate. These numbers represent 10 and 30%, respectively, of the total  
18 U.S. domestic production of oil/condensate and natural gas in 2009. The Federal Government  
19 has received, on average, more than \$10 billion per year between 2000 and 2010 from OCS  
20 bonuses, rental payments, and royalties. The highest revenues per year occurred in 2008, when  
21 the government received \$23.3 billion in total revenues.

### 22 23 24 **1.3 ENVIRONMENTAL REVIEW UNDER NEPA**

25  
26 Section 18 of the OCSLA directs the USDOJ to conduct environmental studies and  
27 prepare any EIS required in accordance with the OCSLA and within Section 102(2)(C) of the  
28 National Environmental Policy Act of 1969 (NEPA) (42 USC 4332(2)(C)). Under NEPA,  
29 Federal agencies are required to prepare a “detailed statement for major Federal actions  
30 significantly affecting the quality of the human environment” (NEPA 102(2)). The preparation  
31 of this draft PEIS is also consistent with the Council on Environmental Quality (CEQ)  
32 regulations (40 CFR 1502.4(b)), which state that “environmental impact statements may be  
33 prepared and are sometimes required for broad Federal actions such as the adoption of new  
34 agency programs or regulations (Section 1508.18). Agencies shall prepare statements on broad  
35 actions so that they are relevant to policy and are timed to coincide with meaningful points in  
36 agency planning and decision making.” The preparation of this draft PEIS is thus consistent  
37 with, and meets the requirements of OCSLA, CEQ’s regulations for implementing NEPA and  
38 USDOJ’s regulations implementing NEPA (43 CFR 46).

39  
40 The OCSLA leasing and development process consists of four major phases. The  
41 Secretary first prepares a nationwide 5-year oil and gas leasing program that establishes a  
42 schedule of lease sales. Thereafter, individual lease sales scheduled in the 5-year program are  
43 held following a series of pre-lease planning actions. Once a lease is issued to an OCS lessee, an  
44 Exploration Plan (EP) must be submitted for approval before an operator may begin exploratory  
45 drilling on a lease. The EP establishes how the operator will explore the lease and includes all  
46 exploration activities, the timing of these activities, information concerning drilling, the location

1 of each well, and other relevant information. If the lessee discovers oil and/or natural gas, a  
2 Development and Production Plan (DPP) must be submitted for agency approval. This DPP  
3 includes how many wells, where these wells will be located, what type of structure will be used,  
4 and how the operator will transport the oil and natural gas. The OCSLA also requires operators  
5 to apply for permission prior to drilling wells, pursuant to an EP or, in most areas, a DPP.  
6

7 In this phased process, the final PEIS may, through tiering, greatly assist subsequent lease  
8 sale-specific analyses by allowing incorporation of relevant portions of the final PEIS into those  
9 later analyses and NEPA documents. Tiering is defined by the CEQ (40 CFR 1508.28) as “the  
10 coverage of general matters in broader environmental impact statements (such as national  
11 program or policy statements) with subsequent narrower statements or environmental analyses  
12 (such as regional or basin-wide program statements or ultimately site-specific statements)  
13 incorporating by reference the general discussions and concentrating solely on issues specific to  
14 the statement subsequently prepared.”  
15

16 When a broad NEPA document such as a PEIS or environmental assessment (EA)  
17 has been prepared, any subsequent site-specific assessment or evaluation can summarize  
18 (and include by reference) the issues discussed in the broader document, and thus the site-  
19 specific assessment can focus its analyses on project-specific issues of the particular proposed  
20 action (40 CFR 1502.20). Following selection of the Program, any subsequent lease sale-  
21 specific NEPA analyses and documentation may tier off the PEIS for the Program.  
22

23 This draft PEIS is the first of many NEPA analyses that will be done for the activities that  
24 occur as a result of the Program. The NEPA assessments, including EISs and EAs associated  
25 with various stages of OCS oil and gas development, are shown in Table 1-1.  
26  
27

### 28 **1.3.1 Scope of the PEIS** 29

30 This draft PEIS was prepared to evaluate the environmental impacts of alternatives for  
31 OCS oil and gas leasing under the Program, and presents those impacts in a comparative manner  
32 that provides a clear basis for making a reasoned choice among the alternatives by the  
33 decisionmaker. The analyses and evaluations in this draft PEIS and subsequent final PEIS are  
34 intended to inform decisions on the size, timing, and location of leasing activity that will be  
35 made to create the schedule of lease sales for the Program (43 USC 1344). The OCSLA requires  
36 that, for potential leasing to occur in a specific planning area during the applicable 5-year OCS  
37 oil and gas leasing program, the specific planning area in which the lease sale would be held  
38 must be included in the 5-year program and its associated PEIS. Pursuant to the OCSLA  
39 (1344(e)), the Secretary has the discretion to review the leasing program approved at least once  
40 each year.  
41

42 Portions of planning areas can be deferred from leasing during any 5-year oil and gas  
43 program because of the presence of sensitive environmental resources, space-use conflicts, or  
44 other reasons. The USDOJ can also cancel or restrict the area offered in a lease sale based on  
45 information, events, and other conditions that arise during any 5-year oil and gas program.



1 **TABLE 1-1 NEPA Assessments Conducted within the OCS Oil and Gas Leasing Program**

Program Level	Program Stage	NEPA Analysis <sup>a</sup>	Geographic Scope	Focus and Scope
Planning	Program	Programmatic EIS	Continental	Identification of program areas and number and schedule of lease sales for the Program
	Lease sale	Lease sale EIS or EA	Planning area	Identification of potential impacts and mitigation measures
Project <sup>b</sup>	Exploration	CER, EA, or EIS	Lease block(s)	Application and
	Production	CER, EA, or EIS	Portion of lease block	enforcement of
	Decommissioning	CER, EA, or EIS	Specific facility within a lease block	mitigation measures; monitoring of mitigation effectiveness

<sup>a</sup> CER = categorical exclusion review; EA = environmental assessment; EIS = environmental impact statement.

<sup>b</sup> The level of NEPA review at the project level is determined by the complexity of the project, risk factors associated with the project, whether the project occurs in a frontier or mature OCS area, the technologies being used for the project, and other factors.

2  
3  
4 Examples of the exercise of this authority occurred during the 2007-2012 oil and gas leasing  
5 program (the Program) when the single sales scheduled in the North Aleutian Basin and offshore  
6 Virginia were cancelled in 2010.

7  
8 Because portions of planning areas (subareas) can be deferred during a 5-year leasing  
9 program, the USDOJ is maintaining maximum flexibility in fulfilling its OCSLA mandate to  
10 provide for both the nation’s energy needs and protect the marine and coastal environment by  
11 including in the Program all 6 OCS Planning Areas that were decided upon by the Secretary. If  
12 conditions changed during the Program as a result of new information, technologies, or other  
13 developments that mitigated the issues responsible for the deferral of a subarea, it would not be  
14 possible to restore the subarea for leasing during the existing Program if it were not included in  
15 the Program at the outset. There are some exceptions to the approach described above for the  
16 5-year program; for example, the two subsistence deferrals in the Beaufort Sea and the 25-mi  
17 no-leasing buffer in the Chukchi Sea have been deferred in past lease sales and have  
18 subsequently been incorporated into past 5-year programs. These deferrals (described in detail in  
19 Chapter 2 of this PEIS) will be included in the proposed action for the current 5-year leasing  
20 program. BOEM may include additional deferral areas in future 5-year programs based on the  
21 environmental analysis and regional determination for individual lease sales.

22  
23 In addition, the detailed information and fine geographic scale needed to evaluate block-  
24 by-block deferrals or other mitigations in a specific planning area are not available or appropriate

1 for the PEIS, which needs to adopt a broad geographical scale for its national coverage.  
2 Decisions about exclusions and mitigations are premature at the programmatic stage when the  
3 focus is the development of a leasing program that identifies how many sales will be included in  
4 the program, where to have the sales, and when to schedule the sales. The PEIS informs these  
5 decisions by identifying areas, environmental resources, and types of OCS activities that, acting  
6 together, suggest the potential for significant interactions between environmental resources and  
7 OCS-related activities that could result in significant impacts. In this way, the PEIS identifies  
8 the broad issues that will likely require more focused and fine-scale evaluations in subsequent  
9 NEPA assessments, leading to the possible development and application of mitigations, should  
10 leasing and development actually occur.

### 13 **1.3.1.1 Incomplete and Unavailable Information**

14  
15 CEQ regulations require an agency to obtain, or explain why it cannot obtain, relevant  
16 information about reasonably foreseeable significant adverse impacts that is essential to a  
17 reasoned choice among the alternatives presented in an EIS (40 CFR 1502.22). This PEIS  
18 provides the level of NEPA analysis corresponding to the first stage of the Program. The PEIS  
19 sets forth alternatives for the Secretary to consider and analyzes issues of programmatic concern,  
20 which pertain to the Program as a whole.

21  
22 Programmatic-level analyses and decisions do not require the same detailed analysis that  
23 may be necessary at a later stage in the OCS leasing process. Lease sale-specific issues, such as  
24 determining which stipulations should apply to a lease sale, are not ripe for analysis at the  
25 programmatic stage. Resolving uncertainty related to significant adverse effects on some  
26 resources, such as that surrounding global climate change impacts in the Arctic and the potential  
27 environmental baseline change brought about by the Deepwater Horizon (DWH) event in the  
28 GOM, is not essential at this programmatic stage. In the instances of missing resource-specific  
29 information noted in the PEIS, it was determined that the information was not essential to the  
30 Secretary's choice among alternatives at this broad, programmatic decision point because the  
31 Secretary is only establishing a schedule of potential lease sales. The Secretary maintains the  
32 discretion to delay and cancel lease sales that are part of an approved program. On the other  
33 hand, the Secretary will not have the discretion to add program areas that are not included in the  
34 Program without program re-approval. It would be imprudent to foreclose program areas at this  
35 time based on uncertainty due to incomplete and unavailable information. Over the course of the  
36 Program, information relevant to decision making may become available before the decision  
37 maker is actually deciding to hold a specific lease sale.

38  
39 This PEIS presents the information necessary for the Secretary to make a general  
40 planning decision, which will be implemented in the future through a series of subsequent,  
41 planning area-specific decisions that authorize lease sales and OCS exploration and development  
42 activities. To the degree possible, the PEIS uses scientifically credible information and uses  
43 accepted scientific methods to make reasoned judgments and arrive at reasoned conclusions.  
44 Moreover, some of the missing information, such as definitive information about baseline  
45 changes to resources in the GOM resulting from the DWH event, will not be available in a time



1 frame relevant to timely fulfillment of the OCSLA statutory mandate to establish a program  
2 every five years.

### 3 4 5 **1.3.2 Public Involvement** 6

7 As previously discussed, the development of the Program includes preparation of this  
8 draft PEIS which, in accordance with NEPA, analyzes the potential effects of the adoption of a  
9 schedule of proposed lease sales that identifies the size, timing, and location of proposed leasing  
10 activity. The content of a PEIS is based on a process called “scoping.” The regulations  
11 implementing NEPA require that scoping be included in the environmental analysis process  
12 (40 CFR 1501.7). Scoping for this draft PEIS included several key elements: (1) gathering  
13 information and ideas from the public and elsewhere about the analytical issues related to the  
14 Program; (2) making determinations about which issues should be analyzed; and (3) identifying  
15 alternatives to the proposal that warranted analysis. The scoping process is dynamic in that it  
16 begins before the draft PEIS analyses are initiated and continues throughout the period of  
17 document preparation.  
18

19 In January 2009, the previous Administration published a Draft Proposed Program and a  
20 NOI to prepare an EIS that set out a schedule for scoping meetings in the areas of the Draft  
21 Proposed Plan. In February 2009, the Secretary of the Interior extended the comment period on  
22 the Draft Proposed Plan and postponed the scoping meetings to allow time to consider further  
23 public comment before determining which areas in the Draft Proposed Plan should be scoped  
24 and analyzed for consideration in the subsequent program proposals. A preliminary revised  
25 program for 2012-2017 was proposed on March 31, 2010, and on April 2, 2010, an NOI to  
26 prepare and scope the 2012-2017 OCS oil and gas leasing program PEIS was published in the  
27 *Federal Register* (75 FR 16828). That NOI invited the public to provide comments on the scope  
28 and content of the PEIS and identified as many as 14 locations where public scoping meetings  
29 could be held to obtain comments.  
30

31 On June 30th, 2010, Secretary of the Interior Salazar announced that the public scoping  
32 meetings would be postponed in response to the Deepwater Horizon event. The additional time  
33 would be used to evaluate safety and environmental requirements of offshore drilling. On  
34 December 1, 2010, Secretary Salazar announced an updated oil and gas strategy for the OCS.  
35 The new strategy continued a moratorium for areas in the Eastern GOM (Figure 1-2) and  
36 eliminated the Mid-Atlantic and South Atlantic Planning Areas from consideration for potential  
37 sales and development through the 2017 planning horizon. The Western GOM, Central GOM,  
38 Eastern GOM (only a very small portion thereof), Cook Inlet, Chukchi Sea, and Beaufort Sea  
39 OCS Planning Areas (Figure 1-1) would continue to be considered in the PEIS. Subsequently,  
40 on January 4, 2011, a Notice of Scoping Meetings for the proposed 2012-2017 OCS oil and gas  
41 leasing program PEIS was published in the *Federal Register* (76 FR 376) and a second scoping  
42 period was conducted from January 6, 2011, through March 31, 2011. During this scoping  
43 period, public scoping meetings were scheduled for 12 locations in Alaska, Texas, Louisiana,  
44 Alabama, and Washington, D.C. In addition, BOEM received comments through the mail and  
45 maintained a public website to accept electronic scoping comments.  
46

1           Recent EISs and EAs for GOM and offshore Alaska oil and gas lease sales provided  
2 additional scoping information. Many of the analytical issues raised during the lease sale review  
3 process are applicable to this draft PEIS for the proposed Program. Subject matter experts at  
4 BOEM also identified analytical issues relevant to the draft PEIS analyses. In addition,  
5 alternatives developed for past leasing program proposals were reviewed to determine whether it  
6 would be appropriate to analyze any of them in detail in this PEIS.

7  
8           Through the scoping process, the following major issues were identified for consideration  
9 in preparing the draft PEIS:

- 10
- 11           • Oil and gas activities that could cause impacts (termed “impact-producing  
12 factors”);
  - 13
  - 14           • Ecological resources that could be affected by oil and gas activities;
  - 15
  - 16           • Social, cultural, and economic resources that could be affected by oil and gas  
17 activities;
  - 18
  - 19           • Human health;
  - 20
  - 21           • Climate change;
  - 22
  - 23           • Regulatory oversight and safety; and
  - 24
  - 25           • Oil spills.
  - 26

27           In addition, comments received through the scoping process provided suggestions for  
28 alternatives to be considered in the PEIS. These suggestions fell into the following major  
29 categories:

- 30
- 31           • Prohibiting leasing and development in one or more planning areas;
  - 32
  - 33           • Limiting leasing and development to specific areas on the OCS (e.g., no deep  
34 water);
  - 35
  - 36           • Including more OCS planning areas than the six identified in the proposed  
37 action;
  - 38
  - 39           • Developing new, or expanding existing, deferral areas; and
  - 40
  - 41           • Developing alternative energy sources to replace oil and gas.
  - 42

43           The alternatives evaluated in this draft PEIS, as well as those considered but removed  
44 from further consideration, are discussed in Chapter 2 of this draft PEIS.

1           This draft PEIS considers mitigation measures already established and required by  
2 existing statutes or regulations, as well as sale-specific measures (stipulations) that were  
3 commonly adopted in past sales and that will likely be implemented for any lease sales that  
4 would occur under the Program. However, it is at the lease sale stage that more detailed and  
5 geographically focused analyses are conducted to evaluate the magnitude of potential impacts  
6 and, if needed, to develop effective mitigation strategies to reduce the magnitude of those  
7 potential impacts to acceptable levels. Therefore, the impact analyses presented in this PEIS  
8 assume implementation of mitigation measures that are required by statute or regulation as well  
9 as sale-specific mitigation measures (stipulations) commonly adopted in past sales (see  
10 Appendix B: Assumed Mitigation Measures). This draft PEIS also assumes that existing  
11 mitigations in areas with currently active leases, such as the GOM and parts of Alaska, will be  
12 applied to areas included in the Program that do not have a history of OCS activity.  
13  
14

## 15 **1.4 ANALYTICAL ISSUES**

16  
17           A number of analytical issues, many of which are addressed in this draft PEIS, were  
18 identified during scoping. These include the geographic scope of the PEIS, the analytical scope  
19 of the PEIS, the impacting factors to be considered in the analyses, and the resources that may be  
20 affected by the Program. These analytical issues are discussed below.  
21  
22

### 23 **1.4.1 Geographic Scope**

24  
25           There are 26 planning areas on the OCS, and six of these have been identified for leasing  
26 consideration as part of the Program (Figure 1-1). Twenty planning areas located along the  
27 Atlantic, Pacific, Florida, and Alaskan coasts are neither part of the proposed action nor analyzed  
28 in any alternative considered in this draft PEIS.  
29  
30

### 31 **1.4.2 Analytic Scope**

32  
33           The analyses conducted in preparation of this draft PEIS were based on current,  
34 available, and credible scientific data. Interpretation of these scientific data was used to evaluate  
35 direct, indirect, and cumulative impacts associated with the proposed action and alternatives.  
36 Throughout this PEIS, Alternative 1 (referred to herein as the proposed action) is used as the  
37 default scenario on which to base analysis of potential impacts. This does not mean that  
38 Alternative 1 has already been chosen as the operative alternative for the Program. Rather, the  
39 proposed action includes the largest geographic scope of any of the alternatives contemplated, so  
40 using it to analyze impacts results in the most all-inclusive analysis possible, compared to the  
41 other alternatives presented. The proposed action is the alternative that has the potential to cause  
42 the greatest impacts, with each of the other alternatives representing, in effect, a subset of the  
43 proposed action. Therefore, using the proposed action as the basis for analysis provides the most  
44 complete and meaningful assessment of potential impacts.  
45

1 As a programmatic evaluation, this draft PEIS does not evaluate site-specific issues that  
2 would be associated with specific lease sales in specific planning areas. As previously discussed,  
3 a variety of location-specific factors (such as water depth, sea floor topography, distance from  
4 shore, ecological communities, and the presence of threatened and endangered species and  
5 cultural resources) may vary considerably, not only between planning areas but also among lease  
6 sale blocks within individual planning areas. In addition, variations in project design and study  
7 (including the seismic survey approach and technology selected) will influence and/or determine  
8 the nature and magnitude of impacts that might occur with a given lease sale. The combined  
9 effect of these location-specific and project-specific factors cannot be fully anticipated or  
10 addressed in a programmatic analysis, and can only be evaluated at the lease-sale or finer level.  
11  
12

### 13 **1.4.3 Impact-Producing Factors**

14  
15 Several types of impact-producing factors were identified that warrant consideration. All  
16 of the following impact-producing factors are included in the exploration and development  
17 scenarios for the proposed action presented in Section 4.4, and are evaluated as applicable in the  
18 resource-specific impact evaluations presented elsewhere in Chapter 4. In addition, the  
19 cumulative impact analysis includes activities unrelated to OCS development but relevant to  
20 assessing cumulative impacts (Section 4.6). The impact-producing factors related to OCS  
21 development that were identified include:  
22

- 23 • Accidental oil spills including those from loss of well control, production  
24 accidents, transportation failures (e.g., from tankers, other vessels, seafloor  
25 and onshore pipelines, and storage facilities), and low-level spillage from  
26 platforms.
- 27  
28 • The offshore and onshore disposal of liquid wastes, including well drilling  
29 fluids (i.e., drill muds), produced water, ballast water, and sanitary and  
30 domestic wastewater generated by OCS-related activities.
- 31  
32 • Solid waste disposal, including material removed from the well borehole  
33 (i.e., drill cuttings), solids produced with the oil and gas (e.g., sands), cement  
34 residue, bentonite, and trash and debris (e.g., equipment or tools) accidentally  
35 lost, including those that contain materials such as mercury that may  
36 bioaccumulate.
- 37  
38 • Gaseous emissions from offshore and onshore facilities and transportation  
39 vessels and aircraft.
- 40  
41 • Noise from seismic surveys, ship and aircraft traffic, drilling and production  
42 operations, and explosive platform removals.
- 43  
44 • Invasive species whose introduction may be facilitated by activities associated  
45 with the construction of offshore facilities or with the movement of materials  
46 and equipment by way of transportation systems.
- 47

- 1 • Physical impacts from ship and aircraft traffic and use conflicts with oil  
2 tankers and barges, supply/support vessels and aircraft, and seismic survey  
3 vessels and aircraft.  
4
- 5 • Physical emplacement, presence, and removal of facilities, including offshore  
6 platforms; seafloor pipelines; floating production, storage, and offloading  
7 systems; onshore infrastructure such as pipelines, storage, processing, and  
8 repair facilities; ports; pipe coating yards; refineries; and petrochemical plants.  
9
- 10 • Other activities including oil spill response (cleanup), including both response  
11 and recovery under extreme sea and ice conditions.  
12
- 13 • Interaction of oil and gas industry workers and local residents, including  
14 interaction associated with the employment of local residents.  
15

16 In addition to the activities that may result from the proposed action, the draft PEIS  
17 considers natural processes and phenomena that could cause indirect impacts by affecting the  
18 safe conduct of OCS oil and gas exploration, production, and transportation activities, or the  
19 environmental conditions under which these activities occur. These include geologic hazards  
20 such as earthquakes and continental slumping; gas hydrates; physical oceanographic processes  
21 such as water currents, sea ice, and waves; subsea permafrost; shoreline erosion; and  
22 meteorological and climatic events and processes such as hurricanes and climate change,  
23 including global warming and ocean acidification. The draft PEIS also considers space-use  
24 conflicts with military operations in designated offshore military areas and potential future  
25 alternative uses of the OCS, including the program for alternative energy development and  
26 production and alternate use of offshore facilities. It also considers the effects of the OCS oil  
27 and gas leasing program on the introduction of invasive species into U.S. waters.  
28

29 This draft PEIS gives particular attention to the issue of climate change, based on the  
30 observed changes that have been occurring during the past several decades, particularly in the  
31 Arctic environments in Alaska. Chapter 3 presents a discussion of climate change and baseline  
32 conditions (Section 3.3), while many of the subsequent resource-specific discussions of the  
33 affected environment include discussions of the effects of ongoing, observable climate changes  
34 for those resources. Additional analyses are included in the cumulative analysis (Section 4.6) in  
35 which the impacts of the continuing trend in climate change during the life of the proposed  
36 action are evaluated along with all other factors affecting the resource.  
37  
38

#### 39 **1.4.4 Potentially Affected Resources**

40  
41 This draft PEIS evaluates resources that may potentially be impacted by oil and gas  
42 leasing and development under the Program. The resources evaluated include not only natural  
43 resources (physical and biological) but social, cultural, and economic resources as well. The  
44 natural resources and topics evaluated in this draft PEIS are as follows:  
45

- 1 • *Water Quality (including marine and estuarine areas)*. The water quality  
2 issues are related primarily to marine water quality and how changes in water  
3 quality caused by OCS activities could affect biological resources (for  
4 example, by potentially contributing to the GOM hypoxia zone).  
5
- 6 • *Air Quality*. The principal concern is the transport of offshore emissions to  
7 onshore areas leading to potential violations of Federal and State air quality  
8 standards intended for the protection of human health and welfare.  
9
- 10 • *Biologic Resources*. Primary concerns are related to habitat disturbance or  
11 loss (including designated critical habitats, pursuant to ESA, and habitat areas  
12 of particular concern, pursuant to the Magnuson-Stevens Act), direct physical  
13 impacts on biota, and disturbance of normal behaviors (feeding, courtship,  
14 migration) by OCS-related activities.  
15
- 16 • *Socioeconomic and Sociocultural Resources*. Socioeconomic and  
17 sociocultural resources included potential impacts on tourism, recreation,  
18 commercial fishing, subsistence harvests, aesthetics, local economy, land and  
19 water use conflicts, equitable sharing of program benefits and burdens,  
20 disproportionate impacts on Louisiana, and disproportionate impacts on  
21 Alaska Natives.  
22

23 The issues we examine in this draft PEIS regarding possible impacts on biology and  
24 ecology fall into three main categories: animals, plants, and habitats or ecological systems.  
25 Among the animal groups identified as needing analysis for potential program impacts were  
26 marine mammals, birds, fish, and sea turtles. Special attention was drawn to migratory species,  
27 species taken commercially and for Alaska Native subsistence (including whales, fish, and  
28 birds), and threatened and endangered species. With respect to habitats or systems, both marine  
29 (e.g., sanctuaries, marine parks/preserves, seagrasses, mangroves, and “hard bottom” areas) and  
30 coastal (e.g., estuaries, wetlands/marsh, intertidal zone, seashore parks) areas were identified as  
31 subject to possible adverse impacts. The issue of bioaccumulation is also discussed in this draft  
32 PEIS.  
33

34 The specific biological and ecological resources analyzed in detail are:

- 35
- 36 • Marine mammals, including a variety of endangered and nonendangered  
37 cetaceans (e.g., whales, dolphins, etc.), pinnipeds (seals, sea lions, walruses),  
38 sea otters, and polar bears.  
39
- 40 • Terrestrial mammals, including caribou and grizzly/brown bear in the Arctic,  
41 and five species of federally listed mice and voles that inhabit certain coastal  
42 areas of the GOM.  
43
- 44 • Birds, including a variety of endangered and nonendangered seabird,  
45 shorebird, waterfowl, and raptor species. Particular concern was identified for  
46 migratory species, including those taken for Alaska Native subsistence.  
47

- 1 • Fish, including a variety of finfish and shellfish species used for commercial  
2 or recreational purposes. Particular concern was identified regarding chronic  
3 pollution from polycyclic aromatic hydrocarbons. Particular concern was also  
4 identified for salmon in Alaska.
- 5
- 6 • Reptiles, including sea turtles.
- 7
- 8 • Coastal habitats, including wetlands, estuaries, seagrass and kelp beds,  
9 mangroves, dunes, beaches, and barrier islands.
- 10
- 11 • Lower trophic level organisms and food chains.
- 12
- 13 • Open water habitats, such as *Sargassum* mats.
- 14
- 15 • Seafloor habitats, including submarine canyons, topographic features, corals,  
16 live bottom areas (benthic environments), and seeps (e.g., brine and oil seeps).
- 17
- 18 • Areas of special concern, including coastal and marine sanctuaries, parks,  
19 refuges, reserves, sanctuaries, and forests. Particular concern was raised in  
20 regard to “essential fish habitat” as designated by the U.S. Department of  
21 Commerce (USDOC) National Marine Fisheries Service (NMFS).
- 22

23 Specific concerns regarding social, cultural, and economic resources included potential  
24 impacts on tourism, recreation, commercial and recreational fishing, subsistence harvests,  
25 aesthetics, local economy (especially the “boom/bust” phenomenon), land and water use  
26 conflicts, equitable sharing of program benefits and burdens, and disproportionate impacts to  
27 certain populations. The social, cultural, and economic topics analyzed in this PEIS are as  
28 follows:

- 29
- 30 • Population, employment, income, and public service issues from the effects of  
31 the Program, including issues of “boom/bust” economic cycles.
- 32
- 33 • Land use and infrastructure, including construction of new onshore facilities,  
34 and land use and transportation conflicts between the oil and gas development  
35 and other uses.
- 36
- 37 • Sociocultural systems effects were primarily identified with respect to Alaska.  
38 These include concerns about the effects on subsistence (e.g., bowhead whale  
39 hunting), loss of cultural identity, psychological health of people, and social  
40 costs of lease sales and oil spills.
- 41
- 42 • Environmental justice (e.g., the potential for disproportionate and high  
43 adverse impacts on minority and/or low-income populations [Executive  
44 Order 12898]).
- 45
- 46 • Fisheries; commercial, subsistence, and recreational.
- 47



- 1 • Tourism and recreation, including the use of coastal areas for sightseeing,  
2 wildlife observations, swimming, diving, surfing, sunbathing, hunting, fishing,  
3 and boating, as well as visual impacts of offshore OCS structures.  
4
- 5 • Archaeological resources, including historic shipwrecks and surface or  
6 subsurface sites that had been inhabited by humans during prehistoric times.  
7  
8

#### 9 **1.4.5 Issues Not Analyzed in This PEIS**

10 The following discussions address issues mentioned during scoping that were not  
11 analyzed in this PEIS. These issues include concerns about affected resources or analytical  
12 techniques employed in the PEIS.  
13  
14

##### 15 **1.4.5.1 Worker Safety**

16 Generally, concerns mentioned regarding worker safety risks from OCS oil and gas  
17 development were broad and not defined during scoping. The issue of worker safety is more  
18 appropriately considered during the review of individual lease exploration and development  
19 proposals. The OCSLA and the implementing regulations require that all drilling and production  
20 operations use the best available and safest technologies. A principal reason for this requirement  
21 is to minimize the adverse effect of OCS operations on human safety. BOEM considers whether  
22 a proposed project would be conducted in a manner that conforms to the many specific  
23 requirements developed to protect worker safety during the review of proposals to conduct lease  
24 operations. BOEM can best determine at that time whether additional measures are needed to  
25 reduce the potential for accidents that affect safety.  
26  
27  
28  
29

##### 30 **1.4.5.2 Proposed Seismic Inventory**

31 Many comments were received through the scoping process on the issue of conducting  
32 seismic surveys to identify potential OCS U.S. oil and gas resources. Industry must hold leases  
33 before it commits to very expensive exploration drilling activities. Generally, industries, States,  
34 and individuals supportive of OCS petroleum development favored this idea, and those against  
35 OCS development opposed it. Those in favor argued that it was prescribed in duly enacted law,  
36 it would support national energy planning, and it would provide information relevant to the  
37 equitable sharing of the benefits and burdens of the OCS leasing program. Those against oil and  
38 gas leasing and development on the OCS argued that it would subvert previous laws and policies  
39 (e.g., coastal zone management and Congressional moratoria), it might not comply with all  
40 NEPA requirements, and it might create pressure to develop areas that are currently under  
41 Congressional moratoria and Presidential withdrawals. The procedures under which a seismic  
42 inventory for all of the oil and gas resources on the OCS might be conducted are not yet  
43 established and are, therefore, unrelated to the Program and not addressed in this PEIS.  
44  
45  
46

### 1.4.5.3 Neighboring Countries Drilling on OCS Border with the United States

It was suggested that the United States should lease selected tracts on the OCS to counter petroleum development being planned by foreign countries, such as Cuba. It was suggested that this would protect U.S. mineral rights in border areas. The issue of foreign governments exploring and developing petroleum resources in their territorial waters is unrelated to the Program and is, therefore, not addressed by this draft PEIS. This issue of international mineral rights is more appropriately addressed by the U.S. Department of State than by BOEM.

### 1.4.5.4 Biological Assessment and Opinion for Threatened and Endangered Species

Section 7(a)(2) of the Endangered Species Act (ESA) (16 USC 1536(a)(12)) requires every Federal agency, in consultation with and with the assistance of the Secretary of the Interior and the Secretary of Commerce, to ensure that any action it authorizes, funds, or carries out in the United States or upon the high seas is not likely to jeopardize the continued existence of any listed species or result in destruction or adverse modification of critical habitat. Section 402.02 defines “action” as “all activities or programs of any kind authorized, funded, or carried out in whole or in part.” Preparing the Program does not fit the definition of a Federal action because no OCS activities are being “authorized, funded, or carried out” at this Program level. Therefore, ESA Section 7 consultation (whether informal or formal) at the leasing program level is premature.

The OCS oil and gas leasing program, as required by Section 18 of OCSLA (43 USC 1344), identifies a proposed schedule of lease sales and prospective areas of the OCS that the Secretary of the Interior believes will best meet U.S. energy needs. The leasing program process and subsequent Secretarial decisions are based on the four main principles of Section 18 that dictate which areas are reasonable for consideration of leasing in the upcoming 5-year time frame. The Program will define, as broadly as possible, the portion of each planning area that is proposed for subsequent leasing consideration. Decision options for the leasing program are preserved for the Secretary at the time the decision is made for each sale. Therefore, it is at the lease sale stage that BOEM begins ESA Section 7 consultations.

In further support of the position not to consult at the leasing program stage, the U.S. Fish and Wildlife Service (USFWS) and NMFS, in their final rulemaking establishing procedural regulations for Section 7 consultations (51 FR 19926), clarified that informal and formal consultations are a “post-application process when applicants are involved.” BOEM would not approach this stage until a lease sale is held and a qualified bid is accepted. Further, we believe the intent of Congress when passing the ESA was to exclude consultations on actions that are remote or speculative in nature. While the following quote addresses ESA Section 7 early consultations (a pre-application process defined in the above-referenced *Federal Register* notice), we believe it clearly expresses Congress’ intent and is consistent with our position.

“The Committee expects that the Secretary will exclude from such early consultation those actions which are remote or speculative in nature and to include only those actions which the applicant can demonstrate are likely to

1 occur. [. . .] The Committee further expects that the guidelines will require the  
2 prospective applicant to provide sufficient information describing the project,  
3 its location, and the scope of activities associated with it to enable the Secretary  
4 to carry out a meaningful consultation.” (H.R. Rep. No. 567, 97th Cong.,  
5 2nd Sess. 25 [1982])  
6

7 Ultimately, decisions regarding the size and configuration of a lease sale area, lease  
8 stipulations, and some mitigation measures are determined by the presale process. Prior to the  
9 presale process, greater uncertainties exist. Some of the uncertainties may result from an  
10 industry firm’s interest in a particular area and its willingness to bid, which depend, in part, on  
11 continually changing perceptions about potential benefits that might result. Limitations on  
12 predicting a firm’s investment decisions also limit the ability to predict OCS activities. With so  
13 much uncertainty at this Program stage, ESA consultation would be premature.  
14

#### 15 **1.4.5.5 Life Cycle Effects of Oil and Gas Development**

16 A recommendation was made that the PEIS address all reasonable effects of new oil and  
17 gas development, production, and consumption. Such “full cycle” effects would include oil and  
18 gas exploration, construction and placement of infrastructure, continued drilling, production,  
19 processing, treatment, refining, transportation and storage, final decommissioning, and ultimate  
20 consumption of the finished product. Additionally, the contribution of OCS development and  
21 OCS oil and gas consumption activities to global warming was stressed.  
22  
23  
24

25 The scope of the proposed action analyzed in this draft PEIS encompasses the  
26 exploration, development, production, and transport of crude oil, and decommissioning. The  
27 consumption of the refined oil is not considered because the scope of this draft PEIS is limited to  
28 issues that have a bearing on the decisions for the proposed leasing program. Consumption of oil  
29 and gas is considered at a broader level when decisions are made regarding the role of oil and gas  
30 generally, including domestic production and imports, in the overall energy policy of the  
31 United States. At the refinery stage, OCS oil is mixed with oil from other sources such that the  
32 OCS contribution to subsequent environmental impacts is not separable.  
33  
34

#### 35 **1.4.5.6 Resource Estimates and Impact Analyses**

36 A concern was expressed that petroleum resource reserves should not be linked to  
37 conclusions for environmental impacts. It was felt that low oil resource estimates, and  
38 subsequent low probabilities of commercial finds, may erroneously be equated with insignificant  
39 environmental impacts. The draft PEIS does not equate oil and gas resource estimates and  
40 impact significance. We assess the potential impacts of exploration, production, transporting  
41 crude oil and gas, and decommissioning on environmental resources, including the potential  
42 impacts of a large oil spill, of the proposed action and alternatives, regardless of the oil resource  
43 estimate. The analytical conclusions reflect the likely impacts of routine activities as well as  
44 those that could occur in the event a large spill contacted the resource. The estimated number of  
45 large spills that could occur is a function of the assumptions regarding anticipated (future)  
46

1 production. Therefore, the impacts could be greater on some environmental resources because  
2 they could be exposed to more large spills than other environmental resources. If exploration  
3 fails to identify oil and gas projects that are commercially feasible, then no development would  
4 occur and the only impacts will be associated with exploration activities.

5  
6 A suggestion was made that the analysis of relative marine productivity should not be  
7 limited to a measure of the primary productivity of marine plants. This measure is used because  
8 it is well documented and understood. However, we agree that it should not be the only factor  
9 used; therefore, BOEM uses other information as well in its consideration of the productivity of  
10 marine environments.

11  
12 A suggestion was made that the environmental cost analysis model should consider the  
13 impact of catastrophic events on unique resources. We think that probabilistic models are not an  
14 appropriate venue for analyzing events with highly uncertain probabilities. For this reason,  
15 catastrophic events are being considered separately.

16  
17 A suggestion was made in the Alaska region that BOEM use development scenarios that  
18 reflect the concerns of affected communities rather than such industry-related factors as water  
19 depth and proximity to existing infrastructure. As is the intent of CEQ guidance, our  
20 development scenarios are constructed to identify those events that are most likely to happen to  
21 better focus the analysis of future activities. However, we address the concerns of affected  
22 communities in the analyses of such topics as possible impacts on species and on subsistence.

## 23 24 25 **1.5 ORGANIZATION OF THIS PEIS**

26  
27 This draft PEIS is organized as follows:

- 28  
29 • Chapter 1 provides background information, identifies the purpose and need  
30 for the action, and discusses scoping and analytical issues.
- 31  
32 • Chapter 2 describes the alternatives evaluated in the draft PEIS, identifies  
33 alternatives considered but not evaluated in the draft PEIS, and presents a  
34 summary comparison of the environmental impacts of the alternatives.
- 35  
36 • Chapter 3 provides an overview of the marine and coastal ecoregions where  
37 oil and gas development under the Program may occur and presents  
38 descriptions of the physical, natural, cultural, and economic resources or  
39 conditions that may potentially be affected by the proposed action and other  
40 alternatives.
- 41  
42 • Chapter 4 describes the impact-producing factors associated with routine  
43 operations under each phase of OCS oil and gas development, discusses  
44 accidental events and spills, describes the impact analysis approach of the  
45 draft PEIS, and defines impact levels. This chapter also discusses the  
46 relationship of the physical environment to oil and gas development and

1 identifies issues of programmatic concern. Finally, Chapter 4 presents the  
2 exploration and development scenarios, as well as the accidental oil spill  
3 scenarios, assumed for this draft PEIS; discusses the potential impacts of these  
4 scenarios for each alternative; and discusses the potential cumulative impacts  
5 of the alternatives.  
6

- 7 • Chapter 5 identifies the unavoidable adverse impacts associated with the  
8 alternatives.  
9
- 10 • Chapter 6 discusses the relationship between short-term use of the  
11 environment and long-term productivity.  
12
- 13 • Chapter 7 discusses the significant irreversible and irretrievable commitments  
14 of natural and manmade resources.  
15
- 16 • Chapter 8 discusses the process used for preparing the Program and the list of  
17 agencies, organizations, governments, and individuals that received the draft  
18 PEIS.  
19
- 20 • Chapter 9 lists the names, education, and experience of the persons who  
21 helped to prepare the draft PEIS. Also included are the subject areas for  
22 which each person was responsible.  
23
- 24 • Appendix A presents a glossary of terms used throughout this draft PEIS.  
25
- 26 • Appendix B identifies the mitigation measures that are required by existing  
27 statutes or regulations, as well as sale-specific measures (stipulations) that  
28 were commonly adopted in past sales and that are assumed will be  
29 implemented for any lease sales that would occur under the Program.  
30
- 31 • Appendix C identifies all Federal laws and Executive Orders that would apply  
32 to leasing under the Program.  
33

## 34 35 **1.6 REFERENCES**

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