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Folder Title:
Outer Continental Shelf

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G	15	23	1	

ROBERT J. LAGOMARSINO
19TH DISTRICT, CALIFORNIA

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CONGRESSIONAL OBSERVER
GENEVA ARMS CONTROL TALKS

POW/MIA TASK FORCE
CHAIRMAN

Congress of the United States
House of Representatives
Washington, DC 20515
August 1, 1990

ER
JL

COMMITTEE ON
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NATIONAL PARKS AND PUBLIC LANDS
VICE CHAIRMAN—PARKS

Governor John H. Sununu
Chief of Staff
Executive Office of the President
The White House
1600 Pennsylvania Avenue
Washington, D.C. 20500

Dear Governor Sununu:

Following up on our conversation this morning, I am writing to ask for your assistance in working out a reasonable solution to the problems created by the Administration's recent decision on leasing portions of the Outer Continental Shelf (OCS).

As we discussed, I am not opposed to off-shore drilling, as long as it is done in an environmentally safe and sound manner. However, the Administration's OCS leasing proposal forces one area of the country to bear the entire national burden for additional off-shore leasing activity. Much of that area lies off the coast of my Congressional District.

I am especially concerned about the proposed leases in the environmentally sensitive areas in the Santa Barbara Channel. Some of the proposed tracts come right up against the Federal Ecological Preserve and Buffer Zone as well as the National Marine Sanctuary surrounding the Channel Islands. Additionally, several tracts block either the northbound or southbound shipping lanes that cut through the channel. It is these areas that I was trying to protect when I testified before the President's OCS Task Force last year. In fact, I understand that the tracts within the Santa Barbara Channel were not included in the OCS Task Force recommendations to the President, but were added later.

Of the 87 tracts to be considered for leasing after January 1, 1996 under the President's proposal, I would like to see the following tracts, all in the Santa Barbara Channel, included in the ten-year moratorium that the President has announced for the rest of the California coast. Taken from OCS Leasing Maps 6A and 6B, the tract numbers are:

☐ SUITE 101
5740 RALSTON
VENTURA, 93003
(805) 642-2200/656-4344

☐ 314 EAST CARRILLO
SANTA BARBARA, 93101
(805) 963-1708

☐ 104 E. BOONE ST. #E
SANTA MARIA, 93454
(805) 922-2131

Governor John H. Sununu
August 1, 1990
Page 2

From OCS Leasing Map 6A: 5588, 5586, 5382, 5281, 5172, 5173, 5174, 5073, 5074, 5079, 5080, 5081, 5082, 5083, 4973, 4975, 4976, 4977, 4978, 4979, 4980, 4981, 4982, 4983, 4984, 4873, 4874, 4875, 4876, 4877, 4772, 4773, 4774, 4777. (35 blocks)

From OCS Leasing Map 6B: 5162, 5163, 5171, 5062, 5070, 5071, 4961. (7 blocks)

After including these 42 tracts in the ten-year moratorium enjoyed by the rest of the California coast, there would still be 45 additional tracts available for leasing after January 1, 1996. Realistically, the local governments in the on-shore areas near the tracts listed above will not issue the permits needed for a company to commence drilling activity before the year 2000.

If this proposal is not feasible to the Administration, then, at the very least, the proposed tracts contiguous to the environmentally sensitive Channel Islands National Marine Sanctuary and the Buffer Zone, as well as those blocking the shipping lanes should be included in the ten-year moratorium. Taken from OCS Leasing Maps 6A and 6B, the tracts included in the moratorium under this compromise are:

From OCS Leasing Map 6A: 5588, 5382, 5281, 5079, 4976, 4975, 4973, 5074, 5073, 4973, 4873, 4872, 4984, 4983, 4982, 4981, 4980, 4979, 4978, 4877, 4777, 4774, 4773, 4772. (24 blocks)

From OCS Leasing Map 6B: 5070. (1 block)

After including these 25 tracts in the ten-year moratorium, 62 tracts remain available for leasing in five years. The inclusion of these tracts also addresses the President's stated concerns regarding environmentally sensitive areas and the danger of off-shore oilspills...especially from tanker traffic.

Further addressing the President's concerns about oilspills from tankers, I have been trying to get a vessel traffic system installed in the channel in an effort to reduce the safety hazards created by the existing obstacles to free navigation. I would certainly like to see the consideration of this system progress. Also, I would like to see the President reaffirm his commitment to the Channel Islands National Marine Sanctuary and the Federal Ecological Preserve and Buffer Zone through permanent protection for these areas from any oil and gas development.

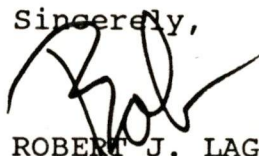
Governor John H. Sununu
August 1, 1990
Page 3

As I mentioned before, I believe that oil and gas development can proceed on the Outer Continental Shelf in an environmentally sound manner. I also agree with the President's decision that air quality controls for oil and gas development off-shore California should be the same as those applied on-shore. However, it is unfair to load the entire national burden for off-shore development on a small, environmentally sensitive area such as the Santa Barbara Channel, and considering the chances of any development actually proceeding there, the harm done by the decision appears to be needless.

Thank you for your consideration of these requests. I look forward to hearing from you shortly.

With best wishes,

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Lagomarsino', written over the printed name.

ROBERT J. LAGOMARSINO
Member of Congress

RJL:tj

FINAL EDITION

The Miami Herald

WEDNESDAY, MAY 30, 1990

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25 CENTS

Bush likely to extend Keys oil ban

By PAUL ANDERSON
Herald Washington Bureau

WASHINGTON — President Bush is ready to extend through 2002 a moratorium on oil drilling in the Gulf of Mexico off the Florida Keys, with an announcement possible as soon as today, administration officials said Tuesday.

The moratorium falls short of the permanent drilling ban sought by environmentalists and others, including Gov. Bob Martinez and Florida's congressional delegation.

12-year moratorium is less than state had sought

"It sounds like it's a step forward, but it's not resolving the issue," said Ann Whitfield of the Florida Public Interest Research Group, a leader in the coalition fighting for a ban.

But the administration officials, who didn't want to be identified by name, said the plan is in line with the

recommendations of a National Academy of Sciences study and an interagency federal task force, which concluded that the long-term ecological impact of offshore drilling needs further research.

The extended moratorium will reach through the federal govern-

ment's next two cycles of offshore leasing, 1992-1997 and 1997-2002.

The moratorium will cover an area south of 26 degrees north latitude, which cuts across the state at Naples, to at least the Dry Tortugas, one source said. It could not be immediately determined how far out

into the Gulf it will extend.

Environmentalists fear that an oil spill in the Florida Keys would permanently damage the last living coral reef in the continental United States and the fragile mangrove fringe of the Everglades along the Southwest Florida coast.

Another key issue — the cost of canceling 73 leases for exploratory wells sold in the early 1980s for nearly \$110 million — will be left to negotiations between the U.S. Department of Interior and state officials, sources at the Interior Department said.

Those leases, each covering a tract three miles by three miles, are held by nine different oil companies. They've been suspended by con-

PLEASE SEE OIL 12A

Bush will extend oil moratorium, U.S. officials say

OIL, FROM 1A

gressional drilling bans.

Additional details of the president's forthcoming announcement were sketchy late Tuesday.

While the policy for South Florida is "locked down," a senior White House official said, the president is still weighing a proposal to allow drilling in portions of two sensitive areas off the coast of California.

If a decision isn't announced today, it will be delayed by the summit with Soviet leader Mikhail Gorbachev, the official said.

Aides to Martinez, Sens. Bob Graham and Connie Mack and other Florida officials said late Tuesday they had not been informed of a final decision affecting South Florida. But they said the policy outlined by the administration sources was in line

with what they are expecting, based on Bush's previous comments.

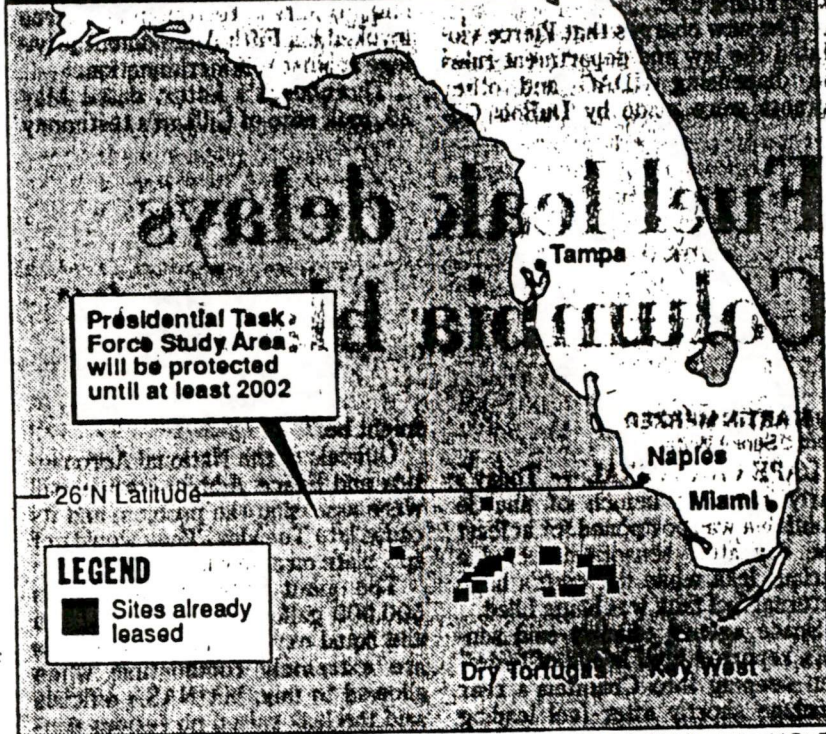
"We've got nothing official, but those are the signals we've been getting," said Brian Ballard, the Republican governor's top aide.

Ballard said the governor won't mind having to negotiate over the current leases, which now have an estimated cost of more than \$140 million. "We want that as a separate deal, with every avenue open," he said.

Late last year, Martinez offered to put up \$10 million from a state oil-spill trust fund toward buying back the leases, but Interior Secretary Manuel Lujan said the state would have to bear a greater share — if not all — of the cost.

Since then, members of Congress, led by Rep. Larry Smith, D-Hollywood, have proposed a plan to let the oil companies holding the

SOUTH FLORIDA DRILLING DELAYED



BERT GARCIA/Miami Herald Staff

canceled leases claim credits against royalties and other fees due the government for drilling elsewhere.

Environmentalist Whitfield said cancellation of the existing leases

will be "the crucial issue" in Bush's decision.

"If he doesn't get those oil companies out of there . . . it's just fluff," she said. "He can't then claim this as an environmental decision."

Platt's OILGRAM NEWS

Wednesday, May 2, 1990

**FLA GOVERNOR BIDS LUJAN
CANCEL OCS LEASE SALE 137**

Washington 5/1.--Florida Gov. Martinez has urged the Interior Dept. to cancel a proposed offshore lease sale along the state's Gulf Coast while issues such as environmental risk, oil spill containment and cleanup and a revised 5-year OCS plan are addressed.

The proposed sale, No. 137, is scheduled for November 1991, off the northwest coast of Florida.

"We are on the threshold of a new era in understanding the need to balance our nation's energy needs with those of our environment, but until we fully understand the ramifications of offshore exploration, we must come down on the side of environmental caution," Martinez wrote Interior Secretary Lujan.

Martinez cited statements made by Lujan and discussions at the staff level that suggest the new 5-year OCS program "will include a thorough re-evaluation and refocusing of oil and gas leasing, which could bring about major changes to the leasing approach off Florida. Because of the potential benefits these changes may hold for Florida, it is essential to the state that the proposed sale be canceled."



BOB MARTINEZ
GOVERNOR

STATE OF FLORIDA

Office of the Governor

THE CAPITOL

TALLAHASSEE, FLORIDA 32399-0001

FL Elections -
Gov's. Race

FOR IMMEDIATE RELEASE
April 30, 1990

CONTACT: Jon Peck, Press
Secretary 488-5394

GOVERNOR URGES FEDERAL GOVERNMENT TO CANCEL SALE OF OIL AND GAS LEASES OFF PANHANDLE AND GULF COAST

Governor Bob Martinez today urged the federal government to cancel the proposed sale of offshore oil and gas leases along Florida's Gulf coast, saying environmental concerns should take priority and final decisions should wait for development of a new national energy program.

In a letter to U.S. Interior Secretary Manuel Lujan Jr., the Governor said the federal government should cancel plans to offer additional leases while such issues as environmental risk, oil spill containment and cleanup, and a revised five-year program are addressed.

"We are on the threshold of a new era in understanding the need to balance our nation's energy needs with those of our environment, but until we fully understand the ramifications of offshore exploration we must come down on the side of environmental caution," Governor Martinez wrote. "To allow this lease sale to go forward without the benefit of that new understanding could be to the detriment of the program and the environment, as well as to the people of Florida."

(MORE)

2
The Interior Department is considering Proposed Sale 137, which would make 47.5 million acres in the Gulf of Mexico subject to oil and gas exploration. The Florida portion of the area runs approximately from Naples north to Pensacola. The department has scheduled public hearings on the proposed lease sale in three Florida cities this week.

Governor Martinez has been working constantly with the federal government to ban future drilling activity south of Naples. The Governor has spoken repeatedly with Secretary Lujan and President Bush about the areas off Southwest Florida, including the Florida Keys, and is awaiting a decision from the President.

In his letter to Lujan, the Governor noted that there are already more than 200 active leases off the Florida Panhandle that are not being used. He said additional leases are not necessary until the oil and gas industry have evaluated the status of the existing leases.

The Governor noted that Interior is developing a new five-year program that will provide a comprehensive approach to oil and gas leasing, and the new program could benefit Florida. As a result, he said, further lease sales should be stopped until the new program is completed.

"There is no compelling reason to hold Proposed Sale 137, but there are significant reasons -- for both the State of Florida and the entire nation -- to stop any further action," Governor Martinez wrote. "It is imperative that we refrain from further leasing activity while we work to ensure that our irreplaceable environmental resources are safeguarded."

A copy of the Governor's letter to Lujan is attached.



STATE OF FLORIDA

OFFICE OF THE GOVERNOR

BOB MARTINEZ

April 30, 1990

The Honorable Manuel Lujan, Jr.
Secretary of the Interior
18th and C Streets, Northwest
Washington, D.C. 20240

Dear Mr. Secretary:

I am writing to provide my recommendations on the alternatives proposed for Eastern Gulf of Mexico Outer Continental Shelf (OCS) oil and gas lease sale 137, scheduled for November 1991, as they appear in the draft Environmental Impact Statement for the sale.

There is no compelling reason to hold Proposed Sale 137, but there are significant reasons -- for both the State of Florida and the entire nation -- to stop any further action. Therefore, I strongly urge you to adopt Alternative F, which cancels the proposed sale.

Recent statements made by you and discussions at the staff level suggest that the new 5-Year OCS program for the nation will include a thorough re-evaluation and refocusing of oil and gas leasing, which could bring about major changes to the leasing approach off Florida. Because of the potential benefits these changes may hold for Florida, it is essential to the State that the proposed sale be canceled.

It is evident that more time is needed to develop a national energy program, as well as the research and development into oil spill containment and cleanup activities to support that program. We are on the threshold of a new era in understanding the need to balance our nation's energy needs with those of our environment, but until we fully understand the ramifications of offshore exploration we must come down on the side of environmental caution. To allow this lease sale to go forward without the benefit of that new understanding could be to the detriment of the program and the environment, as well as to the people of Florida.

The Honorable Manuel Lujan, Jr.
April 30, 1990
Page Two

There already are more than 200 active or pending leases off Florida's Gulf coast, especially in the Panhandle area off northwest Florida. Those active leases have received only limited exploratory drilling, and there is no need to offer additional leases in the Eastern Gulf until the industry has better evaluated these existing leases for the potential for natural gas. More than 130 leased blocks were relinquished with no drilling ever taking place.

Both a national energy program and adequate technology for oil spill prevention and cleanup are critical in developing a new 5-Year Program. Should we be able to develop a mutually satisfactory program with all of the needed elements to ensure that Florida's natural resources are protected, limited leasing in certain areas of the Eastern Gulf may be acceptable. Until then, however, it is imperative that we refrain from further leasing activity while we work to ensure that our irreplaceable environmental resources are safeguarded.

For these reasons, I recommend cancelling this sale until details of the new program can be worked out with the State. I appreciate the opportunity to comment on sale 137 and look forward to working with you on the new 5-Year Leasing Program. Detailed technical comments on the draft Environmental Impact Statement for Sale 137 and comments received by my office are being forwarded to your New Orleans office by my staff.

Sincerely,

A handwritten signature in cursive script, appearing to read "Bob".

Governor

BM/vjp

TUESDAY, MAY 1, 1990 • USA TODAY

FLORIDA

TALLAHASSEE — Federal government should cancel plans to sell oil, natural gas drilling leases for most of Gulf of Mexico in '91, Gov. Bob Martinez said. Public hearings on proposal are today here, in Tampa; Wednesday in Pensacola.

Martinez: Cancel oil and gas lease sale

By MICHAEL MOLINE

TALLAHASSEE, Fla. (UPI) — Gov. Bob Martinez called upon the federal government Monday to cancel sales of offshore oil and gas exploration leases from Naples to Pensacola pending more study of the environmental dangers.

President Bush is already considering a ban on energy exploration in the portion of the Gulf of Mexico south of Naples, including the Florida Keys. Martinez referred Monday to the remaining 47-million acres from Naples northeast to the Alabama border.

In a letter to Interior Secretary Manuel Lujan, Martinez said the lease sales should be delayed pending completion of a federal study into the effects of oil and gas drilling on the environment.

The federal agency is currently working on a new five-year program to balance the nation's energy needs against environmental considerations, Martinez said in a news conference.

"We are on the threshold of a new era in understanding the need to balance our nation's energy needs with those of our environment, but until we fully understand the ramifications of offshore exploration we must come down on the side of environmental caution," Martinez wrote to Lujan.

"To allow this lease sale to go forward without the benefit of that new understanding could be to the detriment of the program and the environment, as well as to the people of Florida."

He noted that Florida's tourism and fishing industries depend on the conditions of the state's beaches, shores and waters.

The Interior Department is conducting public hearings on the Proposed Lease Sale 137 this week. Martinez said there are already more than 200 active leases off the Panhandle that have never been drilled.

A 30-mile buffer zone where drilling is banned already extends offshore from the Bay-Gulf county line to Naples. The off-limits zone proposed by Martinez extends further into the Gulf.

Florida officials have been trying to prevent drilling at existing leases in the southern Gulf for several years. Bush has hinted his decision about those leases, expected within a few weeks, will please environmentalists.

Martinez said cancelling the lease sales in the other sections of the Gulf would prevent political battles with energy interests such as the state has been fighting in the southern Gulf.

"We just don't need another one of those (political struggles)," he said.

WHITE HOUSE STAFFING MEMORANDUMDATE: 6/26/90ACTION/CONCURRENCE/COMMENT DUE BY: ---SUBJECT: FACT SHEET AND PRESIDENTIAL STATEMENT ON OCS

	ACTION FYI			ACTION FYI	
VICE PRESIDENT	☐	☒	MCCLURE	☐	☒
SUNUNU	☐	☒	NEWMAN	☐	☒
SCOWCROFT	☐	☒	PORTER	☐	☒
DARMAN	☐	☒	ROGICH	☐	☒
CARD	☐	☒	UNTERMAYER	☐	☒
CICCONI	☐	☒	<u>ROGERS</u>	☐	☒
DEMAREST	☐	☒	<u>ANDERSON</u>	☐	☒
FITZWATER	☐	☒	<u>WINSTON</u>	☐	☒
GRAY	☐	☒	<u>CARNEY</u>	☐	☒
HAGIN	☐	☐	<u>BOSKIN</u>	☐	☒
HOLIDAY	☐	☒	<u>DELAND</u>	☐	☒
			<u>BROMLEY</u>		☒

REMARKS:

RESPONSE:

James W. Cicconi
 Assistant to the President
 and Deputy to the Chief of Staff
 Ext. 2702

THE WHITE HOUSE
Office of the Press Secretary

FOR IMMEDIATE RELEASE

Tuesday, June 26, 1990

STATEMENT BY THE PRESIDENT

I have often stated my belief that development of oil and gas on the outer continental shelf (OCS) should occur in an environmentally sound manner.

I have received the report of the interagency OCS Task Force on Leasing and Development off the coasts of Florida and California, and have accepted its recommendation that further steps to protect the environment are needed.

Today, I am announcing my support for a moratorium on oil and gas leasing and development in Sale Area 116, Part II, off the coast of Florida, Sale Area 91 off the coast of northern California, Sale Area 119 off the coast of central California, and the vast majority of Sale Area 95 off the coast of southern California, until after the year 2000.

The combined effect of these decisions is that the coast of southwest Florida and more than 99 percent of the California coast will be off limits to oil and gas leasing and development until after the year 2000.

Only those areas which are in close proximity to existing oil and gas development in Federal and state waters, comprising less than 1% of the tracts off the California coast, may be available before then. These areas, concentrated in the Santa Maria Basin and the Santa Barbara Channel, will not be available for leasing in any event until 1996 -- and then only if the further studies for which I am calling in response to the report of the National Academy of Sciences satisfactorily address concerns related to these tracts.

I am also approving a proposal that would establish a National Marine Sanctuary in California's Monterey Bay and provide for a *permanent* ban on oil and gas development in the sanctuary, and I am asking the Secretary of the Interior to begin a process that may lead to the buyback and cancellation of *existing* leases in Sale Area 116, Part II, off southwest Florida.

In addition, I am directing the Secretary of the Interior to delay leasing and development in several other areas where questions have been raised about the resource potential and the environmental implications of development. For Sale Area 132 off the coasts of Washington and Oregon, I am accepting the recommendation of the Secretary that further leasing and development activity be deferred until a series of environmental studies are completed, and directing that no

such activity take place until after the year 2000. I am also cancelling Lease Sale 96, in the Georges Bank area of the North Atlantic, and directing that no leasing and development activity take place in this area until after the year 2000. This will allow time for additional studies to determine the resource potential of the area and address the environmental and scientific concerns which have been raised.

Finally, I am today directing the Secretary to take several steps to improve the OCS program and respond to several of the concerns expressed by the Task Force. My goal is to create a much more carefully targeted OCS program -- one that is responsive to local concerns, to environmental concerns, and to the need to develop prudently our nation's domestic energy resources. Although I have today taken these strong steps to protect our environment, I continue to believe that there are significant offshore areas where we can and must go forward with resource development.

While I believe that a leaner OCS program will ultimately be more effective, Americans must recognize that the OCS program is a vital source of fuel for our growing economy. My desire is to achieve a *balance* between the need to provide energy for the American people and the need to protect unique and sensitive coastal and marine environments.

#

THE WHITE HOUSE
Office of the Press Secretary

For Immediate Release

June 26, 1990

FACT SHEET

PRESIDENTIAL DECISIONS CONCERNING OIL AND GAS DEVELOPMENT
ON THE OUTER CONTINENTAL SHELF

The President today announced a series of decisions related to oil and gas development on the outer continental shelf (OCS). The President believes that these decisions strike a needed balance between development of the Nation's important domestic energy resources and protection of the environment in sensitive areas.

Decisions by the President on Three Pending Sales

Decision for California Sales

- o Cancel all sales scheduled for 1990, 1991 and 1992 offshore California, including Sale 91 off the coast of northern California and Sale 95 off the coast of southern California.
- o Conduct additional oceanographic and socioeconomic studies as recommended by the National Academy of Sciences in a review conducted for the interagency Task Force on Leasing and Development of the OCS (the Task Force). These studies should take 3 to 4 years.
- o Exclude more than 99 percent of the tracts (including all of the Sale 91 area and all of the Sale 95 area south of the Santa Barbara Channel) off California from consideration for any lease sale until after the year 2000. The Interior Department has identified 87 tracts off the coast of southern California within the Sale 95 area that have high resource potential. These tracts are located in the Santa Maria Basin and Santa Barbara Channel, where oil and gas production is currently underway. They comprise approximately 0.7 percent of all of the tracts off California, or 0.67 percent of the 74 million total acres off California that could be leased and 1.63 percent of the 30.5 million acres in the Southern California Planning Area. These tracts will not be available for leasing consideration until after January 1, 1996 and completion of the additional studies. They will then be available only if

development appears viable based on the guiding principles outlined below and the results of the studies.

Decision for Florida

- o Cancel Sale 116, Part II, and exclude the area from consideration for any lease sale until after the year 2000. Any development after the year 2000 would be pursued only if it appears viable based on the guiding principles outlined below and the results of additional studies.
- o Conduct additional oceanographic, ecological and socioeconomic studies as recommended by the National Academy of Sciences in its review. These studies should be completed within 5 to 6 years.
- o Begin cancellation of existing leases off Florida and initiate discussions with the State of Florida for its participation in a joint federal-state buy-back of the leases.

Guiding Principles

The President's decisions were based on the following principles:

- (1) Adequate Information and Analysis -- Adequate scientific and technical information regarding the resource potential of each area considered for leasing and the environmental, social and economic effects of oil and gas activity must be available and subjected to rigorous scrutiny before decisions are made. No new leasing should take place without such information and analysis.
- (2) Environmental Sensitivity -- Certain areas off our coasts represent unique natural resources. In those areas even the small risks posed by oil and gas development may be too great. In other areas where science and experience and new recovery technologies show development may be safe, development will be considered.
- (3) Resource Potential -- Priority for development should be given to those areas with the greatest resource potential. Given the inexact nature of resource estimation, particularly offshore, priority should be given to those areas where earlier development has proven the existence of economically recoverable reserves.
- (4) Energy Requirements -- The requirements of our nation's economy for energy and the overall costs and

benefits of various sources of energy must be considered in deciding whether to develop oil and gas offshore. The level of petroleum imports, which has been steadily increasing, is a critical factor in this assessment.

(5) National Security Requirements -- External events, such as supply disruptions, might require a reevaluation of the OCS program. All decisions regarding OCS development are subject to a national security exemption. If the President determines that national security requires development in the areas of these three lease sales or in other areas, he has the ability to direct the Interior Department to open the areas for development.

The need to develop adequate information, particularly needed to meet the inadequacies identified by the National Academy of Sciences, is an essential factor in calling for further studies and cancellation of the pending sales. The Sale 116 area off southwest Florida, which contains our nation's only mangrove-coral reef ecosystem and is a gateway for the precious Everglades, deserves special protection. The presence of successful drilling operations and known resources off certain areas of southern California merits allowing continued development, assuming scientific and environmental uncertainties can be resolved.

Other Actions by the President

The President has also directed certain other actions affecting offshore oil and gas development.

Sale 119 and Monterey Bay Sanctuary

The Task Force consideration of development off northern and southern California has been accompanied by strong concern about the prospect of development off central California and Sale 119. Sale 119, originally scheduled for March 1991, covers an area stretching from San Francisco southward to the northern tip of Monterey Bay. This area includes unique coastal and marine resources and a portion of the area of the Monterey Bay National Marine Sanctuary proposed by the National Oceanic and Atmospheric Administration (NOAA) (the proposed sanctuary would cover approximately 2,200 square miles). NOAA has also proposed regulations to prohibit all oil and gas exploration and development activities within the sanctuary. This area contains nationally significant, environmentally sensitive resources, including the largest breeding ground for marine mammals in the lower 48 states.

The President has directed Interior Secretary Manuel Lujan and NOAA Administrator John Knauss to take the following actions:

- o Cancel Sale 119 and adopt the sanctuary proposed by NOAA.
- o Permanently prohibit all oil and gas exploration and development within the sanctuary.
- o Allow no development in the Sale 119 area outside the sanctuary until after the year 2000. At that time the guiding principles outlined above will be applied to determine the viability of development in the area.

Sale 96 in North Atlantic

Sale 96 has been proposed for the Georges Bank area of the North Atlantic Planning Area, which stretches northward from Rhode Island to Canada. The President has directed Interior Secretary Lujan to:

- o Cancel Sale 96 and exclude it from the 1992-1997 five-year plan.
- o Conduct additional studies, including studies designed to determine the resource potential of the North Atlantic area and to assess the environmental, scientific and technical considerations of development in the area.
- o Consult with the governors of the states whose residents would be affected by future development of oil and gas in the North Atlantic.

These actions ensure that no sale will be considered in the North Atlantic Planning Area until after the year 2000, and then only if studies show that development is warranted because of resource potential and is environmentally safe.

OCS Development off Washington and Oregon

The President has accepted the recommendation of Interior Secretary Lujan to conduct a series of additional environmental studies of the effects of oil and gas development off Washington and Oregon, including the Sale 132 area, before any environmental impact statement would be completed. These studies are expected to take 5 to 7 years. No sale will be considered off Washington and Oregon until after the year 2000 and then only if studies show that development can be pursued in an environmentally safe manner.

General OCS Decisions

The President also decided that:

- o Air quality controls for oil and gas development offshore California should be substantially the same as those applied onshore.
- o Immediate steps should be taken to improve the ability of industry and the federal government to respond to oil spills offshore, regardless of their source.
- o Federal agencies should develop a plan to reduce the possibility of oil spills offshore from whatever source, including and especially from tanker traffic. This plan should include moving tanker routes further away from sensitive areas near the Florida Keys and the Everglades.

Restructuring the OCS Program

The President determined that providing the necessary balance between developing domestic energy resources and protecting the environment requires certain revisions to the OCS program. The program must be:

- o targeted more carefully toward areas with truly promising resource potential;
- o buttressed by information adequate to ensure that oil and gas development proceeds in an environmentally sound manner; and
- o sensitive to the concerns and needs of local areas affected by offshore development.

Accordingly, the President directed Interior Secretary Lujan to take three actions to improve the overall OCS program:

- o Improve the information needed to make decisions on OCS development by conducting the studies identified by the National Academy of Sciences and studies to explore new technologies for alleviating the risks of oil spills from OCS platforms and new oil and gas drilling technologies, such as subsea completion technology.
- o Target proposed sale areas in future OCS five-year plans to give highest priority to areas with high resource potential and low environmental risk. This will result in offering much smaller and more carefully selected blocks of tracts.

- o Prepare a legislative initiative that will provide coastal communities directly affected by OCS development with a greater share of the financial benefits of new development and with a larger voice in decision-making. Currently, states receive 100 percent of revenues from leases within three miles of shore. Revenues from leases between three and six miles of shore are divided 73 percent to the federal government and 27 percent to the states. Revenues from leases six miles or further offshore go 100 percent to the federal government. Coastal communities directly affected by development are not presently guaranteed any of these revenues.

Background on Sales

Sale 91

The Sale 91 area contains approximately 1.1 million acres and lies offshore Mendocino and Humboldt Counties in northern California, primarily in two areas off Eureka and from south of Cape Mendocino to south of Point Arena. It is within the Northern California Planning Area, which stretches from the California/Oregon border to the Sonoma/Mendocino County lines. There is currently no oil and gas production within this planning area. The Minerals Management Service (which is responsible for the OCS program within the Interior Department) estimates that there are between 210 million and 1.54 billion barrels of crude oil and approximately 2.5 trillion cubic feet of natural gas in the Northern California Planning Area and between 20 million and 820 million barrels of oil and approximately 1.0 trillion cubic feet of natural gas in the Sale 91 area. Congress imposed a moratorium prohibiting leasing in the Northern California Planning Area as part of the Interior Department's FY 1990 appropriations bill.

Sale 95

The Sale 95 area contains approximately 6.7 million acres and lies offshore southern California from the northern border of San Luis Obispo County to the United States/Mexico border. It is within the Southern California Planning Area, which extends from the northern border of San Luis Obispo County to the United States/Mexico border. Oil and gas production is currently taking place in the Southern California Planning Area in the Santa Maria Basin, the Santa Barbara Channel and offshore Long Beach. There are 135 active federal leases in the area, producing approximately 90,000 barrels of crude oil and 95 million cubic feet of natural gas daily from 17 producing platforms in federal

waters. One platform in federal waters is used exclusively for processing and four other platforms are under construction or completed but not yet producing. In addition, there are 10 platforms and four artificial islands in the area supporting production facilities within state waters, which extend three miles from the shore. The Minerals Management Service estimates that there are between 610 million and 2.23 billion barrels of crude oil and approximately 3.01 trillion cubic feet of natural gas in the Southern California Planning Area and between 200 million and 960 million barrels of oil and approximately 1.1 trillion cubic feet of natural gas in the Sale 95 area.

Sale 116, Part II

The area of Sale 116, Part II contains approximately 14 million acres, lying south of 26 degrees north latitude off the southwest Florida coast off Collier, Monroe and Dade Counties. This area is within the southeastern portion of the Eastern Gulf of Mexico Planning Area. (In 1988 the Eastern Gulf of Mexico was divided for leasing purposes into two parts along the 26 degrees north latitude line.) There is no oil and gas production within the sale area, although 73 active leases are held within the area by ten oil and gas companies. The Minerals Management Service estimates that there are between 440 million and 1.72 billion barrels of crude oil and approximately 1.68 trillion cubic feet of natural gas in the Eastern Gulf of Mexico Planning Area and between 279 million and 1.06 billion barrels of oil and approximately 110 billion cubic feet of natural gas in the Sale 116, Part II area.

Background on the OCS Task Force

In his February 9, 1989 budget message to Congress, the President indefinitely postponed three OCS lease sales scheduled for FY 1990 -- Sale 91 off the coast of northern California, Sale 95 off the coast of southern California and Sale 116, Part II off the coast of southwestern Florida -- pending a study of the sales by a Cabinet-level task force charged with reviewing and resolving environmental concerns over adverse impacts of the sales. The Task Force was named on March 21, 1989. It consisted of Interior Secretary Manuel Lujan as Chairman, Energy Secretary James Watkins, Administrator John Knauss of the National Oceanic and Atmospheric Administration (NOAA), Administrator William Reilly of the Environmental Protection Agency, and Director of the Office of Management and Budget Richard Darman. The Task Force conducted nine public workshops in Florida and California, heard from over 1,000 witnesses, took ten field trips to sites in the two states, received briefings from various federal agencies,

met twice with Members of Congress, and solicited and received over 11,000 written public comments.

The Task Force also commissioned a technical review from the National Academy of Sciences regarding the environmental and other information available on which decisions could be made. The National Academy of Sciences determined that adequate ecological, oceanographic or socioeconomic information was not available to some extent for each of the three sale areas.

The Task Force found that:

- o The southwest Florida shelf comprises subtidal and nearshore habitats that are unique within the U.S. continental margin and provide refuge to a number of rare and endangered species;
- o The incremental risks of an oil spill associated with the Sale 91 area off northern California are greater than those associated with the other two sales.
- o Information concerning the onshore socioeconomic effects of oil and gas development is particularly lacking for Sale 116, Part II off Florida and Sale 91.
- o Additional studies in response to the report of the National Academy of Sciences are needed before the Secretary of the Interior makes leasing decisions in any of the three areas.

Background on the OCS Program

Management of oil and gas found in federal waters offshore (which generally begin three miles from a state's coast and can extend out 200 to 300 miles) is vested in the Department of the Interior under the Outer Continental Shelf Lands Act of 1953, as amended. The Act directs the Interior Department to:

- o make OCS resources available to meet the nation's energy needs;
- o protect human, marine and coastal environments;
- o ensure that states and local governments have timely access to information and opportunities to participate in OCS program planning and decision-making; and
- o obtain for the federal government a fair and equitable return on resources while preserving and maintaining free enterprise competition.

These responsibilities within the Interior Department are administered by the Minerals Management Service (MMS), created in 1982 to oversee the orderly development of offshore energy and mineral resources while safeguarding the environment. The current director of the MMS is Barry Williamson.

The MMS makes resources available by leasing federal acreage offshore to private companies, which explore for and can develop and produce commercial deposits, subject to continuing review and permitting procedures. Environmental standards are established by the MMS in regulations and lease stipulations and enforced through review of companies' exploration, development and production plans (including drilling permits that must be obtained) before operations can begin on leases, and an offshore facility inspection program, under which inspectors review safety, operational and environmental activities on offshore platforms. Inspectors currently oversee 3,800 platforms in the Gulf of Mexico and 22 platforms off California.

Oil and gas lease sales are conducted in a competitive sealed bid process. Sales are scheduled in five-year planning cycles (the first of which was in 1978) developed by the Secretary of the Interior with public review and comment on the draft plan. Efforts are made to address concerns raised during this review process, which normally takes two years. After the adoption of a plan, extensive pre-lease activities are conducted before any sales occur. These activities include the preparation of an environmental impact statement for each sale, with opportunities for public review and comment, and submission of sale proposals to the governors of the affected states before final decisions are made. These steps generally take an additional two or more years.

The total OCS area covers 1.4 billion acres, and is composed of over 260,000 tracts. Since 1954 over 118,000 (or approximately 45 percent) of the tracts have been offered for lease; 10,115 (3.9 percent) have been leased; 4,111 (1.6 percent) have been drilled; and slightly more than 1,250 (approximately .05 percent) are occupied by platforms. Production from the OCS program since 1954 totals over 8.5 billion barrels of crude oil and condensate and 88 trillion cubic feet of natural gas. Since its creation, the Minerals Management Service has been responsible for overseeing the production of more than two billion barrels of crude oil and condensate and over 25.6 trillion cubic feet of natural gas and for generating over \$90 billion in revenues from lease sales and lease rental payments for the United States Treasury.

The OCS accounts for a significant portion of existing United States oil and gas resources. Table 1 shows: the quantities of proven oil and gas reserves that have been discovered and are economically recoverable within the United States as a whole and

the OCS separately (Column A); and the quantities of undiscovered oil and gas resources estimated to be economically recoverable using existing technologies within the United States as a whole and the OCS separately (Column B).

TABLE I
OIL AND GAS RESERVES IN THE UNITED STATES
AND THE OUTER CONTINENTAL SHELF (OCS)

	<i>Column A</i> Proven Oil and Gas Reserves		<i>Column B</i> Estimated Oil and Gas Reserves	
	<u>All U.S.</u>	<u>OCS Only</u>	<u>All U.S.</u>	<u>OCS Only</u>
Oil				
(billion barrels)	26.8	2.6	34.8	8.2
Natural Gas				
Liquids (billion barrels)	8.2	.6	6.3	.8
Natural Gas				
(trillion cubic feet)	168.0	32.3	262.7	74.0

Note: Column A shows the quantities of proven oil and gas reserves that have been discovered and are economically recoverable within the United States as a whole and the OCS separately; Column B shows the quantities of undiscovered oil and gas resources estimated to be economically recoverable using existing technologies within the United States as a whole and the OCS separately.

THE WHITE HOUSE
Office of the Press Secretary

FOR IMMEDIATE RELEASE

Tuesday, June 26, 1990

STATEMENT BY THE PRESIDENT

I have often stated my belief that development of oil and gas on the outer continental shelf (OCS) should occur in an environmentally sound manner.

I have received the report of the interagency OCS Task Force on Leasing and Development off the coasts of Florida and California, and have accepted its recommendation that further steps to protect the environment are needed.

Today, I am announcing my support for a moratorium on oil and gas leasing and development in Sale Area 116, Part II, off the coast of Florida, Sale Area 91 off the coast of northern California, Sale Area 119 off the coast of central California, and the vast majority of Sale Area 95 off the coast of southern California, until after the year 2000.

The combined effect of these decisions is that the coast of southwest Florida and more than 99 percent of the California coast will be off limits to oil and gas leasing and development until after the year 2000.

Only those areas which are in close proximity to existing oil and gas development in Federal and state waters, comprising less than 1% of the tracts off the California coast, may be available before then. These areas, concentrated in the Santa Maria Basin and the Santa Barbara Channel, will not be available for leasing in any event until 1996 -- and then only if the further studies for which I am calling in response to the report of the National Academy of Sciences satisfactorily address concerns related to these tracts.

I am also approving a proposal that would establish a National Marine Sanctuary in California's Monterey Bay and provide for a *permanent* ban on oil and gas development in the sanctuary, and I am asking the Secretary of the Interior to begin a process that may lead to the buyback and cancellation of *existing* leases in Sale Area 116, Part II, off southwest Florida.

In addition, I am directing the Secretary of the Interior to delay leasing and development in several other areas where questions have been raised about the resource potential and the environmental implications of development. For Sale Area 132 off the coasts of Washington and Oregon, I am accepting the recommendation of the Secretary that further leasing and development activity be deferred until a series of environmental studies are completed, and directing that no

such activity take place until after the year 2000. I am also cancelling Lease Sale 96, in the Georges Bank area of the North Atlantic, and directing that no leasing and development activity take place in this area until after the year 2000. This will allow time for additional studies to determine the resource potential of the area and address the environmental and scientific concerns which have been raised.

Finally, I am today directing the Secretary to take several steps to improve the OCS program and respond to several of the concerns expressed by the Task Force. My goal is to create a much more carefully targeted OCS program -- one that is responsive to local concerns, to environmental concerns, and to the need to develop prudently our nation's domestic energy resources. Although I have today taken these strong steps to protect our environment, I continue to believe that there are significant offshore areas where we can and must go forward with resource development.

While I believe that a leaner OCS program will ultimately be more effective, Americans must recognize that the OCS program is a vital source of fuel for our growing economy. My desire is to achieve a balance between the need to provide energy for the American people and the need to protect unique and sensitive coastal and marine environments.

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THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release

June 26, 1990

FACT SHEET

PRESIDENTIAL DECISIONS CONCERNING OIL AND GAS DEVELOPMENT
ON THE OUTER CONTINENTAL SHELF

The President today announced a series of decisions related to oil and gas development on the outer continental shelf (OCS). The President believes that these decisions strike a needed balance between development of the Nation's important domestic energy resources and protection of the environment in sensitive areas.

Decisions by the President on Three Pending Sales

Decision for California Sales

- o Cancel all sales scheduled for 1990, 1991 and 1992 offshore California, including Sale 91 off the coast of northern California and Sale 95 off the coast of southern California.
- o Conduct additional oceanographic and socioeconomic studies as recommended by the National Academy of Sciences in a review conducted for the interagency Task Force on Leasing and Development of the OCS (the Task Force). These studies should take 3 to 4 years.
- o Exclude more than 99 percent of the tracts (including all of the Sale 91 area and all of the Sale 95 area south of the Santa Barbara Channel) off California from consideration for any lease sale until after the year 2000. The Interior Department has identified 87 tracts off the coast of southern California within the Sale 95 area that have high resource potential. These tracts are located in the Santa Maria Basin and Santa Barbara Channel, where oil and gas production is currently underway. They comprise approximately 0.7 percent of all of the tracts off California, or 0.67 percent of the 74 million total acres off California that could be leased and 1.63 percent of the 30.5 million acres in the Southern California Planning Area. These tracts will not be available for leasing consideration until after January 1, 1996 and completion of the additional studies. They will then be available only if

development appears viable based on the guiding principles outlined below and the results of the studies.

Decision for Florida

- o Cancel Sale 116, Part II, and exclude the area from consideration for any lease sale until after the year 2000. Any development after the year 2000 would be pursued only if it appears viable based on the guiding principles outlined below and the results of additional studies.
- o Conduct additional oceanographic, ecological and socioeconomic studies as recommended by the National Academy of Sciences in its review. These studies should be completed within 5 to 6 years.
- o Begin cancellation of existing leases off Florida and initiate discussions with the State of Florida for its participation in a joint federal-state buy-back of the leases.

Guiding Principles

The President's decisions were based on the following principles:

- (1) Adequate Information and Analysis -- Adequate scientific and technical information regarding the resource potential of each area considered for leasing and the environmental, social and economic effects of oil and gas activity must be available and subjected to rigorous scrutiny before decisions are made. No new leasing should take place without such information and analysis.
- (2) Environmental Sensitivity -- Certain areas off our coasts represent unique natural resources. In those areas even the small risks posed by oil and gas development may be too great. In other areas where science and experience and new recovery technologies show development may be safe, development will be considered.
- (3) Resource Potential -- Priority for development should be given to those areas with the greatest resource potential. Given the inexact nature of resource estimation, particularly offshore, priority should be given to those areas where earlier development has proven the existence of economically recoverable reserves.
- (4) Energy Requirements -- The requirements of our nation's economy for energy and the overall costs and

benefits of various sources of energy must be considered in deciding whether to develop oil and gas offshore. The level of petroleum imports, which has been steadily increasing, is a critical factor in this assessment.

(5) National Security Requirements -- External events, such as supply disruptions, might require a reevaluation of the OCS program. All decisions regarding OCS development are subject to a national security exemption. If the President determines that national security requires development in the areas of these three lease sales or in other areas, he has the ability to direct the Interior Department to open the areas for development.

The need to develop adequate information, particularly needed to meet the inadequacies identified by the National Academy of Sciences, is an essential factor in calling for further studies and cancellation of the pending sales. The Sale 116 area off southwest Florida, which contains our nation's only mangrove-coral reef ecosystem and is a gateway for the precious Everglades, deserves special protection. The presence of successful drilling operations and known resources off certain areas of southern California merits allowing continued development, assuming scientific and environmental uncertainties can be resolved.

Other Actions by the President

The President has also directed certain other actions affecting offshore oil and gas development.

Sale 119 and Monterey Bay Sanctuary

The Task Force consideration of development off northern and southern California has been accompanied by strong concern about the prospect of development off central California and Sale 119. Sale 119, originally scheduled for March 1991, covers an area stretching from San Francisco southward to the northern tip of Monterey Bay. This area includes unique coastal and marine resources and a portion of the area of the Monterey Bay National Marine Sanctuary proposed by the National Oceanic and Atmospheric Administration (NOAA) (the proposed sanctuary would cover approximately 2,200 square miles). NOAA has also proposed regulations to prohibit all oil and gas exploration and development activities within the sanctuary. This area contains nationally significant, environmentally sensitive resources, including the largest breeding ground for marine mammals in the lower 48 states.

The President has directed Interior Secretary Manuel Lujan and NOAA Administrator John Knauss to take the following actions:

- o Cancel Sale 119 and adopt the sanctuary proposed by NOAA.
- o Permanently prohibit all oil and gas exploration and development within the sanctuary.
- o Allow no development in the Sale 119 area outside the sanctuary until after the year 2000. At that time the guiding principles outlined above will be applied to determine the viability of development in the area.

Sale 96 in North Atlantic

Sale 96 has been proposed for the Georges Bank area of the North Atlantic Planning Area, which stretches northward from Rhode Island to Canada. The President has directed Interior Secretary Lujan to:

- o Cancel Sale 96 and exclude it from the 1992-1997 five-year plan.
- o Conduct additional studies, including studies designed to determine the resource potential of the North Atlantic area and to assess the environmental, scientific and technical considerations of development in the area.
- o Consult with the governors of the states whose residents would be affected by future development of oil and gas in the North Atlantic.

These actions ensure that no sale will be considered in the North Atlantic Planning Area until after the year 2000, and then only if studies show that development is warranted because of resource potential and is environmentally safe.

OCS Development off Washington and Oregon

The President has accepted the recommendation of Interior Secretary Lujan to conduct a series of additional environmental studies of the effects of oil and gas development off Washington and Oregon, including the Sale 132 area, before any environmental impact statement would be completed. These studies are expected to take 5 to 7 years. No sale will be considered off Washington and Oregon until after the year 2000 and then only if studies show that development can be pursued in an environmentally safe manner.

General OCS Decisions

The President also decided that:

- o Air quality controls for oil and gas development offshore California should be substantially the same as those applied onshore.
- o Immediate steps should be taken to improve the ability of industry and the federal government to respond to oil spills offshore, regardless of their source.
- o Federal agencies should develop a plan to reduce the possibility of oil spills offshore from whatever source, including and especially from tanker traffic. This plan should include moving tanker routes further away from sensitive areas near the Florida Keys and the Everglades.

Restructuring the OCS Program

The President determined that providing the necessary balance between developing domestic energy resources and protecting the environment requires certain revisions to the OCS program. The program must be:

- o targeted more carefully toward areas with truly promising resource potential;
- o buttressed by information adequate to ensure that oil and gas development proceeds in an environmentally sound manner; and
- o sensitive to the concerns and needs of local areas affected by offshore development.

Accordingly, the President directed Interior Secretary Lujan to take three actions to improve the overall OCS program:

- o Improve the information needed to make decisions on OCS development by conducting the studies identified by the National Academy of Sciences and studies to explore new technologies for alleviating the risks of oil spills from OCS platforms and new oil and gas drilling technologies, such as subsea completion technology.
- o Target proposed sale areas in future OCS five-year plans to give highest priority to areas with high resource potential and low environmental risk. This will result in offering much smaller and more carefully selected blocks of tracts.

- o Prepare a legislative initiative that will provide coastal communities directly affected by OCS development with a greater share of the financial benefits of new development and with a larger voice in decision-making. Currently, states receive 100 percent of revenues from leases within three miles of shore. Revenues from leases between three and six miles of shore are divided 73 percent to the federal government and 27 percent to the states. Revenues from leases six miles or further offshore go 100 percent to the federal government. Coastal communities directly affected by development are not presently guaranteed any of these revenues.

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The Sale 95 area contains approximately 6.7 million acres and lies offshore southern California from the northern border of San Luis Obispo County to the United States/Mexico border. It is within the Southern California Planning Area, which extends from the northern border of San Luis Obispo County to the United States/Mexico border. Oil and gas production is currently taking place in the Southern California Planning Area in the Santa Maria Basin, the Santa Barbara Channel and offshore Long Beach. There are 135 active federal leases in the area, producing approximately 90,000 barrels of crude oil and 95 million cubic feet of natural gas daily from 17 producing platforms in federal

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Sale 116, Part II

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- o The southwest Florida shelf comprises subtidal and nearshore habitats that are unique within the U.S. continental margin and provide refuge to a number of rare and endangered species;
- o The incremental risks of an oil spill associated with the Sale 91 area off northern California are greater than those associated with the other two sales.
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TABLE I

**OIL AND GAS RESERVES IN THE UNITED STATES
AND THE OUTER CONTINENTAL SHELF (OCS)**

	Column A Proven Oil and Gas Reserves		Column B Estimated Oil and Gas Reserves	
	<u>All U.S.</u>	<u>OCS Only</u>	<u>All U.S.</u>	<u>OCS Only</u>
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THE SACRAMENTO BEE
Thursday, Feb. 15, 1990

Duke rips offshore oil critics

Calls views of Wilson, others shortsighted

By Amy Chance
Bee Capitol Bureau

Gov. Deukmejian leaped to the defense of offshore oil drilling Wednesday in the wake of last week's Southern California oil spill, saying U.S. Sen. Pete Wilson and others who want to ban drilling are shortsightedly ignoring the country's overall energy needs.

The Republican governor said the latest spill, which occurred when a tanker ruptured its hull off Huntington Beach, should not fuel efforts to halt drilling. Rather, he said, it points up the need to lessen California's dependence on tanker-shipped imported oil.

Wilson, who is the sole Republican bidding to replace Deukmejian as governor, has long differed with prominent members of his own party on the question of offshore oil drilling. Deukmejian did not try to downplay his disagreement with the senator's call for a ban on further development.

"I have said of those people who hold the view of wanting to continue a ban on any further offshore development, that I think it's a very shortsighted view," Deukmejian said at a Capitol press conference.

"I think that they're not looking at the bigger picture of the interests of our country and what the needs are at the present time."

Deukmejian said Californians use twice as much crude oil as is produced in the state.

"I don't hear them calling on residents of this state to cut the consumption of the amount of gasoline that they use in half," he said.

Wilson spokesman Bill Livingstone said the senator is pushing now for increased development of alternative fuels. In the meantime, he said, Wilson does not believe the benefits of increased oil development are worth the environmental risks.

"The question is, should we sacrifice our coastline in order to have a marginal decrease in our foreign dependence on oil? Wilson says no," Livingstone said.

President Bush, who is due to announce a national energy strategy soon, has also said the Southern California oil spill should not lead to a complete shutdown of offshore oil drilling.

'I think that they're not looking at the bigger picture ... and what the needs are at the present.'

— Gov. Deukmejian

Offshore

Continued from page A1
can proceed with the exception of certain "environmentally sensitive" areas.

"I don't know what his final decisions are going to be, but I tend to feel that it will be along those lines," he said. "I don't think there will be much difference between their position and the position that we have held since the beginning of our administration."

That position is at odds with the one taken by most Californians, according to an August California Poll. Three-fourths of those surveyed said they were opposed to more drilling for oil and natural gas along California's coast, by far the highest level of opposition ever expressed in a state poll.

In addition, 57 percent of those questioned said they

didn't believe offshore oil drilling could be done in an environmentally safe way, while 38 percent said it could.

Deukmejian also was critical of Wilson's call for creation of a California Environmental Protection Agency, saying he is not convinced a new department is necessary. "I don't support making a change just to make a change," he said.

The governor had even harsher words, however, for one of the Democratic gubernatorial candidates, state Attorney General John Van de Kamp.

Van de Kamp announced last week that he would no longer defend state actions allowing the logging of old-growth timber, saying that his legal role conflicted with his gubernatorial campaign and his belief that the practice ought to be outlawed.

Deukmejian, who also declined to take cases when he

served as attorney general, said he believes it is "contrary to law" for Van de Kamp to withdraw from cases he previously had accepted. He also questioned Van de Kamp's logic, noting that the attorney general continues to handle capital punishment cases despite his personal opposition to the death penalty.

"On the other hand, when it comes to trees, he says in the middle of representing an agency that he's not going to continue to represent the state because he doesn't want those trees to be cut down," he said.

"I'm finding it a little hard to figure out whether people are more important to him than trees or are trees more important to him than people."

A spokesman for Van de Kamp said he disagrees with the governor's interpretation of the laws governing the attorney general's role.

A 2 ***

San Francisco Chronicle

Deukmejian, Wilson at Odds On Oil Drilling and Pesticides

By Robert B. Guntzson
Chronicle Sacramento Bureau

Sacramento

Reflecting a simmering debate in the Republican ranks, Governor Deukmejian yesterday distanced himself from the environmental views of GOP gubernatorial candidate Pete Wilson.

Deukmejian opened a Capitol press conference with a report on the Huntington Beach oil spill and a defense of offshore drilling, which Wilson has long opposed.

Deukmejian praised the state's cleanup and said only 20 percent of the oil remained from the 400,000 gallons that gushed from a tanker last week in California's worst spill in two decades.

A storm packing gale-force winds on Tuesday night pushed much of the floating oil onto nearly 25 miles of the region's popular surfing and sunbathing beaches — from Anaheim Bay to Newport Beach. The storm generated rough

seas yesterday that forced a flotilla of oil skimming boats to seek refuge in port.

In response to questions, the governor said opponents of offshore drilling have "a very short-sighted view. They're not looking at the big picture of what's needed for our country."

President Bush is deciding whether to allow drilling off the California coast. Deukmejian has backed the continued drilling, saying California must reduce its dependence on imported oil. But Wilson insists that environmental concerns outweigh the need for the fuel.

"There's no question that he has a different view than I do on this subject," Deukmejian said of Wilson, who has a lock on the GOP nomination for governor in the June primary.

The opposing views reflect a split among Republicans. Traditional business and agricultural interests, who have a sympathetic ear in Deukmejian, are at odds with Wil-

son over his opposition to offshore drilling and stricter regulations of agricultural chemicals.

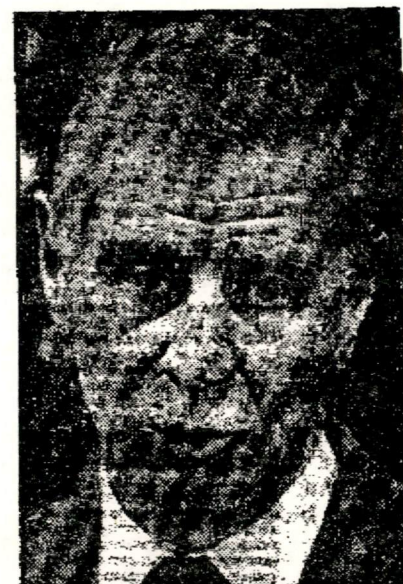
Sources say Deukmejian has grown testy about Wilson's campaign speeches in which the implication is clear that he would be a different kind of governor from Deukmejian.

Yesterday, Deukmejian also differed with Wilson over pesticide regulations.

The governor was asked to comment on a Senate report that state regulators had ignored their own scientists and approved chemical products with incomplete health studies. The report said the state Department of Food and Agriculture at least 20 times had approved pesticides and other substances against the advice of its own health experts.

"In general, I'm very satisfied with the way our Department of Food and Agriculture has monitored this program," he said.

Wilson has proposed creating a



GOVERNOR DEUKMEJIAN
He praised state's oil cleanup

state version of the federal Environmental Protection Agency that would oversee state regulation of pesticides. Environmentalists have long criticized the Department of Food and Agriculture as being too lenient in pesticide enforcement.

"I don't support making a change just to make a change," Deukmejian said. "At present, I don't think there is sufficient reason to make that kind of change."

Governor Criticizes Wilson on Oil Drilling

■ **Politics:** Deukmejian calls opposition to offshore production 'shortsighted.' The GOP candidate for governor pledges to create a state EPA-type agency.

By GEORGE SKELTON
TIMES SACRAMENTO BUREAU CHIEF

SACRAMENTO—Punctuating major differences between himself and his would-be Republican successor, Gov. George Deukmejian on Wednesday criticized Sen. Pete Wilson's opposition to offshore oil development as "shortsighted" and not in the nation's interest.

The GOP governor also objected to Wilson's campaign pledge to create a state environmental protection agency, implying that the proposal merely was a political ploy and insisting that the new entity is not needed.

Wilson's campaign aides have been saying for some time that the senator would be a different kind of governor than Deukmejian, and a press conference held Wednesday by the lame duck incumbent aptly illustrated the point.

A Wilson spokesman, Bill Livingston, said afterward that although the senator "has great admiration" for Deukmejian, the two "invariably disagree" on some issues. "Sen. Wilson is not a clone," he spokesman said.

Besides disagreeing with Deukmejian on offshore oil drilling, Wilson generally has been more pro-environment than the governor, advocating managed growth rather than laissez faire economic development. The two Republicans also have taken opposing positions on other issues, such as abortion; Deukmejian supports restrictions, Wilson is "pro-choice."

Illustrating the depth of their differences in style and ideology, one anonymous Wilson strategist recently commented to a reporter, "The Duke has been asleep at the switch for the last couple of years."

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THURSDAY, FEBRUARY 15, 1990

GOVERNOR: Differences With Sen. Wilson

Continued from A3
the thugs up."

Deukmejian's main goal on Wednesday was to assure people residing along Orange County's beaches and trying to make a living there that everything possible is being done to clean up the oil spill. But he also said that "we should not fool ourselves. As long as California remains thoroughly dependent on imported oil . . . we are going to run the risk of having oil tanker accidents. . . ."

"The fundamental lessons of this most recent oil spill [are] that the best thing we can do for California's environment and economy is to strike out hard against our dependency on imported oil and produce more California energy of all types right here at home."

And this, the governor said, includes offshore oil development "done in an environmentally safe manner."

When a reporter pointed out that Wilson—who is virtually certain to be the GOP gubernatorial nominee—advocates banning any new offshore development, the governor responded:

"There is no question that he has a different view than I do on this subject. And I have said of these people who hold the view of wanting to continue a ban on any further offshore oil development, I think it's a very shortsighted view. And I think they're not looking at the bigger picture of the interest of our country and what the needs are. . . ."

"I don't hear, for example, the people who are calling for a [drilling] ban calling on residents of this state to cut the consumption of the amount of gasoline that they use in half."

At another point, Deukmejian was asked about Wilson's pledge to establish a new state environmental agency—Cal-EPA—to oversee regulation of pesticides, hazardous waste, air and water pollution, garbage and recycling. One of the purposes is to take pesticide regulation away from the farmer-oriented state agriculture department. The governor dismissed the idea as lacking merit.

"I don't support making a change just to make a change," Deukmejian said. "I would support making changes if it is necessary . . . if there's some reason. At the present time, I don't believe there is sufficient reason to make that kind of change. The expertise in this area is in the Department of Food and Agriculture."

Wilson talked about his differences with Deukmejian on Tuesday in Santa Barbara while touring the state to officially announce his gubernatorial candidacy. Standing on an oceanside cliff with oil platforms in the far background, the senator praised Deukmejian for being "perhaps the most pro-law enforcement governor in our history" and said they share "concern for the hard-earned tax dollars of Californians."

"But we do have differences," Wilson added, citing offshore drill-

ing and support for the California Coastal Commission, which he would give more money. The senator also said he would have unhesitatingly fully funded family planning clinics, which Deukmejian reluctantly did only after having been pressured by fellow Republicans.

At his press conference, Deukmejian also jabbed at state Atty. Gen. John K. Van de Kamp, a candidate for the Democratic gubernatorial nomination. The governor noted that Van de Kamp personally opposes capital punishment, but still defends the state in death penalty cases. So he questioned the attorney general's recent decision to withdraw as the state's lawyer in cases involving the logging of old-growth redwoods, just because Van de Kamp personally opposes the cutting.

"I'm finding it a little hard to figure out—whether people are more important to him than trees, or are trees more important to him than people," Deukmejian said. "I can't figure out his logic in all this."

A spokesman for Van de Kamp, Duane Peterson, said the logic is that Van de Kamp has not made a campaign issue out of capital punishment, but is pushing to eliminate logging of old growth redwoods. The attorney general does not want to be accused of providing poor legal representation for political purposes so is telling the state to get another lawyer, the spokesman said.

Times political writer Keith Love in Los Angeles contributed to this story.

OFFSHORE PETROLEUM DEVELOPMENT: STILL NEEDED

The recent oil tanker spill in Alaska was an extremely serious accident -- and U.S. oil companies are acting to reduce the risk of another accident, and to put in place any improvements needed in oil spill prevention and response.

This accident does not reduce the need for orderly offshore petroleum development. Keeping the federal outer continental shelf (OCS) off-limits to such activities will harm the nation's future energy security but will not reduce the risk of another tanker accident.

- o **Nation Depends on OCS Petroleum.** We depend on oil for 43 percent of our energy. Since 1954, federal OCS operations have produced 7.9 billion barrels of oil and 79.2 trillion cubic feet of natural gas. According to the U.S. Department of the Interior, the federal OCS could contain another 35.1 billion barrels of oil -- enough to fuel all the registered automobiles in the United States for 6.5 years.
- o **Domestic Production Declining.** U.S. oil production is at a 25-year low, and still declining. Discovery of additional petroleum resources, such as those believed to lie beneath the federal OCS, will be essential to fuel the U.S. economy into the 21st century.
- o **Developing Federal OCS Critical to U.S. Energy Security.** The nation already imports 45 percent of the oil it uses, and we are using more oil while producing less. To avoid pushing our foreign oil dependence higher in the future, we must develop new supplies here at home, and the federal OCS is one of our best prospects for finding them.
- o **Only a Fraction of OCS Developed.** Drilling has occurred on only a tiny portion of the 1.4 billion-acre federal OCS. Off California's coast, for example, less than one-half of 1 percent of the federal OCS that has been considered for leasing since 1954 has been developed.
- o **Moratoria Block OCS Development.** Congress continues to ban leasing on much of the federal OCS. Currently, 25.7 million acres have been put off-limits by legislative moratoria.
- o **Leasing Program Works Well.** Federal law requires the Interior Department to follow a 5-year OCS lease sale schedule. This involves detailed data collection and analysis, exhaustive environmental studies, and extensive input from state and local officials and the public.
- o **Keeping OCS Off-Limits Won't Stop Tanker Traffic.** In reviewing the Alaska spill's impact, EPA Administrator William K. Reilly pointed out that much of the world's and the nation's oil will continue to be supplied by ocean tankers. No matter what the nation decides about petroleum development on the federal OCS, half of its domestic oil and at least 75 percent of its imported oil will continue to travel by ocean tanker. As an industry and as a nation, we need to learn the

-2-

right lessons from the tanker spill. If, however, we draw the wrong conclusions and ban development of federal OCS resources, we could increase U.S. reliance on foreign oil to dangerous levels.

- o **Modern Technology, Transportation Prevent Mishaps.** U.S. oil companies use state-of-the-art offshore exploration and production equipment. Such modern technology, developed over more than three decades of OCS operations, helps ensure that the coastal and marine environments are protected. And virtually all the oil produced from federal OCS wells is transported to shore via pipeline, rather than tanker.
- o **U.S. Economy Benefits.** Lease bonuses, rents and royalties from federal OCS production poured \$86 billion into the federal treasury between 1954 and 1987. For every 10 jobs created offshore, 37 jobs are added in onshore industries.

4/25/89

THE FEDERAL OCS AND THE ENVIRONMENT: A GOOD RECORD

The petroleum industry's record of more than 30 years of operations on the federal outer continental shelf (OCS) provides overwhelming evidence that these operations can take place without harming the environment. Offshore oil production and environmental protection are not mutually exclusive.

- o **Oil Spills Rare.** No major oil spill has occurred on the federal OCS in 20 years. In 1986, 351 million barrels of oil were produced, but only 610 barrels spilled -- less than 0.0002 percent. Natural oil seeps that year in the Santa Barbara Channel off California added about 150,000 barrels of oil to the marine environment.
- o **Leasing Process Protects Environment.** The Interior Department's 5-year OCS leasing program involves exhaustive environmental studies, detailed data collection and analysis, and extensive input from state and local officials and the public.
- o **OCS Protected by Stringent Regulation.** Oil companies must obtain 17 federal permits and comply with 74 sets of federal regulations to operate on the federal OCS. Operations also must be consistent with state coastal management programs.
- o **Modern Technology Prevents Mishaps.** U.S. oil companies use state-of-the-art offshore exploration and production equipment. Such modern technology, developed over more than three decades of OCS operations, helps ensure that the coastal and marine environments will be fully protected.
- o **Fish Catches Have Increased Around Offshore Rigs.** The fish catch has increased in the Gulf of Mexico, where oil companies have operated for decades. Catches have increased especially near platforms, which act as artificial reefs. Platforms in the central and western Gulf constitute 28 percent of the reef habitat.
- o **Few Drilling Platforms Needed.** Drilling platforms on the federal OCS are placed only where oil is found. Modern technology prevents the need for multiple platforms at a site. Because of the sheer cost of these platforms -- often tens of millions of dollars -- few will be built. All production facilities must get government approval before installation.

2/23/89

INDUSTRY INTEREST RANKINGS, RESOURCE ESTIMATES, AND VALUE ESTIMATES FOR THE 26 OCS PLANNING AREAS

<u>PLANNING AREA</u>	<u>INDUSTRY INTEREST 7/89 [RANK (RANGE)]</u>	<u>RESOURCE ESTIMATES [BBOE]</u>	
C. Gulf of Mexico	1 (1-2)	7.38	<i>OCS MORATORIA LEGISLATION AND PRES. TASK FORCE FOCUS ON 6 OUT OF TOP 10 AREAS OF INTEREST</i>
W. Gulf of Mexico	2 (2-3)	5.20	
* S. California	3 (1-9)	1.36	
Chukchi Sea	4 (1-9)	0.59	
* C. California	5 (4-8)	0.58	
Beaufort Sea	6 (3-10)	0.12	
* N. California	7 (4-9)	0.52	
* E. Gulf of Mexico	8 (4-9)	0.30	
* N. Aleutian Basin	9 (4-14)	0.01	
* Washington/Oregon	10 (8-21)	0.14	
Mid-Atlantic	11 (5-20)	0.43	
North Atlantic	12 (8-15)	0.22	
South Atlantic	13 (9-14)	0.23	
Cook Inlet	14 (5-20)	****	
Gulf of Alaska	15 (6-23)	0.04	
Straits of Florida	16 (10-23)	0.08	
St. George Basin	17 (12-19)	0.01	
Navarin Basin	18 (11-20)	0.03	
Hope Basin	19 (12-21)	****	
Norton Basin	20 (13-21)	****	
Kodiak	21 (16-22)	0.01	
Shumagin	22 (14-26)	****	
Saint Matthew-Hall	23 (13-23)	****	
Aleutian Arc	24 (20-26)	****	
Bowers Basin	25 (22-26)	****	
Aleutian Basin	26 (23-26)	****	

**** Negligible

Minerals Management Service
Department of the Interior

1987 Estimates of Total Scores for Relative Marine Productivity
and Environmental Sensitivity for Whole Planning Areas

<u>Planning Areas</u>	<u>Whole Planning Area</u>	
	<u>Score</u>	<u>Rank</u>
Hope Basin	338	1
North Aleutian Basin	326	2
St. George Basin	287	3
Norton Basin	262	4
Kodiak	262	5
Cook Inlet	261	6
Shumagin	260	7
Beaufort Sea	257	8
Washington/Oregon	256	9
Central Gulf of Mexico	254	10
Straits of Florida	238	11
Central California	236	12
Gulf of Alaska	231	13
South Atlantic	230	14
Northern California	222	15
Southern California	219	16
North Atlantic	209	17
Chuckchi Sea	200	18
Eastern Gulf of Mexico	198	19
Mid-Atlantic	198	20
Western Gulf of Mexico	180	21
Navarin Basin	141	22

Minerals Management Service
Department of the Interior

A decision to cancel the existing lease sales and not include them in the next five-year plan (1992-97) will provide the President with a very limited pro-environmental story and substantial risks.

- o After the recent events in Panama, the President is not susceptible to charges of being indecisive. With the State of the Union address and budget message and continued reductions in world wide tensions, an OCS story will get limited play.
- o There are immediate political pluses for Senator Wilson and Governor Martinez but as their respective gubernatorial races heat up in September and October haven't you taken a politically charged issue away from them.
- o For the first time the opponents of domestic production will have a Presidential seal of approval that environmental risks exist from the OCS activities. Rather than the President gaining control of the program from Congress, these opponents will seek additional wins as they try to shut down future leasing, buy back leases, establish offshore wilderness areas with no drilling allowed.
- o Proponents of OCS activities in the Gulf states of Texas, Louisiana, Alabama, and Mississippi will come under attack and annual lease sales scheduled for the Central and Western Gulf areas could be delayed or cancelled (revenue losses of \$500-\$750 million annually for bonus money).
- o More crude oil will be imported in foreign tankers (this is a greater environmental risk).
- o Declining domestic production has substantial economic and geopolitical risks.
- o So long as the framework for OCS leasing exists, the nation

can respond quickly when the public support for increased domestic production improves. If the fundamental framework for leasing decisions is not in place, administrative burdens will hamper the nation's ability to respond.

A conference committee is reconciling the differences in the House and Senate passed versions of oil-spill liability legislation. One issue is of particulent concern if private clean-up cooperatives are to be effective in responding to future spills -- preempting state liability laws for "good samaritans."

THE WHITE HOUSE
WASHINGTON

January 9, 1990

MEMORANDUM FOR THE PRESIDENT

FROM: DAVID Q. BATES 
SUBJECT: Final Report of Outer Continental Shelf Leasing
and Development Task Force

Accompanying this memorandum you will find a copy of the final report of the Outer Continental Shelf (OCS) Leasing and Development Task Force (the Task Force), which was delivered to the White House by the Task Force last Friday, January 5.

In your budget address to Congress last February, you announced the establishment of this Cabinet-level Task Force, comprised of Secretaries Lujan (who served as Chairman) and Watkins, Administrators Reilly and Knauss and Director Darman. Its charge was to resolve environmental concerns about the potential adverse impacts of three pending OCS oil and gas lease sales scheduled for Fiscal Year 1990: Sale 116, Part II, off the southwestern coast of Florida; Sale 91, off northern California; and Sale 95, off southern California. The Task Force conducted numerous meetings over the past year and requested that the National Academy of Sciences (NAS) evaluate the adequacy of the scientific and technical information available for making leasing decisions in the three areas. The NAS report identified varying deficiencies in the oceanographic, ecological and socioeconomic information available for all three areas.

The Task Force has presented options for each sale, but within those options has made no recommendations. In addition to the specific options, the Task Force has also identified additional measures that should be taken to protect the environmental resources in these and other OCS areas in which existing leases are being developed.

The Task Force has presented three options for the Florida sale, all of which encompass cancellation of the pending sale. Alternatives are presented for the timing of any subsequent sale, ranging from (1) its consideration in the 1992-97 five-year program, to (2) consideration in the 1997-2002 five-year program, to (3) consideration only after the 1997-2002 program, if ever. Within all of these options steps to obtain the additional oceanographic, ecological and socioeconomic data identified by the NAS are recommended, as are steps to revise oil spill contingency plans to protect the Everglades and Florida Keys from

the adverse impact of an oil spill. The Task Force also addresses the future of existing leases within the area and presents options ranging from (a) considering their future development under normal procedures to (b) beginning discussions with the state regarding its purchase of the leases to (c) initiating actions that could lead to cancellation of the leases.

The Task Force has presented four options for the northern and southern California sales, ranging from (1) continued preparations for the sales to (2) cancellation of the pending sales to (3) deferral of the sales until the next 1992-97 five-year leasing program, with leasing to be allowed only in some of the available areas to (4) cancellation of the sales and exclusion of the entire areas from the 1992-97 five-year program. Each option would be accompanied by collection of the additional oceanographic and/or socioeconomic data identified by the NAS, revision of the air quality controls applicable to offshore drilling to make them more consistent with the controls for onshore activities, revision of oil spill contingency plans and, with respect to the northern California sale, evaluation of the effects of leasing on commercial fishing.

A working group within the White House is currently reviewing the report in order to prepare a decision memorandum for your consideration. Governor Sununu and I are discussing plans for you to meet with the members of the Task Force and possibly with interested members of Congress before you make your decision.

cc: Governor Sununu



OUTER CONTINENTAL SHELF LEASING & DEVELOPMENT TASK FORCE

**A Report to the President
On Lease Sales 91, 95, and 116, Part II**

January 2, 1990

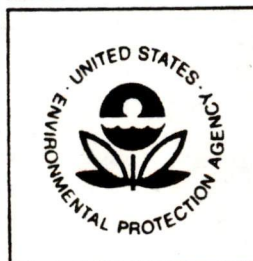
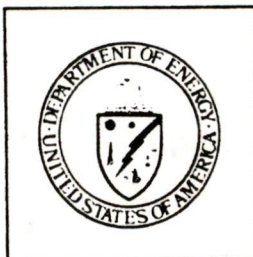
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Environmental Protection Agency

JOHN KNAUSS
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I. SUMMARY OF FINDINGS AND OPTIONS

INTRODUCTION

For many years, substantial controversy has surrounded the Federal Government's program to lease oil and gas resources on the Outer Continental Shelf (OCS) for exploration and development by the oil and gas industry. Concerns about the environmental effects of offshore oil and gas activities have given rise to strong opposition among the coastal residents of California and Florida. Where opposition has been strong, leasing, exploration, and development of oil and gas have been delayed by local permitting controversies, State coastal zone management actions, litigation, and congressional moratoria. It has become clear that past attempts to gain a consensus on the means of controlling environmental effects and the importance of developing offshore oil and gas resources have been unsuccessful in many cases in these areas.

In his message on the Fiscal Year 1990 budget, President Bush announced that he would establish a Cabinet level task force to "review and resolve environmental concerns" about three OCS oil and gas lease sales off Florida and California that had been scheduled for FY 1990. The three sales, shown in Figure II-1, are:

1. Lease Sale 116, Part II south of 26 degrees north latitude off the southwestern coast of Florida,
2. Lease Sale 95 off the southern coast of California, and
3. Lease Sale 91 off the northern coast of California.

The President ordered that the Minerals Management Service (MMS), the Agency in the Department of the Interior (DOI) responsible for OCS leasing, delay preparations for the three sales until concerns about environmental effects could be resolved.

This report presents the findings of the OCS Leasing and Development Task Force (Task Force) to the President and options for deciding whether and how to proceed with leasing in the three areas.

ENVIRONMENTAL CONCERNS EXPRESSED TO THE TASK FORCE

In its nine public workshops, the Task Force heard a wide variety of concerns expressed about undesirable environmental effects that people believe could result from OCS oil and gas activities in the three sale areas. In part because of the oil spill from the *Exxon Valdez*, the risks of oil spills from offshore oil development were a foremost concern. Other concerns included air quality, conflicts with fishing, effects on tourism and recreation, changes in onshore land use and "lifestyles," and effects on sensitive environmental areas and ecosystems.

Many people told the Task Force that the potential benefits of OCS oil and gas development in the three areas were small and that a national energy policy that placed emphasis on oil conservation and alternative energy sources, particularly alternative transportation fuels, could reduce or eliminate the need for development of these resources.

In general, people who expressed opposition to leasing felt very strongly that the potential

environmental effects were unacceptable.

Those supporting oil and gas exploration and development in the three areas stated their belief that these activities could be conducted in a way that protects environmental resources in a responsible manner. Those in favor of going ahead with leasing also emphasized the importance of domestic oil production, noting that the current trend of declining production and growing oil imports would increase the likelihood of future energy security and economic problems.

GENERAL FINDINGS

The Task Force reviewed a wide range of information about environmental effects that could occur if OCS oil and gas leasing proceeds in the three areas. Sources of information included MMS studies, Environmental Impact Statements (EIS's), briefings from various Federal Agencies, public workshops, and meetings with interested Members of Congress. The Task Force also asked the National Academy of Sciences/National Research Council (NAS/NRC) to evaluate the adequacy of the scientific and technical information base for making leasing decisions in the three areas.

The NAS/NRC had already been engaged by MMS to review the environmental studies program and oil and gas resource evaluation methods which MMS uses in its preparations for leasing decisions. The Secretary of the Interior's leasing decisions determine what tracts are offered for lease and what conditions are imposed upon the lessees. The Secretary makes these leasing decisions after a 2-year process of analysis, public comment, and consultation with the Governors of affected States.

The NAS/NRC Report concluded that some types of information in some of the areas are adequate for the Secretary's leasing decisions, while other types of information are not. The NAS/NRC found the oceanographic information adequate for northern California and the ecological information adequate for both northern and southern California. The NAS/NRC found the socioeconomic information inadequate for leasing decisions in southwestern Florida and northern California and doubted that it was adequate for southern California. It found the physical oceanographic information inadequate for southern California and marginal for southwestern Florida and the ecological information inadequate for southwestern Florida. The NAS/NRC did not assess potential environmental effects or draw conclusions about whether leasing should proceed.

The MMS has spent over \$41 million on environmental studies specifically for these areas during the past 15 years. **Nevertheless, the Task Force finds that some additional studies, in response to the NAS/NRC Report, are needed before the Secretary of the Interior makes leasing decisions in the three areas. The Task Force also found that MMS should revise its process for writing EIS's to improve the environmental assessment information available for leasing decisions.**

The Task Force carefully considered the information that it collected in briefings and workshops in order to determine what actions should be taken to resolve the environmental concerns about offshore oil and gas activities in the three areas. **In some cases, the Task Force found that environmental effects could be greater than the Task Force deems acceptable at this time. In these cases, additional controls or mitigation measures are needed. In other cases, the Task Force found that**

the actual effects of OCS activity are being controlled in an acceptable way.

The Task Force has also concluded that although many of the environmental effects of oil and gas activities, taken individually, are acceptable, collectively they could result in unacceptable changes to the local environments in or near the three sale areas unless new measures are taken to control or mitigate such effects.

The Task Force also reviewed information on the role of OCS oil and gas production from the three areas to our Nation's energy supplies as well as the relationship between leasing decisions and the development of a national energy policy. The MMS resource assessment shows that if oil and gas are found in these three areas, economically recoverable resources could range from 0.8 to 2.1 billion barrels of oil (equivalent to as much as 8% of current U.S. oil reserves) and 1.1 to 3.2 trillion cubic feet of natural gas. The NAS/NRC concluded that MMS resource estimates are based on an adequate data base and that the procedures used in estimation are generally appropriate.

Additional oil and gas production in such amounts would replace as much as \$40 billion worth of imported oil over 30 years. Such production would provide economic benefits in the form of Federal leasing revenues and net corporate income which together could reach as high as \$7.8 billion. The southern California OCS is currently producing over 30 million barrels of oil per year.

The Task Force has concluded that substantial economic and energy security benefits would be provided by the oil and gas production in future decades that could result from leasing in the three areas. Furthermore, it concluded that while additional oil conservation can substantially reduce U.S. oil consumption, it would not reduce or eliminate the economic and energy security benefits from additional OCS oil production. Both conservation and production projects and policies should be considered on their own merits, as they will be in formulating the National Energy Strategy currently in preparation by the Department of Energy.

The Task Force recognizes the substantial conflict that often exists between the goals of protecting coastal and marine environments and maintaining the quality of life in coastal areas, on the one hand, and the goals of promoting energy security and economic growth, on the other. The Task Force found no easy way to resolve this conflict. **Based on its review of available information, the Task Force concluded that additional time and effort are needed before environmental concerns can be resolved in a manner that provides an acceptable balance between these often conflicting goals.**

Although the OCS oil and gas program has generally had a good environmental record over the last decade, many people do not feel confident that oil and gas activities can be conducted off their coasts without causing damage to valuable environmental resources. In some instances, collection of more information about these effects will help to resolve these concerns. In other cases, additional environmental protection measures need to be developed, perhaps even tested, before leasing decisions proceed. New working relationships and institutional arrangements may be needed so that affected local communities have more influence on leasing, exploration, and development decisions.

The Task Force has developed a series of options that allow different periods of time for

studies. It has also suggested a number of additional environmental controls which should be considered in future leasing decisions. Some of these measures should be undertaken now to better control existing threats to the environment. The next section summarizes findings on specific environmental concerns. This is followed by a summary of the options and additional environmental protection measures.

SUMMARY OF FINDINGS ON SPECIFIC ENVIRONMENTAL CONCERNS

The Task Force's findings about specific environmental concerns and its recommendations for additional studies and specific environmental control measures are summarized below.

Air Quality

The effects of emissions from offshore oil and gas operations on the generally poor air quality in southern California is a primary concern. Outer Continental Shelf emissions may not make a substantial contribution to onshore air pollution in all coastal areas of California. The emission controls which the MMS currently imposes offshore are less stringent than required for similar activities onshore.

The Task Force has concluded that air emissions from OCS oil and gas facilities off the California coast should be subject to more stringent controls that are substantially equivalent to controls applicable to similar onshore facilities. The MMS now has efforts underway to develop a new proposed rulemaking to achieve this objective.

Oil Spill Risks

The MMS analysis of oil spill risk shows that development of oil and gas in each of the three lease sales would cause a small increase in the risk of an oil spill greater than 10,000 barrels during the next 30 years in their area. Table I-1 shows the MMS's estimates of the chances of an oil spill greater than 10,000 barrels both without additional leasing and with the proposed lease sale.

Table I-1: Chances of An Oil Spill Over 30 Years

Greater Than 10,000 Barrels		
Lease Sale	Chance Without Leasing	Chance With Leasing
Sale 116, Part II	96%	97%
Sale 95	93%	94%
Sale 91	77%	85%

The Task Force has concluded that:

- **the risk that an oil spill of significant size will occur due to OCS-related activities in the three proposed lease sale areas is small compared to the risk of a significant spill from other existing sources, notably non-OCS tanker and barge traffic;**
- **although the risk of occurrence of a major OCS oil spill is relatively small, the environmental effect of such a spill could be significant;**
- **coastal and marine resources deserve greater protection from oil spills from all sources than is now available; and**
- **governments and the oil and shipping industries should act now to achieve significantly better protection against oil spills for coastal and marine resources, regardless of whether OCS leasing and development proceeds in the three proposed lease sale areas.**

Effects on Protected Lands

There are numerous protected areas such as parks, marine sanctuaries, and wildlife refuges near the three sale areas that could be affected by oil and gas activities including existing tanker transportation. These include the Everglades National Park, Looe Key National Marine Sanctuary, Key Largo National Marine Sanctuary, Channel Islands National Park, Channel Islands National Marine Sanctuary, Farallon Islands National Marine Sanctuary, and Cordell Bank National Marine Sanctuary.

The Task Force has concluded that the sensitive and highly valuable resources in protected areas such as National Parks deserve additional consideration and management to ensure that they are not seriously damaged by oil and gas activities.

Effects on Protected Species and Other Wildlife

A wide variety of endangered or threatened species inhabit areas in or near the sale areas. The effects of offshore oil and gas activities on these species is reviewed through the consultation procedures required by the Endangered Species Act. While most species are not jeopardized by oil and gas activities, concern has been expressed about potential harm to individuals and the cumulative effects of many different oil and gas developments.

The Task Force concluded that effects on protected species and wildlife are important enough to warrant additional management attention but are not, by themselves, sufficient to justify a delay in leasing.

Effects on Commercial Fishing

The Task Force concluded that there are conflicts between commercial fishing activity and offshore oil and gas activities, many of which can be resolved or significantly mitigated.

Effects on Water Quality

The Task Force concluded that environmental impacts from drilling muds, cuttings, and produced fluids can be adequately addressed under the existing National Pollutant Discharge Elimination System regulatory program.

Changes in Onshore Infrastructure and Land Use

The Task Force has concluded that development of offshore oil and gas resources may create onshore land use conflicts and demands on infrastructure that need to be better addressed. Conflict could be reduced if better consultative relationships were established among the oil industry, Federal, State, and local governments and other affected parties for planning and coordinating the onshore activities of OCS lessees.

Effects on Tourism and Recreation

The Task Force concluded that OCS impacts on tourism and recreation are a major concern for which further information is needed to determine the magnitude of impacts. However, tourism losses alone are not likely to be sufficient to provide a basis for canceling or delaying lease sales. They should be addressed as a part of other efforts or new efforts to control and mitigate onshore impacts.

SUMMARY OF OPTIONS DEVELOPED BY THE TASK FORCE

The Task Force developed three options for each of the three lease sales. In doing so, it recognized that OCS lease sales must be scheduled in a 5-year leasing program approved by the Secretary of the Interior. The three lease sales addressed by the Task Force, as well as follow on sales in the same OCS areas, are scheduled in the 1987-1992 5-Year Leasing Program. Additional sales could be scheduled in a new 5-year leasing program. The Secretary is tentatively planning to release a proposal for a new 5-year program for comment in March 1990. If gaps and overlaps between 5-year programs are avoided, the new program will cover the 1992-1997 period. It would be followed by a 1997-2002 program. The options for the three sale areas reflect the structure imposed by the 5-year program requirement.

In addition to the options for lease sales in the three areas, the Task Force also developed a list of additional environmental control or mitigation measures that can be used to further reduce undesirable effects of OCS oil and gas activities. The options and additional measures are summarized below.

Sale 116, Part II - Off Southwestern Florida

All three of the following options developed for Sale 116, Part II include recommendations to develop a program to better protect the Everglades and Florida Keys environmental resources from oil spills and to consider moving oil tanker routes to reduce the risk of damage from oil spills to these resources.

Option A:

Cancel Sale 116, Part II, and defer subsequent leasing decisions until additional oceanographic, ecological, and socioeconomic data in response to the NAS/NRC Report have been collected.

Revise requirements for OCS oil spill contingency plans to improve their effectiveness, and develop improved means of assessing the risk of oil spill damage.

Canceling the sale would exclude the Part II area from any additional OCS leasing for the remainder of the 1987-1992 5-Year Program. Leasing in the Part II area could occur in the 1992-1997 5-Year Program only after additional oceanographic, ecological, and socioeconomic data in response to the NAS/NRC Report have been collected and after the ability to protect the Everglades from oil spills has been demonstrated.

The NAS/NRC Report identified gaps in the information record for the area off southwestern Florida and concluded that those gaps should be addressed prior to any decision regarding the leasing of tracts in the area. Consequently, the MMS would acquire and analyze additional information for leasing decisions.

The timing of future leasing decisions should be determined after analysis of the time required to complete the studies. Upon their completion, the Secretary of the Interior will decide whether or not to offer tracts for lease. If a decision to lease is made, the new information would be used in determining which tracts to offer and what environmental controls to apply to the leases in order to resolve environmental concerns.

Existing Leases: Proceed with decisions about exploration and development on existing leases under normal OCS Lands Act and Coastal Zone Management Act (CZMA) procedures.

This option would allow exploration and development on the 73 existing leases in the Part II area, subject to the OCS Lands Act and the CZMA. Decisions on two exploration plans are currently before the Secretary of Commerce under the CZMA. Any subsequent development on these leases should be conditioned on the demonstration of the ability to better protect Everglades and Keys ecosystem from oil spills and completion of additional ecological and socioeconomic studies in response to the NAS/NRC Report.

Option B:

Cancel Sale 116, Part II.

Exclude the Part II area from consideration in formulating the new 1992-1997 5-Year Program.

Canceling the sale and excluding the area from the 1992-1997 program would delay leasing until late 1997 at the earliest. If a sale in the Part II area is scheduled in the 1997-2002 5-Year Program, additional oceanographic, ecological, and socioeconomic studies will be conducted prior to leasing decisions. Leasing will proceed only after the ability to better protect the Everglades from oil spills has been demonstrated.

Existing Leases: Proceed with decisions about exploration and development on existing leases under normal OCS Lands Act and CZMA procedures.

The DOI should undertake discussions with Florida and existing lessees to facilitate purchase of existing leases by the State, if the State so desires.

This option would proceed with decisions regarding exploration and development on the 73 existing leases in the Part II area using the normal procedures under OCS Lands Act and the CZMA. Decisions on two exploration plans are currently before the Secretary of Commerce under the CZMA. Any subsequent development on these leases would be conditioned on the demonstration of the ability to better protect Everglades and Keys ecosystem from oil spills.

The State of Florida has been considering ways of compensating lessees in order to prevent drilling on existing leases. State purchase of some of the existing leases is one mechanism for achieving this objective.

Option C:

Cancel Sale 116, Part II.

Exclude the Part II area from consideration in formulating the new 1992-1997 5-Year Program and the 1997-2002 5-Year Program.

This option would not allow leasing before 2002, if ever. Future decisions on leasing would be based on additional information on environmental effects and energy benefits available by that time. Although there would be no drilling, the MMS would continue to refine its assessment of the oil and gas resources in the area to provide a basis for these future decisions.

Existing Leases: The DOI should undertake discussions with Florida and existing lessees to facilitate State purchase of existing leases. The Secretary should initiate procedures that could lead to cancellation of the existing leases pursuant to section 5 of the OCS Lands Act. If these leases are canceled, it would prevent drilling on existing leases. Selection of this option would reflect the view that the existing oil spill threat to environmental resources in this region is too great and that additional risk from any source, including OCS exploration and development, is not justified at this time.

The Secretary of the Interior should begin the lease cancellation process immediately. This process requires that, prior to cancellation, the leases be suspended for 5 years based on a determination by the Secretary that there is a threat of serious harm or damage to the environment from continued operations on the lease. In order to make this determination, the Secretary would need to review the information on the environmental effects of operations on existing leases. Leases cannot be drilled while under suspension. The State

of Florida may wish to purchase existing leases in order to reach a final resolution on drilling of existing leases at an earlier time than under the section 5 process.

Protecting the Everglades and Keys from Oil Spills

A key feature of all three options is the establishment of a program to provide greater protection from oil spills to the environmental resources of the Everglades and Keys ecosystem. The Task Force has found that even without OCS activity, the use, value, and unique environmental sensitivity of the Everglades and Keys resources are great enough to warrant increased protection from oil spills from existing sources including tanker transport. The Task Force suggests that the program develop a system for oil spill protection for the Everglades National Park and Florida Keys resources.

These efforts to improve protection of the Everglades and Keys should involve the DOI, the Department of Commerce, the U.S. Coast Guard, the Environmental Protection Agency (EPA), and representatives from the shipping and petroleum industries. In addition, the U.S. Coast Guard should study the feasibility of moving oil tanker routes further from the environmental resources in the Keys and Everglades.

Sale 95 - Off Southern California

Option A:

A-1: Proceed with preparations for a lease sale but defer final leasing decisions until after additional oceanographic and socioeconomic data in response to the NAS/NRC report have been collected.

A-2: Cancel Sale 95, and defer subsequent leasing decisions until additional oceanographic and socioeconomic data in response to the NAS/NRC report have been collected.

Establish air quality controls for the California OCS that are substantially equivalent to those applied onshore.

Revise requirements for OCS oil spill contingency plans to improve their effectiveness, and develop improved means of assessing the risk of oil spill damage.

Option A-1 would give the Secretary of the Interior the discretion to proceed with preparations for a lease sale when he determines that it is appropriate in light of the progress in collecting additional data. Option A-2 directs the Secretary to cancel Sale 95. Both would allow future leasing decisions for the southern California OCS to be based on more extensive data about the oceanographic and socioeconomic effects of oil and gas activities. The NAS/NRC Report identified gaps in the information record for the southern California area and concluded that those gaps should be addressed prior to any decision regarding the leasing of tracts in the area. Consequently, the MMS would acquire and analyze additional information for leasing decisions.

Upon completion of the additional studies, the Secretary of the Interior would decide which tracts to offer, if any, and what environmental controls to apply to the leases in order to resolve environmental concerns.

Option B:

Defer leasing decisions until the 1992-1997 5-Year Leasing Program.

Offer tracts only in Santa Maria Basin and San Diego Outer Basin in the next sale off southern California.

Conduct additional oceanographic and socioeconomic studies prior to making leasing decisions for any future sale.

Establish air quality controls for the California OCS that are substantially equivalent to those applied onshore.

Revise requirements for OCS oil spill contingency plans to improve their effectiveness, and develop improved means of assessing the risk of oil spill damage.

This option would allow a lease sale to be scheduled in the 1992-1997 5-Year Leasing Program. A sale could occur in the middle of this period, following completion of the additional studies. Leasing decisions by the Secretary of the Interior will draw on this information to determine the tracts to be offered and the environmental control measures to be applied in order to resolve environmental concerns.

The option for proceeding with leasing in the Santa Maria Basin needs to be considered in light of the likelihood that related onshore facilities would probably be located in Santa Barbara County, which has already experienced substantial development. Because there has been little drilling of the larger prospects in this area, there may be a greater chance for large discoveries than in the Channel. The generally deeper water, however, may make such resources less beneficial economically.

Leasing in the San Diego Outer Basin may be more acceptable environmentally than leasing closer to shore, because the greater distance from shore reduces visual impacts and reduces the chance that an oil spill from operations on a lease would contact the coast. Because there are a number of large prospects that have not been drilled, there is a fair chance for large discoveries. However, as the geology and economics are less favorable in this area, the chance of finding commercial quantities of oil and gas is considerably lower than in the Inner Basin.

This option would defer leasing in the Santa Barbara Channel in light of the intensity of current and planned oil and gas development on existing leases off Santa Barbara County. These developments have been slowed by concerns about the onshore impacts. Once such problems have been worked out, however, additional leasing and development should be possible without substantial increases in onshore facilities, if activities are appropriately phased. Additional leasing in the Santa Barbara Channel holds a lower probability of discovering new large oil fields, because most of the larger prospects there have already been drilled.

This option also defers leasing in the Inner Basin in light of its proximity to highly valued, intensively used coastal resources in San Diego County, Orange County, and Los Angeles County. However, because the larger prospects in this area have not been drilled, deferring leasing would forgo a good chance for large discoveries.

Option C:

Cancel Sales 95 and 138.

Exclude the southern California area from consideration in formulating the new 1992-1997 5-Year Program.

Conduct additional oceanographic and socioeconomic studies prior to making leasing decisions for the next sale.

Establish air quality controls for the California OCS that are substantially equivalent to those applied onshore.

Revise requirements for OCS oil spill contingency plans to improve their effectiveness, and develop improved means of assessing the risk of oil spill damage.

Under this option, leasing would not be allowed until late 1997, at the earliest. A sale could be scheduled in the 1997-2002 5-Year Program. Leasing would proceed only if new OCS air quality controls have proven substantially equivalent with standards onshore and after collection of additional oceanographic and socioeconomic data in response to the NAS/NRC Report. The decision to proceed would be based on the treatment of additional OCS oil and gas production in the National Energy Strategy. Although there would be no drilling on new leases, exploration and development could continue on existing leases. The MMS would continue to refine its assessment of the oil and gas resources in the area to provide a basis for these future decisions.

OCS Air Quality Regulations, Tanker Route Study, and Oil Spill Response

A component of all three of the options above is the recommendation that MMS issue a rule making the standards for regulating air quality on the OCS substantially equivalent to regulatory standards onshore. Less stringent controls for OCS facilities would be allowed only if justified by safety and technical considerations applicable to OCS facilities. The MMS is already drafting a new proposed rulemaking intended to achieve this goal.

Also included in all three options is the recommendation that the U.S. Coast Guard conduct a study of the possibility of moving tanker routes out of the Santa Barbara Channel. This study should also include consideration of a vessel traffic system for this area and traffic separation zones for the area near the Channel Islands National Park and National Marine Sanctuary.

Oil spill concerns in the southern California area are substantial. The Task Force has concluded that they could be addressed more effectively by focusing more effort on the prevention and containment of oil spills from all sources of risk including tankers. It is possible that improvements in oil spill response capabilities in the area could reduce the potential damage to valuable coastal resources by more than the increased risk due to additional OCS oil production. Increased capabilities would also reduce the risk of damage from an OCS oil spill.

Sale 91 - Off Northern California**Option A:**

A-1: Proceed with preparations for a lease sale but defer final leasing decisions until after additional socioeconomic data in response to the NAS/NRC report have been collected.

A-2: Cancel Sale 91, and defer subsequent leasing decisions until additional socioeconomic data in response to the NAS/NRC report have been collected.

Establish air quality controls for the California OCS that are substantially equivalent to those applied onshore.

Revise requirements for OCS oil spill contingency plans to improve their effectiveness, and develop improved means of assessing the risk of oil spill

Reevaluate the effects on fisheries and institute measures to reduce conflicts with commercial fishing.

Option A-1 would give the Secretary of the Interior the discretion to proceed with preparations for a lease sale when he determines that it is appropriate in light of the progress in collecting additional data. Option A-2 directs the Secretary to cancel Sale 91. Both options would allow future leasing decisions for the northern California OCS to be based on more extensive data about the socioeconomic effects of oil and gas activities. The NAS/NRC Report identified gaps in the information record for the northern California area and concluded that those gaps should be addressed prior to any decision regarding the leasing of tracts in the area. Consequently, the MMS would acquire and analyze additional information for leasing decisions.

Upon completion of the additional studies, the Secretary of the Interior would decide which tracts to offer, if any, and what environmental controls to apply to the leases in order to resolve environmental concerns.

Option B:

Defer leasing decisions until the 1992-1997 5-Year Leasing Program.

Offer tracts only in the Eel River Basin in the next sale off northern California.

Conduct additional socioeconomic studies prior to leasing decisions for the next sale.

Establish air quality controls for the California OCS that are substantially equivalent to those applied onshore.

Reevaluate the effects on fisheries and institute measures to reduce conflicts with commercial fishing.

Revise requirements for OCS oil spill contingency plans to improve their effectiveness, and develop improved means of assessing the risk of oil spill damage.

Under this option a lease sale could be scheduled for late 1992, at the earliest. This option would allow leases to be offered in the gas-prone Eel River Basin only, thus reducing the probability of finding oil in the sale area and causing much less risk of an oil spill. Leasing in the Point Arena Basin would be deferred, forgoing the best chances of major oil discoveries in the northern California area.

Option C:

Cancel Sale 91 and Sale 128.

Exclude the Northern California Planning Area from consideration in formulating the new 1992-1997 5-Year Program.

This option would not allow leasing in this area until late 1997, at the earliest. Leasing decisions would be made only after collection of additional socioeconomic data in response to the NAS/NRC Report. The decision to proceed would be based on the treatment of additional OCS oil and gas production in the National Energy Strategy. Although there would be no drilling, the MMS would continue to refine its assessment of the oil and gas resources in the area to provide a basis for these future decisions.

Additional Environmental Control and Mitigation Measures

The Task Force identified a number of additional measures which should be developed for consideration when future leasing decisions are made in the three areas. It also suggests that some of these measures be taken in the near future in order to reduce the environmental effects of exploration and development on existing leases or to protect environmental resources in one or more of the three areas from damages that could result from other existing activities. Because some of these measures could be instituted only at considerable cost to lessees, taken together they could substantially reduce the benefits of developing oil and gas and could discourage the industry from bidding for the right to OCS resources. The MMS, in consultation with other affected Agencies, should develop criteria for determining where and when they should be applied. The MMS should also develop regulations, lease stipulations, and other measures requiring such controls.

The additional measures are as follows:

- Require transport of OCS oil in pipelines where feasible and environmentally preferable.
- Improve OCS oil spill risk assessment, contingency planning and response capability.
- Encourage consolidation of onshore facilities to reduce demand on existing onshore public services infrastructure and land use changes.
- Establish processes to assist local communities to address onshore impacts associated with OCS development.
- Require no discharge of drilling muds/fluids in sensitive areas.
- Establish joint oil industry/fishing industry coordinating committees in areas where OCS activities are likely to conflict with commercial fishing.
- Strengthen policies to protect environmentally sensitive areas.

A more detailed description of these measures is provided in Chapter VI.

II. INTRODUCTION

THE PRESIDENT'S CHARGE TO THE TASK FORCE

In his February 9, 1989, budget address to Congress, President Bush announced the establishment of a Cabinet level Task Force to review and resolve environmental concerns about adverse impacts in three OCS oil and gas lease sales that were scheduled for Fiscal Year 1990: Sale 91, Northern California; Sale 95, Southern California; and Sale 116, Part II, Eastern Gulf of Mexico south of 26 degrees north latitude. The general locations of these three lease sales are shown in Figure II-1.

The President stated that he is committed to continued OCS oil and gas development in an environmentally sound manner. Nonetheless, he recognized that there are legitimate differences of opinion concerning the environmental effects of OCS leasing in these three areas. The President ordered that, until the Task Force resolves such concerns:

- leasing in the Sale 116, Part II area would be indefinitely postponed;
- leasing in the Sale 95 area would be delayed; and
- leasing in the Sale 91 area would be indefinitely postponed.

The three lease sales under review are shown in more detail in Figures II-2, II-3, and II-4.

Sale 116, Part II, Eastern Gulf of Mexico (Figure II-2) consists of approximately 14 million acres located between 26 degrees and 24 degrees north latitude offshore southwestern Florida (from Naples to the southern limits of the Eastern Gulf of Mexico Planning Area). The area is about 25 miles from the Dry Tortugas at its closest point to land.

Sale 95, Southern California (Figure II-3) includes approximately 6.7 million acres located offshore southern California from the northern border of San Luis Obispo County to the U.S. / Mexico provisional boundary.

Sale 91, Northern California (Figure II-4) consists of approximately 1.1 million acres located offshore portions of Mendocino and Humboldt Counties in the Northern California Planning Area. The proposal is in two segments: centering off Eureka in the north and from south of Cape Mendocino to south of Point Arena.

On March 21, 1989, the White House announced the structure of the President's OCS Leasing and Development Task Force. The members of the Task Force include: the Secretary of the Interior, who serves as Chairman; the Secretary of Energy; the Administrator of the National Oceanic and Atmospheric Administration (NOAA); the Director of the Office of Management and Budget (OMB); and the Administrator of the EPA. The National Academy of Sciences was asked to provide a technical review of the information about environmental concerns and petroleum resources to the Task Force.

Lower 48 Planning Areas

■ Task Force Study Areas



Figure II-1

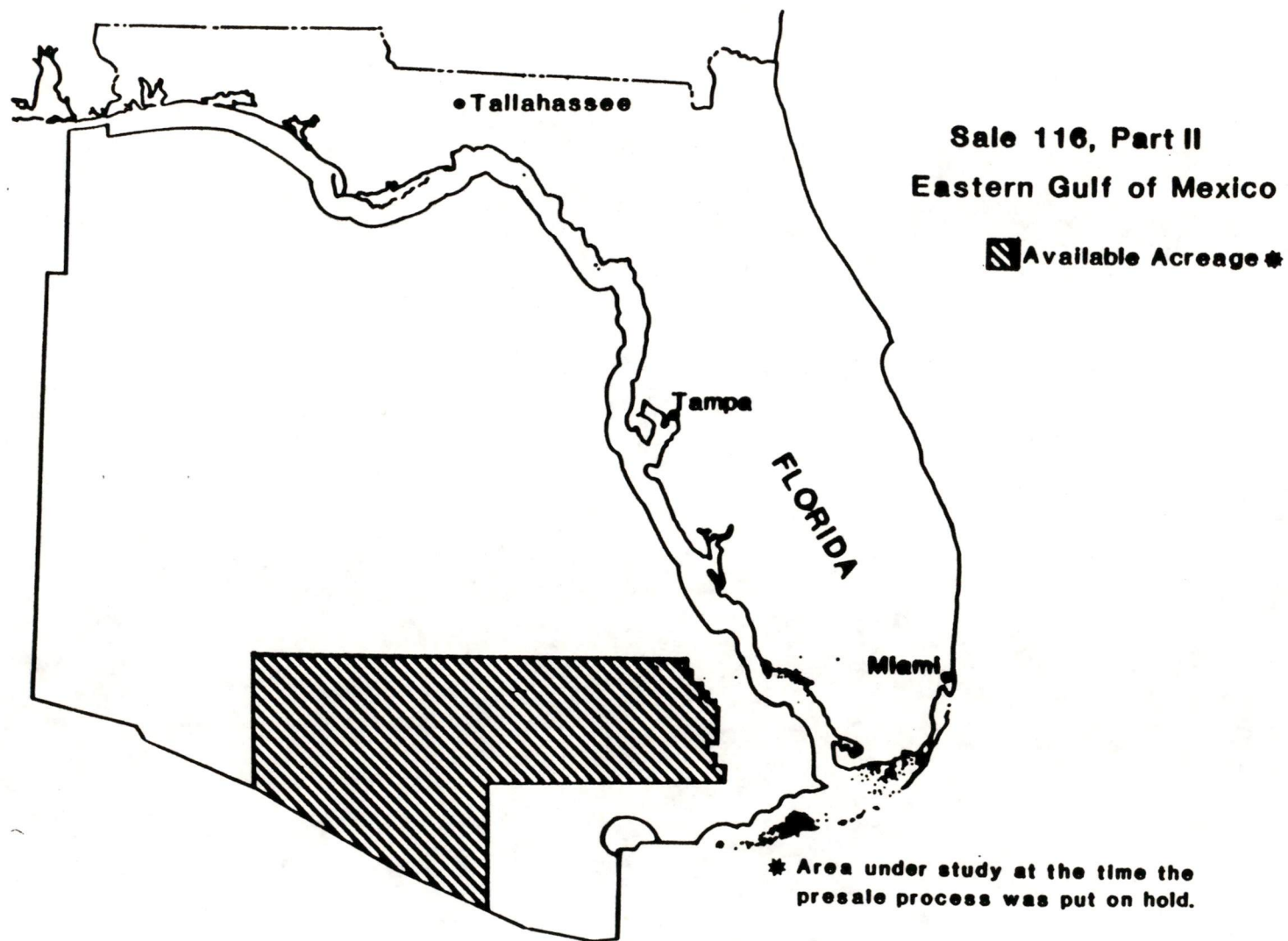
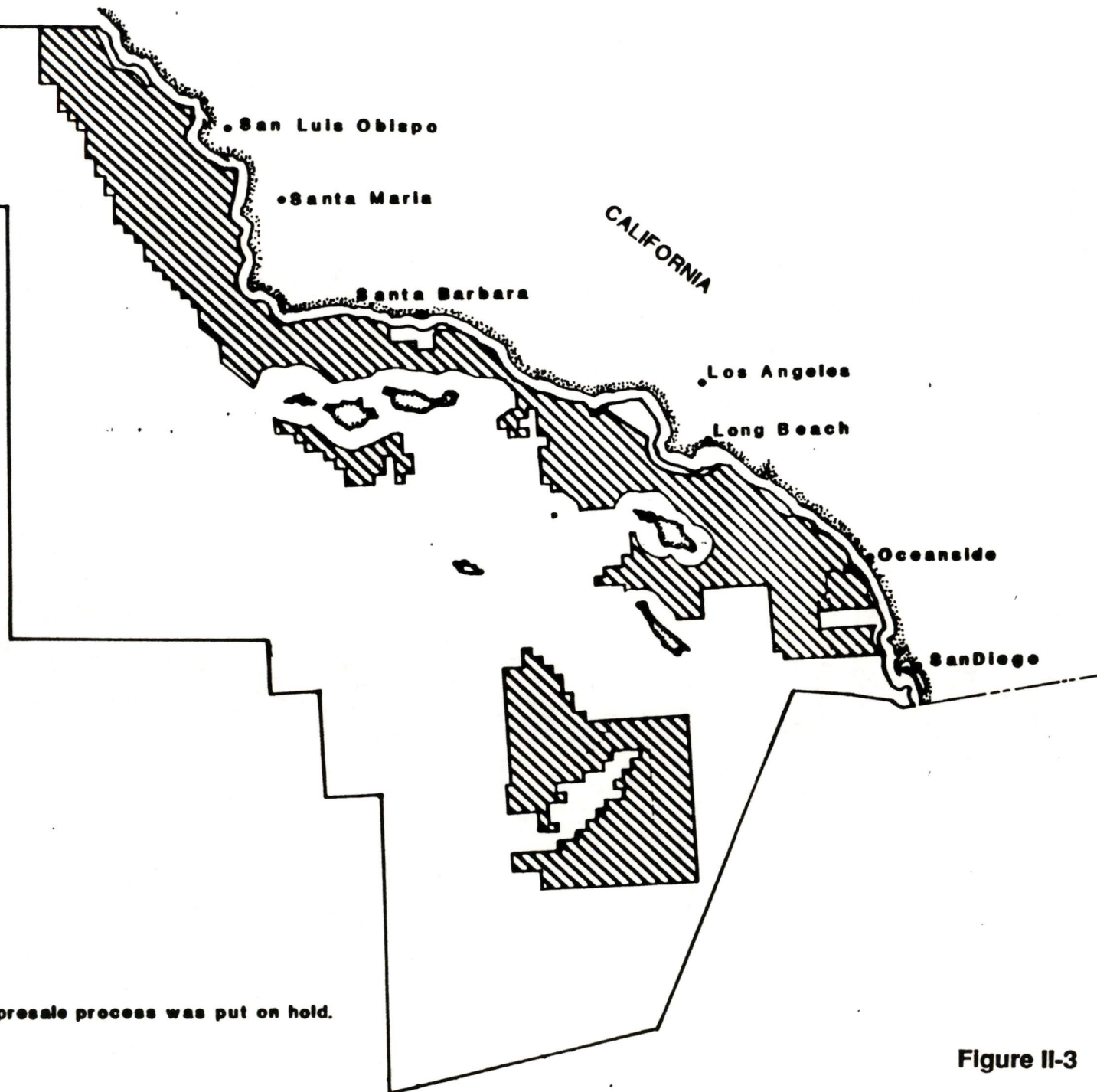


Figure II-2

**Proposed Sale 95
Southern California**

 **Available Acreage ***



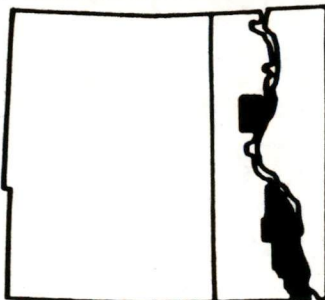
* Area under study at the time the presale process was put on hold.

Figure II-3

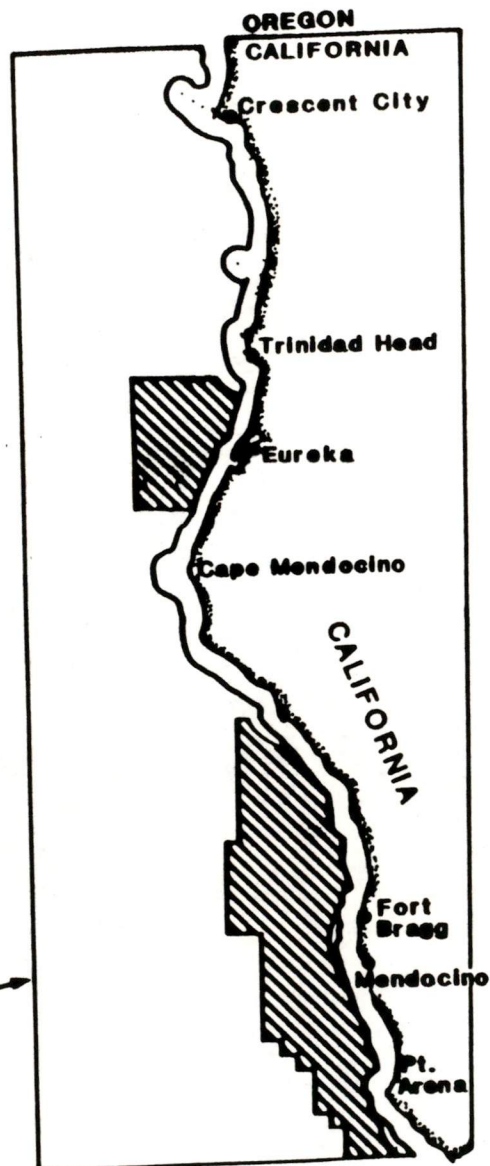
**Proposed Sale 91
Northern California**

 Available Acreage *

N. CALIFORNIA PLANNING AREA



SEE DETAIL MAP →



* Area under study at the time presale process was put on hold.

Figure II-4

Based on the President's direction, the Task Force decided to pursue the following six objectives:

1. Review concerns about adverse environmental impacts in each of the three sale areas.
2. Identify and investigate environmental concerns.
3. Explore leasing proposals, including no leasing, for the three sale areas that might resolve environmental concerns.
4. Review the Administration's energy goals, environmental goals, and ocean management goals as they relate to OCS leasing.
5. Review the question of leasing and operations in the three sale areas, and make recommendations to the President.
6. Review and monitor information available about the *Exxon Valdez* oil spill and cleanup effort which may aid the Task Force in accomplishing the five previous objectives.

Based on guidance from the White House Staff, the Task Force limited the options and recommendations presented in this report to those which: (1) could be implemented within the President's and the Administration's current legal authorities; and (2) could apply specifically to the three lease sales which the President asked the Task Force to review.

THE WORKINGS OF THE TASK FORCE

As part of its review and analysis of the environmental effects of the three proposed lease sales, the Task Force obtained information from a wide range of sources and settings including Federal Government Agency briefings, public workshops in communities adjacent to the proposed sales, field trips, and meetings with Members of Congress. In addition, the Task Force accepted written comments from the public.

Agency Briefings

Federal Government Agencies whose responsibilities relate to the conduct of the OCS leasing program presented briefings to the Task Force on general environmental and resource issues as well as sale specific concerns. The Federal Agencies presenting materials to the Task Force are listed below:

- Department of the Interior
 - Minerals Management Service
 - National Park Service
 - U.S. Fish and Wildlife Service
 - U.S. Geological Survey
- Environmental Protection Agency
- National Oceanic and Atmospheric Administration
- U.S. Coast Guard
- Department of Energy

The general briefings presented by these Agencies covered the following subjects:

Oil Spills

- sources of oil in the marine environment
- oil spill history from OCS and non-OCS sources
- effects of oil spills
- oil spill prevention
- oil spill modeling
- oil spill contingency planning
- oil spill clean up and containment capabilities
- overview of the *Exxon Valdez* oil spill and response
- analysis of possible legislative changes to oil spill planning and response statutes

General Environmental Effects

- OCS Environmental Studies Program
- Clean Air Act and Clean Water Act
- Coastal Zone Management Act
- National Marine Sanctuary Program

Oil Production and Conservation

- preparation of the National Energy Strategy
- oil production and conservation history
- world oil supply and outlook
- potential for new sources of domestic production and conservation

The topics covered at briefings on each of the proposed lease sales included:

- status and 5-year program rankings of the proposed sale
- geology, leasing history, and resource estimates in the area
- existing OCS activity in the area
- location of the proposed sale in relation to environmental and recreation resources
- potential for effects on protected lands and protected species
- oceanography, fisheries, and live bottom resources
- oil spill probability and trajectory analyses
- oil spill response time
- issues of particular significance to the specific sale
- history of coastal consistency determinations for OCS oil and gas activities

Public Workshops

In order to obtain specific information about the effects of OCS activity on local communities and environmental resources, the Task Force held nine public workshops in Florida and California, organized by the Governor's Office in Florida and the county governments in California. The workshops were held in the following communities:

California

Carlsbad
Los Angeles
Eureka/Arcata
Santa Barbara
Sacramento

Florida

Tallahassee
Fort Myers
Miami
Key West

These workshops gave the Task Force the opportunity to discuss the proposed sales with State and local officials, scientists, business leaders, and interested groups. In addition to the panel discussions involving the Task Force, local officials, experts, and the general public were invited to express their concerns.

Congressional Meetings

The Task Force twice met with Members of Congress in Washington, D.C. The first meeting, with the delegations from Florida and California, was held prior to the Task Force workshops in the proposed sale areas. The second meeting, which followed the completion of the workshops, involved Members of Congress from States other than California and Florida.

Field Trips

An important component of the Task Force's information collection process was the direct examination of resources and facilities associated with OCS activity. Field trips were arranged for the Task Force in association with its workshops in the proposed sale areas. These field trips are listed below.

- Southern California Coast
- Aloha Research Vessel to Platform Gilda, CA
- 10,000 Islands / Everglades National Park, FL
- Shark Valley / Everglades National Park, FL
- Snorkeling / Viewing Coral in the Florida Keys
- Northern California Coast and Avenue of the Giants
- Platform Hondo and the Offshore Storage and Treatment Facility, offshore Santa Barbara, CA
- Los Flores Canyon Facility, CA
- Gaviota Oil and Gas Plant, CA
- Channel Islands National Park, CA

Federal Register Notice

At the conclusion of the workshops and field trips, the Task Force published a "Staff Summary of Environmental Concerns and Options" in the Federal Register (54 FR 33150-33165). The Notice summarized the environmental concerns about OCS leasing and potential options for resolution of those concerns which the Task Force heard in its workshops, briefings, meetings, and field trips.

As a part of the Federal Register Notice, the Task Force solicited public comment on concerns and options not included in the publication.

III. A FRAMEWORK FOR CONSIDERING ENVIRONMENTAL EFFECTS

DETERMINING WHAT IS ENVIRONMENTALLY SOUND

The fundamental problem with the development of oil and gas resources on the OCS is the potential for undesirable effects on the nearby environment and its many uses. The Task Force has heard first hand that many of these effects and risks are widely regarded by residents near the three sale areas as being substantial and very costly. Coastal residents and visitors value the environmental resources in those areas highly and do not want them degraded. While they would feel the losses resulting from such effects, they believe that, as individuals, they stand to benefit little from the development of oil and gas resources. In fact, most of the economic benefits are captured in the form of Federal leasing revenues which seldom have a direct noticeable effect on the lives of individual citizens.

The environmental effects and risks in and near the three sale areas that can result from OCS exploration and development, followed by the production and transportation of oil and gas, are real and concrete. Air and water can be polluted; plants, fish, and marine mammals can be hurt; beaches can be fouled; and ocean vistas can be marred by industrial facilities. Socioeconomic effects can also result in the form of damage to or displacement of existing economic activities, the construction and operation of onshore support facilities, and the demand for new public services and facilities to serve additional population and industrial activity. Although these changes can be offset by increases in jobs and local tax revenues, concerns have also been raised about changes in lifestyle and culture. To determine the extent of such effects and risks and to judge whether allowing them to occur would be environmentally sound, the Task Force addressed the following questions:

1. Given current environmental control policies, how could the oil and gas activities that would result from the three planned lease sales affect the environmental resources nearby?
2. To what extent would such effects damage other uses of environmental resources?
3. What options for configuring the three lease sales and controlling or mitigating environmental effects might reduce such damages?
4. Would the remaining effects and risks be regarded as environmentally sound?

The Task Force has been briefed by Federal Agencies regarding a wide variety of potential environmental effects of oil and gas activities in the three lease sale areas. In its workshops, it received further information both from experts and from the general public.

The Task Force recognizes that there are several different approaches that can be used in determining whether the effects of oil and gas activities are environmentally sound and resolving issues about leasing. Various approaches are discussed in the next sections.

Using Scientific Information to Resolve Concerns

A scientific and technological approach can be used to determine how and to what extent various environmental resources could be affected by offshore oil and gas activities in the

three sale areas. The Task Force has learned that there are numerous conflicting claims about potential effects and risks of oil and gas activities on the OCS. Environmental concerns about the proposed lease sales may be at least partially resolved if scientific studies can show that the effects will not be as damaging as feared. They may also be resolved if regulatory or technological means can be employed to prevent undesirable effects. Nevertheless, many people lack trust in the technology that is designed to prevent mishaps.

The Task Force asked the NAS/NRC to review the existing information on the potential oil and gas resources in the three sale areas and the environmental effects of the OCS activities that could result from leasing. The NAS/NRC was asked to judge the adequacy of the information for leasing decisions, but not to assess the environmental effects that could occur. The results of this work were provided to the Task Force in a report on November 3, 1989, so that they could be incorporated into this report to the President. The results are discussed in Chapter IV, the discussion of environmental concerns. The Executive Summary of the NAS/NRC Report is included in the Appendix to this report. The NAS/NRC Report is available in full from the Board on Environmental Studies and Toxicology, 2101 Constitution Avenue, NW., Washington, D.C. 20418.

The NAS/NRC Report concluded that in a number of cases, the available information is not scientifically adequate for the assessment of environmental effects needed for leasing decisions. Unfortunately, lack of complete scientific knowledge, combined with inherent uncertainty about the location and extent of undiscovered oil and gas resources, limits the capability to resolve concerns through science alone, particularly at the leasing stage.

The NAS/NRC Report also raises the issue of the relationship of leasing decisions to subsequent decisions about whether and how to develop oil and gas that is found. This relationship has a strong effect upon the information needed for leasing decisions. The NAS/NRC Report observes that many people doubt that the Secretary of the Interior will decide not to allow a lessee to proceed with development once a new oil and gas field has been discovered on a lease. In the NAS/NRC view, this burdens the environmental assessments performed for leasing decisions with the difficult task of analyzing specific effects from facilities and reserves whose size and location cannot be determined until after successful exploratory drilling. The NAS/NRC suggests that this problem would be eased by providing for a more distinct separation of leasing and development decisions to allow "distinctly different phases of scientific data-gathering and analysis."

The Task Force examined the question of whether different criteria for information adequacy should be used at different phases in the lengthy decision process that governs OCS leasing and development for the three sale areas. The Task Force found that it is not feasible to complete a detailed, scientifically rigorous assessment of the environmental effects of the specific reserves and facilities that might ultimately result from a leasing decision before that decision is made. The difficulty is substantially due to the lack of information on the size and location of the oil and gas, if any, that will be found. Environmental impact statements for leasing decisions currently use hypothetical scenarios of oil and gas development to assess a range of potential environmental impacts. Means for obtaining definitive information about oil and gas resources before leasing are beyond the Task Force's scope.

The NAS/NRC suggested that a more comprehensive EIS be written at the development stage. This would allow the information used in leasing decisions to be more general, while that used in later development decisions would be more specific. In this approach,

one purpose of the information used in leasing decisions is to identify potential effects which are so substantial that, if they occurred, they would make subsequent developments impossible to undertake in an environmentally sound manner. Leasing decisions, in this approach, need to be based on information that is adequate to detect environmental problems which would be insurmountable at the exploration and development stage. This is not to say that environmental concerns would not emerge at the development stage or that they could necessarily be resolved without controversy, delay, and substantial cost.

The Task Force examined the procedures established by the OCS Lands Act in light of this approach. The Task Force found that these procedures allow for additional information to be used in decisions at the exploration and, particularly, the development stage. In fact, before development can proceed on any oil and gas discovered in the three sale areas, the MMS will require a new EIS to be completed which assesses the effects of the proposed development plans. The Secretary has clear authority to require development plans to be modified if the specific information available at that point shows that the plan does not provide adequate "protection of the human, marine, or coastal environment." In the past, development plans for leases off southern California have been modified significantly after discussion with Federal Agencies and State and local governments.

The Secretary also has the authority to suspend and, after 5 years, cancel a lease if there is a threat of serious harm or damage that cannot be reduced. The NAS/NRC observed that no lease has ever been canceled and implied that this was due to the sizable investments which lessees have typically made by that point. The Task Force notes that the NAS/NRC Report provides no evidence to support this implication. **Nevertheless, the Task Force finds that strengthened data collection and environmental assessment coupled with more careful scrutiny of development plans for any leases issued in the three areas might yield greater public confidence that the environment will be protected.**

In addition, States with Federally approved coastal zone management programs have the authority to block the issuance of necessary Federal permits if they find activities affecting their coastal zone are not consistent with their coastal zone management programs. Thus, States can use additional information that becomes available at the exploration plan and development plan stages to force modifications or stop those activities. This has occurred on numerous exploration and development plans.

From this examination, the Task Force concluded that reliance on scientific information is useful to resolve environmental concerns in the three sale areas. The Task Force found that it is not feasible to produce the specific information necessary to estimate all of the effects of exploration and development prior to leasing decisions. The Task Force also concluded that it is not necessary that information for leasing decisions fully and precisely describe all of the effects of development, because there is, in fact, opportunity to collect more specific scientific information for subsequent development decisions.

Using Existing Standards

Another approach for resolving environmental concerns about the three lease sales is to examine Federal, State, and local laws and regulations to identify environmental standards that have been established. Existing standards would provide a reference that is, at least in part, determined outside the decision processes used to manage the OCS leasing program.

While using existing environmental policies to define "environmentally sound" has its advantages, it also has drawbacks. For many types of environmental effects, oil and gas activities, both onshore and offshore, are already legally required to comply with these policies. It is clear, however, that compliance with existing policies reduces but does not entirely eliminate environmental effects. Some routine emissions, discharges, changes in land and water use, and accidents will still occur. These effects may be acceptable under existing law or they may result in fines for violations and payments for damages. The level of controversy about OCS leasing suggests that many people do not regard the effects and risks that occur under existing standards as acceptable.

Furthermore, disagreements sometimes arise about whether the existing environmental standards are sufficiently protective. Amending existing policies to address such problems would require a determination of what is environmentally acceptable, undercutting the reliance on such standards for determining what is environmentally sound. **The Task Force decided to review existing environmental standards as they are applied to OCS oil and gas activities in the three sale areas to determine whether they yield results that are environmentally acceptable.**

THE BALANCING APPROACH

The Task Force recognizes that the primary approach used to make decisions under the OCS Lands Act is a "balancing" of the benefits from oil and gas production and the environmental costs. When such costs and benefits are considered at the national level, if the benefits are greater than the costs, including all environmental costs, the country as a whole will be better off if the decision is made to implement the activity. The cost/benefit approach has the advantage of providing a generally consistent, systematic treatment of similar effects for all of the OCS areas included in the leasing program.

The Task Force has learned that there has been substantial controversy over the way in which environmental costs have been treated and decisions made using the balancing approach, particularly in decisions about previous lease sales off southern California. Many of the participants in the Task Force workshops advocated use of the balancing approach but stated their belief that the environmental costs and risks far outweighed the benefits of offshore oil and gas development in one or more of the three sale areas. Although it could not review the socioeconomic information for southern California, the NAS/NRC was particularly critical of the socioeconomic analysis MMS conducted for the other two lease sales. This supports the view that a cost/benefit analysis that deals more carefully with local and regional costs and benefits is needed as a part of the balancing approach.

The "balancing" decisions made in the past for the three sale areas have generally favored leasing and development with some acreage restrictions and environmental controls as opposed to forgoing oil and gas production. The Task Force found that the reasons for this are evident in the analyses performed by the MMS. The estimated benefits of oil and gas development have been much larger than the estimated environmental costs. This is particularly evident, for example, in the analysis provided in MMS' 5-Year Leasing Program Mid-1987 to Mid-1992 (April 1987). It was this analysis that supported inclusion of the three lease sales in the 1987-1992 5-Year Program.

The MMS's estimates of the benefits from oil and gas development in the three areas are large because they reflect the substantial amounts of oil and gas that may be found and the

high value which oil and gas bring in the U.S. economy. People in the United States value the goods and services produced from oil and gas so highly that we continue to use them widely, even when oil prices are high. Thus, the environmental costs must be large for a decision based on balancing benefits and costs to go against leasing and development. The MMS' estimates of environmental costs in the three areas have been small in comparison with the estimated benefits.

The Task Force identified several features of the balancing approach that can account for the difference between the apparently dominant benefits at the national level and the strong and enduring opposition to offshore oil development among residents of California and Florida. First, while the environmental costs occur primarily at the local level, the economic benefits are captured primarily by the Federal Government or are experienced by Americans collectively. Thus, a cost/benefit test applied, say, to a California county, could possibly show that the local costs outweigh the local benefits even if the benefits outweigh the costs for the Nation as a whole. Moreover, the rapid population growth in southern California and southwestern Florida in the last decade suggests that people there value living in such environments more highly than they did in earlier times. During the same period, the potential economic benefits from oil and gas development have declined. These trends suggest the need for greater efforts to measure local costs.

A second problem with the balancing approach is the possibility that the methods MMS uses for the quantitative valuation of environmental costs are not capable of measuring the full range of environmental effects, particularly the high value which residents living near the three sale areas attach to their environment. The NAS/NRC concluded that more socioeconomic data, perhaps even survey data, is needed in all three areas to measure the costs reflected by the intense local opposition to leasing.

A further difficulty in using the balancing approach arises from the chance nature of the most catastrophic effects, oil spills. While the basic methods for analysis of such risks are well developed, they yield results which are difficult for most people to understand. Incorporating such analysis into the cost/benefit framework gives results that would yield the greatest economic benefit, but are often not acceptable to the people most directly exposed to the risks. The Task Force found in its workshops that people seem to be particularly averse to risks over which they have little or no control. Many expressed the view that with certain coastal and marine resources, no additional risk is acceptable. However, many people seem to be unaware of the existing risks to the same resources, even though they are sometimes greater than the risks from additional OCS leasing.

The Task Force concluded that the balancing approach is an appropriate basis for the leasing decisions made by the Secretary of the Interior, but that additional information about the environmental effects in the three sale areas needs to be considered in order to more fully reflect the high value that coastal residents and visitors in California and Florida place upon the environmental resources that may be affected by OCS activities.

THE CONSENSUS BUILDING APPROACH

Another approach to determining what is environmentally sound is to negotiate additional leasing restrictions, environmental controls, or mitigation measures for each proposed sale in a manner that reduces opposition and increases consensus. This approach has been used with limited success in some previous California lease sales, such as Sale 80 in 1984, and in the Eastern Gulf of Mexico. The procedures established by the OCS Lands Act for

formulating 5-year OCS leasing programs and making decisions on individual lease sales provide opportunities for comments and recommendations by the Governors of affected States as well as other governmental officials. These procedures can be used by the Secretary of the Interior to build a broader consensus on future leasing decisions.

A JURISDICTIONAL PERSPECTIVE

The Task Force has learned that, to an extent, controversies about OCS leasing and development arise from the way in which the benefits and costs are distributed among the various jurisdictions involved. Because most solutions to controversies raised by the three proposed lease sales would alter the distribution of benefits and costs, it is useful to understand how that distribution affects the various jurisdictions.

The Task Force recognizes that the Federal Government acts as a steward for the general public in managing the resources on public lands such as the OCS lands. As owner of the oil and gas resources of the OCS, the Federal Government tries to promote the realization of the economic benefits that can be result from developing those resources. These benefits are captured primarily in the form of leasing revenues which reduce the need for the public to pay higher Federal taxes.

The Federal Government is also the jurisdiction most sensitive to the benefits of improved energy security because of its national security and national economic responsibilities. Development of domestic oil and gas resources is clearly an important means of improving energy security. Furthermore, development of the oil and gas resources in the three areas is the only way of achieving the economic benefits inherent in those resources. The Federal Government's efforts to bring about economical and safe development of OCS oil and gas is thus an appropriate response to the national benefits it would yield for the general public.

The Federal Government is also responsible for maintaining the quality of many environmental resources including air and water, fish and wildlife, National Parks, marine sanctuaries, wildlife refuges, and other areas of national significance. These resources are so unique and valuable that they have been made a part of national systems so that they are preserved for the use of all the people of the United States. Protecting the resources of these areas is an important goal which Federal Agencies must consider in making decisions about OCS leasing.

The State and local governments of California and Florida, in contrast to the Federal Government, properly respond to the benefits and costs that would be experienced by their constituents rather than the Nation as a whole. The environmental costs and risks that might result from oil and gas activities on leases in the three areas would be borne primarily by residents and visitors in the coastal areas of California and Florida. On the other hand, these people often perceive little of the benefit because it is captured primarily at the Federal level. State and local jurisdictions benefit from the portion of the Federal leasing revenues that is paid to the States, 27% of the revenues from leases in the first 3 miles of the OCS. Current law does not specify, however, that the OCS revenues the States receive be transferred to local jurisdictions affected by OCS leasing and development. Local governments may not see enough benefit from the States' share of OCS revenues to outweigh the costs they experience. Furthermore, while States and localities may benefit from the economic growth that results from oil industry employment and investment, such benefits often go unnoticed.

Most of the solutions proposed to resolve OCS controversies would change the distribution of benefits and costs among the various affected jurisdictions. For example, some measures would impose stricter environmental controls in order to reduce the risk of damages and risks borne by coastal residents and visitors in California and Florida. The costs incurred to implement such controls would reduce the overall economic benefits shared by U.S. taxpayers in order to provide the benefits of greater environmental quality to coastal residents. Most measures that would compensate those affected for the environmental damages they sustain or that would increase the share of the Federal leasing revenues would similarly reduce the total costs borne by coastal residents while reducing the benefits to Federal taxpayers. However, changes in the allocation of OCS revenues within coastal States, could offset local costs without affecting Federal finances.

The Task Force has learned that resolving OCS controversies is difficult because of the issues of fairness and equity raised by the distributional consequences of leasing and development. From one perspective, it could be argued, residents and visitors in California and Florida who bear environmental risks in order that the general public may benefit should be compensated. From another perspective, if the general public gives up substantial benefits from developing the oil and gas resources it owns so that the residents and visitors in California and Florida can enjoy their coastal resources unaffected by oil and gas development, it could be argued that residents of these States should compensate the general public in some fashion. **The Task Force recognizes that there is clearly no easy solution to such an equity conflict. The President should give careful consideration to the effects of decisions about the three lease sales on both the Nation as a whole and State and local jurisdictions.**

CONCLUSIONS

The Task Force recognizes the complexity of the issues that arise from the environmental concerns about OCS oil and gas activities. Clearly, no single approach can easily resolve the conflicting views about the environmental effects that will occur, the extent to which effects can and should be controlled, and the proper balance between the benefits that may be achieved and the environmental costs and risks that must be borne. The strategic and economic importance of domestic oil and gas production, on the one hand, and the substantial public concern about degradation of environmental resources, on the other, make OCS leasing issues difficult to resolve in a manner that meets the objectives of all interested parties. **The Task Force has concluded that, over the long run, careful attention to each of the approaches outlined above will yield balanced OCS leasing decisions for the three sale areas.**

IV. CONCERNS ABOUT ENVIRONMENTAL EFFECTS

INTRODUCTION

Offshore oil and gas exploration and development can cause a wide range of environmental effects which create concerns among the residents of nearby coastal areas. The environmental effects that can result from OCS oil and gas activities include changes in the physical and biological elements of the environment as well as changes in local economies, land use, and population. Taken together, such effects are often regarded as a threat to the character of coastal communities and the environmental amenities which attract people to these areas.

Over the past 20 years, the Department of the Interior, other Federal Agencies, State and local governments, and the oil and gas industry have developed a variety of measures to protect the environment from impacts associated with OCS activity. The Federal Government has enacted many environmental protection laws. These have been supplemented in many cases by State and local actions. Technologies for controlling environmental effects have been developed by the oil industry. Although these measures do not completely prevent adverse effects, they have limited the nature and extent of the damages that actually occur. The Task Force has undertaken the job of reviewing the potential effects that are of concern to coastal residents and examining the existing environmental protection measures. Its objective was to determine whether the effects that would or could occur warrant actions that have been proposed such as banning or delaying leasing and imposing more stringent environmental protection measures.

This chapter describes potential impacts to resources and communities in the following categories:

- Air Quality
- Oil Spills
- Commercial Fishing
- Protected Species
- Protected Lands
- Social and Economic Impacts (including onshore infrastructure changes and tourism losses)
- Water Quality

The discussion for each section contains a description of existing conditions and potential impacts posed by oil and gas leasing, exploration, development, and production in each of the three lease areas. In most cases, the Task Force relied on MMS estimates of hydrocarbon resources, scenarios describing anticipated development (both offshore and onshore), and oil spill trajectory models. Generally, these are the most comprehensive data available on these subjects. For information on environmental impacts, the Task Force reviewed MMS information in light of the findings of the NAS/NRC Report, the presentations and submissions from its public workshops, and additional information from Agencies represented on the Task Force.

IMPACTS ON AIR QUALITY

Summary of Concerns

The human health effects of air pollution make it a strong concern in areas where substantial emissions and meteorological conditions cause poor air quality. Southern California in particular has a combination of factors that cause poor air quality, create the need for stringent controls of emissions, and heighten concerns about the effects of additional emissions from offshore oil and gas activities. Ozone, which is formed by a photochemical reaction among pollutants in the atmosphere, is a primary concern in southern California. Reduced visibility is the concern in other areas that have excellent air quality. Table IV-1 summarizes the air quality concerns for the three sale areas.

Offshore oil and gas operations emit air pollutants from several sources including: (1) engine driven generators used to power platform and drilling equipment; (2) flaring of natural gas associated with oil production; (3) fugitive hydrocarbon emissions; and (4) emissions from support ships and helicopters. The types and quantities of air emissions typically associated with offshore oil and gas activities are shown in Tables IV-2 and IV-3.

Meteorological conditions play an important role in the transport and dispersion of emissions and, thus, have a strong effect on ambient air quality. The conditions that can result in higher onshore concentrations from long-range transport of offshore emissions are (1) a plume traveling in a stable air layer over the water, (2) winds blowing persistently toward shore, and (3) meteorological conditions which cause the polluted air mass to "slosh" back and forth over the coastal areas. On days when such conditions exist, OCS emissions can contribute to onshore air pollution problems. Under different conditions, offshore emissions can occur without adding measurably to onshore pollution loads. The build-up of ozone from reactions involving nitrogen oxides and volatile organic compounds is promoted by atmospheric temperature inversions which can trap pollutants over a wide area. When an inversion occurs onshore, emissions of nitrogen oxides and volatile organic compounds from OCS activities can contribute to ozone build-up.

Table IV-2 : Air Pollutants from OCS Activities

- Nitrogen oxides (NO_x) are an important factor in causing ozone pollution.
- Sulfur oxides (SO_x)
- Total suspended particulates (TSP) refers to all particle emissions, both reactive and nonreactive
- Carbon monoxide (CO)
- Volatile organic compounds (VOC) include all hydrocarbon compounds, except those that are nonreactive.
- Ozone (O₃) is not released from OCS sources but is formed as a result of photochemical reactions in the atmosphere involving VOC and NO_x.
- Particulate matter.

Table IV-1: Characterization of Air Quality Concerns

	General Description	Non-Attainment Categories	Class I PSD Areas	Closest Existing/ Potential OCS Development to Class I Area
Off Southwest Florida	Good to Excellent	none	Everglades National Park Ft. Jefferson National Monument	>30 Miles
Off Southern California	Poor	Ozone, NO ₂ , TSP, PM ₁₀ CO	Channel Islands National Park	6 Miles
Off Northern California	Good to Excellent	none	Redwoods National Park	15 Miles

Emission Sources: Platform power generation
Crew and supply boats
Gas flaring
Helicopter flights

**Table IV-3: Type and Quantities of Typical Emissions
from OCS Activities and Platforms**

Source	Emissions In Tons				
	NOx	VOC	SOx	CO	TSP
Exploration: 1					
Drilling Vessel 2	25-80	3-10	2-5	8-17	3-5
Boats In-transit 3	1-3	2-6	<1-2	<1-2	<1-2
Development and Production: 4					
Platform 5	65-160	20-45	1-10 6	45-70	3-6
Boats In-transit and at platform 3	10-100	3-60	1-3	3-10	1-3

- Notes: 1. Emissions in tons/operation
 2. Range for drilling depends upon exploration vessel engines used, target depth, and duration of operation
 3. Boat emissions vary with distance
 4. Emissions in tons/year
 5. Assumes power generated on the platform; (Electrified platforms can have all pollutant emissions in single digits.) Range for development and production depends upon the size of the platform, production throughput, and whether production is processed on the platform.
 6. SOx emissions can vary depending on the operation of sulfur content of the production. The number listed here does not include SOx emissions from the OS&T, which, depending on the operation of sulfur recovery equipment, can have emissions 10 times higher.

Air emissions from activities onshore are controlled under the Federal Clean Air Act, administered by the EPA, and related State and local laws. Under the Clean Air Act, States develop implementation plans to control emissions sufficiently to meet National Ambient Air Quality Standards (NAAQS). In addition, certain areas are designated as Class I because of their high air quality. In Class I areas, the EPA applies regulations designed for the Prevention of Significant Deterioration (PSD). New emission sources which exceed emission increments prescribed by the EPA are not allowed to locate in Class I areas.

The Clean Air Act does not apply to activities conducted on the OCS, which are outside State jurisdiction. Instead, OCS air emissions from drilling vessels and production platforms are regulated by the MMS under Section 5 (a)(8) of the OCS Lands Act. This provision requires compliance with NAAQS to the extent that OCS activities significantly affect the air quality of a State. Because of the different requirement of the OCS Lands Act, the existing MMS air quality regulations (30 FR 250.45 and 250.46) do not apply emission controls that are as stringent as those in effect in some adjacent onshore areas. Many of the participants in the Task Force workshops in California expressed the view that

it was inequitable to impose stringent controls on emissions from onshore activities while allowing less controlled emissions offshore. The MMS has been considering a rulemaking that would address this issue.

Support vessel and helicopter emissions are not currently regulated by either EPA under the Clean Air Act or MMS under the OCS Lands Act. They can account for as much as 50% of air pollutant emissions from OCS activities. The MMS is now considering regulating emissions from crew and supply vessels.

Sale Specific Concerns

Sale 116, Part II - Off Southwestern Florida

Air quality in most of the Eastern Gulf of Mexico Planning Area is generally considered very good. Air quality impacts of OCS-related development have not been a major issue in southwest Florida. Former Secretary of the Interior Hodel created a substantial coastal buffer area prohibiting leasing within 30 miles of the mainland and western Keys and 25 miles from the Dry Tortugas; this buffer removes concern for air pollutants except ozone. Meteorological and topographical conditions with the potential to cause inversions which promote ozone build-up are rare in the coastal region of southwest Florida. Likewise, there are no large sources of emissions of volatile organic compounds. Thus, based on the relatively low level of existing emissions, infrequent inversions, onshore ambient air quality, and distance of possible OCS activities from shore, there is little potential for ozone impacts from the Sale 116, Part II area.

The MMS conducts air pollution monitoring studies in other parts of the Gulf of Mexico, notably the Offshore Coastal Dispersion study of inert pollutants. Such studies are designed to detect any emerging air quality problems from OCS activities.

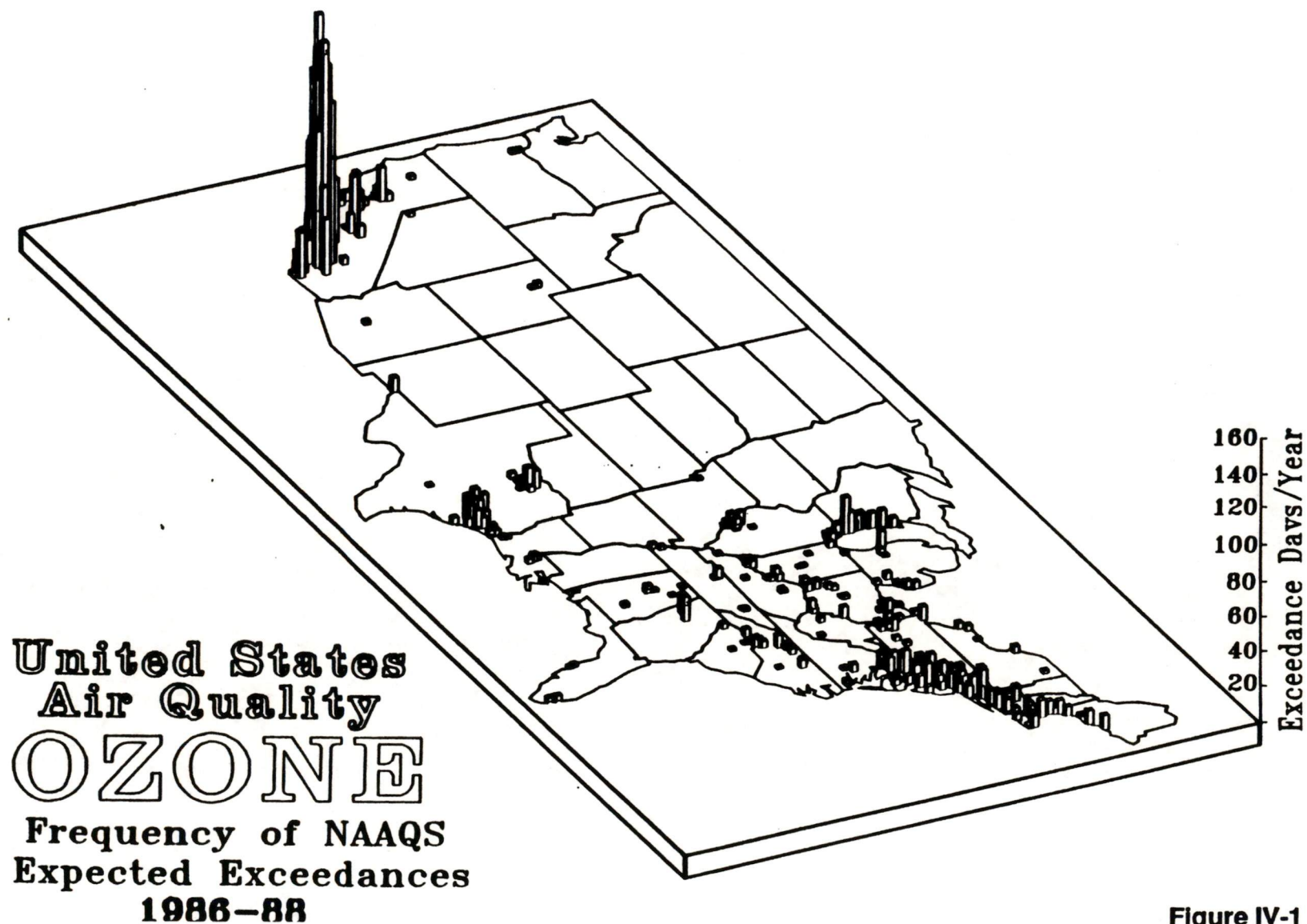
Everglades National Park is the only Class I PSD area near the proposed sale area. The 30-mile buffer should prevent any violations of PSD standards in Everglades National Park.

Any new processing facilities which may be constructed in Florida as a result of OCS development could have an impact on local air quality. The impact would depend on the location of the facilities and the controls and mitigation requirements imposed by regulatory officials with jurisdiction over onshore facilities. The MMS analysis does not project such facilities in the area.

Emissions from OCS activities in the Sale 116, Part II area are unlikely to cause air quality problems in adjacent onshore areas.

Sale 95 - Off Southern California

Parts of southern California, particularly the Los Angeles metropolitan area, suffer from the worst air quality in the Nation due to a combination of meteorology, topography, extensive urbanization, and rapid population growth. The majority of the onshore area adjoining Sale 95 is designated as nonattainment for the ozone standard set by EPA. Ozone levels in the South Coast Air Quality Management District exceed the health-based NAAQS as often as 150 days each year. Figure IV-1 illustrates the magnitude of the southern California ozone exceedences compared with the rest of the Nation. In the Ventura/Santa Barbara areas, the



NAAQS for ozone is exceeded 10-15 days each year. The major source of emissions contributing to ozone and smog is motor vehicles. Other large sources include manufacturing, electric power generation, and petrochemical plants.

Table IV-4 shows the emissions of nitrogen oxide, a precursor to ozone, that are typical of OCS operations off California. Newer platforms with emission controls produce substantially lower emission levels.

**Table IV-4: Typical Nitrogen Oxide Emissions from
California OCS Activities**
Annual Average Emissions (Tons/Year/Platform)

Source	Uncontrolled	Controlled
Electrified Platform	15.2 ¹	5.4 ²
Non-electrified Platform	159.9 ³	62.3 ⁴
Crew & Supply Vessels ⁵	10- 100	8-80

- Notes:
1. Average for 12 existing electrified platforms
 2. Average for 3 proposed electrified platforms
 3. Average for existing 5 production and 3 processing non-electrified platforms
 4. Average for 3 existing and 2 future production and processing non-electrified platforms
 5. Depends on distance from port to platform

The NAS/NRC found that "the relationship between OCS development and onshore air quality in the South Central Coast of California is as well understood as any such relationship in the U.S." According to MMS, air quality models suggest that offshore emissions do not play a significant role in causing NAAQS to be exceeded in southern California. However, because of the inherent uncertainties, results from other models make such conclusions about the contribution of OCS emissions to exceedences of NAAQS onshore debatable. For example, EPA models estimate that as a worst case, offshore air emissions can contribute up to 10% of the ambient ozone level, although the modeled cases showed that OCS emissions did not contribute to ozone violations. The EPA believes the models lack the sophistication to make adequately reliable findings about the contribution of OCS emissions to exceedence of ozone standards.

Onshore areas already implement stringent emission control standards and are in the process of adopting measures which would cause dramatic lifestyle changes for southern California residents. Proposed changes include massive carpooling programs and, eventually, elimination of gasoline powered vehicles. In addition, new regulations would greatly restrict use of charcoal lighter fluid and propane barbecue grills, gas lawn mowers, personal care sprays, and household fireplaces. Increasing emissions from OCS

development would exacerbate the air quality problem. In the face of increased offshore emissions, onshore sources would have to reduce emissions even further in order to comply with the NAAQS.

In January 1989, the MMS proposed regulations applicable offshore the State of California. The Task Force has been advised that MMS is in the process of drafting a more stringent rule which would establish a regulatory regime which controls OCS-related emissions off California in a manner which is substantially equivalent to the controls applicable to similar onshore facilities. This is consistent with the findings of the Task Force below.

It has also been suggested that the authority to regulate OCS emissions be transferred from the MMS to the EPA. The Task Force found that such a change in statutory jurisdiction is not necessary if MMS revises its OCS air quality regulations to make them substantially equivalent to the controls applicable to similar onshore facilities.

OCS development in the Sale 95 area could lead to increased levels of air pollutants in nonattainment areas of southern California at a time when those levels need to be reduced to meet NAAQS and California State standards. This issue can only be resolved by more stringent air emission control and mitigation requirements for OCS development.

Sale 91 - Off Northern California

Air quality in most of northern California is generally very good. The primary existing sources of air pollution in northern California are lumbering activities, agricultural operations, paper mills, and geothermal energy development. The most common air pollution problems are associated with particulates generated by lumbering and agricultural operations, odors associated with sulfur compound emissions from pulp mills, and hydrogen sulfide emissions from power generators in the Geysers geothermal area of Sonoma County. However, progress has been achieved over the last 2 decades in reducing these problems. Particulate emissions have been reduced by modifying wood waste burning practices and by replacing orchard heaters with wind machines and water spray systems. As a result, there has been a decrease in ambient levels of particulates at many locations over the last decade.

There are two Class I PSD areas in the North Coast Air Basin: the Redwoods National Park in Humboldt County and the Yolla-Bolly Middle Eel Wilderness Area in Trinity County. At the public workshops in Arcata, the Task Force heard concerns that air emissions from OCS development could degrade the air quality in Redwoods National Park.

The two important pollutants of major concern for air quality in this Class I area are particulate matter and sulfur dioxide. Generally, OCS activities emit small quantities of particulates [see Table IV-4.] Sulfur dioxide emissions from OCS activities depend upon the sulfur content of fuels used or the produced hydrocarbons. In the analysis done to date, summarized in the draft EIS for Sale 91, MMS found that the sulfur dioxide standards would not be violated for Redwoods National Park. Mitigation of particulate emissions is not addressed in the draft EIS; however, no leasing is proposed within 15 miles of the Park. The EPA commented that mitigation requirements for leases in the area should be at least as great as reductions that were required under Sale 73, with the possibility of greater future reduction requirements.

The air quality requirements that should apply to the Sale 91 area would require mitigation, by either controls or offsets, of any emissions that exceed the PSD increment for an onshore area. Thus, OCS-related facilities would not be expected to have a measurable impact on the Park, barring unusual siting or other considerations which are not apparent at this time.

The Task Force found that ozone pollution is not an issue in the Sale 91 area. Compliance with PSD requirements, particularly for the Class I National Park areas, is a major concern, but could be adequately addressed if revised MMS OCS air quality regulations require controls or mitigation that comply with the PSD requirements.

OIL SPILLS

Summary of Concerns

Oil spilled into marine and coastal environments can have severe adverse effects. These effects include the killing of animals and plants contacted by the oil, disruption of food chains and ecosystems, and spoiled recreational use and enjoyment of land and water resources.

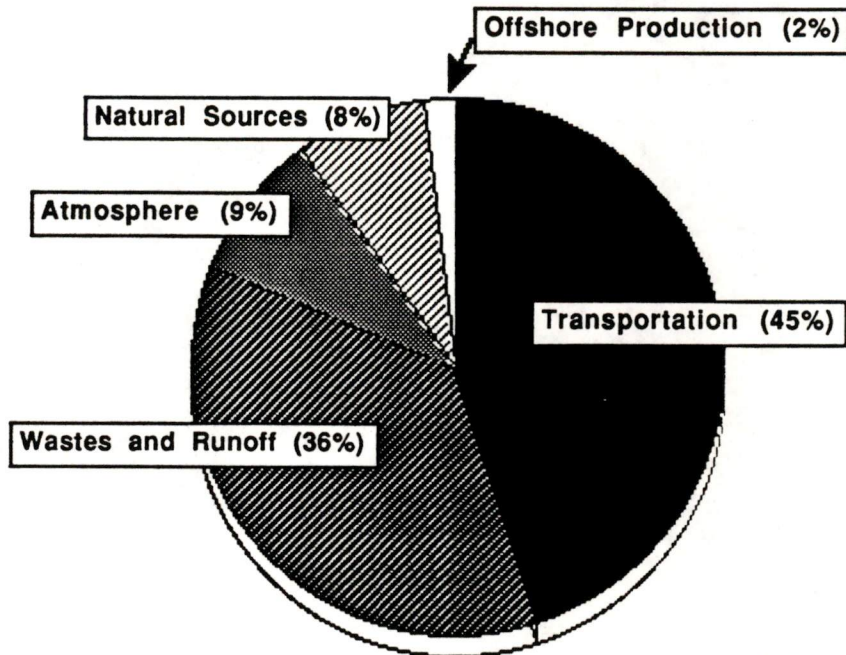
Birds, corals, fish, and marine mammals can die from the ailments caused by coming in contact with oil. Similarly, plants, such as sea grasses, kelp, and mangroves, can also die from the effects of oiling. The relatively short-term loss of plants and animals, which are links in the food chain, can cause ecosystem disruption lasting longer than the physical presence of spilled oil.

Oil enters the marine environment from a number of sources, both natural and caused by man. The largest source is transportation (See Figure IV-2) and derives primarily from accidental spills from tankers and intentional dumping of oiled bilge and ballast water.

Oil spills differ widely in size and effect. Public perceptions about oil spills are generally dominated by the pictures of large spills such as the spill of 260,000 barrels of crude oil from the *Exxon Valdez*, the largest U.S. oil spill. Most oil spills are much smaller and far less damaging. The effects of an oil spill depend on the resources contacted by the oil. Even a very large spill, exceeding 10,000 barrels, for example, could have very little or no detectable, long-term effect if spilled in the open ocean under conditions where the oil dispersed and weathered rapidly. On the other hand, a relatively small spill, such as a few hundred barrels, contacting resources very sensitive to oiling, could kill thousands of plants and animals and disrupt the affected ecosystem for a long period. Clearly, if a spill occurs within reach of land, the larger the size of the spill, the greater the chances that sensitive resources will be affected. Large spills can spread to greater areas and are less likely to be effectively contained and cleaned up.

Of all sources of oil in the marine environment, the contribution from OCS related activity is small. OCS spills tend to be small and infrequent. Table IV-5 shows the OCS-related spills exceeding 1,000 barrels during the last 25 years from the OCS. The MMS requires reporting of all spills but does not project statistics for spills less than 1,000 barrels in its environmental impact statements.

Figure IV-2: Oil In the Sea



Source: NAS, 1985,
Oil In the Sea: Inputs, Fates, and Effects

Table IV-5: OCS Oil Platform Spills*
Platform Spills of 1,000 Barrels or More, 1964 to 1988

Year	Location	Barrels	Cause
1964	Eugene Island	2,559	Collision / Fire
1964	Ship Shoal / Eugene Island	11,869	Storm / Blowout
1965	Ship Shoal	1,688	Blowout
1969	Santa Barbara	77,000	Blowout
1969	Ship Shoal	2,500	Collision / Blowout
1970	Main Pass	30,000	Fire
1970-1	South Timbalier	53,000	Blowout / Fire
1973	West Delta	9,935	Tank Rupture
1973	South Pelto	7,000	Barge Leak
1979	Main Pass	1,500	Collision
1980	High Island	1,456	Tank Overflow

*Note: All spills occurred in the Gulf of Mexico except the one off Santa Barbara, California

OCS Oil Pipeline Spills
Pipeline Spills of 1,000 Barrels or More, 1964 to 1988

Year	Location	Barrels	Cause
1967	West Delta	160,638	Anchor Dragging
1968	South Timbalier	6,000	Anchor Dragging
1969	Main Pass	7,532	Cause Unknown
1973	West Delta	5,000	Corrosion
1974	Eugene Island	19,833	Anchor Dragging
1974	Main Pass	3,500	Hurricane
1976	Eugene Island	4,000	Trawler Dragging
1981	South Pass	5,100	Anchor Dragging
1988	Galveston	15,000	Anchor Dragging

Since 1964, five of the eleven major OCS platform oil spills, those greater than 1,000 barrels, have been from loss of well control. The amount of oil that could enter the water, if a well remained uncontrolled, would depend primarily on the natural flow rate of the well. The oil will enter the environment at the rate determined by the natural pressures and other characteristics of the reservoir. The 1969 Santa Barbara Channel oil spill is the most well-known example of loss of well control.

Oil spills from pipelines occur primarily when a pipeline is damaged (by anchors, typically) or breaks. Since 1964, only one of the nine OCS pipeline spills greater than 1,000 barrels was from corrosion (See Table IV-5). Theoretically, the volume of an oil spill is limited to the volume of oil in the pipeline between the shut-off valves after the leak has been identified and the pipeline shut down.

Most small platform spills occur from oil in discharges, diesel fuel spillage, or during transfer of production. Outer Continental Shelf oil spills are generally smaller in size and less frequent than tanker spills (See Table IV-6). The Task Force learned that, in general, conditions prevalent in OCS oil and gas fields make very large spills less likely to occur from OCS platforms than from major tanker accidents.

Table IV-6: Oil Spills by Source
1,000 Barrels or Greater

<u>Source</u>	<u>Number of Spills</u>	<u>Average Spill Size (Barrels)</u>	<u>Median Spill Size (Barrels)</u>	<u>Barrels Spilled Per Billion Barrels Handled</u>
United States ¹				
OCS Platforms and Pipelines	20	21,000	6,500	.05
TAPS Tankers ²	6	51,000	14,000	.05
Worldwide Tankers ³	140	106,000	15,000	.14

Notes: 1. Data for 1964-1988

2. TAPS (Trans Alaska Pipeline System) tankers carry Alaskan crude oil from Valdez, Alaska to Long Beach, California and other U.S. ports.

3. Data for 1974-1985

Source: MMS, 1989

The MMS has primary responsibility for prevention of OCS oil spills and ensuring appropriate containment and cleanup response should a spill occur. The MMS is also responsible for the assessment of oil spill risk and the identification of resources that could be damaged by OCS oil spills.

The blowout of Union Oil's Platform A in the Santa Barbara Channel in 1969 awakened many people to the kind of environmental damage that could result from offshore oil and gas exploration and development. The Santa Barbara spill was the largest U.S. OCS platform oil spill on record, spilling, by some estimates, as much as 77,000 barrels of oil in the first 10 days and seeping an additional 28,000 barrels through 1988. The Santa Barbara spill resulted in new legislation and spurred the development of new technologies and safety requirements that greatly increased the ability to protect the environment from adverse effects of OCS activities.

The primary means of preventing oil spills from loss of well control is the mandatory installation of blowout preventers at the well head and casing in the well. These measures automatically seal the well should it begin to get out of control. Lessees are also required to

take measures to prevent spillage of fuel oil and produced oil during transfers between vessels and platforms.

The MMS requires an Oil Spill Contingency Plan for oil and gas operations in the Federal OCS for both exploration and development phases. These contingency plans are required to ensure that lessees can effectively respond to an oil spill. Outer Continental Shelf contingency plans identify what equipment is located onsite and what equipment is available from specific contractors and how the equipment will be deployed in the event of a spill. The availability of containment and cleanup equipment both at OCS platforms and in nearby harbors increases the effectiveness of OCS spill response and reduces the likelihood of damage from OCS oil spills.

However, OCS contingency plans do not include assessments of how much oil can be contained or recovered under various conditions. They also do not specifically describe a credible worst case scenario or provide a plan to effectively respond to a credible worst case scenario. The MMS has recently completed a review of the maximum likely OCS spills. This review concluded that the maximum credible oil spill from any OCS platform would be 1000 to 6000 barrels per day. In the area off southern California where such flow rates are possible, the existing skimmers are capable of removing 13,000 barrels of oil per day. Thus, if conditions were to allow a spill of this size to be contained, it could be handled successfully by existing equipment.

If damage occurs due to an oil spill from an OCS platform, pipeline, or "shuttle tanker," responsibility for compensating damaged parties lies first with the owner and operator of the facility or vessel involved. In addition, the U.S. Coast Guard manages the Offshore Oil Pollution Compensation Fund, established by Title III of the OCS Lands Act Amendments of 1978, which is available to pay claims which exceed a responsible party's legal limit of liability, or if the responsible party cannot pay the claim. The Secretary of Transportation's last annual report on the fund reported that no claims had been presented to the fund during the 10 years since it was established; the fund has reached nearly \$128 million.

The Task Force also received briefings from the U.S. Coast Guard on the *Exxon Valdez* spill and subsequent cleanup efforts and the review of regional oil spill contingency plans being performed by the National Response Team. **The Task Force concluded that there are serious limitations in the capability to contain and clean up very large oil spills, especially in heavy seas and high winds.** These limitations apply to the equipment and techniques used to respond to OCS oil spills as well as to spills from tankers.

The Regional Contingency Plans required by the U.S. Coast Guard are now being reviewed by the National Response Team to determine whether they are adequate for maximum likely oil spills. While these contingency plans identify sensitive coastal areas for priority in containment and cleanup efforts, in most cases Agencies like the National Park Service which are responsible for managing such resources do not have the direct capability to take actions to protect these resources from being oiled by a nearby spill.

For each lease sale, the MMS assesses the oil spill risk associated with the oil and gas development that could occur. The MMS first estimates the amount of oil that could be found, developed, and produced. This volume is compared to historical spill rates to estimate the risk of a spill occurring during the life of the operation. The MMS estimates

the oil spill risk associated with new development only (base case risk) and associated with all potential sources in the planning area (cumulative risk).

The MMS based its analyses of oil spill risk from the three sales on the historic spill record. Despite the generally good record, these analyses show that if oil is produced in the amounts estimated, the chance of a spill greater than 10,000 barrels ranges from 10% to 36% over the 30 year life of the oil fields that might be discovered.

The MMS calculates oil spill risk based on the spills greater than 1,000 and greater than 10,000 barrels per billion barrels produced, transported via pipeline, or transported via tanker throughout the OCS. As Table IV-6 shows, the risks of a spill from tankers, as compared to an OCS platform or pipeline, are much greater in both frequency of occurrence and the amount of oil spilled. The MMS and States require pipelines when appropriate and when permits can be obtained in order to take advantage of their superior safety. The statistics in Table IV-5 cover spills reported from 1964 to 1988.

The Task Force learned that the coastal areas near each of the three proposed OCS lease sales were subject to the risk of oil spills from existing tanker traffic and, in the case of southern California, existing State and Federal offshore production. Compared to the risk of spills from these existing sources, the additional risk from the development resulting from the three sales is small.

Current oil spill risk assessments identify tanker traffic as the most significant threat of an oil spill in each of the three areas. Table IV-7 compares the annual peak production projection for Sale 116, Part II, Sale 95 and Sale 91 with the non-OCS crude oil and petroleum product transported through the sale areas by tanker. The Task Force learned that the Florida and California State governments have recently proposed or enacted legislation authorizing funds to respond to an oil spill, but these efforts have not yet resulted in specific improvements in spill prevention or response technology. The Task Force found that, in general, tankers pose a much greater risk of a catastrophic oil spill than offshore production.

Table IV-7: OCS vs. Non-OCS Oil in the Sale Areas
Millions of Barrels of Oil Per Year

Lease Sale	Non-OCS Tankered Crude and Product*	Peak OCS Production From Lease Sale
Sale 116, Part II	960	5
Sale 95	430	28
Sale 91	210	38

* Data for domestic traffic is from 1986; 1985 for imports and exports.

Figures IV- 3, 4 and 5 show the cumulative risk of oil spills in each of the sale areas from all sources. These statistics cover the projected 30 year production horizon, if the sales were conducted and commercial hydrocarbons discovered.

The assessment of the potential damages from oil spills involves estimating the trajectories that spilled oil might follow. Potential trajectories are derived from studies of physical oceanographic and meteorologic data using computer simulations. Trajectory analyses can show where oil is likely to go if spilled in various locations under various conditions. This information can be helpful in planning oil spill responses to protect nearby environmental resources. Currently, however, trajectory analyses are essentially projections of water movement which account for neither natural nor human effects on spilled oil. Thus, they tend to overstate the extent of contact an oil spill would have with coastal resources.

The NAS/NRC Report identified weaknesses in the information available for the analysis of oil spill trajectories and the effects of oil spills on specific environments and ecosystems. The NAS/NRC found that generally, there is a need for more field studies to accumulate enough information to estimate oil spill trajectories. For example, more information is needed regarding coastal circulation off southern California. Specifically, a unified description of the Southern California Bight should be developed. In Sale 116, Part II, the NAS/NRC judged the data on the Loop Current circulation during the summer months inadequate and also recommended drifter studies to support conjecture about water flow south of the Florida Keys onto the continental shelf. The NAS/NRC also found that a general lack of understanding about the transport and the fate of spilled oil mixed vertically in the water column.

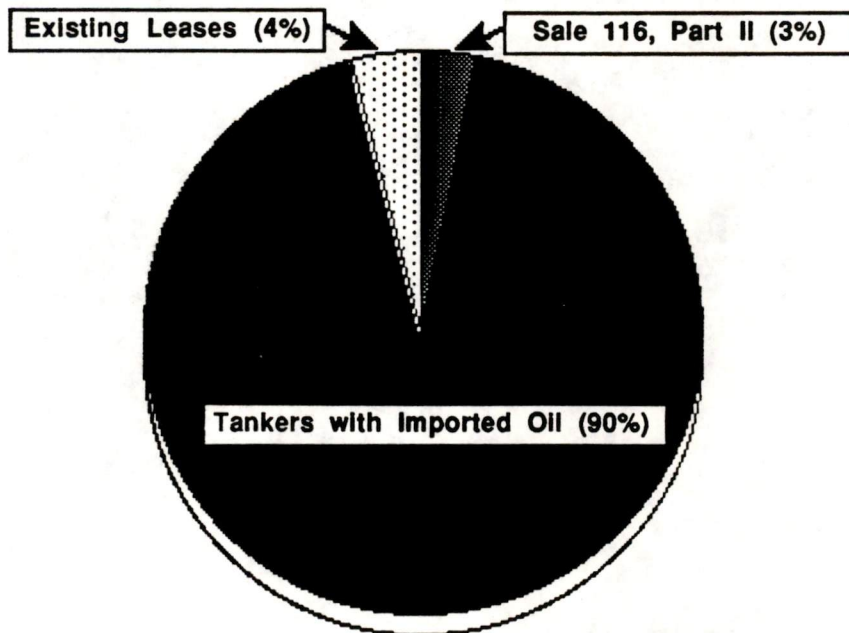
With respect to ecology, the NAS/NRC found that "existing information on sensitivity and recovery of critical habitats (e.g., coral reefs, mangroves, and sea grasses) is inadequate to predict the impact of OCS-related activities." The lack of information concerning the sensitivity and recovery of habitats and species would be a major concern in all three sale areas if new oil fields were discovered and produced.

The Task Force has concluded:

- **The risk that an oil spill greater than 1,000 barrels will occur due to OCS-related activities in the three proposed lease sale areas is small compared to the risk of a significant spill from other existing sources, notably non-OCS tanker and barge traffic;**
- **Although the risk of occurrence of a significant-sized OCS oil spill is small, the environmental effect of such a spill could be significant;**
- **Coastal and marine resources deserve greater protection from oil spills, from all sources, than is now available; and**
- **Government and the oil and shipping industries should act now to achieve significantly better protection from oil spills for coastal and marine resources, regardless of whether OCS leasing and development proceeds in the three proposed lease sale areas.**

Figure IV-3: Cumulative Spill Risk - Off Southwestern Florida
Contribution to Overall Risk of a Spill From Each Source

10,000 Barrels or More Over 30 Years



Overall Risk From All Sources: 97%

Figure IV-4: Cumulative Spill Risk - Off Southern California
Contribution to Overall Risk of a Spill From Each Source

10,000 Barrels or More Over 30 Years

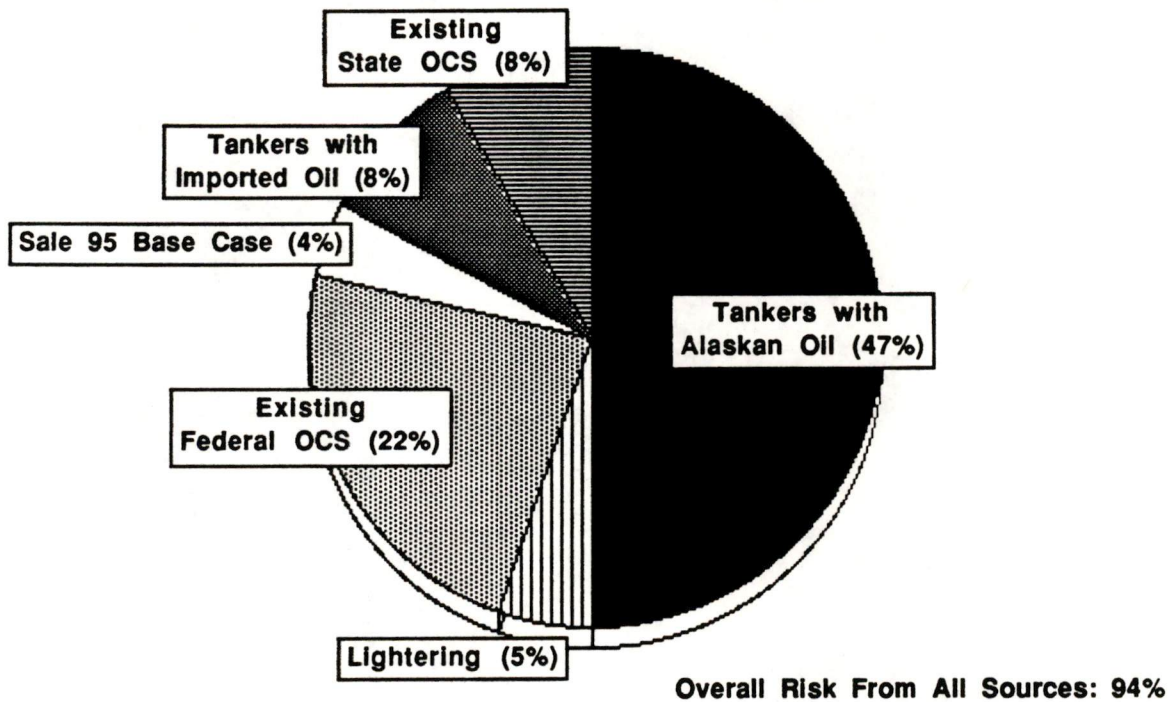
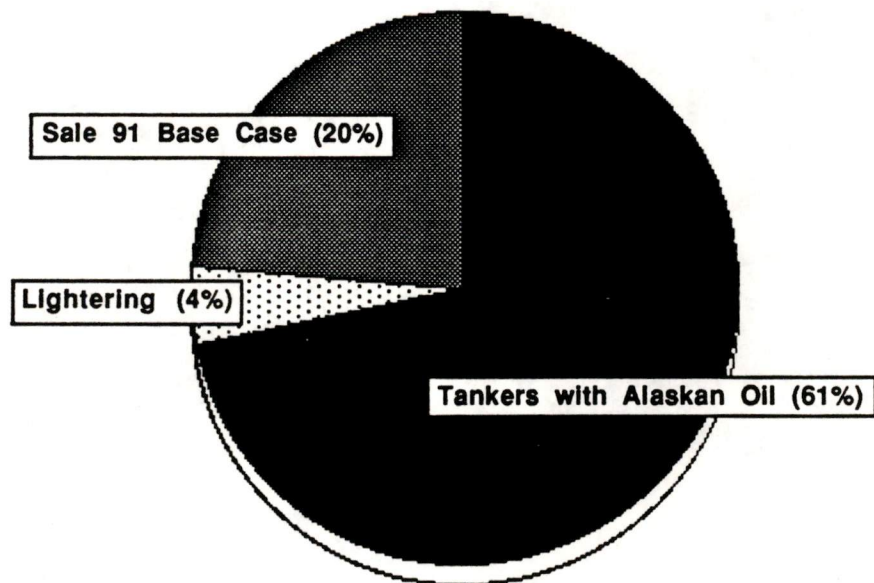


Figure IV-5: Cumulative Spill Risk - Off Northern California
Contribution to Overall Risk of a Spill From Each Source

10,000 Barrels or More Over 30 Years



Overall Risk From All Sources: 85%

Sale Specific Concerns

Table IV-8 summarizes oil spill probabilities that are discussed in the following sections for each lease sale.

**Table IV-8: Probability of One or More Oil Spills*
Greater Than 10,000 Barrels**

Lease Sale	116 (II)	95	91
Sale	10%	11%	36%
Tankers	96%	82% ¹	77%
Overall Probability (All Sources)	97%	86% ¹ 94% ²	85%

Notes: * See Figures IV-3, 4 and 5 for spill sources not itemized in this table
The above probabilities are not additive, as they are derived from a non-linear distribution.

1. Excludes all Federal OCS production

2. Includes all Federal OCS production

Percent of Overall Probability Attributable to:

Sale	3%	4%	20%
Tankers	90%	60%	65%

Sale 116, Part II- Off Southwestern Florida

The Task force reviewed MMS estimates of the oil spill risk and trajectory analyses for Sale 116, Part II. These studies show that the estimated OCS oil production from the sale would create a 10% chance of an oil spill greater than 10,000 barrels which, if uncontained, could contact sensitive resources in the Everglades and the Keys. The importance of the environmental resources in these areas makes it imperative to develop measures to protect them from oil spills before production begins.

Petroleum geologists believe that if oil is found in this area, it will most likely resemble oil found onshore in the Sunniland Formation. This oil is highly viscous and must be pumped to the surface. For this reason, the likelihood of a blowout during exploration or production drilling is extremely low.

The Southwest Florida Shelf, Dry Tortugas, and Florida Keys currently face threats of oil spills from the merchant transport fleet, particularly tankers and freighters, which transit the area. The MMS estimated that there is a 96% chance of an oil spill greater than 10,000 barrels occurring from maritime transport in this area over the next 30 years, even without OCS oil and gas activity. Nearly 1 billion barrels of crude oil and petroleum products are shipped through the Straits of Florida each year.

The simulations of spilled oil done by the Oil Spill Risk Assessment Task Force were from four sites located northwest of the Keys. Models results showed that many oil trajectories were entrained in the Loop Current and moved out of the area through the Straits of Florida. The earliest contact of oil to the Keys was 33 hours, while the earliest contact to the Florida mainland was 90 hours. However, less than 1% of the simulations contacted land in this timeframe. Over 30 days, the maximum length of the model simulations, 25% of the simulations contacted the Keys, and 11% contacted the mainland.

Sale 95 - Off Southern California

The MMS has estimated the probability of oil spill occurrence associated with an assumed production of 230 million barrels of oil in the Sale 95 area over a 31-year period. The estimated probability of a spill over 1,000 barrels is 27%. For a spill exceeding 10,000 barrels, the probability is 11%.

As in the Sale 116, Part II area, there is substantial risk of oil spills from tanker traffic. Assuming no OCS development in this region over the next 31 years, the risk from Alaskan and local tankers of oil spills greater than 1,000 and 10,000 barrels is 95% and 83%, respectively. With OCS oil production in the estimated amounts from Sale 95, the risk of oil spills increases to 96% and 85%, respectively.

There is additional risk in this area from existing Federal and State leases. The risk of oil spills exceeding 1,000 and 10,000 barrels, respectively, is 85% and 47% for existing Federal leases; and 56% and 23% from existing State leases. This increased the overall chance of an oil spill larger than 1,000 barrels from all sources (OCS and tanker activity) to greater than 99.5%; and to 94% for a spill larger than 10,000 barrels.

Sale 91 - Off Northern California

Here, too, the risk of oil spills from tanker traffic overshadows the risk of spills from OCS development. Assuming no OCS development in this region over the next 30 years, the risks of oil spills exceeding 1,000 and 10,000 barrels, respectively, from Alaskan and local tankers are estimated to be 89% and 77%. With the estimated OCS oil production from Sale 91, the risk of an oil spill greater than 1,000 barrels increases from 89% to 96%.

The MMS has estimated the probability of oil spill occurrence associated with an assumed production of 400 million barrels of oil in the Sale 91 area over a 30 year period. The estimated probability of an OCS spill greater than 1,000 barrels is 57%. For an OCS spill greater than 10,000 barrels the probability is 36%.

Within the proposed sale area, the probability of a spill is much higher in the Point Arena Basin than in the Eel River Basin. This is because the likelihood of spill occurrence is directly related to the estimated volume of oil production. A large majority of the

anticipated oil production would occur in the Point Arena Basin.

An oil spill in this region from any source would mainly affect commercial fishing, marine mammals, and seabirds. If a spill were not contained at sea and came ashore along the rocky and inaccessible coast of northern California, it could cause contamination that only natural processes could clean up.

Given prevailing winds and currents, the areas having the highest probability of contact from a spill include the shore along Mendocino County, the Gulf of Farallones and Cordell Bank National Marine Sanctuaries, and the Point Reyes National Seashore just north of San Francisco.

If severe weather and sea state conditions prevailed after a major oil spill in this area, effective containment and cleanup would be very difficult. Containment equipment cannot operate efficiently in high waves or swells. Average wave heights exceed 6 feet, the practical limit of existing equipment, over 50% of the time off Point Arena.

COMMERCIAL FISHERIES CONCERNS

Summary of Concerns

Three major concerns were voiced by commercial and recreational fishermen about the potential impacts of oil and gas development in the three areas: (1) the potential effects of space and scheduling conflicts, (2) the loss or destruction of habitat from OCS oil and gas operations, and (3) the loss of livelihood from an oil spill that could affect the fish or fishing in the areas. The value and harvest of the fisheries of major concern are summarized in Table IV- 9.

Competition for OCS space is the major source of conflict between the fishing and the oil and gas industries. Geophysical surveys and drilling operations in prime fishing areas could displace fishing efforts for a short, but possibly critical, period of time. Oil development and production structures could interfere with some fishing efforts for many years. The more mobile fisheries, such as trawling for bottom fish or shrimp, are the most likely to be susceptible to space-use conflicts from offshore structures. The stationary fisheries, such as lobster and crab potting, are more likely to be affected by oil and gas support operations (vessel traffic) than by stationary structures.

The area excluded by offshore structures varies depending on the type of structure and water depth. Floating exploration drilling rigs use an extensive array of anchors to hold the position of the drilling rig. Approximately 3 square miles may be excluded from fishing activities by such structures. Jackup rigs that rest on the bottom preempt a much smaller area, generally less than 1 square mile. Generally, fishing exclusions from exploration activities will last for a maximum of 120 days.

Each production and development platform results in less than 1 square mile of area lost to the fishing industry. Unlike the short-term nature of the exclusion from exploration, production and development structures would exclude most mobile fisheries in the immediate area for 20-30 years.

Table IV-9: Commercial Fisheries Harvest and Value

	Fisheries of Major Concern	1988 Annual Harvest (million pounds)	1988 Ex-Vessel Value (\$ millions)
Off Southwest Florida *	Pink Shrimp	5.9	15.3
	Spiny Lobster	6.1	16.9
	Snapper	2.1	3.3
	Groupers	8.1	12.3
Off Southern California	Shrimp	0.7	1.0
	Flatfish	5.2	3.6
	Rockfish	6.6	2.6
	Shellfish	2.1	5.6
	Shark	1.5	1.7
	Urchin	19.0	7.0
Off Northern California	Shrimp	10.2	4.2
	Salmon	5.2	14.6
	Urchin	19.0	7.0
	Dungeness Crab	7.7	10.2
	Rockfish	17.4	6.5
	Sole	13.5	4.6

Major Concerns: Space-use conflicts, habitat loss, oil spills

* Lee, Collier, Monroe and Dade Counties

Two factors can increase the amount of OCS area that is lost to fisheries, both associated with specific methods of fishing. Free-drifting fishing gear (drift gill nets and long lines), typically set at night, move with the prevailing currents and are under minimal, if any, control of the fishermen. These fishermen, therefore, must allow for a much larger safety buffer upcurrent from OCS structures. Trawl fisheries may be excluded from a large area if a number of structures are located proximate to each other; here, the exclusion is increased due to the difficulty in setting and retrieving the gear in confined areas. The stationary fisheries, such as potting, set nets, and hook and line, are less affected by offshore structures.

Natural factors can reduce the overall effects of space loss on most commercial fisheries. Most of the important fish species are mobile to some extent, and although physical space may be lost to fishermen, the fish can be available to harvest when outside of the preempted area. Of course, even the most mobile fish will have some portion of the stock in preempted areas at any given time. As additional area is lost to fishermen, fishing effort and costs increase to maintain the same quantity of landings.

Additional concerns have been raised on the potential for residual effects after seismic operations in certain areas. Although the fishermen are physically able to fish the area after seismic operations have concluded, claims have been made that the fish disperse and cannot be caught by the fishermen. In addition, gear damage could occur as a result of offshore oil and gas activity. This damage would affect the harvest of individual fishermen and cause lost time and wages.

Potential competition for coastal facilities, such as docking areas and repair and storage facilities, also contributes to the concerns of the fishing industry. All fisheries may be affected by loss of onshore facilities. Onshore conflicts may occur if industrial development preempts fishing industry uses.

Also of concern to the fishing community is the potential destruction or modification of fish habitat because of coastal development, oil and gas structure placement, or operational discharges from drilling activities. Concerns were raised that the discharge of drill muds and cuttings could bury bottom organisms, alter live-bottom communities, and affect fish habitat. In addition, the placement of structures or operational discharges that occur in discrete spawning areas could affect the viability of future generations. Construction of onshore facilities and expansion of port facilities could result in destruction of habitat.

The chemical component of drilling fluids can be toxic to fish species if high enough concentrations occur. In addition, chronic, low-level inputs of hydrocarbons associated with drilling discharges may have sublethal effects on organisms living on the bottom nearby. These organisms are a part of the food chain on which commercial fisheries depend.

Offshore oil and gas accidents may have adverse impacts on fish, shellfish, invertebrate prey species, vegetation, and habitat. A large oil spill can cause significant impacts on marine and estuarine ecosystems. One spill can affect a portion of a year class of fish if it hits an estuary or nursery area. Extensive mortality of eggs and larvae that float or swim near the water surface or are in shallow water and which contact the spill can occur. These life stages are the most sensitive to toxic effects from spilled petroleum hydrocarbons. If a spill occurs in or contacts a sheltered or partially enclosed coastal area, remnants of the spill may persist for a number of years and affect subsequent year classes, probably with decreasing overall effects over time. The effects of egg and larval mortality on fisheries harvest cannot be realistically estimated because of highly complex environmental and ecological processes affecting recruitment of young fish to the harvested population. However, the overall effects will be influenced by the portion of the year class which is affected.

Adult fish, for the most part, are able to avoid spilled oil which is floating on the surface. Fish and shellfish eggs and larvae are much more susceptible to exposure to spilled oil in open-water environments.

Oil in the water can damage fishing gear. In the event of a severe spill, public concerns over fish tainting can temporarily disrupt a local market for fish.

There are currently a variety of measures in place to manage the potential adverse environmental effects that oil and gas activities could have on the fisheries and fish resources. To minimize the area lost to fishing from offshore exploratory structures, operators in some areas have been required to use jackup drilling rigs in water depths of

175 feet or less. The MMS also requires training for oil industry personnel on how to recognize and avoid interfering with fishing activities.

For the Santa Barbara Channel, a joint oil/fishing industry liaison committee has been formed to provide information to each industry and to assure that oil and gas industry activities are scheduled in a manner that minimizes conflicts with commercial fishermen. The joint committee is also working towards establishing voluntary vessel traffic lanes to concentrate OCS vessel traffic away from fishing areas.

Fishermen who suffer damage to or loss of fishing gear from OCS oil and gas-related tools, equipment, etc., may file a claim with the Fishermen's Contingency Fund, established by Title IV of the OCS Lands Act Amendments of 1978, which is funded by assessments on offshore leases and permits. The Fund compensates for damaged gear and some resulting economic loss (i.e., 50% of the gross income lost because of the damage to fishing gear). The Fund currently contains approximately \$2 million. In the Santa Barbara Channel, the joint committee established a program to cover damage claims while they are being processed.

The existing permitting process for offshore activities seeks to minimize potential environmental effects on nearby live-bottom areas or other unique habitats. Stipulations on existing leases in southern California, for example, require that offshore structures be sited in a manner that avoids direct impacts on unique biological areas. The control of oil spills has been discussed above; the control of water discharges is discussed in a later section of this chapter.

There are limitations in current knowledge of these effects on fisheries. For example, there is currently insufficient data to clearly separate spatial exclusion effects from natural harvest variability. This is due, in part, to a lack of adequate information on the distribution and abundance of various species, as noted by the NAS/NRC Report.

With regard to the potential effects of seismic surveys on fish harvests, preliminary studies funded by MMS indicate that seismic sound sources can cause a response in rockfish that affects the catch of these important commercial species. However, data are not available to make an assessment of the duration or spatial extent of these effects under normal operating conditions.

Overall, there is little information specific to these areas that can be used to evaluate the long-term environmental effects of OCS activities on the habitat. However, habitat effects are most likely to result from the physical effects of structure placement, anchoring, and drilling discharges. Existing laboratory and field studies indicate a low accumulation of heavy metals in organisms from drilling fluids, primarily because the metals are discharged in a relatively insoluble form. The NAS /NRC Report indicates a need for more site-specific monitoring and analysis in some areas. Additionally, the MMS lacks the data needed for long-term assessment of the effectiveness of decisions on siting, permit actions, and mitigation techniques.

The actual effects on fish populations from an open-water oil spill are unknown and probably cannot be known. The overall effects would be determined by a multitude of confounding factors including: size of the spill, season, species, location, weather, type of oil, and ocean currents. In addition, it is currently impossible to project the resultant effect of egg and larval losses on subsequent recruitment to the population. It is certain that

detrimental effects on individual eggs, larvae, and fish would occur as a result of an OCS oil spill. However, because of their mobility and the broad distribution of most fish species, it is unlikely that these effects would result in measurable changes in the overall fish population.

Oil spills that contact land are of more immediate concern because they cause losses in habitat or nursery areas. Still, the overall effect on fish population levels and commercial fisheries from such losses is unknown. However, it is probable that such losses would have persistent effects. Overall, there is a fairly large base of information on the lethal and sublethal effects of petroleum hydrocarbons on individual specimens of various fish species. What is lacking is an understanding of the linkage between the temporary or permanent loss of habitat, the loss of eggs, or the death of larvae and the resulting effects on harvestable fish populations.

The Task Force finds that while coordination and management of OCS activities can minimize space use conflicts at sea, competition for port space will be a concern in this planning area.

In addition, the Task Force found that additional mitigation concerning management of onshore facilities; controls in biologically sensitive areas; enforcement and improvements in oil spill prevention, containment, and cleanup should be implemented, when necessary, to better protect the commercial and recreational fishing industries.

Sale Specific Concerns

Sale 116, Part II - Off Southwestern Florida

Commercial fisheries in southwest Florida include high-value species such as shrimp, spiny lobster, and stone crab. The potential effects of spatial exclusion in these fisheries is not the primary issue in southwest Florida. The major concern centers around possible oil spills and the potential loss or degradation of habitat that supports fish populations. Seagrass beds, coastal wetlands, and mangrove forests are examples of the habitats that would be at risk from an oil spill.

The southwest Florida area is an important recreational fishing area; concerns center on the effects of an oil spill on the tourist industry and loss of aesthetic appeal for vacationers. Recreational fishing in the Florida Keys and Everglades brings millions of dollars into the local economy.

The Tortugas Shrimp Sanctuary is an important nursery area for pink shrimp and is within the Sale 116, Part II area. The potential effects of an oil spill contacting the sanctuary are of major concern.

The Task Force finds that habitats which are important to commercial fish stocks and recreational fishing would be at risk if an oil spill occurred from tanker operations or OCS activities.

Sale 95 - Off Southern California

The marine environment offshore southern California is rich in fish life. In 1988, the

landings in southern California contributed approximately 300 million pounds to the total U.S. fisheries harvest.

Space-use conflicts are the dominant concerns off the California coast and are exacerbated here because of the relatively narrow continental shelf. The level of conflict has been mitigated with the advent of the joint oil/fisheries committee. If offshore oil and gas operations increase, the potential for onshore conflicts over docking, repair, and storage facilities will increase.

Loss of offshore fish habitat for the rocky reef fisheries and the effects of seismic activities on rockfish harvest are major concerns of the fishermen of southern California. The loss of fishing gear from obstructions or from oil and gas vessel activity and just compensation for gear losses continue to be a general concern of fishermen. The potential effects of oil spills on fishing, fishing gear, and fish populations remains a concern.

The Task Force finds that effects on commercial fishing cannot be fully mitigated but can be substantially reduced by careful management and coordination of OCS activities to avoid conflicts with fishermen.

Sale 91 - Off Northern California

The Sale 91 area is located within productive commercial fishing grounds. Annual landings in the area are approximately 100 million pounds. Commercial fishing is among the top three industries in the area.

Because of the relatively narrow shelf off northern California (less than 10 miles in some areas), space-use concerns are one of the major issues; trawl fisheries for shrimp, soles, and other groundfish would be the most affected fisheries. Competition for harbor space in this area is a primary concern for the fishing community in this area.

Another uncertainty that has been raised has been the potential effects of offshore oil and gas activities on potential biological areas of particular importance such as discrete spawning or nursery areas. Furthermore, the general effects of drilling discharges on fish habitat has been identified as a potential problem.

Based upon the review of information presented at briefings, public workshops, in response to the Federal Register Notice on concerns in the study areas, the NAS Report, and other scientific and technical information, the Task Force concluded that conflicts between commercial fishing and offshore oil and gas industries have occurred in other areas and are likely to occur in the Sale 91 area. However, it is apparent that many of the conflicts can be resolved or significantly mitigated. The Task Force bases its conclusion that potential impacts on commercial fishing can be mitigated appreciably on the success of the Santa Barbara area Joint Oil/Fishing Committee.

EFFECTS ON PROTECTED SPECIES

Summary of Concerns

Each of the three sale areas is inhabited by a number of species that have been placed under the protection of Federal statutes. These species include a variety of marine mammals as well as birds, fish, and reptiles that are endangered or threatened. The protections provided by the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA) reflect the high value which the people of the United States place upon the maintenance of wildlife.

Protected species can be affected by offshore oil and gas activities in a number of ways. A summary of these effects is presented in Table IV-10. Onshore and nearshore habitat loss and degradation are caused mainly by increases in industrial and other development in the coastal zone, by discharges of pollutants, and by operation of commercial and recreational vessel traffic.

Oil can cause physiological effects on individuals of protected species that become coated with oil or ingest it either directly or by eating contaminated prey. Populations of protected species can also be affected if an oil spill reduces the availability of their food resources. The effects of oil on marine mammals and sea birds can be particularly severe.

Noise from oil and gas support vessels and aircraft can disturb and disrupt essential activities of protected species. These activities include feeding, mating, calving (or nesting), migrating, socializing, and hauling out. Such effects on marine mammals and birds are generally short term, nonlethal, and localized. However, repeated overflights can cause birds to abandon nests and seals to stampede, killing young. Collisions between oil and gas support vessels and sea animals such as manatees, marine turtles, and whales can damage the individuals involved, sometimes fatally.

The ESA and the MMPA provide the authorities for designating species to be protected. The ESA authorizes the U. S. Fish and Wildlife Service (FWS) to list species as endangered and threatened. It mandates that no federally conducted, funded, or authorized activity may jeopardize the continued existence of listed species or adversely affect their critical habitats. The MMPA provides comparable protection for marine mammals. It is administered by the National Marine Fisheries Service (NMFS) and FWS.

These acts require that Federal Agencies consult with NMFS and FWS to identify ways to avoid jeopardizing listed species and to minimize incidental "takings." The MMS follows these consultation procedures. The FWS and NMFS provide biological opinions stating whether the proposed lease sale would jeopardize any protected species and identifying concerns which need to be addressed as subsequent activity evolves.

If an incidental taking of an individual of a protected species is likely, NMFS and FWS also process requests for special incidental take regulations for those who would conduct the activity. To ensure compliance with the ESA and MMPA, the MMS develops and enforces appropriate protective measures to be taken by lessees. These measures are specified in lease stipulations and Notices to Lessees and Operators which regulate activities on the OCS. The MMS also regularly informs lessees of their obligations under these laws.

Table IV-10: Characterization of Protected Species Concerns

	<u>Effects of Chronic Activities</u>	<u>Effects of Oil Spills</u>
Mammals	• Noise: disturbs, migration, feeding, mating, haul out • Traffic: collisions • Onshore development: habitat destruction, pollutant load	• Physiological: impairs feeding ability/ digestion; respiration; thermal protection • Ecological: prey contamination
Birds	• Noise: disturbs nesting, roosting, feeding, mating • Traffic: overflights disturb nesting • Onshore development: habitat destruction, pollutant load	• Physiological: impairs feeding ability/ digestion; respiration • Ecological: prey contamination; habitat destruction
Reptiles	• Traffic: collisions • Onshore development: habitat destruction, pollutant load	• Physiological: impairs digestion; respiration • Ecological: prey contamination; toxin bioaccumulation

The MMS takes a number of measures to prevent disturbance of protected species. For example, biologically sensitive areas may be deleted from a lease offering or the disturbing activities may be restricted to times when the protected species are not present. Conditions can be imposed on leases and permits to eliminate or minimize disturbance. In the past, the MMS has instructed operators to use procedures designed to mitigate the adverse effects of noise, to limit boat speeds, and to take precautions to avoid collisions with protected species. The oil spill prevention and containment measures that have been discussed in a previous section of this chapter help to protect species from the dangers of contact with oil.

Onshore and nearshore habitat loss and degradation are controlled mainly by State and local governments and such Federal Agencies as the U.S. Army Corps of Engineers, EPA, and U.S. Coast Guard. Although it has no direct jurisdiction over these onshore areas, MMS frequently works with the Federal Agencies that do, and with oil and gas operators, to ensure that species are suitably protected.

To some extent, the knowledge needed to determine effects on protected species is limited. Of particular concern is the lack of full understanding of the long-term habitat degradation that might result from many years of discharging environmental contaminants into the essential habitats of aquatic protected species.

Some physical effects of oiling on whales, dolphins, sea birds, sea otters, and marine turtles are known from experimental studies. These include temporary fouling of whales' baleen plates, temporary skin damage on dolphins and turtles, and sea bird and sea otter mortality. Less is known about other effects such as the long-term effects of contaminant buildup in organs and tissues and of chronic oiling on species' natality, reproduction rates, and timing of sexual maturity.

Many behavioral responses of whales, dolphins, sea otters, seals and sea lions, and birds to noise have been studied and are known. These responses appear to be temporary and localized. However, the extent to which these and other protected species adapt to noise remains poorly understood. Such habituation probably varies widely among species and may be critical to determining long-term effects. The threshold at which the cumulative effects of noise or other disturbances surpass the ability of a species to continue activities essential to its survival is not generally known.

The Task Force concluded that effects on protected species and wildlife are important enough to warrant additional management attention but are not, by themselves, sufficient to justify a delay in leasing.

Sale Specific Concerns

Sale 116, Part II - Off Southwestern Florida

Protected species of special concern in this area include manatees, nesting marine turtles, American crocodiles, sooty terns, brown boobies, whales, dolphins, and marine turtles nearshore and offshore.

Continuing habitat loss and degradation caused by a rapidly expanding population and associated development in southwestern Florida threaten many of these species. For example, the manatees experience increased injury and mortality from collisions with recreational boats whose numbers increase as the population grows. Outer Continental

Shelf oil and gas activities involve minimal additional development of onshore support facilities and slightly increased likelihood of support vessel collisions with manatees. The primary risk from OCS activities is from oil spill contamination of protected species habitat nearshore and onshore. High-productivity mangrove swamps, seagrass beds on which manatees feed, green sea turtle nesting beaches, and habitat of the American crocodile are particularly vulnerable.

The FWS' biological opinion for Sale 116 concluded that there was potential jeopardy to manatees if support vessels were not limited to operations from specified support bases. The NMFS' opinion concluded that no jeopardy to marine mammal and sea turtle species would arise, but noted concerns that available information on the distribution and abundance of whales, dolphins, and marine turtles are inadequate and need to be augmented.

To protect manatees, MMS limits support vessel traffic to and from a few onshore support bases and restricts boat speeds and maneuvering in manatee areas. If development and production are to proceed, additional environmental review will be necessary, and the MMS and the wildlife Agencies will develop and implement appropriate constraints to protect manatees and other protected species.

The NAS/NRC Report concluded that information on marine turtles and marine mammals is inadequate or not sufficiently reliable for leasing decisions in this area and that still more information would be needed for development and production decisions.

The Task Force finds that existing mitigating measures and safeguards appear to be adequate and effective for protection of manatees. However, there are persistent risks to all protected species from potential oil spills. Additionally, the information on the distribution and abundance of whales, dolphins, and marine turtles offshore would be useful for enhanced assessment of environmental effects, particularly of oil spills.

Sale 95 - Off Southern California

Protected species of special concern in and near this area include gray and other "great" whales, dolphins, marine turtles, seals and sea lions, California sea otters, brown pelicans, least terns, light-footed clapper rails, and pelagic sea birds (including the world's only breeding colony of Zantu's murrelet).

Because southern California is highly developed, additional habitat loss or degradation due specifically to OCS activities is unlikely. Offshore oil and gas production and wildlife populations coexist in many parts of the area, particularly in the Santa Barbara Channel where California sea lions frequently bask on oil platforms and associated equipment. Humpback whales and sea lions are frequently observed in the Channel without apparent reaction to drilling and support vessels working nearby. The numerous natural oil seeps in the area cause occasional bird oiling but have little adverse effect on protected species such as migrating whales. Still, the threat of large oil spills contacting protected species habitat, particularly in bays and estuaries, requires protective measures.

There are no recent FWS or NMFS biological opinions for leasing and exploration in the area, but opinions for a recent development plan in the Santa Barbara Channel concluded that no jeopardy to protected species would occur. These opinions expressed concerns about potential oiling and noise effects on least tern habitat and on seal and sea lion

rookeries. These concerns have been addressed through aerial overflight restrictions and through operating restrictions on oil and gas support vessels. The NMFS also expressed concern about potential cumulative effects of oil and gas and other activities on Guadalupe fur seals and gray whale migration routes.

The NAS/NRC Report concluded that available biological information is adequate for leasing decisions in this area, but more information is needed about birds along the Pacific coast of Baja California (Mexico). The report also concluded that more information would be needed for development and production decisions.

The Task Force concluded that existing information on protected species is adequate for leasing decisions. The Task Force also concluded that continued attention to mitigating measures and safeguards for protecting species of concern in the area is needed.

Sale 91 - Off Northern California

This area includes the same species of special concern noted for the Sale 95 area, except that marine turtles and Zantus murrelets are rarer here. If oil from this area were transported into San Francisco Bay, species there (light-footed clapper rails, salt-marsh harvest mice, and California least terns) and farther south (sea otters) might also be affected severely by OCS oil spilled during shipping or unloading operations. This risk would be offset by reductions the amounts of Alaskan and other crude oil that would be brought into San Francisco from Long Beach.

Unlike southern California, northern California is relatively undeveloped. Outer Continental Shelf exploration would cause minimal habitat loss and degradation because existing support facilities would be used. The threat of large oil spills contacting protected species habitat, especially near the Farallon Islands and the numerous rookeries and haulout areas of Stellar and California sea lions and harbor seals, is a major concern.

The FWS and NMFS biological opinions for leasing and exploration in this area concluded that no jeopardy to protected species would occur. However, both Agencies expressed concerns similar to those noted for the Sale 95 area.

The major risk to protected species in this planning area is from possible oil spills. Oil spill prevention and adequate response capability are essential for managing risk to protected species in this area.

The NAS/NRC Report concluded that available biological information is adequate for a leasing decision in this area, but that more information would be needed for development and production decisions.

To further reduce potential adverse effects to protected species, the collection of additional information and the adoption of appropriate protections would be helpful. Such protections range from improved oil spill contingency planning to the adoption of buffers in the vicinity of nearshore areas important to the protected species.

The protective measures currently employed by MMS should be augmented by additional requirements as they are identified. Key questions that must be answered to assess the need for additional requirements are: (1) What are the cumulative effects of oil and gas and other activities on protected species? (2) What is the threshold at which the cumulative

effects or noise or other disturbance surpass species' abilities to continue essential activities? (3) Do protected species habituate to noise and, if so, for how long and to what extent?

The Task Force suggests that the Department of the Interior and oil and gas operators, service companies, and transportation companies cooperatively seek answers to these questions to determine areas that should be deleted or deferred from leasing and ways to optimize protection of biologically sensitive resources.

IMPACTS ON PROTECTED LANDS

Summary of Concerns

Nationally and internationally recognized, ecologically sensitive coastal areas are located near each of the three proposed sale areas. National and state parks, wildlife refuges, seashores and sanctuaries, and other public recreation areas provide unparalleled wildlife habitat as well as opportunities for public enjoyment. Everglades National Park, Channel Islands National Park, Cordell Bank, and Farallones National Marine Sanctuaries are prime examples of protected lands near the three sale areas. In addition to the areas protected by Federal statutes, there are many State and local parks, beaches, and wildlife areas in the coastal areas near the three sales.

The main environmental concern for protected lands is from the threat of a possible oil spill. The threat of damage arises from two sources; either a tanker spill from a vessel in transit, or a spill due to OCS operations. As noted earlier in this chapter, the probability of a large spill (over 10,000 barrels) from a tanker accident is greater than from OCS operations. In fact, the additional risk of a spill from OCS operations that could damage protected lands near the three sale areas is very small.

Nevertheless, the Task Force has concluded that the exceptional value of these sensitive resources justifies a high standard of protection from oil spill risk and damage, regardless of the source of risk.

The Task Force found that the current level of protection afforded protected lands in the event of a spill is the same as provided to all environmental resources under Federal oil spill contingency plans. The Task Force recognizes that these contingency plans represent a general defense against damage, but are probably not sufficient to assure that harm to especially sensitive resources would be minimized in the event of a major spill. The Task Force therefore recommends that Federal managers of protected lands should begin to prepare their own oil spill contingency response plans which includes coordination with the U.S. Coast Guard, the MMS, the oil and gas industry, and state and local governments.

Sale Specific Concerns

The resources which could be affected by a spill from tanker transport or OCS activity and which therefore need to be addressed by oil spill contingency plans differ in each of the three sale areas.

Sale 116, Part II - Off Southwestern Florida

In the Sale 116 Part II area, a large oil spill could severely affect the fragile ecosystem of southwestern Florida. This area contains a number of significant wildlife refuges, marine sanctuaries and parks, including Everglades National Park and Fort Jefferson National Monument (Dry Tortugas), which have been designated International Biosphere Reserves; and Looe Key and Key Largo National Marine Sanctuaries. The Keys-Everglades complex is the only mangrove-coral reef ecosystem in the coterminous United States. Although the entire ecosystem of the region is considered sensitive, the resources which require particular attention in specific oil spill contingency plans are coral reefs, mangroves, and sea grass beds. These provide important habitat for many species, and could be seriously harmed and slow to recover from the effects of a spill.

Sale 95 - Off Southern California

The Sale 95 area also contains national parks and sanctuaries which deserve additional protection. The Channel Islands National Park and the Channel Islands National Marine Sanctuary are located near active leases in the Santa Barbara Channel. Oil spill contingency planning for sensitive resources in this region would need to address specific protection for marine mammals, sea birds, and offshore park lands, such as the Channel Islands.

Sale 91 - Off Northern California

An oil spill would threaten similar resources in the Sale 91 area. Marine mammals and sea birds could be adversely affected and oil spill contingency plans for the Cordell Bank and Gulf of the Farallones Marine Sanctuaries are needed to minimize the impact of an oil spill on the resources and habitat of these areas.

SOCIAL AND ECONOMIC IMPACTS**Summary of Concerns**

In all three areas, people attending workshops vehemently expressed the concern that the character of their communities would be changed by oil and gas operations offshore and by onshore support facilities. The changes would result from: 1) increased population resulting from the creation of new jobs; 2) demand for onshore support and processing facilities; and 3) reduction in tourism due to oil spills on beaches or the sight of offshore platforms from shore. People in northern California and southwestern Florida fear that offshore development will bring the boom-bust development patterns found in coastal areas of the central and western Gulf of Mexico. In densely populated southern California, where residents value their beaches and scenic coastline highly, the opposition to offshore development focuses on air quality degradation, land-use changes, and the fear of a major accident like the 1969 Santa Barbara oil spill.

The Task Force learned that these effects may differ over time, depending upon the phase of offshore activity. These phases are summarized in Table IV-11. For example, exploration activities generally have different population, employment, public service and land use impacts than either the development or production phases of the OCS life cycle. Moreover, the Task Force found that the terms "socioeconomic effects" or "socioeconomic

Table IV-11: Characterization of Social and Economic Concerns

	1986 Population In Adjacent Counties	Change in Population 1981-86	Employment Bases	Regional Setting	Major Concerns
Off Southwest Florida	2.2 million	13.2 %	Tourism, services, fishing	Rural, resort development, protected areas along coast	1. Land use changes 2. Visual impacts 3. Loss of Tourism
Off Southern California	13.8 million	12.7 %	Heavy industry, services, tourism	Urban with heavy industry to rural agriculture	1. Land use changes in rural areas 2. Cumulative impacts 3. Visual impacts 4. Loss of Tourism
Off Northern California	189 thousand	7.4 %	Forestry, fishing, agriculture, tourism	Rural, extensive federal and state land	1. Land use changes 2. Chronic pollution 3. Visual impacts 4. Inadequate infrastructure

impacts" are used to describe a wide variety of discrete onshore consequences which can range from waste water treatment to aesthetic perceptions.

These concerns manifest themselves in slightly different ways in each of the sale areas due to differences in population size, existing economic structure, and major land uses. For example, similar levels of offshore activity are accurately perceived to have very different infrastructure impacts in the small communities of northern California as compared with Los Angeles.

The Task Force found that thinking about onshore effects could be clarified by identifying and examining several classes or sources of impacts. For purposes of analysis, the Task Force has found it helpful to distinguish at least three types of onshore impacts which can result from offshore development: (1) direct project impacts, (2) population and employment impacts and (3) attitudes and emotions.

The first category of impacts include those which are directly caused by specific offshore activities and projects, such as dock space for supply boats, warehousing space, and construction staging areas. Direct effects also include land use changes and public service requirements associated with onshore oil and gas processing: water and sewer services, transportation, fire protection, and pollution control. Direct project impacts can occur during oil and gas exploration, development, or production. These effects tend to be physical and economic in nature because they affect the local community's infrastructure, land use, and ability to finance public services needed by the industry. Local planning to accommodate and mitigate project impacts can only be successful when industry plans are made clear, and thus can be facilitated by industry cooperation. Chapter VI discusses onshore facility consolidation and voluntary joint local government/industry committees as means for addressing project impacts.

The second class of effects includes those which are caused generally by changes in local population and employment. Examples of such effects are the impacts of growth or decline on housing demand and prices, personal income, welfare costs, school attendance and capacities, police protection, sewage treatment, solid waste disposal, and other general demands on community facilities. These effects of offshore activity on a community may be evident in varying degree for a significant period of time, and can have social as well as physical and economic dimensions. These broader community effects are often not as easy to measure and plan for as direct project impacts, but they are nonetheless real and in large degree can be anticipated, analyzed and dealt with by local plans and policies. A key element in dealing successfully with general, community-wide impacts of offshore activity is the availability of sound information and analysis upon which to base local planning decisions. Development of improved socioeconomic data and some analysis of the onshore effects of alternative offshore development scenarios during the prelease process should be useful for anticipating community effects.

The third class of impacts is not readily measured, and in fact may be impossible to resolve satisfactorily. These are the attitudes and feelings which people develop from knowing that the oil and gas industry might conduct operations nearby. Many view the industry as an intrusion on the landscape which will change the "character" of the community and thereby diminish both their enjoyment of it as well as the desire of others to visit. Perhaps the most specific concerns in this category are aesthetic objections to platforms and the fear that an oil spill will damage beaches and affect recreation and tourism. Some people who have worked hard and sacrificed in order to be able to live in an area with high quality

coastal resources are particularly upset by the possibility that those resources could be affected by oil and gas activities.

Tourism and recreation are multi-billion dollar industries in California and Florida, producing significant revenues to State and local governments. Tourism has surpassed manufacturing and agriculture to become the largest industry in California (\$36 billion revenues annually) and Florida (\$22 billion revenues annually). As the economic significance of tourism has increased, so have communities' interests in protecting the coastal and marine resources which attract visitors.

Many individuals, organizations, and government agencies believe that oil and gas development is not compatible with recreation and tourism and will result in significant economic losses at local and State levels. The Task Force found that there are few studies that establish the strength of the cause and effect relationship between offshore oil and gas activities and diminished tourism and recreation. As the NAS/NRC Report noted, the results of these studies are conflicting and inconclusive.

The Task Force recognizes the validity of community concern about such changes, but also recognizes that the nature and extent of possible effects is difficult to predict accurately at the time a lease sale is being contemplated. The difficulty in prediction of onshore effects arises because the strength and scope of community, physical, social and economic impacts depends upon the timing, duration, size, and technology of specific offshore operations. However, the character of offshore activities cannot be predicted prior to a lease sale because the number of tracts that may actually be bid upon and leased is unknown. Moreover, the location and size of the oil and gas fields, if any, that will be found, is difficult to predict. Thus, the assessment of social and economic effects prior to a lease sale must be based on scenarios that describe the offshore and onshore activities that are typical of those expected to occur rather than on predictions of what will occur, when, and where.

More accurate assessment of some social and economic effects becomes possible when lessees file exploration plans, because these indicate the location, timing, and extent of offshore exploratory drilling. This information can be used to assess the effects of the planned exploration on local population, primary and secondary employment, demand for public services and housing, and warehousing and dock space. It can also be used to revise scenarios about possible oil and gas development activities that could follow if exploration is successful.

Similarly, if exploration yields commercial oil and gas discoveries, production and development plans submitted by lessees will provide additional information for more detailed assessments of the effects on nearby communities. At this stage the need for onshore support facilities may intensify land use conflicts and increase physical infrastructure demands, while employment and population effects may diminish.

The NAS/NRC report found that the available socioeconomic information was inadequate for all three areas. It suggested that the MMS collect additional data and perform analyses of socioeconomic effects similar to those done for other major Federal projects. Despite the recognized difficulty of evaluating specific socioeconomic effects due to the uncertainties inherent in offshore leasing and exploration, the Task Force has concluded that planning and coordination could be improved by conducting more analysis at the prelease stage, and by distinguishing the several types or classes of onshore effects, each of which may call for

a different kind of assessment, planning, and local government response. Assessments need to be revised at the exploration and development stages to provide more specific and accurate projections of the effects that need to be considered in local planning.

The Task Force concludes that prelease information and analysis could be improved by collecting more socioeconomic data and using it to estimate the onshore impacts of several offshore exploration, development and production scenarios. These scenarios, and the community impact profiles derived from them, could be presented in the EIS for each proposed lease sale. The factual basis for constructing these impact profiles would be community baseline studies conducted by the MMS. These baseline studies would collect and analyze information on demography, economic structure, tax base, and expenditures, public service capacities, public and private infrastructure including utilities, land use, housing stock, and measures of social and economic status.

Many local governments near the three sale areas are faced with ongoing economic development pressures which are addressed by policies and controls embodied in a variety of land use plans and coastal zone management programs. Onshore facilities needed to support OCS oil and gas activities must comply with the procedural and regulatory provisions of these policies. Local permitting processes can ensure that acceptable sites are chosen and that adverse impacts are mitigated. Controversies often arise, however, when oil and gas support facilities are proposed.

In order to reduce such conflicts, the impact assessment information needs to be used in a consultative process that begins early in the preparations for a lease sale and continues through the exploration and development phases. Local governments, oil companies, the MMS and other Federal and State Agencies need to participate in these discussions to identify and resolve conflicts raised by onshore support facilities. **The Task Force has concluded that development of offshore oil and gas resources may create onshore land use conflicts and demands on infrastructure that need to be better addressed. Conflict could be reduced if better consultative relationships were established among the oil industry, Federal, State, and local governments and other affected parties for planning and coordinating the onshore activities of OCS lessees.**

The Task Force also concluded that OCS impacts on tourism and recreation are a major concern for which further information is needed to determine the magnitude of impacts. However, tourism losses alone are not likely to be sufficient to provide a basis for canceling or delaying lease sales. They should be addressed as a part of other efforts or new efforts to control and mitigate onshore impacts.

Sale Specific Concerns

Although public concerns about socioeconomic effect are generally similar in all three of the sale areas, there are some differences in the emphasis placed on specific effects from one area to another, and sometimes between communities within the same area. In southwestern Florida, concerns about the potential impacts of offshore development on recreation and tourism and population growth receive priority attention. In southern California, effects on tourism are also a concern, but especially so for communities south of Los Angeles and the San Diego area. For communities north of Los Angeles, onshore land use conflict and growing demands on infrastructure seem particularly important.

Communities in the Sale 91 area cite population growth and infrastructure problems which could change the character of the area and adversely affect the tourism industry.

IMPACTS ON WATER QUALITY

Summary of Concerns

Degradation of water quality near exploratory drilling rigs and production platforms may be caused by acute discharges, such as oil spills, and routine, chronic discharges of drilling muds, drill cuttings, produced waters, sanitary wastes, and oil. The scientific literature contains many studies documenting impacts of oil spills on water quality and other components of the marine environment. However, the NAS/NRC Report raised concern about the lack of information regarding impacts of long-term, chronic discharges, particularly their effects on sensitive ecosystems such as mangroves, sea grasses, and corals in Florida. The NAS/NRC Report was critical of MMS for not thoroughly monitoring conditions at existing platforms to determine the extent of chronic, long-term impacts.

The OCS discharges that cause the primary water quality concerns are drilling muds, drill cuttings and produced water. Drilling muds are fluids that lubricate the drill bit and help to control pressure in the well. Drill cuttings are fragments of the geological formations penetrated by the drill bit. They are carried to the surface with the drilling fluids. Produced water is the water brought up from subsurface formations along with the oil and gas that is extracted.

The potential for environmental harm from drilling fluids and cuttings arises from toxicity, oxygen demand and suspended sediments. Added oil (historically diesel fuel) and biocides are the primary sources of toxicity. Water based drilling muds, which have come into widespread use, have much lower toxicity than oil based muds. Oxygen demand from muds and cuttings can be high, creating low oxygen levels in the discharge area.

Suspended sediments can increase turbidity in the area around the discharge and can bury organisms living on the ocean bottom nearby. The effects of discharging muds and cuttings thus depend on the nature of the ecology on the nearby bottom and the specific content of the muds and cuttings. Depending on currents and water depth, discharged drill cuttings can smother an area within 500 meters of the discharge and increase sedimentation and turbidity. Discharged drilling fluids can create a turbidity plume which can extend up to 4 km from the discharge. Sedimentation is likely to increase out to 1 km from the discharge. At present, the most common mitigation for the discharge of drill muds and cuttings is shunting of the discharge to a water depth that helps assure that the drill cuttings settle to the bottom near the well site. This minimizes the area of the seabed that may be buried.

Produced water may contain a variety of hydrocarbons, trace metals and chemicals used in well maintenance. It is highly saline and low in dissolved oxygen. In some situations, produced water may contain radionuclides. The plume of a produced water discharge tends to sink because of its salinity, carrying the hydrocarbons and other chemicals it contains to the bottom. Generally, such discharges do not create substantial environmental harm when they occur in the open marine environment.

All discharges are regulated by EPA under the authority of the Clean Water Act through the

National Pollutant Discharge Elimination System (NPDES) program. NPDES permits issued by EPA specify the treatment required and the limits on discharges. The NPDES permit may require "no discharge" if warranted.

The Task Force concluded that the known water quality-related environmental impacts of OCS activities can be adequately evaluated and regulated under the EPA's NPDES program. The Task Force also found a lack of information on the long-term effects of chronic discharges.

Sale Specific Concerns

Sale 116, Part II - Off Southwestern Florida

Much of the concern about the effects of OCS activities on water quality off southwestern Florida focuses on possible degradation of the currently excellent water quality in this area. The waters off Florida have high clarity and good light penetration with little, if any, turbidity except in shallow areas after storms. Excellent water quality off southwestern Florida is a primary factor in the attractiveness of the area, particularly for recreational diving and fishing.

Florida has designated the State waters adjacent to State and National Parks as "Outstanding Florida Waters" and prohibits discharges that reduce water quality, including those that increase turbidity.

Former Secretary of the Interior Hodel and Florida Governor Martinez appointed a joint task force to assess the potential environmental impacts from OCS oil and gas activities in the Sale 116, Part II area. The Joint DOI/Florida Task Force members agreed that discharges from exploration platforms would occur frequently but cause water quality effects of low severity. They also agreed that site specific analyses of drill rig locations would be needed to determine the effects at a particular site. Decisions about the discharge of drilling muds and cuttings need to be based upon detailed knowledge of the organisms living on the seabed near the drilling site.

During exploration, produced waters should not present an environmental risk. However, some produced waters during the development and production phase may not meet the water quality standards for some metals. Produced waters in some parts of the Gulf of Mexico contain elevated levels of barium, beryllium, cadmium, chromium, copper, iron, lead, nickel, silver, and zinc. Such pollutants may need to be treated before produced waters are discharged. If development and production occur in the Sale 116, Part II area, measures need to be taken to ensure that discharges of produced waters do not degrade water quality near sensitive resources. Such controls are achievable within the NPDES permit process.

Sale 95 - Off Southern California

The waters off southern California are among the most heavily used in the country for both recreation and for disposal of municipal and industrial waste water. Concerns about the water quality effects of OCS activities reflect local residents' desires to avoid further degradation.

The existing discharges into the Southern California Bight are substantial. Twenty-eight municipal and industrial sources discharge over one billion gallons of effluent per day into coastal waters. Some publicly owned treatment works are discharging in violation of legal requirements, notably Hyperion (Los Angeles) and San Diego. Waste water discharged from municipal outfalls contains a number of potentially toxic chemicals. Non-point surface runoff contains a variety of hydrocarbon and toxic pollutants and is the second largest source of water pollutants, amounting to 67 billion gallons per year.

Southern California waters are also affected by natural oil seeps. Most documented natural oil seeps in the Southern California Planning Area are in the Santa Barbara Channel and on the Santa Monica and San Pedro shelves. Estimates of oil entering the water from seeps in the Santa Barbara Channel range from 40 to 670 barrels per day. More than 900 seeps have also been identified off Point Conception. One oil company has established a system for capturing oil and gas from natural seeps.

Water discharges from both existing OCS activities and those that could occur on new leases are controlled under the EPA's NPDES permits. The existing permits limit the discharge of both toxics and conventional pollutants (including oil, suspended solids and biological oxygen demand) into Federal waters off California. The NPDES system is adequate to prevent degradation of the waters off California by OCS activities.

Sale 91 - Off Northern California

Water quality in the Sale 91 area is generally excellent. Concerns about the water quality effects of OCS activities focus on the degradation of the otherwise pure waters off northern California. The excellent water quality in the area is of particular importance to the quality of fish caught in offshore fisheries, especially abalone.

During the winter and spring runoff, turbidity may increase within the river plumes. The increased turbidity is accompanied by an increase in organic and trace metal levels. These seasonal events are natural phenomena which create natural variations in water quality.

Humboldt Bay is the only region of relatively light industrial activity in the northern California. Activities in and around the bay which could contribute to oceanic water quality degradation include agriculture, industry, and sewage treatment. Two pulp mills operate on the north spit of the bay, and both have short ocean outfalls which discharge an effluent that consists of solid organic wastes and dissolved chemicals. There is much agricultural activity, including both dairy and farming operations, surrounding Humboldt Bay; this is probably the greatest source of non-point pollution in the region.

Discharges from activities on any leases issued in the northern California area need to be carefully managed to avoid degradation of water quality. The NPDES program provides the basis for appropriate assessment and control.