

Offshore Energy Development & California Commercial Fisheries



Why this report was created

The current administration has renewed federal efforts to expand offshore oil and gas leasing while also advancing future offshore mineral extraction. These activities have the serious potential to negatively affect California's seafood economy and the coastal communities that depend on healthy fisheries.

To help fishermen, fishing organizations, local governments, and community members understand these proposals, the Monterey Bay Fisheries Trust (MBFT) developed a comprehensive report that:

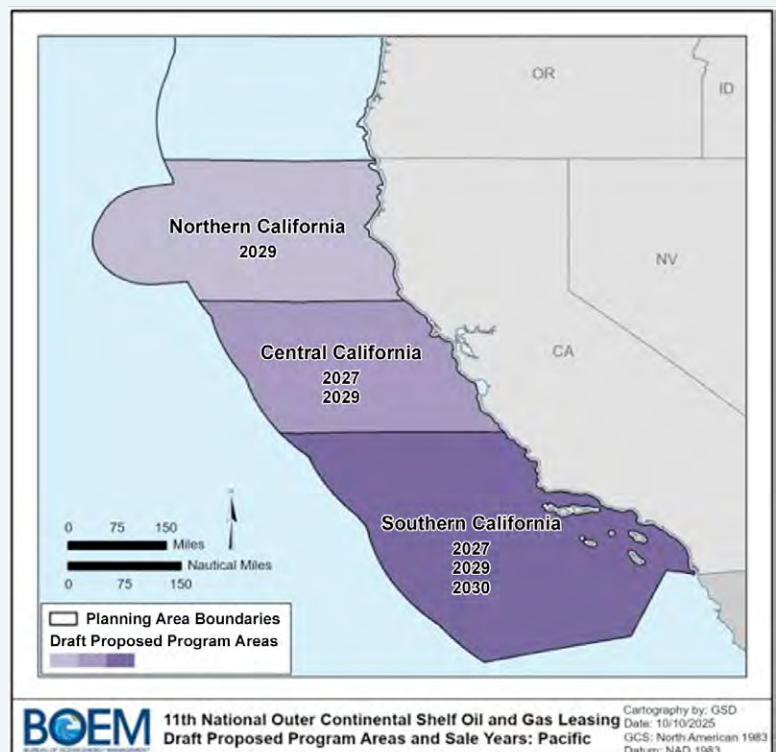
- explains the federal offshore oil and gas leasing process;
- provides an overview of emerging offshore mineral extraction activities;
- summarizes examples of how offshore energy development could affect California's commercial fisheries and working waterfronts; and
- provides resources to help stakeholders engage effectively

Proposed Offshore Oil & Gas Lease Areas

The federal government has proposed **six offshore oil and gas lease sales between 2027 and 2031** off California, encompassing approximately **65 million acres** of federal offshore waters.

Looking Ahead: Offshore Mineral Extraction

As of Fall 2026, no offshore mineral mining projects have been proposed off California. However, the federal government is actively developing policies that could support future exploration and leasing. The report summarizes current exploration technologies, and the potential implications for fisheries should future proposals advance.



Potential Impacts on California Commercial Fisheries

Loss of Fishing Access

Industrial energy activities can reduce or eliminate access to fishing grounds, increasing travel time, fuel costs, and competition in remaining fishing areas.

Economic Impacts

Reduced fishing opportunities can affect:

- fishermen
- seafood processors
- gear suppliers
- seafood markets
- restaurants
- coastal working waterfronts

Changes to Fish and Marine Life

Noise and light disturbance, pollution, and increased vessel activity may affect fish behavior, migration, spawning, and damage essential habitat. Species that may be affected include:

- Market squid
- King salmon
- Dungeness crab
- Sablefish
- Nearshore groundfish

Oil Spill Risk

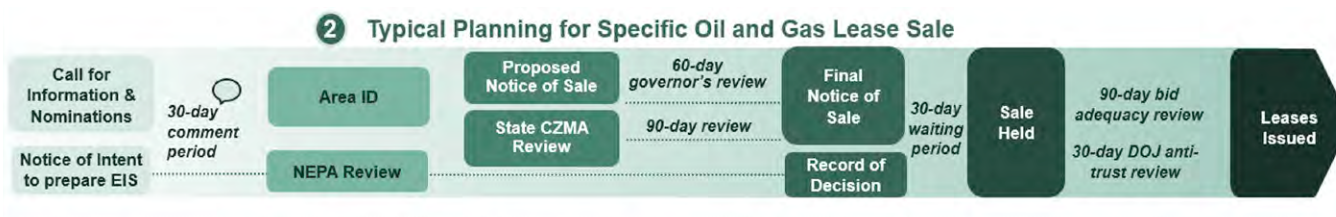
Oil spills can cause:

- fishery closures
- seafood market disruptions
- contamination of fishing grounds
- long-term economic losses
- prolonged ecosystem recovery

Working Waterfronts

Ports already operating with limited infrastructure may experience increased competition for space and reduced resilience if fishing activity declines.

How the Offshore Leasing Process Works



Where Your Voice Matters

Public Comment

Federal agencies must allow for public comments throughout the planning and review process. Comment periods may be brief, making early engagement important.

Share Local Knowledge

Agency analyses are strengthened by information from fishermen and fishing communities about fishing grounds, seasonal fishing patterns, target species, navigation, port operations and local economic impacts.

Review Proposed Mitigation

Future environmental reviews may propose measures intended to reduce impacts. Community input helps determine whether those measures adequately protect fisheries and coastal communities and is necessary for a strong administrative record for possible judicial review.

Why Engagement Matters

California's fishermen hold knowledge that cannot be captured through mapping or scientific data alone. Information about fishing locations, seasonal use, economic dependence, navigation routes, seafood infrastructure, and community impacts helps decision-makers better understand how offshore energy development could affect California's fishing industry. Participating in public review processes helps ensure that fisheries remain part of the decision-making process as offshore energy proposals advance.

Learn More

Read the complete report:

www.montereybayfisheriestrust.org/resources

Questions?

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**MONTEREY BAY
FISHERIES TRUST**



Navigating California's Offshore Future

Offshore Oil, Gas, and Mineral Development, Implications for Commercial Fisheries, and Strategies for Engagement



Photo credit: J.f Manzanero on Unsplash



**OIL & GAS
DEVELOPMENT**



**MINERAL
EXPLORATION**



**TAKING ACTION:
HOW YOU CAN HELP**

Acknowledgements

This report reflects the collective effort of individuals and organizations committed to the future of California's commercial fisheries and working waterfronts, and a healthy ocean ecosystem.

We gratefully acknowledge the financial support of the Resources Legacy Fund, who funded the development of this report. Thanks to Stephanie Webb, who reviewed the report for accuracy related to federal process, research references, and context.



Photo credit: Tom Barrett

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Abbreviations used in this report:

AUV	Autonomous Underwater Vehicle
BOEM	Bureau of Ocean Energy Management
BSEE	Bureau of Safety and Environmental Enforcement
CCC	California Coastal Commission
CCZ	Clarion-Clipperton Fracture Zone
CDFW	California Department of Fish and Wildlife
CZMA	Coastal Zone Management Act
DPP	Draft Proposed Oil and Gas Program
DPP 1st Analysis	Draft Proposed Oil and Gas Program - 1st Analysis and Proposal
DSHMRA	Deep Seabed Hard Minerals Resources Act
EA	Environmental Assessment
EEZ	Exclusive Economic Zone
EIS	Environmental Impact Statement
EFH	Essential Fish Habitat
E.O.	Executive Order
ESA	Endangered Species Act
IPFs	Impact Producing Factors
MBES	Multibeam echosounder
HMS	Highly Migratory Species
MFDE	CDFW's Marine Fisheries Data Explorer
MMA	Marine Minerals Administration
MMPA	Marine Mammal Protection Act
MPC	PFMC's Ad Hoc Marine Planning Committee
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOS	National Ocean Service (Division of NOAA)
O&G Program	National Outer Continental Shelf Oil and Gas Leasing Program
OCS	Outer Continental Shelf
OCSLA	Outer Continental Shelf Lands Act
PEIS	Programmatic Environmental Impact Statement
PFMC	Pacific Fishery Management Council
RFI	Request for Information and Interest
ROV	Remotely Operated Vehicle
USCG	United States Coast Guard

Executive Summary

Through Executive Orders, concurrent Agency actions, and legislative initiatives, the federal administration is expediting the expansion of offshore oil and gas drilling and also supporting development of offshore mineral mining, including the pursuit of new oil and gas leasing offshore California for the first time since 1984. Regulatory processes shaping offshore oil and gas development and mineral mining in the U.S. Outer Continental Shelf (OCS) are underway and pose a threat to California fisheries and fishing communities. Each of these could have profound impacts on marine resources and ecosystems that California's fishing communities rely upon.¹

These impacts include; but are not limited to:

- loss of access to important fishing grounds and compaction as displaced fishermen move to other areas,
- changes in abundance, distribution, and behavior of marine life (fish, marine mammals, etc) resulting from those activities,
- habitat alteration and/or destruction (short and long term)
- pollution and spill events leading to extended closures, and health issues, and
- increased competition for limited port infrastructure and space

This report summarizes the legal processes and government actions that are setting the stage for activities associated with offshore oil and gas development and mineral mining, describe the potential and realized effects of those activities, and offer engagement strategies and guidance for making public comments.

Proposed actions that would permit activities related to offshore mineral mining are expected in the near future. Those activities may occur both within and outside the U.S. Exclusive Economic Zone (EEZ). Because there are currently no comparable activities within the U.S. we provide examples from international and proposed methods.

Beginning as early as 2027, six lease sales are scheduled to take place off California through 2031, covering roughly 65 million acres (approximately 101,562 mi²). This report discusses past processes and experiences with offshore oil and gas development to help fishery stakeholders anticipate likely actions leading up to, and following new lease sales. Those

¹ "A community which is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew and United States fish processors that are based in such community". See 16 U.S.C. §1802(17)

experiences also inform identification of realized and potential impacts. **It bears noting, past processes may differ from those used for proposed lease sales off the California coast.**

The declaration of a national energy emergency in January of 2025, grants the President broad executive powers under the National Emergencies Act² to address what the administration frames as an “unusual and extraordinary threat” to the U.S. economy, national security, and foreign policy using unprecedented measures, including limiting the opportunities for public comments from during various stages of environmental review. For offshore oil and gas, this can mean accelerated permitting, reduced regulatory barriers, and expanded federal authority to move projects forward. In March of this year, administration officials voted unanimously to exempt the oil and gas industry in the Gulf from requirements of the Endangered Species Act, a move that would lift protections for endangered whales, turtles and other animals.³ As described below, similar exemptions are playing out for both the Environmental Impact Statement (EIS) for the Platform Gilda Well Stimulation Treatment Offshore California and the Programmatic EIS for Proposed Oil and Gas Lease Sales in the California Program Areas. For Platform Gilda, BOEM took just 28 days to go from a notice to the final EIS using ‘Alternative Arrangements for NEPA Compliance During a national Energy Emergency’. This is likely a strategy that will be used again for lease sales.

This report concludes with suggestions and information to assist the reader in participating in the federal OCS planning process and developing an effective comment letter. It also provides statewide and port-level landings (the amount of commercial fish harvested and brought to shore for market) information in pounds and ex-vessel revenues, instructions to gather fishery specific landing and economic information, and guidance for personalizing content related to the potential impacts of oil and gas development and mineral mining on their fishery/fisheries.



Photo credit: Wilson Stratton on Unsplash

² 50 U.S.C. §§1601 et seq

³ <https://www.npr.org/2026/03/30/nx-s1-5745926/endangered-species-committee-hegseth-security>

Introduction

The following Executive Orders (EOs) demonstrate the federal administration's interest in prioritizing and promoting oil and gas production and mineral mining in federal waters.⁴

- 14154 - Unleashing American Energy⁵
- 14156 - Declaring a National Energy Emergency⁶
- 14285 - Unleashing America's Offshore Critical Minerals and Resources⁷

In implementing these EOs, the administration has revised, or is revising, regulations to facilitate and expedite offshore oil and gas and/or marine mineral resource development, including minimization of environmental reviews and public comment processes. We discuss these changes later in this report.

Oil and gas development planning is underway specifically targeting coastal waters off Alaska and California, and in the Gulf. In contrast, there are no current efforts to permit or license marine mineral mining within the EEZ off the west coast, but applications have been submitted to undertake marine mineral mining outside the U.S. Exclusive Economic Zone (EEZ)⁸. This report draws from and describes the regulatory processes underway in other regions to provide informed assumptions of how the mineral mining could unfold off the west coast.

Offshore oil and gas development activities have the potential to negatively affect fisheries through habitat disturbance, changes in fish behavior and distribution, displacement of fishing activities, vessel conflicts, pollution, and impacts to port-dependent businesses. Together, these direct, indirect, and cumulative effects could threaten the long-term viability of California's commercial fisheries and the communities that depend on them.

In addition to routine activities, such as exploration, development and decommissioning, the risk of a major oil spill is statistically plausible and could have devastating consequences for the region, including severe impacts to the ecosystem, commercial and recreational fishing, and the associated economic and community benefits.

4 Other E.O.s which could inform marine oil and gas production and mineral mining: E.O. 14192 - Unleashing Prosperity Through Deregulation; E.O. 14213 - Establishing the National Energy Dominance Council; E.O. 14241 - Immediate Measures To Increase American Mineral Production; E.O. 14260 - Protecting American Energy From State Overreach; E.O. 14270 - Zero-Based Regulatory Budgeting To Unleash American Energy; and E.O. 14272 - Ensuring National Security and Economic Resilience Through Section 232 Actions on Processed Critical Minerals and Derivative Products

5 <https://www.federalregister.gov/documents/2025/01/29/2025-01956/unleashing-american-energy>

6 <https://www.federalregister.gov/documents/2025/01/29/2025-02003/declaring-a-national-energy-emergency>

7 <https://www.whitehouse.gov/presidential-actions/2025/04/unleashing-americas-offshore-critical-minerals-and-resources/>

8 The maritime area extending up to 200 nautical miles from the territorial sea baseline, where the United States has sovereign rights to explore, exploit, conserve, and manage natural resources

This report provides a high-level overview of the statutes, agencies, authorities, and regulatory processes governing offshore oil and gas development and offshore mineral mining within the U.S. EEZ and on the High Seas. It then describes the economic importance of California's commercial fishing industry, the marine ecosystems that sustain it, and the potential impacts of offshore development on fisheries and fishing communities. The appendices provide additional resources to support public participation in regulatory and environmental review processes. [Appendix 1](#) identifies the ports and harbors included within each California port complex, and [Appendix 2](#) explains how to access fishery-specific landing and revenue data by port area and port complex.

Background: Laws & Agencies

Several federal laws and regulations provide and/or require opportunities for stakeholder involvement and input. These include; but are not limited to, the Outer Continental Shelf Lands Act (OCSLA)⁹, the National Environmental Policy Act (NEPA)¹⁰, the Coastal Zone Management Act (CZMA)¹¹, the Marine Mammal Protection Act (MMPA)¹², the Endangered Species Act (ESA)¹³, etc.

The Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE)¹⁴ govern leasing and development of federal offshore oil and gas resources (OCSLA). BOEM manages leasing, planning, and environmental review, while BSEE oversees operational safety and environmental compliance during exploration, production, and decommissioning. Notably, the Department of the Interior announced its plan to combine and absorb the functions of BOEM and the BSEE into a single federal agency called the Marine Minerals Administration (MMA) in April of 2026.

The National Oceanic and Atmospheric Administration (NOAA) and state coastal management agencies ensure that federal activities affecting coastal resources are consistent, to the maximum extent practicable, with approved state coastal management programs. NOAA's National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service protects marine mammals (MMPA) by regulating activities that may result in harassment, injury, or mortality and authorizes incidental take under specified conditions. They also have authority to protect threatened and endangered species (ESA) and their critical habitat by requiring federal agencies to ensure their actions do not jeopardize listed species.

9 43 U.S.C. §§1331 et seq

10 42 U.S.C. §§4321 et seq

11 16 U.S.C. §§1451 et seq

12 16 U.S.C. §§1361 et seq

13 16 U.S.C. §§1531 et seq

14 The Department of the Interior is reunifying the Bureau of Ocean Energy Management and the Bureau of Safety and Environmental Enforcement into the Marine Minerals Administration, which will oversee the responsible development of the nation's offshore energy and marine mineral resources with an integrated focus on safety, environmental protection and efficient oversight. <https://www.doi.gov/mma-reunification>

All federal agencies (lead agency varies by project) are required to evaluate and disclose the environmental consequences of major federal actions before decisions are made (NEPA). Collectively, these statutes and associated agency authorities are intended to create a regulatory framework in which multiple federal and state agencies contribute their respective expertise and ensure offshore energy decisions incorporate environmental science, resource conservation, state interests, and stakeholder input throughout the planning, environmental review, permitting, and operational phases of development. However, EO 14156 (National Energy Emergency) has provided a regulatory pathway for some phases of environmental review, public input, and protections for endangered species to be excluded or circumvented.

Background: Overview of California's Commercial Fishing Industry

California's commercial fishing industry is both an economic engine and a way of life. Commercial fisheries provide food security, and generate significant revenues for the State in terms of license sales, taxes and fees. They also support numerous dependent industries including processors, live bait providers, tackle and gear manufacturers and distributors. In 2024, commercial fishing, seafood processing and seafood markets contributed \$1.6 billion in total GDP and \$584.9 million in wages in California.¹⁵

The 2023 Fisheries of the United States and 2023 Fisheries Economics of the United States Reports¹⁶ estimated California's commercial fishing industry accounted for \$5.7 billion in income while supporting roughly 173,000 jobs. Thousands of fishing families, deckhands, processors, and dock workers, as well as the restaurants and businesses that depend on fresh local seafood, have a stake in healthy, productive fisheries. For 2025, the California Department of Fish and Wildlife (CDFW) reported commercial landings of over 217 million pounds, with an ex-vessel value of almost \$213 million.¹⁷

Over the last decade, California's commercial fishing ports landed approximately 2.15 billion pounds of seafood, generating \$2.19 billion in ex-vessel revenue between 2014 and 2025 (CDFW's Marine Fisheries Data Explorer, MFDE; Table 1)^{18,19} On average, this equates to 179.6 million pounds and \$182.9 million in ex-vessel revenue annually.

15 NOAA Coastal Program. ENOW data reporting. California. 2024. <https://coast.noaa.gov/enowexplorer/#/wages/livingresources/2024/06000/open>

16 <https://www.fisheries.noaa.gov/national/sustainable-fisheries/fisheries-economics-united-states>

17 <https://wildlife.ca.gov/Conservation/Marine/Data-Management-Research/MFDE/Commercial-Landings>

18 CDFW's Marine Fisheries Data Explorer (MFDE) allows the public to explore, review, and summarize California commercial landings data in terms of amount (pounds) and value (ex-vessel value) aggregated by location (or port) and or by species.

19 Note that ex-vessel revenue reflects dollars paid to commercial fishermen.

*Table 1. Total Landings of commercial seafood in California ports by value and volume from 2014 - 2025, by major port complex. Average volume and revenue show annual amounts.
(Source: CDFW MFDE, accessed June 10, 2026)*

Port Complex	Pounds		Ex-vessel Revenues	
	Total	Average	Total	Average
Eureka	195,615,166	16,301,264	\$370,700,669	\$30,891,722
Fort Bragg	65,448,378	5,454,032	\$101,336,864	\$ 8,444,739
Bodega Bay	33,445,768	2,787,147	\$115,131,383	\$9,594,282
San Francisco	164,663,516	13,721,960	\$303,307,882	\$25,275,657
Monterey	491,271,527	40,939,294	\$206,866,049	\$17,238,837
Morro Bay	32,864,232	2,738,686	\$71,724,660	\$5,977,055
Santa Barbara	667,803,672	55,650,306	\$564,521,658	\$47,043,472
Los Angeles	459,352,864	38,279,405	\$321,726,674	\$26,810,556
San Diego	44,275,750	3,689,646	\$139,539,129	\$11,628,261
Totals	2,154,740,873 lbs	179,561,739 lbs	\$2,194,854,968	\$182,904,581

The fishing communities built around ports from Eureka to San Diego reflect generations of connection to the sea. CDFW’s Marine Fisheries Data Explorer (MFDE)²⁰ shows ports in and around Santa Barbara as the state’s leading fishing port, accounting for approximately 31% of all commercial landings and 26% of total ex-vessel revenue, making it the most important port by both harvest volume and economic value. The Monterey and Los Angeles areas also rank among the state’s largest ports by landings, although Monterey generates less revenue because it primarily lands lower-value species. In contrast, the areas in and adjacent to Eureka, San Francisco, Bodega Bay, and San Diego generate relatively high revenues compared to the amount of seafood landed, reflecting a greater reliance on higher-value fisheries.

Several fisheries are particularly important to California because of the amount of seafood they produce, their economic value, or both. California market squid is the state’s largest commercial fishery by volume, accounting for approximately 13–19% of all commercial landings (by weight) between 2021 and 2024.²¹ Chinook (king) salmon consistently commands the highest price per pound, making it one of the most economically valuable fisheries despite lower harvest volumes. Dungeness crab is also a cornerstone of California’s fishing industry, ranking among the largest fisheries by landings while consistently earning the second-highest price per pound during 2021–2024. Other commercially important

20 CDFW’s Marine Fisheries Data Explorer (MFDE) allows the public to explore, review, and summarize California commercial landings data in terms of amount (pounds) and value (ex-vessel value) aggregated by location (or port) and or by species.

21 NOAA Fisheries Office of Science and Technology, Commercial Landings Query, Available at: www.fisheries.noaa.gov/foss, Accessed 07/01/2026

fisheries include pelagic species—such as northern anchovy and Pacific sardine, highly migratory species such as tuna and —as well as sablefish and other groundfish species, all of which support California’s fishing fleets, seafood processors, and coastal economies.



Understanding which fisheries are most economically important, which ports depend on them, and how California’s commercial fishing industry contributes to local and state economies helps decision-makers evaluate the potential impacts of offshore development. These impacts are not limited to ecological effects on marine species—they can also affect the livelihoods of fishermen, seafood businesses, and coastal communities. For example, research has shown that California market squid can change their behavior in response to artificial lighting associated with offshore oil and gas development.²² Because many California fishing vessels and coastal communities rely heavily on the market squid fishery, changes in squid behavior or distribution could reduce catch opportunities, resulting in economic losses for fishermen and seafood processors. If these effects persist over multiple years, they could also have broader, long-term consequences for port infrastructure, seafood supply chains, and local economies that depend on commercial fishing.

22 Marangoni, Laura FB, et al. “Impacts of Artificial Light at Night (ALAN) in marine ecosystems—A review.” *Global Change Biology* 10.

Offshore Oil and Gas Development

At its highest level, the federal offshore oil and gas program is structured as a tiered planning and environmental decision-making framework, where each successive phase builds upon the analyses and decisions that preceded it. Rather than evaluating every project independently from the beginning, BOEM/MMA progressively refines decisions as additional scientific information, engineering data, environmental analyses, and stakeholder input become available. This approach, in the absence of E.O. 14156, seeks regulatory consistency while allowing explanations and examinations of ecological conditions, engineering designs, operational risks, new scientific information, Tribal consultation, public input, and updated resource data progressively.

The following three phases have several specific processes within them, going from Notice of Intent, to draft, and then to final action. Project specific environmental impact statements or environmental assessments are the point at which analysis shifts from policy questions (i.e., planning areas, leasing schedules, etc) to determining whether a particular activity can proceed safely, what environmental impacts may occur, and what mitigation measures or operating conditions are necessary.

- **The National Outer Continental Shelf (OCS) Oil and Gas Leasing Program**– often called the “five year plan”-- establishes the federal government’s long-term strategic vision for offshore oil and gas development. It typically precedes any leasing activities.
- **The Programmatic Environmental Impact Statement (PEIS)** provides the broad environmental foundation supporting those planning decisions (concurrent with initiation of the leasing process and could represent leasing and post-leasing environmental analysis).
- **Project-specific Environmental Review**²³, once an individual lease sale has occurred and a lessee proposes activities, evaluates the unique characteristics of a proposed exploration, development and production, or decommissioning (post-leasing activity).

Together, the National Program, Programmatic EISs, and project-specific environmental reviews create a framework intended to support informed decision-making, incorporate new scientific knowledge, allow for public comment, and ensure that offshore oil and gas development remains consistent with federal law and the government’s stewardship responsibilities for public marine resources.

It is critically important for California’s coastal communities, commercial fishermen,

23 There may be an Environmental Review that precedes a lease sale. These typically take the form of an Environmental Assessment (EA).

and fishing communities to engage in public input during these processes. The public comment periods for each stage within the offshore oil and gas development processes vary, typically ranging from 30 to 90 days.

The National OCS Oil and Gas Leasing Program (O&G Program)

The O&G Program is a federal initiative designed to plan and schedule oil and gas lease sales on the OCS over a five-year period to best meet national energy needs. The 10th O&G Program for 2024 to 2029– established during the Biden administration– outlined a final plan for leasing federal offshore marine space for oil and gas development in three locations within the Gulf Region²⁴. Unless required by statute,²⁵ such as the One Big Beautiful Bill Act²⁶, an oil and gas lease sale on the OCS can only take place in accordance with the O&G Program. Figure 1, below, depicts the process for finalizing the O&G Program. **NOTE: The public comment period after the 2nd Analysis is the last opportunity for public input before the O&G Program is finalized.**



Figure 1 – Pre-lease processes for oil and gas activities. Source – Presentation from BOEM/MMA during April 30 2026 PPMC MPC meeting

The current federal administration views the 10th O&G Program as being too restrictive and initiated efforts to replace it with a significantly more ambitious and expansive plan. In April of 2025, BOEM²⁷ published a request for information on the Preparation of the 11th O&G Program. This initiated a process which led to publication of the 1st Analysis and Proposal. Yet to be completed are the 2nd Analysis and Proposal, a 3rd (final) Analysis and Proposal (the Proposed Final Program), and lastly, approval.²⁸

24 https://www.boem.gov/sites/default/files/documents/oil-gas-energy/leasing/2024-2029_NationalOCSProgram_PFP_Sept_2023.pdf

25 See Oil and Gas Leasing on the Outer Continental Shelf (BOEM June 2025) <https://www.boem.gov/oil-gas-energy/oil-and-gas-leasing-outer-continental-shelf>. Some scholars believe a Presidential Directive or Executive Order will authorize lease sales outside of the O&G Program. Note, tThe One Big Beautiful Bill Act required lease sales offshore Alaska and in the Gulf of America. Public Law 119–21 Sec. 50102

26 <https://www.congress.gov/bill/119th-congress/house-bill/1/text>

27 Most of the activities referenced in this Section were initiated by BOEM as the decision to establish the MMA had not yet been made. We refer to BOEM; but acknowledge future actions supporting oil and gas development may be initiated by MMA.

28 90 FR 17972

DRAFT PROPOSED O&G PROGRAM (DPP)—1ST ANALYSIS AND PROPOSAL²⁹

In November of 2025, BOEM published the Draft Proposed O&G Program (DPP)—1st Analysis and Proposal, which represented the largest offshore leasing plan in U.S. history, proposing a total of 34 lease sales across Alaska (21), California (6), and the Gulf (7) and reflecting a major policy realignment towards boosting domestic oil and gas energy production (and associated economic growth). Table 2 within the DPP 1st Analysis shows the proposed leasing schedule for 2026 – 2031.³⁰

The DPP 1st Analysis is a lengthy document, largely informed by Section 18 of OCSLA, provides limited information on California's fishing industry, competing marine uses, and potential environmental impacts in Chapters 8 and 9;³¹ A detailed overview of the DPP 1st Analysis is beyond the scope of this report and the 2nd Analysis has yet to be published.

The six lease sales planned off California include three in the Southern California Program Area beginning in 2027, two in the Central California Program Area beginning in 2027, and one in the Northern California Program Area starting in 2029. Figure 2 depicts each of the Areas, which together comprise waters off the full length of the California coast.

In response to this proposed leasing schedule, The PFMC submitted a public comment letter to BOEM³², recommending that *“no Planning or Program Areas should be established in the Pacific Region at this time... Leasing and development in the Pacific Region expose ecological resources and fishing communities to a risk of significant and irreparable damage. Adverse effects on fishing communities are likely to be irreversible and longstanding.”*

The leasing schedule proposed in the DPP 1st Analysis includes lease sales off California beginning in 2027. Considering the timeline outlined in Figure 1 above, publication of the *2nd Analysis and Proposal* is imminent (i.e. expected during the summer of 2026). The *2nd Analysis and Proposal* could propose removing some or all of California planning areas from the scheduled lease sales. Although unlikely, if this occurs in the 2nd Analysis, or beyond, there

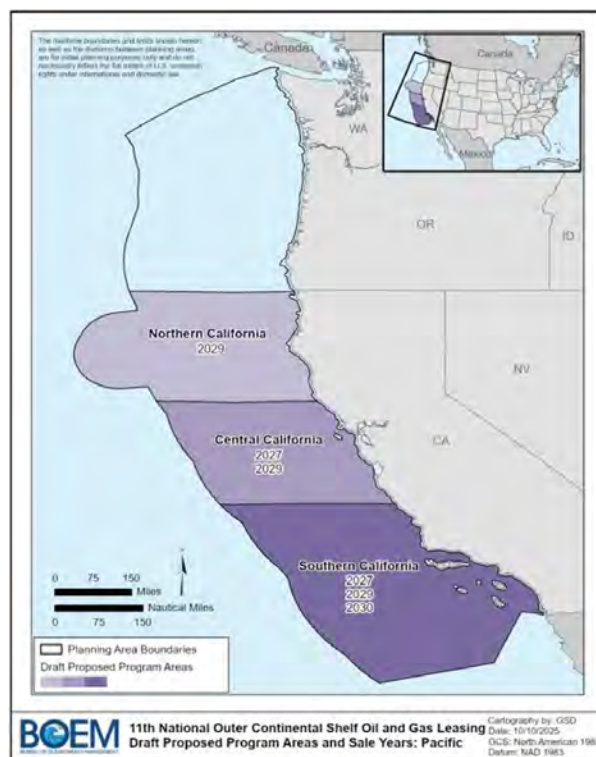


Figure 2 – California Program Areas. Source – Presentation from BOEM/MMA during April 30 2026 PFMC MPC meeting

29 <https://www.boem.gov/oil-gas-energy/national-program/11thnationalocsprogram1stanalysisandproposal>

30 Ibid

31 43 U.S.C. §1344

32 Pacific Fishery Management Council. February 2026 Comment Letter to BOEM on California Central and Southern Oil and Gas Leasing Programs. Pacific Fishery Management Council, Feb. 2026. <https://www.pcouncil.org/documents/2026/02/february-2026-comment-letter-to-boem-on-ca-central-and-southern-oil-and-gas-leasing-programs.pdf>.

would be no new activities related to oil and gas development off California. However, subsequent actions by the administration indicate that they remain focused on new California lease sales and offshore development in line with the initially proposed lease sale schedule as outlined in the DPP 1st Analysis. For example, BOEM initiated the process leading to lease sales within the Southern California and Central California Program Areas, including both a Call for Information and Nominations as well as publishing a NOI to prepare a PEIS for proposed offshore oil and gas lease sales in Northern, Central, and Southern California planning areas (Fig. 3).³³ Conducting these processes concurrent with the main planning process is unusual³⁴.

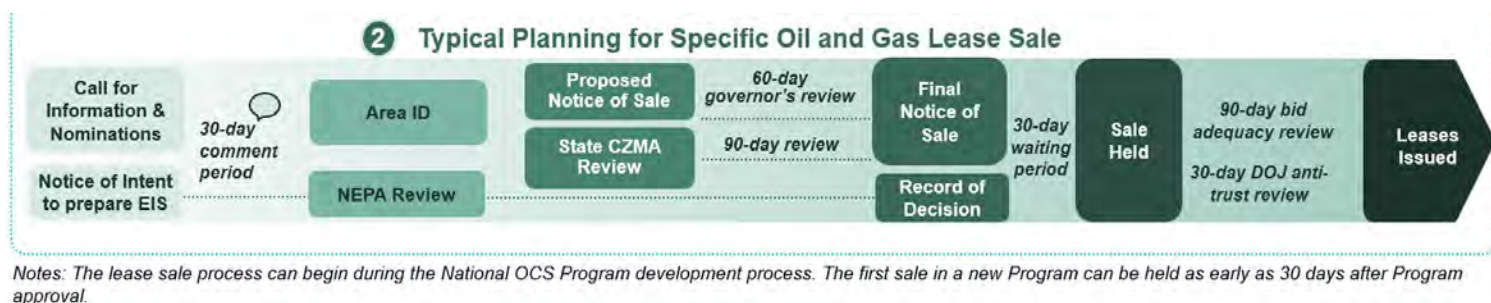


Figure 3 – BOEM/MMA planning process for Oil and Gas Lease sales. Source – Presentation from BOEM.MMA during April 30 2026 PPMC MPC meeting

Lease sales within the Southern and Central California Planning Areas

On January 27 2026, BOEM published Calls for Information and Nominations for both the Central California³⁵ and Southern California³⁶ Program Areas. Each sought “industry nominations (in acreage) for possible inclusion in these proposed sales” and “information on geological conditions, archaeological sites, potential use conflicts, areas of special concern, and other socioeconomic, biological, and environmental information.” Information and nominations received will be used to identify areas to be carried forward for analysis and potential inclusion in future oil and gas leasing. Figure 4 depicts the Central California Program Area, while Figure 5 is the Southern California Program Area.

33 The first PEIS for oil and gas development was published in August 2025 for the Gulf of America (formally Mexico) for OCS Oil and Gas Lease Sales and Post-Lease Activities. See <https://www.boem.gov/environment/environmental-assessment/final-goa-peis>. It is likely that the content will be very similar for California, but present regional specific details. It is reasonable that the frameworks and conclusions could be similar.

34 <https://www.independent.com/2026/02/20/after-public-outcry-feds-invite-oil-and-gas-companies-to-nominate-blocks-of-ocean-off-california-for-offshore-drilling/>

35 91 FR 3534

36 91 FR 3537

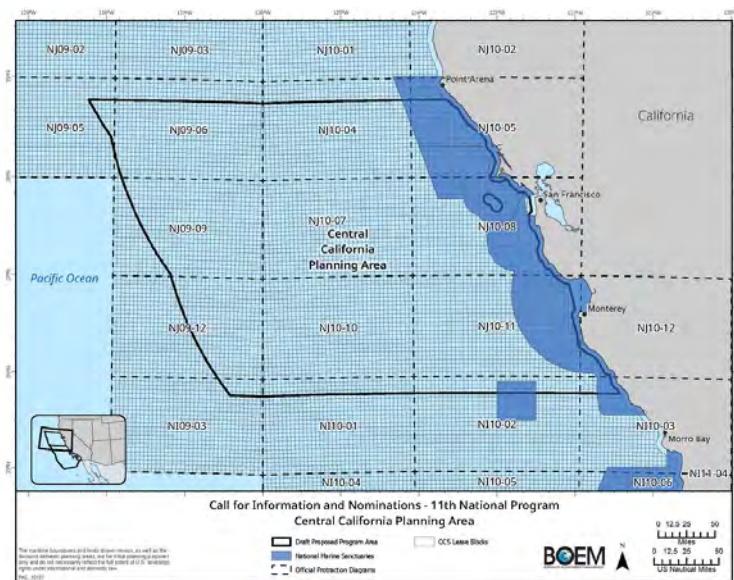


Figure 4 – Central California Program Area.
Source – BOEM Website³⁷

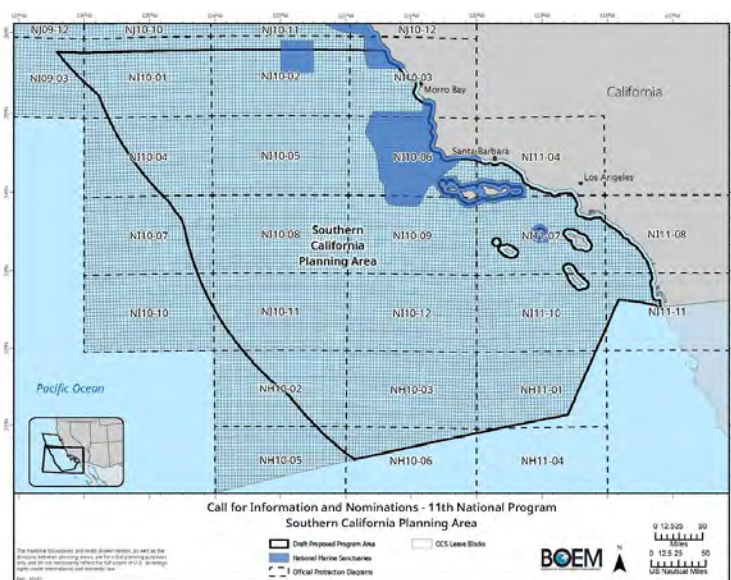


Figure 5 – Southern California Program Area.
Source – BOEM Website³⁸

On February 26, BOEM/MMA published a NOI To Prepare a PEIS for proposed oil and gas lease sales in the Northern, Central and Southern California Planning Areas of the Outer Continental Shelf. This initial step under NEPA, initiates the process to analyze a representative California lease sale. The forthcoming PEIS should examine the cumulative environmental consequences of implementing the leasing program across large geographic regions, identify overarching mitigation strategies, evaluate alternatives, and establish a common analytical baseline for future reviews. It is reasonable to assume the California PEIS will follow similar methodological frameworks and conclusions as the *Gulf of America Regional Outer Continental Shelf Oil and Gas Lease Sales and Post-Lease Activities: Final Programmatic Environmental Impact Statement* published in August 2025.

Unlike previous processes, the creation of the PEIS is happening concurrently (rather than after) the Final 11th O&G Program is published. Also new, BOEM/MMA expressed that it does not intend to publish a Draft PEIS for public review, but rather, will use information received from responses to the NOI to prepare the Final PEIS.³⁹

Figure 3 shows Area Identification as the next step in the California leasing process. Historically, future leasing Areas have been identified based on responses to the Calls for Information and Nominations. Following Area Identification, a Proposed Notice of Sale will be published; but the amount of time between the two actions remains unknown. During this timeframe, state Coastal Zone Management Act (CZMA) review will be initiated.

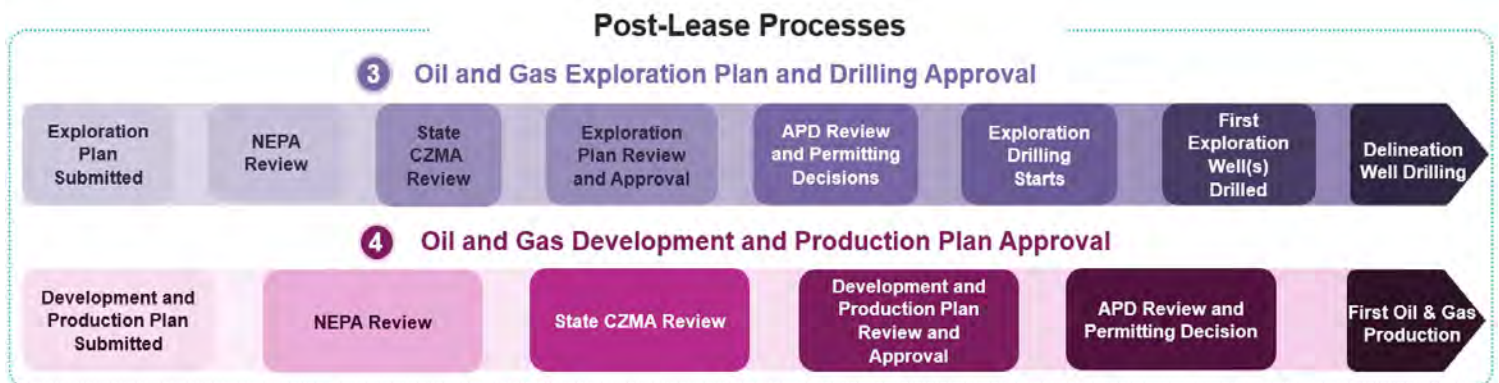
37 https://www.boem.gov/sites/default/files/images/national_program_call_for_information_and_nominations_central_nms_8x11_landscape.jpg?VersionId=FG2lvsWvLBOzg.dopbhF5pLOzqCwh0fc

38 https://www.boem.gov/sites/default/files/images/national_program_call_for_information_and_nominations_southern_nms_8x11_landscape.jpg?VersionId=pE9ob00nxYQs7guklz69PydQcGu2iL30

39 Personal communication. BOEMs presentation to the PFMC's MPC. April 30

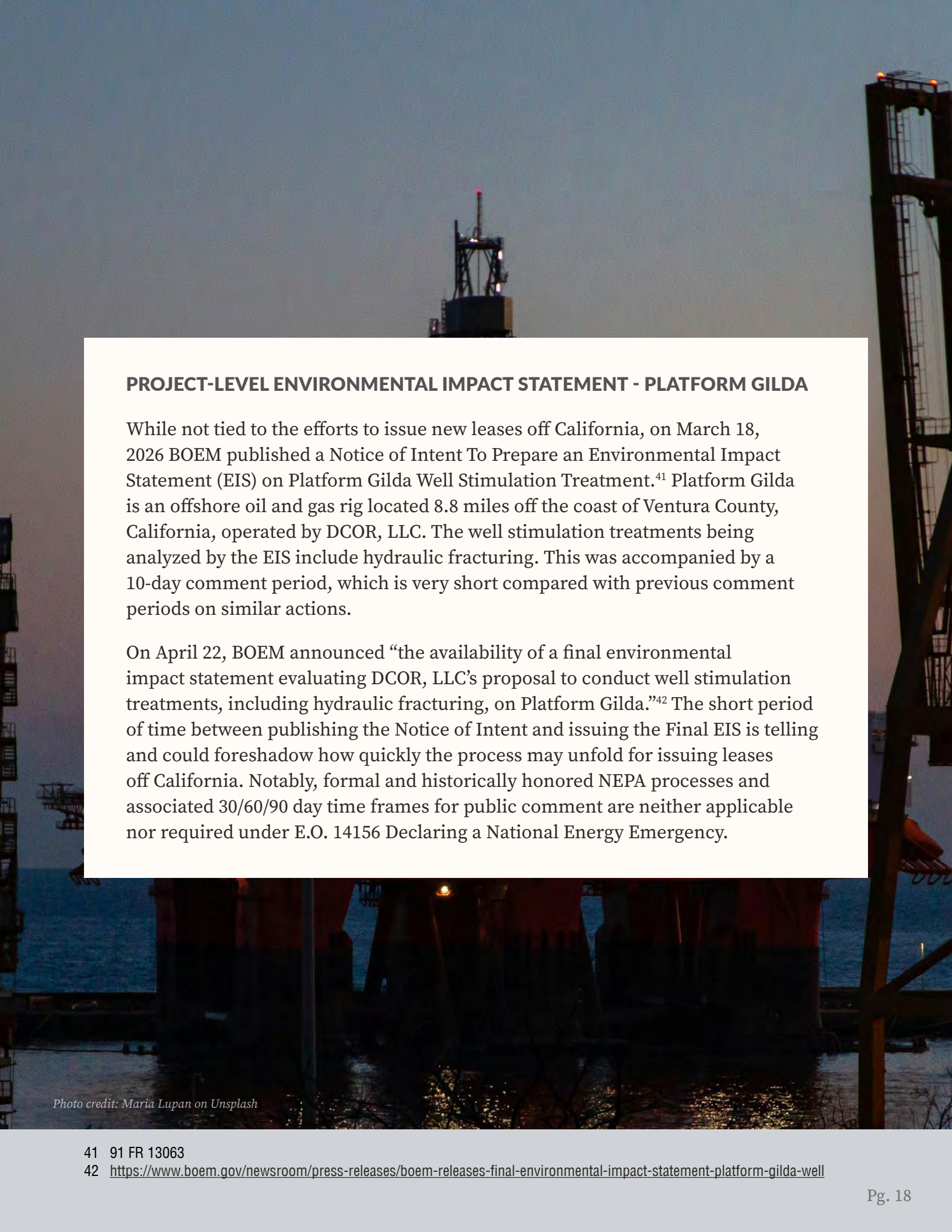
Under the CZMA, California’s Coastal Management Program gives the California Coastal Commission (CCC) the authority to review federal projects — including lease sales — for compliance with state environmental and coastal protection standards. During the CZMA review, BOEM/MMA will request a consistency certification from the CCC determining whether the proposed sale is consistent, to the maximum extent practicable, with the enforceable policies of the State’s approved coastal zone management program. In short, the Coastal Commission’s consistency review process provides the state– and the public– with an important opportunity to holistically evaluate the potential impacts to the marine environment and California fisheries from the proposed offshore oil and gas development activities, and is therefore an important opportunity for stakeholder input.

After the sale and issuance of the lease, there should be other opportunities for public engagement. Assuming past processes and procedures apply, BOEM/MMA will prepare project environmental reviews after the completion of lease related planning documents.⁴⁰ These project-specific environmental reviews build upon, rather than replace, the programmatic analyses. They evaluate the unique characteristics of a specific proposed exploration, development and production, or decommissioning activity, and incorporate NEPA guided Tribal consultations and public input. Figure 6 identifies necessary steps, including NEPA reviews (project specific environmental reviews) for post lease activities: exploration and production(drilling) activities.



Note: Government-to-Government consultations are conducted throughout all pre- and post-lease phases.
Key: APD = Application for Permit to Drill; CZMA = Coastal Zone Management Act; DOJ = Department of Justice; EIS = Environmental Impact Statement; NEPA = National Environmental Policy Act

Figure 6 - BOEM/MMA planning process post Oil and Gas Lease sales. Source – Presentation from BOEM. MMA during April 30, 2026 PFMC MPC meeting.



PROJECT-LEVEL ENVIRONMENTAL IMPACT STATEMENT - PLATFORM GILDA

While not tied to the efforts to issue new leases off California, on March 18, 2026 BOEM published a Notice of Intent To Prepare an Environmental Impact Statement (EIS) on Platform Gilda Well Stimulation Treatment.⁴¹ Platform Gilda is an offshore oil and gas rig located 8.8 miles off the coast of Ventura County, California, operated by DCOR, LLC. The well stimulation treatments being analyzed by the EIS include hydraulic fracturing. This was accompanied by a 10-day comment period, which is very short compared with previous comment periods on similar actions.

On April 22, BOEM announced “the availability of a final environmental impact statement evaluating DCOR, LLC’s proposal to conduct well stimulation treatments, including hydraulic fracturing, on Platform Gilda.”⁴² The short period of time between publishing the Notice of Intent and issuing the Final EIS is telling and could foreshadow how quickly the process may unfold for issuing leases off California. Notably, formal and historically honored NEPA processes and associated 30/60/90 day time frames for public comment are neither applicable nor required under E.O. 14156 Declaring a National Energy Emergency.

Photo credit: Maria Lupan on Unsplash

⁴¹ 91 FR 13063

⁴² <https://www.boem.gov/newsroom/press-releases/boem-releases-final-environmental-impact-statement-platform-gilda-well>

Potential Impacts to commercial fisheries and fishing communities from offshore oil and gas development

Offshore oil and gas extraction in California, especially near or south of Santa Barbara, has declined over time. Now, only 10 offshore oil and gas leases in state waters are still active, compared to more than 60 that were originally issued.⁴³ Most of these leases were approved before the 1969 Santa Barbara oil spill, which had a major impact on public opinion and state policies about offshore oil development. Today, California aims to balance energy production with protecting marine ecosystems, fisheries, Tribal resources, recreation and tourism, and other industries that rely on the ocean and support the coastal economy.

Offshore oil and gas development is an established industry that uses well-known technologies and processes.⁴⁴ When looking at the overall impact, it is important to note that some offshore structures can bring local ecological benefits but also create wider environmental or social risks. For example, offshore platforms can act as artificial reefs, provide shelter, and attract fish, making them popular fishing spots and, in some cases, offering reproductive habitat for rockfish and other species. However, these benefits can also lead to problems like the spread of invasive species, safety and access challenges, less available sea space, higher chances of gear entanglement or vessel collisions, and can push commercial fishermen into smaller areas.

Environmental reviews done under the National O&G Program and related environmental impact statements use a standard set of factors to see how offshore oil and gas activities might affect people and nature. These include: underwater and airborne noise, vessel and aircraft traffic, routine discharges, disturbance of the seafloor and land, air emissions, artificial lighting, offshore structures, competition for ocean space, and accidents like spills or equipment failures. The size, length, frequency, and area affected by these impacts depend on the stage of development, the activity, and the location, and should be considered for both biological and economic effects.

Biological impacts depend on the sensitivity of affected species, the extent to which activities overlap with important habitats, and the duration of exposure. The most at-risk species are those dependent on EFH, spawning grounds, migration corridors, or nursery areas in areas targeted for oil and gas development that can disproportionately affect their survival, reproduction, feeding, or recruitment. While some impacts are temporary and localized, others, particularly marine life in deep-water benthic habitats, such as rockfishes and sablefish, are more vulnerable to the adverse effects of oil and gas development. It is important to weigh both the possible ecological benefits and the tradeoffs when evaluating biological impacts over the course of a project. The next sections outline the main factors

43 <https://www.slc.ca.gov/oil-gas/leases/#cawaters>

44 Yang, Jin. "The development and prospect of the offshore oil and gas industry." *Advances in Resources Research* 1.1 (2021): 1-12.

associated with offshore oil and gas development and explain how each connects to key biological stressors, sensitive marine resources, and California commercial fisheries most likely to experience adverse effects.

► NOISE AND VIBRATION

Noise from seismic surveys, drilling, hydraulic fracturing, and other offshore activities can displace marine mammals and fish and disrupt feeding, breeding, and migration. Species such as marine mammals, salmon, and herring rely on acoustic cues, making them vulnerable to behavioral changes ranging from temporary avoidance to chronic stress and reduced reproductive success. Altered migration patterns of protected species could affect fisheries if they change where protected species overlap with fishing gear, while disruptions to salmon or herring behavior may reduce catch opportunities and shift fishing effort. Because the last major commercial seismic surveys specifically for oil and gas exploration off the coast of California took place in the 1980s, **new west coast leasing may precipitate substantial, prolonged new seismic surveying**, as drilling companies seek to characterize the subsea resources and plan development activities. (See [Appendix 3](#) for more on seismic surveys)

► VESSEL TRAFFIC

Increased vessel traffic and associated acoustic pollution may disturb marine mammals, increase collision risk, and alter fish behavior in heavily trafficked areas.⁴⁵ Changes in whale distribution or behavior may increase the spatial overlap between migrating whales and commercial Dungeness crab gear, elevating entanglement risk and increasing the likelihood of seasonal management measures such as delayed openings, depth restrictions, gear reductions, or fishery closures.⁴⁶

► POLLUTION

Discharges from the exploration, construction, and drilling stages can free materials from the seafloor and result in cuttings containing heavy metals and toxic chemicals. This, in turn, can degrade water quality, contaminate sediments, and bioaccumulate in the food web potentially impacting species higher up in the food chain. Dungeness crab, sablefish, and nearshore groundfish may exhibit moderate to high susceptibility where exposure is prolonged.

► HABITAT DESTRUCTION OR IMPAIRMENT

Construction of offshore platforms, pipelines, anchors, and drilling activities can

45 Erbe, Christine, et al. "The effects of ship noise on marine mammals—a review." *Frontiers in Marine Science* 6 (2019): 606.

46 Dungeness crab fishery is one of California's highest-value commercial fisheries and supports numerous fishing businesses and coastal communities. Increased management actions resulting from indirect effects of acoustic pollution from vessels or exploration activities (seismic blasting) can have disproportionate impacts on California's fishing businesses and coastal communities. See California Department of Fish and Wildlife. "Whale Safe Fisheries." California Department of Fish and Wildlife, <https://wildlife.ca.gov/Conservation/Marine/Whale-Safe-Fisheries>. Accessed 3 July 2026.

destroy or alter critical habitats, which are critical for many fish species.⁴⁷ Additionally, sediment plumes caused by drilling can smother benthic organisms and reduce biodiversity. In the deeper sea, benthic organisms are known to be slow growing, so recovery times are long.⁴⁸

► LIGHTING

Artificial lighting associated with offshore platforms can alter fish behavior, predator-prey interactions, and aggregation patterns of marine organisms. California market squid exhibits moderate to high behavioral susceptibility to artificial lighting and also represents the state's largest commercial fishery by harvest volume. Changes in squid distribution or behavior could reduce catch efficiency and landings, resulting in economic impacts to harvesters, processors, and coastal communities that depend heavily on this fishery.⁴⁹

Offshore oil and gas development also influences fishing operations, seafood markets, and the well-being of coastal communities. Changes in fish behavior or habitat quality can lower catch rates and make fishing less efficient, even if the total number of fish stays the same.

Displacement from traditional fishing grounds due to safety zones, infrastructure, or conflicts with offshore activities may increase travel distances, fuel consumption, operating costs, and competition within remaining fishing areas. Fishing ports are more than just places to dock boats—they hold years of local knowledge, important infrastructure, seafood processing, and community identity. Prolonged reductions in fishing opportunity or access can affect not only fishermen but also processors, gear suppliers, seafood markets, restaurants, fuel docks, ice plants, and tourism-dependent businesses. Even relatively small reductions in fishing access can have significant economic impacts, especially for ports or fleets with limited alternative fishing opportunities.

When assessing these impacts, it is important to consider the value of commercial catches, the extent to which fleets rely on certain fisheries, cultural importance, and the ability of fisheries to adapt. Under OSCLA, evaluations should look at both the direct economic effects on fisheries and the overall resilience of California's fishing communities.⁵⁰ These impacts need to be measured over time, taking into account short-term, long-term, and ongoing effects. The next sections outline the main IPFs associated with offshore oil and gas

47 Corrêa, I. C. S., E. E. Toldo Jr, and Felipe Antonio de Lima Toledo. "Seafloor geological impacts associated with drilling disturbance." *Deep Sea Research Part II: Topical Studies in Oceanography* 56.1-2 (2009): 4-11.

48 Kahn, Amanda, et al "Behaviors of sessile benthic animals in the abyssal northeast Pacific Ocean" <https://www.sciencedirect.com/science/article/abs/pii/S0967064519302401>

49 Although the squid fishery has learned to co-exist with existing oil and gas platforms in southern California, the introduction of new oil and gas development activities could strain the fishery, especially in areas, where coastal communities and port processing infrastructure depend on the fishery. In this way, spatial placement of the proposed leases and activities are crucially important.

50 The term "human environment" means the physical, social, and economic components, conditions, and factors which interactively determine the state, condition, and quality of living conditions, employment, and health of those affected, directly or indirectly, by activities occurring on the outer Continental Shelf. 43 U.S.C. §1331(i)

development and explain how each connects to key stressors on people and communities, the species or ports most at risk, and the California fisheries that are most economically vulnerable.

► **LIVELIHOOD DISRUPTION AND ECONOMIC LOSSES**

Being displaced from traditional fishing grounds can have profound impacts on fishermen, fisheries and dependent communities. In addition to displacement, negative impacts on fish stocks and the habitats they depend on can reduce catch potential, threatening food security and income.

► **SPACE USE CONFLICTS**

Primarily affect the human environment, exclusion zones and operational activities may alter fishing patterns and increase pressure on adjacent habitats. For example, reduced access may increase travel distances, fuel costs, competition within remaining fishing grounds, and operating expenses while reducing catch opportunities. Highly place-based fisheries, such as Dungeness crab, sea urchin, nearshore rockfish, and trap fisheries, often have limited opportunities to relocate because productive fishing grounds are geographically constrained.

► **LOCAL FISHING COMMUNITY CULTURAL IMPACTS**

Many of California's ports and harbors have a cultural identity tied to commercial fishing. Ports across the State support generations of fishing families, processors, seafood markets, and maritime businesses whose livelihoods depend on continued access to productive fishing grounds. Loss of access to fisheries coupled with increased competition for limited dock space and prolonged economic uncertainty can erode the network of relationships, shared values, traditions, and institutions that hold fishing communities together.

The net effects of offshore oil and gas development are primarily adverse to California's commercial fisheries, given the magnitude, duration, geographic extent, and distribution of outcomes. California's commercial fisheries vary in biological susceptibility and economic importance. California market squid (highest landing volume), Chinook salmon (high ex-vessel value per pound), Dungeness crab, sablefish, and nearshore groundfish are especially important to California's fishing communities and marine economy.

While some port complexes (Eureka, San Francisco, Bodega Bay, and San Diego) depend heavily on high-value fisheries (Chinook salmon, Dungeness crab, sablefish, and spiny lobster); others (Santa Barbara, Monterey and Los Angeles) are dependent on high-volume, lower value fisheries with substantial landings and larger seafood processing sectors. Sustained adverse impacts on fisheries that are slow to recover (rockfish), show behavioral changes affecting fishing or catch effort (marine mammals, squid, herring), or experience

high mortality (salmon), and are economically important can ripple through seafood supply chains, working waterfronts, and regional and local labor systems and service industries.

Many questions remain regarding how BOEM/MMA will consider and address the potential negative environmental, social, and economic of forthcoming oil and gas development activities. It is standard practice for programmatic and project-specific EIS to incorporate mitigation measures (compensation, spatial or temporal restrictions, etc) designed to minimize adverse impacts. It is important that California's fishing communities evaluate and provide public comment on mitigation measures proposed to validate their effectiveness. The fishing industry needs to consider how it will engage and remain vigilant to call out inadequacies that are overlooked or marginalized.



Photo credit: Arvind Vallabh on Unsplash

OIL SPILL RISK & ASSOCIATED IMPACTS

Oil spills are among the most serious risks linked to offshore oil and gas activities. They can cause death, stress, problems with reproduction and development, slower growth, contaminated habitats, changes in animal behavior, and disruptions in the food web. Sensitive species like marine mammals, seabirds, sea turtles, fish eggs and larvae, benthic invertebrates, and essential fish habitats can be affected for a long time after a spill because of contaminated sediments, toxic chemicals building up, and slow ecosystem recovery. The severity of these effects depends on how much oil is spilled, the type of oil, how long the spill lasts, the season, ocean conditions, and vulnerability of local habitats and species. In many cases, the damage can cover large areas and take years or even decades to recover.

Section 9.4 (Accidental Oil Spills) of BOEM/MMA's DPP 1st Analysis acknowledges "Accidental, small, and large spills could result" from oil and gas activities on the OCS.⁵¹ It also suggests that spills are localized to planning areas and are "statistically unexpected".⁵² It also acknowledges that "catastrophic discharge events, very large discharges of oil into the environment, can have long-term and widespread effects on marine and coastal environments. However it states that "catastrophic spill is not expected and would be considered well outside the normal range of probability" and "recent safeguards make such an event less likely to occur."⁵³ On the other hand, contemporary research indicates that human error—rather than technological mishaps—remains a leading cause of offshore oil spills, calling into question the agency's assertion of a significant decline in overall risk.⁵⁴

An additional shortcoming of the DPP 1st Analysis is that it fails to address between oil spill impacts on commercial fisheries and fishing communities, such as the long term market disruption and regulatory closures.

Oil spills can cause both immediate and long-lasting economic problems that go far beyond the area directly affected. They can (and have) lead to fishery closures, problems in seafood markets, less consumer trust, contaminated fishing gear, and ongoing financial losses for fishermen, processors, seafood sellers, and coastal communities, which can add up to devastating economic losses.

It often takes longer for fishing-based economies to recover than for the environment to heal, since market demand, fishing opportunities, and community strength may take years to return. Fisheries are often closed as a precaution to protect public health and keep seafood safe. Even after these areas reopen, people may still worry about seafood safety, which can lower demand and prices, making economic recovery slower. Other effects include higher costs from moving fishing operations, traveling farther, damaged gear, and changes to usual fishing routines. Communities that rely on fishing may also face job losses, less tourism and recreation, and harm to cultural traditions and community identity.

- On October 3, 2021 a spill of an estimated 24,500 gallons of oil offshore of Huntington Beach, California⁵⁵ resulted in a fisheries closure lasting nearly two months encompassing 650 square miles.⁵⁶
- On May 19, 2015 a ruptured pipeline resulted in a spill of an estimated 21,000 gallons offshore Refugio State Beach near Santa Barbara.⁵⁷ This caused a fisheries closure lasting nearly six weeks covering roughly 138 square miles.

51 <https://www.boem.gov/oil-gas-energy/national-program/11thnationalocsprogram1stanalysisandproposal>

52 *ibid*

53 *ibid*

54 <https://www.sciencedirect.com/science/article/pii/S026974911936676X>

55 <https://darrp.noaa.gov/oil-spills/pipeline-p00547-huntington-beach-oil-spill>

56 <https://www.nbctvlosangeles.com/news/local/fishing-allowed-to-resume-along-stretch-of-orange-county-coast-near-oil-spill/2769117/>

57 <https://www.fisheries.noaa.gov/inport/item/59392>

In 2011, Fish and Game Code Section 5654⁵⁸ was enacted and authorizes the Director of CDFW to close areas to fishing in the event of an oil spill. Prior to then a number of significant spills occurred off California, with longlasting and deleterious effects on both commercial fisheries, marine life, and local communities.

- A 2007 incident where a container ship struck the Bay Bridge and spilled 58,000 gallons of bunker fuel into San Francisco Bay;⁵⁹
- A 1990 incident off Huntington Beach where more than 416,000 gallons of crude oil spilled;⁶⁰
- A 1971 incident where 800,000 gallons of bunker fuel spilled in San Francisco Bay;⁶¹ and
- A 1969 incident that resulted in a spill of 4.2 million gallons of crude oil off Santa Barbara.⁶²

Although not affecting California, the Deepwater Horizon disaster in 2010 in the Gulf provides a stark warning of the potentially catastrophic impact of this activity on ocean ecosystems and human communities. The blowout of the Macondo well and subsequent leaking of an estimated 4.9 million barrels of oil (equivalent of 210 million gallons) before it was sealed, is the largest spill in US history. Coastal habitats are still being restored⁶³ and monitoring effects on fish populations and habitat health continue. Studies have shown significant impacts on sea birds, marine mammals, sea turtles, and reduced survival rates among commercially important species. Long-lived species of limited reproductive capacity may be particularly vulnerable.⁶⁴ One study of cumulative economic impacts from the 2010 Deepwater Horizon blowout estimated \$3.7 billion in Gulf-wide commercial and recreational fishery revenue losses.⁶⁵ Many commercially important groundfish stocks inhabiting ocean waters off California fall into that category. Notably, the safety of the Deepwater Horizon drilling rig too had been hailed by industry in advance of the disaster, with BP executives infamously flying out to the facility hours before the blowout to present the crew with a safety award.⁶⁶

58 https://leginfo.ca.gov/faces/codes_displaySection.xhtml?lawCode=FGC§ionNum=5654

59 <https://www.coastal.ca.gov/publiced/oilspills.html>

60 <https://wildlife.ca.gov/OSPR/NRDA/American-Trader>

61 <https://www.coastal.ca.gov/publiced/oilspills.html>

62 <https://response.restoration.noaa.gov/about/media/45-years-after-santa-barbara-oil-spill-looking-historic-disaster-through-technology.html>

63 The Final Joint Restoration Plan and Environmental Assessment #1: Wetlands, Coastal, and Nearshore Habitats, Federally Managed Lands, Fish and Water Column Invertebrates, Sea Turtles, Submerged Aquatic Vegetation, and Birds Restoration of the Chandeleur Islands was published in February of this year.

64 Murawski SA, Schwing PT, Patterson III WF, Sutton TT, Montagna PA, Milligan RJ, Joye SB, Thomas L, Kilborn JP, Paris CB, Faillettaz R, Portnoy DS and Gilbert S (2023) Vulnerability and resilience of living marine resources to the Deepwater Horizon oil spill: an overview. *Front. Mar. Sci.* 10:1202250. doi: 10.3389/fmars.2023.1202250

65 https://www.researchgate.net/publication/235417786_Impact_of_the_Deepwater_Horizon_well_blowout_on_the_economics_of_US_Gulf_fisheries

66 <https://www.kenan-flagler.unc.edu/news/out-of-sight-out-of-mind/>

Offshore Mineral Mining

The ocean floor is thought to have abundant deposits of nickel, cobalt, copper, manganese, titanium, and other rare earth elements. Executive Order 14285 states “*The United States has a core national security and economic interest in maintaining leadership in deep sea science and technology and seabed mineral resources.*” In support of this, the administration is aggressively pursuing establishing a U.S. based offshore mineral mining industry.

Where the proposed activity will take place informs which federal agency has authority over those activities. Mineral mining activities outside of the EEZ fall under the purview of the NOAA Administrator, or their designee, under the Deep Seabed Hard Minerals Resources Act (DSHMRA).⁶⁷ If the proposed action is within the EEZ, the Marine Minerals Administration (MMA)⁶⁸ has such authority under OCSLA. Figure 7 shows prospective regions where valued mineral resources could occur, namely ferromanganese crusts and nodules, on the seafloor, both within and outside the EEZ. These are important global repositories for metals such as nickel, cobalt, copper, and rare earth elements that have attracted interest as potential resources for deep-sea mining.

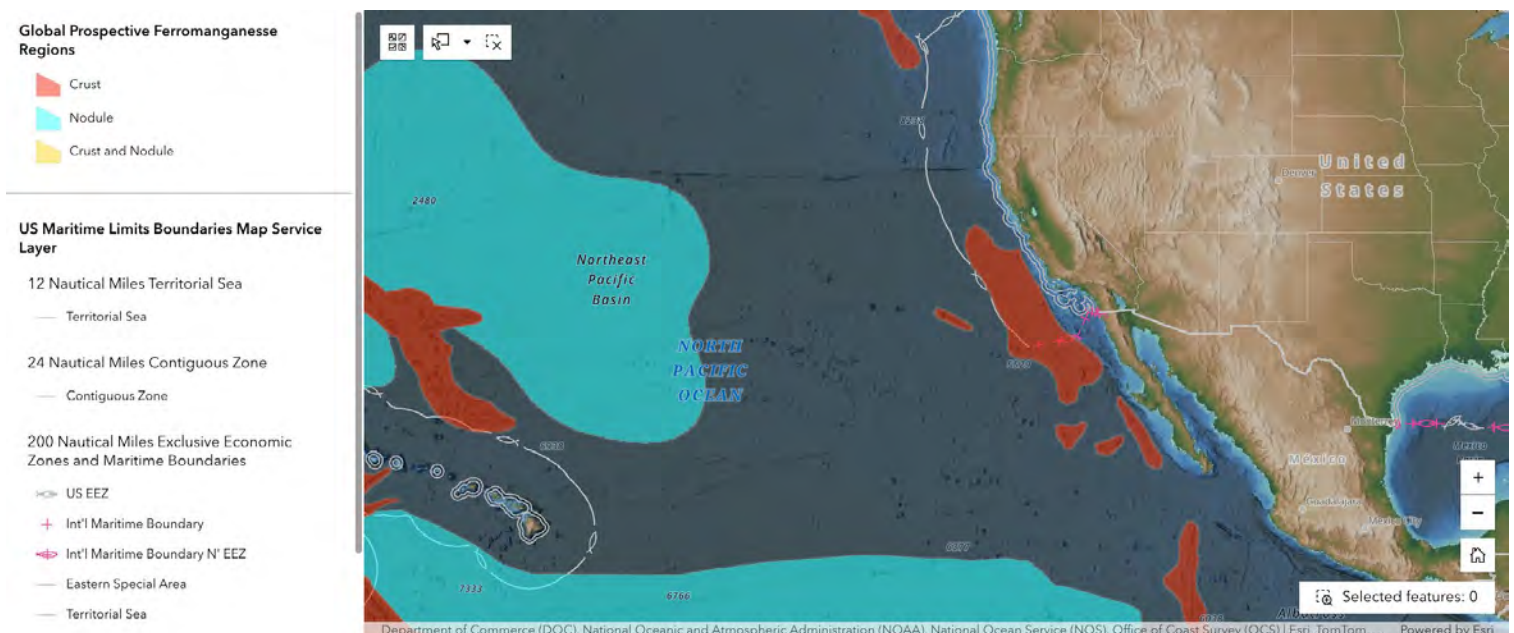


Figure 7 – Prospective Ferromanganese Regions (USGS Pacific Coastal & Marine Science Center)⁶⁹

67 30 U.S.C. §§1401 et seq

68 In April, the Department of the Interior announced its plan to combine and absorb the functions of the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE) into a single federal agency called the Marine Minerals Administration (MMA).

69 <https://geonarrative.usgs.gov/globalmarinemineraldataviewer/Prospective-Regions/World-Regions-of-Interest/index.html>

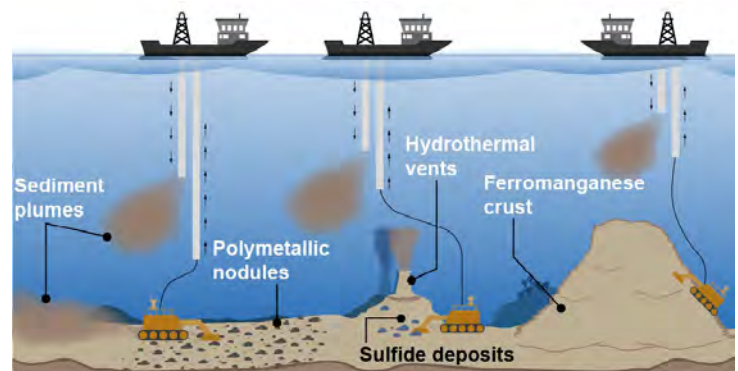
There are typically two phases associated with marine mineral mining activities – exploration and recovery/development. In describing likely activities involved with each phase we draw from other materials, including projects currently outside US waters, given the lack of operational marine mineral projects under U.S. law.

Phase One: Exploration

Exploration includes surveying and assessing mineral resources within a specific location. On June 2, 2026, NOAA noticed the receipt of an application for an Exploration License under DSHMRA.⁷⁰ The exploration license would authorize the use of advanced oceanographic survey, sampling, and environmental monitoring technologies⁷¹ to map, characterize, sample, and evaluate deep-sea polymetallic nodule resources and their environmental setting, but it would not authorize commercial seabed mining or production-scale recovery of minerals without separate approvals and environmental review. The application indicates the use of hull-mounted multibeam echosounder (MBES) for wide-area seafloor mapping operating at a frequency of 30 kHz while the AUV-mounted high-resolution MBES systems will operate at approximately 200 kHz for fine-scale bathymetric mapping close to the seafloor. The application also envisions taking core samples reaching up to 1 meter in depth.

Phase Two: Recovery/Development

The recovery/development phase includes the harvest and processing of marine minerals within the lease site. Typically, this involves vessel(s) at the surface guiding and operating 9 to 12 meter ROVs or AUVs collector vessel(s) on the seafloor. Minerals harvested on the seafloor are transported to the surface via riser tubing or pipes. Those minerals may be processed aboard the receiving vessel, in which case unwanted material would be discharged back into the sea (Fig. 8).⁷²



Source: GAO analysis of peer reviewed journal articles. | GAO-22-105507

Figure 8 - Source Science & Tech Spotlight: Deep-Sea Mining (GAO-22-105507)

70 91 FR 32957

71 Multibeam sonar, autonomous underwater vehicles (AUVs), remotely operated vehicles (ROVs), and camera systems

72 See – information on a 2022 pilot test - <https://www.allseas.com/en/who-we-are/our-fleet/hidden-gem>; information on China Minmetals collector vehicle (2024) <https://dialogue.earth/en/ocean/chinas-push-into-deep-sea-mining-gathers-speed/>; and a 2025 Hatfield Marine Science Center hosted a webinar entitled Journey into the Deep: Deep sea mining - A recording of that webinar is available here - <https://www.youtube.com/watch?v=02VPTGU7qA0>

International Offshore mineral mining

DSHMRA, enacted in 1980, serves as a statutory framework for commercial exploration and recovery of critical minerals from the international ocean floor. NOAA's National Ocean Service (NOS) reviews and processes applications for exploration licenses and commercial recovery permits, for final approval or denial by the NOAA Administrator. In January, 2026 NOAA revised regulations implementing DSHMRA, providing for a consolidated application process where an eligible applicant can apply for and obtain the exploration license and commercial recovery permit at the same time.⁷³ Previous regulations implementing DSHMRA required two separate actions and the recovery permit followed issuance of the exploration license.

Under DSHMRA, NOAA is also required to “consult with any affected Regional Fishery Management Council” if the activities “undertaken pursuant to such license or permit could adversely affect any fishery” within the EEZ.⁷⁴

To-date, there are five (5) applications for an exploration license or commercial recovery permit in an area known as the Clarion Clipperton Fracture Zone (CCZ), an area stretching 1.7 million miles, which falls under DSHMRA given it is located well outside the EEZ.⁷⁵

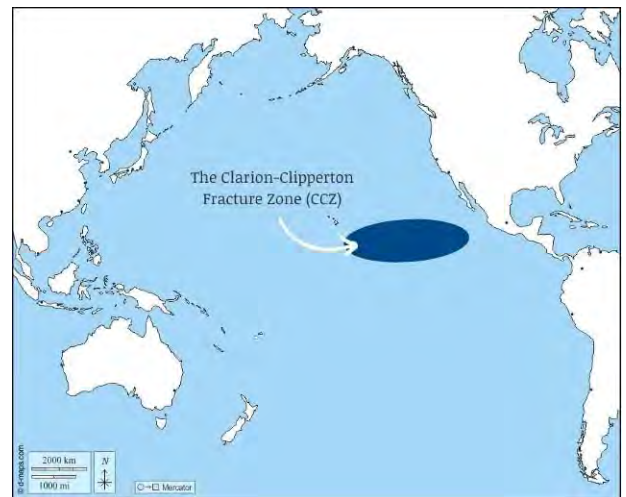


Figure 9 – CCZ (Source - <https://oceanfdn.org/>)

It is likely that mining activities within the CCZ could adversely affect west coast fisheries including those targeting Pacific bluefin tuna, north pacific albacore and other commercially important Highly Migratory Species (HMS) due to overlap with known migratory routes⁷⁶ (Fig. 9). This obligates NOAA to consult with the Pacific Fishery Management Council (PFMC).

Offshore mineral mining within the EEZ

BOEM/MMA oversees prospecting and leasing activities on the federal seabed by approving and issuing Exploration Licenses and Development Permits within the EEZ.

73 91 FR 2642

74 30 U.S.C. §1415(d)

75 The CCZ (Clarion-Clipperton Zone) is a specific geological province and international abyssal plain, whereas an EEZ (Exclusive Economic Zone) is a maritime jurisdiction belonging to a specific coastal nation; See - <https://oceanservice.noaa.gov/deep-seabed-mineral-resources/deep-seabed-mining/>

76 Amon, D.J., Palacios-Abrantes, J., Drazen, J.C. et al. Climate change to drive increasing overlap between Pacific tuna fisheries and emerging deep-sea mining industry. *npj Ocean Sustain* 2, 9 (2023). <https://doi.org/10.1038/s44183-023-00016-8>; also <https://www.nationalfisherman.com/fishing-fleets-and-deep-sea-miners-converge-in-the-pacific>

In February 2026, a notice of proposed rulemaking was published seeking to revise regulations related to offshore mineral mining within the EEZ to “eliminate unnecessary provisions, revise others for clarity, and facilitate timely prospecting, leasing, and operations.”⁷⁷ As July 1, 2026, the final revised regulations have not been published, but it is reasonable to think that language included in the Notice of Proposed Rulemaking will be adopted with minimal modifications.

On April 30, 2026, the PFMC’s Ad Hoc Marine Planning Committee (MPC) received a presentation from BOEM/MMA on its process for issuing marine mineral leases on the OCS (Fig. 10).



Figure 10 – MMA Regulatory Pathway for OCS Mineral leasing. Source – Presentation from BOEM/MMA during April 30 2026 PFMC MPC meeting⁷⁸

BOEM/MMA has published four Requests for Information and Interest (RFI) related to offshore mining in the last year, including one on June 23, 2026 covering marine waters offshore Virginia.⁷⁹ Each of the RFIs ask commenters to provide “Information regarding commercial, Indigenous, and recreational fisheries, including but not limited to, the use of the areas, the fishing gear types used, seasonal use, and recommendations for reducing use conflicts.” Each RFI had a 30-day public comment period. Subsequent processes within the NEPA review, and the proposed leasing notice, and leasing notice stage (blue boxes in Fig. 10) will also provide opportunities for public engagement, by ways of public meetings, comment, or both. To-date, no leasing activities have been initiated by BOEM/MMA for offshore mineral mining off the U.S. west coast. If initiated, or an unsolicited lease request⁸⁰ is received by BOEM/MMA, a RFI will formally start the regulatory pathways for mineral mining leasing. If this occurs, it will also be the first opportunity for the public to comment on the proposed action.

77 91 FR 8803

78 <https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.pcouncil.org%2Fdocuments%2F2026%2F04%2Fboem-mpc-update.pptx%2F&wdOrigin=BROWSELINK>

79 June 23, 2026 - Offshore Virginia (91 FR 37417) January 29, 2026 – Offshore Alaska (91 FR 3923); November 12, 2025 – offshore the Commonwealth of the Northern Mariana Islands (90 FR 50872); and June 12, 2025 – Offshore American Samoa (90 FR 25369)

80 An unsolicited lease request for mineral mining occurs when a private company or entity proposes that a government agency offer specific land or seabed for mineral extraction. These proposals are frequently used by exploration firms to secure rights to harvest valuable or critical minerals, such as heavy sands, rare earth elements, and manganese nodules. See 30 CFR § 581.11.

Potential Impacts to commercial fisheries and fishing communities from offshore mineral mining activities

Given the lack of authorized license or permits under U.S. law, we are left to rely on research and other studies to identify potential impacts. There is general acknowledgement amongst the scientific community that more research is needed to understand potential negative impacts, which would support a more informed decision making process.

DURING THE EXPLORATION PHASE

- ▶ **Noise and Light:** Noise and light generated while conducting surveys could result in fish aggregating or dispersing. Noise Frequencies utilized inform the potential for, and degree of, anticipate impacts. It could also impact the migratory patterns of marine mammals, forcing them closer to sure overlapping with important fishing grounds. A 2025 Study identifies the following: negatively impacted respiratory systems, feeding efficiency, behavior, growth, reproduction, and mortality.⁸¹
- ▶ **Spatial conflicts:** Surface vessels operating ROVs or AUVs near the seafloor increase opportunities for collision or allision. Those operations could result in fisheries being unable to operate in those areas during exploration activities. Those ROVs or AUVs could pose significant threats to trap or other bottom tending gear types.
- ▶ **Habitat impairment:** Taking core samples could impact important habitats to commercial fisheries in the form of bottom disturbance and resulting plumes.

DURING THE RECOVERY/DEVELOPMENT PHASE

- ▶ **Noise and Light:** Movement of the collector vessel(s) and all activities associated with the recovery of minerals will generate noise throughout the water column. How such noise will impact fish stocks, marine mammals, and sea turtles remains unknown. Light will be emitted at the surface and on the sea floor. This could impact marine life aggregations, feeding, reproduction, and behavior.
- ▶ **Spatial conflicts:** Not only with the vessels undertaking the activity; but other vessels that may be in the area to support those operations. The United States Coast Guard (USCG) has authority to issue navigational safety zones to restrict access. For activities related to offshore wind, the USCG implemented temporary 500 meter safety zones. It is reasonable to assume similar safety zones would be implemented around vessels engaged in offshore mining activities. Spatial conflicts could occur within ports and harbors to the extent vessels participating in the activities will have to come ashore for provisions, crew changes, etc.

81 Erratum to “Technology and equipment of deep-sea mining: State of the art and perspectives” [Earth Energy Sci. 1 (2025) 65–84] Earth Energy Science, Volume 1, Issue 2, June 2025, Pages 119 Qi Zhang, Xuguang Chen, Lubao Luan, Fei Sha, Xuelin Liu

- **Habitat destruction or impairment:** To the extent recovery/development requires digging into, or otherwise disturbing, the seafloor, species that inhabit those areas will face habitat loss. Sediment plumes will be created on the sea floor and at the location of any discharge pipes attached to the surface vessel. Those plumes could have significant impacts on benthic habitats and in the water column as those sediments disperse. Each proposed project should describe if sediment plumes will also occur at the surface.
- **Marine Food Web:** In a 2025 study, University of Hawaii researchers found that mining waste released back into the water column — including excess seawater, sediment, and particles — can create “junk food” for zooplankton in the twilight (mesopelagic) zone. If zooplankton consumes these waste particles instead of natural food, it can undernourish micronekton, which are key prey for commercially important fish stocks.⁸²

The National Marine Fisheries Service (NMFS) would be consulted should the activities proposed under a license or permit have the potential to impact Essential Fish Habitat (EFH).



Photo credit: Y S on Unsplash

Taking Action: Public engagement as a critical first step

The Actions described above are likely to result in the presence of additional offshore oil and gas extraction activities and offshore mineral extraction activities along the California coast. The agencies involved **MUST** provide ample opportunities for the public, and especially those directly affected by the proposed actions (i.e. fishermen and fishing communities, in this case) to offer their thoughts, perspectives, and comments.

This report was developed to enable potentially affected stakeholders the ability to more quickly and easily understand what's happening, the impacts of the proposed activities, and invite consideration of engaging with the process. As people who stand to be the most directly impacted, as outlined above, **your comments are critical to establish the legal standing necessary for potential litigation**, should it come to that. Given the wide range of activities that will likely be made available for public comments, we outline and describe how to draft and submit an effective comment letter. As noted above, a template developed in response to publication of the 2nd Analysis and Proposal for O&G Leasing will be prepared after it is made available.

It is understandable that participating in the processes can be daunting. However, these processes need to benefit from the knowledge and experience you and your community have gathered over the years. You should assume the authors of the documents you will be commenting on are very unfamiliar with your fishery, how it operates, what it means to the community, and how the activities proposed will impact those.

The initial step is to read the document you are considering commenting on. There are numerous examples of previously published requests for comments included in this paper. Many documents will specifically state the types of information they are seeking; and in some cases will provide questions for commenters to address. For more lengthy documents, it is not unreasonable to search out portions that specifically address fishing activities or potential impacts to ports or harbors.

After you have read the document and made the decision to submit a comment, you should determine who your response will be addressed to. Documents published in the Federal Register will always list the Agency receiving the comments and typically identify an individual to whom the comments should be addressed. Most Agencies prefer commenters submit their materials through the [Regulations.gov](https://www.regulations.gov) website.

Every comment should include a brief introduction describing who you are, the action you are responding to, and expressing appreciation for their consideration of the comments.

For example,

My name is John/Jane Doe and I am a California commercial fisherman who participates in the following fisheries: (list them here) or a member of California's fishing community (explain how here). My vessel is (describe your vessel) and I am homeported in _____, California. I appreciate the opportunity to provide comments on (identify the Agency and the action – for example, the Bureau of Ocean Energy Management's (BOEM) Notice of Intent to prepare a Programmatic Develop an Environmental Impact Statement on Oil and Gas (O&G) Lease Sales in the Northern, Central, and Southern California Program Areas).

Because the specific activities you may be considering commenting on are so diverse, there is no size fits all approach. First, are some tips on what you should do in developing your comment letter followed by things you should not do.

What TO do:

- **Be respectful.** Even if you are vehemently opposed to the proposed action, express that opposition in a respectful manner.
- **Describe your interest.** This includes identifying what area you fish out of; what fisheries you participate in and for how long; what gear types you use; your vessel (length, width, maneuverability, etc); and how dependent you are on those areas for your fisheries.
- **Describe your port.** This includes its dependence on fishing (use the information in the appendices); can it support vessels serving oil and gas and/or mining; is it dependent on transient berthing (or are transient vessels dependent on that port seasonally); what other services are available – processors, fuel docks, offloading equipment, areas for gear storage, ship yard
- **Describe how your fishery, community, port, community could be impacted.** This includes the loss of access to important fishing grounds and gear compaction as a result of having to move to other grounds. Described above are potential impacts associated with offshore mining and offshore oil and gas: review and incorporate those, as applicable. Importantly, describe how those impacts could impact YOU and/or your community.
- **Talk about social impacts.** How impacts to commercial fishing could negatively impact the culture and identity of the port/harbor and city⁸³. This should include the role of tourism in your location and how commercial fishing is integral to that. Much has been made about the seafood trade deficit and recent actions by the Administration have promised to strengthen America's seafood competitiveness.⁸⁴ By ensuring you and other

83 "The long history of commercial fishing, dating back from the beginning of abalone divers to today with local restaurants serving the fishermen's catches, showcases how fishing shaped this town into a modern day tourist destination. Not only is the fishing industry of Morro Bay a powerful link to the past, but it is also an integral part of the city's identity and provides a great sense of pride for its local residents." <https://historicalmorrobay.org/wp-content/uploads/2019/06/Hidden-History-Final-Project-Copy-1.pdf>

84 Executive Order 14276 – Restoring American Seafood Competitiveness (April 17, 2025)

members of the fishing community are able to continue harvesting a well-managed and sustainable resource, our food security benefits as well.

- **Complain.** Only if something is truly worth complaining about. If you do complain, make sure to offer a solution as well. For example, if a comment opportunity is only 10-days, that is worth complaining about. Requesting the comment period be extended should accompany that complaint.
- **Coordinate with others.** Share the burden of developing comments. Check with your local association(s) and fellow fishermen. Share this document far and wide.
- **Stay on point.** A typical analysis under NEPA will review and discuss a number of Impact Producing Factors (IPFs). These are the specific environmental, cultural, and socioeconomic outcomes that BOEM identifies as potentially affected by proposed or ongoing OCS activities. They include: Noise, traffic, routine discharges; seafloor bottom and land disturbances, emissions, lighting, visible infrastructure, space use conflict, and accidental/unauthorized events.⁸⁵ Do not feel compelled to offer thoughts on each of these; but if your fishery, or the habitats those fish depend upon, could be impacted by any of those then consider providing comments
- **Invite additional conversations.** While not expecting they will happen

What NOT to do:

- **Assume others in your community know of the comment opportunity.** If you are located in the Central California Program Area and a lease sale is proposed in important fishing grounds, make sure to advise others in your community about this and the importance of commenting.
- **Be afraid of participating.** Your inputs matter. The fishing community had a significant role in reducing areas that were considered for offshore wind in both California and Oregon.
- **Use inappropriate language.** Dock talk does not translate well in the written form.
- Make a conclusion without evidence/information in support. Do not say your crab fishery will be negatively impacted without explaining how, why, and to what degree.
- **Be overly emotional.** Offshore mineral mining and oil and gas development draw emotional responses. A little emotion can be a powerful tool in getting your point across. A letter coated in emotion is more likely to be ineffective.
- **Repeat yourself.** Say what you want or need to say and move on.
- **Complain for the sake of complaining.** As noted above, valid complaints (with solutions) are useful. Providing a laundry list of complaints with nothing else, will not be received well.
- **Assume the reader knows anything about fishing, fisheries, vessels, fishing gear, ports and harbors.**

Conclusion

As summarized in the report, the proposed future exploration, development and extraction of offshore oil, gas, and minerals poses a serious and credible threat to California's commercial fishing industry and its coastal communities. Making matters worse, effective oversight of offshore oil and gas development is increasingly at risk as the timeline, concurrent actions and lack of capacity inside government agencies increases. Recent federal actions and proposed regulatory changes have the potential to narrow environmental review, reduce opportunities for meaningful public participation, streamline permitting, and consolidate agency functions, collectively altering the institutional safeguards that have historically shaped offshore leasing decisions. At the same time, shifting federal priorities and private-sector investment away from offshore wind and toward oil and gas create market conditions that may accelerate leasing and development. Together, these changes weaken the governance framework that has traditionally provided transparency, scientific scrutiny, interagency coordination, and accountability throughout the leasing process, making it more difficult for affected communities, Tribes, fisheries, states, and other stakeholders to influence decisions before leases are issued.

In this evolving regulatory landscape, strategies to mitigate risk must extend beyond documenting environmental impacts to strengthening the broader governance systems that influence leasing outcomes. Priority actions include preserving meaningful opportunities for public engagement, supporting state, Tribal and public participation in decision-making, ensuring the best available science informs agency analyses, and maintaining rigorous administrative records capable of withstanding judicial review. Equally important are approaches that increase market and reputational risk for poorly sited or inadequately vetted projects by fostering broad coalitions among fishing communities, coastal governments, conservation organizations, industry partners, and other ocean users. These efforts can reduce investment certainty, discourage developer participation in lease sales, and reinforce the institutional and economic checks that remain available as traditional procedural safeguards evolve.

As we have seen many times in the past, fishermen and fishing communities are often excluded from opaque regulatory processes and activities, and left to fend for themselves. Therefore, it is important for potentially affected stakeholders to become educated about this expedited process, and be ready to engage and share knowledge and perspectives, particularly as it relates to offshore development activities that could profoundly impact the marine ecosystems, California's economic vitality, and fishing community way of life for generations to come.

Appendix 1 – Commercial Fishing Data

In collecting the document’s commercial fishing data, we relied on the California Department of CDFW’s MFDE.⁸⁶ We chose to use BOEM/MMA’s three Offshore Oil and Gas Planning Areas off the California Coast (see Fig 5) to most effectively present the information.

California’s commercial fishing activity is concentrated in a handful of major port complexes. CDFW groups geographically adjacent ports and harbors into nine (9) distinct Port Complexes: Eureka, Fort Bragg, Bodega Bay, San Francisco, Monterey, Morro Bay, Santa Barbara, Los Angeles, and San Diego. Regional context can help understand the overall level impact of energy development activities when activities are often proposed regionally. CDFW groups landing information in geographic complexes. For example,

The Northern California Planning Area encompasses the Eureka⁸⁷ and Fort Bragg⁸⁸ Port Complexes. The raw data for landings (in lbs) and ex-vessel revenues (in \$\$) between 2014 – 2025 are:

	Eureka		Fort Bragg		Totals	
Year	Lbs	Ex-vessel \$	Lbs	Ex-vessel \$	Lbs	Ex-vessel \$
2014	24,989,850	\$30,682,236	8,872,666	\$14,096,775	33,862,516	\$44,779,011
2015	15,569,359	\$ 14,606,125	6,640,205	\$ 11,182,585	22,209,564	\$25,788,710
2016	19,573,578	\$ 38,529,907	4,261,482	\$ 7,668,863	23,835,060	\$46,198,770
2017	14,931,531	\$ 19,512,513	5,052,178	\$ 9,449,425	19,983,709	\$28,961,938
2018	27,111,578	\$ 52,233,422	4,757,739	\$ 9,322,372	31,869,317	\$61,555,794
2019	20,106,568	\$ 39,003,572	4,159,851	\$ 6,742,877	24,266,419	\$45,746,449
2020	12,787,446	\$ 21,462,634	4,445,453	\$ 5,763,598	17,232,899	\$27,226,232
2021	13,249,317	\$ 36,655,889	5,077,973	\$ 9,062,051	18,327,290	\$45,717,940
2022	9,308,944	\$ 12,583,914	6,270,143	\$ 7,755,541	15,579,087	\$20,339,455
2023	21,476,094	\$ 43,880,389	5,960,578	\$ 7,696,037	27,436,672	\$51,576,426
2024	7,359,938	\$ 20,018,255	4,953,437	\$ 5,423,011	12,313,375	\$25,441,266
2025	9,150,924	\$ 41,531,813	4,996,673	\$ 7,173,729	14,147,597	\$48,705,493
Totals	195,615,166	\$370,700,669	65,448,378	\$101,336,864	261,063,505	\$472,037,484
Avg	16,301,264	\$ 30,891,722	5,454,032	\$ 8,444,739	21,755,292	\$ 39,336,457

86 <https://wildlife.ca.gov/Conservation/Marine/Data-Management-Research/MFDE>

87 The Eureka Port Complex includes landing information from the following ports and harbors: Crescent City, Eureka, Fields Landing, Humboldt Bay, King Salmon, Klamath, Orick, Shelter Cove, and Trinidad.

88 The Fort Bragg Complex includes Albion, Fort Bragg and Point Arena.

The Central California Planning Area encompasses the Bodega Bay⁸⁹, San Francisco⁹⁰ and Monterey⁹¹ Port Complexes. The raw data for landings (in lbs) and ex-vessel revenues (in \$\$) between 2014 – 2025 are:

	Bodega Bay		San Francisco		Monterey		Totals	
Year	Lbs	Ex-vessel \$	Lbs	Ex-vessel \$	Lbs	Ex-vessel \$	Lbs	Ex-vessel \$
2014	4,312,128	\$13,419,357	40,793,624	\$45,874,150	131,897,103	\$40,805,529	177,002,855	\$100,099,036
2015	2,161,281	\$3,915,343	15,749,210	\$16,637,252	74,057,857	\$17,521,016	91,968,348	\$38,073,611
2016	4,566,030	\$14,243,509	27,024,591	\$44,982,364	24,349,289	\$13,632,371	55,939,910	\$2,858,244
2017	3,502,829	\$13,245,372	14,163,726	\$26,329,640	24,380,584	\$13,370,311	42,047,139	\$2,945,323
2018	1,959,759	\$7,173,349	12,456,927	\$20,225,751	63,828,846	\$19,556,243	78,245,532	\$46,955,343
2019	2,751,781	\$9,553,654	8,922,239	\$23,459,232	27,430,829	\$10,068,745	39,104,849	\$43,081,631
2020	3,095,020	\$10,443,308	10,184,785	\$18,949,170	41,958,987	\$22,554,652	55,238,792	\$51,947,130
2021	2,120,018	\$10,934,695	11,054,885	\$25,674,684	49,058,513	\$32,459,159	62,233,416	\$69,068,538
2022	2,041,360	\$8,828,211	4,403,948	\$22,153,180	11,098,660	\$11,704,651	17,543,968	\$42,686,042
2023	2,161,849	\$5,182,218	4,254,780	\$13,065,315	10,399,813	\$5,768,602	16,816,442	\$24,016,135
2024	3,276,381	\$10,939,611	7,726,235	\$26,529,558	16,124,044	\$7,951,404	27,126,660	\$45,420,573
2025	1,497,332	\$7,252,756	7,928,566	\$19,427,586	16,687,002	\$11,473,366	26,112,900	\$8,153,708
Totals	33,445,768	\$115,131,383	164,663,516	\$303,307,882	491,271,527	\$206,866,049	689,380,811	\$625,305,314
Avg	2,787,147	\$9,594,282	13,721,960	\$25,275,657	40,939,294	\$17,238,837	57,448,401	\$52,108,776

The Southern California Planning Area encompasses the Morro Bay⁹², Santa Barbara⁹³, Los Angeles⁹⁴, and San Diego⁹⁵ Port Complexes. For the reader's sanity, we break this data down into separate tables. The raw data for landings (in lbs) and ex-vessel revenues (in \$\$) between 2014 – 2025 are:

	Morro Bay		Santa Barbara	
Year	Lbs	Ex-vessel \$	Lbs	Ex-vessel \$
2014	7,222,003	\$10,627,220	83,227,989	\$45,193,847
2015	3,984,002	\$10,106,069	50,248,084	\$35,186,377
2016	5,161,462	\$9,804,014	43,268,529	\$39,507,478
2017	4,875,425	\$8,787,439	95,028,659	\$65,813,413
2018	1,864,223	\$5,096,999	34,871,358	\$36,603,958
2019	1,696,151	\$6,095,613	14,428,595	\$24,427,161
2020	1,097,981	\$3,076,302	9,949,646	\$24,003,539
2021	1,115,733	\$3,388,817	39,941,268	\$43,499,618
2022	1,319,616	\$3,330,000	107,989,411	\$88,187,577
2023	1,361,409	\$3,198,890	23,543,839	\$35,603,080
2024	1,608,502	\$3,677,869	81,635,918	\$65,230,461
2025	1,557,725	\$4,535,428	83,670,376	\$61,265,149
Totals	32,864,232	\$71,724,660	667,803,672	\$564,521,658
Avg/Yr	2,738,686	\$5,977,055	55,650,306	\$47,043,472

89 The Bodega Bay Port Complex includes Bodega Bay, Bolinas, Inverness, Marshall, and Tomales Bay

90 The San Francisco Port Complex includes Alameda, Alviso, Benicia, Berkeley, China Camp, Emeryville, Foster City, Martinez, Oakland, Pacifica, Petaluma, Pinole, Princeton-Half Moon Bay, Redwood City, Richmond, Rodeo, San Francisco, San Leandro, San Rafael, Sausalito, South San Francisco, and Vallejo

91 The Monterey Port Complex includes Santa Cruz, Moss Landing, and Monterey

92 The Morro Bay Port Complex includes Morro Bay and Port San Luis

93 The Santa Barbara Port Complex includes Gaviota Beach, Guadalupe Beach, Oxnard, Port Hueneme, Santa Barbara Harbor, and Ventura

94 The Los Angeles Port Complex includes Avalon, Balboa, Catalina Island, Dana Point, Hermosa Beach, Huntington Beach, Long Beach, Marina Del Rey, Newport Beach, Redondo Beach, San Pedro, Seal Beach, Terminal Island, and Wilmington

95 The San Diego Port Complex includes Imperial Beach, La Jolla, Mission Bay, National City, Oceanside, Point Loma, and San Diego

	Los Angeles		San Diego		Totals	
Year	Lbs	Ex-vessel \$	Lbs	Ex-vessel \$	Lbs	Ex-vessel \$
2014	56,142,781	\$24,656,555	2,330,571	\$9,933,279	148,923,344	\$90,410,901
2015	15,251,994	\$11,942,018	2,549,414	\$9,305,208	72,033,494	\$66,539,672
2016	36,749,768	\$21,347,842	2,407,537	\$10,279,943	87,587,296	\$80,939,277
2017	43,568,457	\$29,300,392	2,250,380	\$9,931,691	145,722,921	\$113,832,935
2018	29,314,150	\$21,978,988	2,856,518	\$10,825,040	68,906,249	\$74,504,985
2019	25,715,552	\$20,080,592	5,137,121	\$11,616,414	46,977,419	\$62,219,780
2020	17,226,269	\$17,672,002	4,902,630	\$11,456,079	33,176,526	\$56,207,922
2021	22,528,755	\$22,321,080	4,144,018	\$18,535,948	67,729,774	\$87,745,463
2022	38,535,621	\$33,006,472	3,689,355	\$11,234,559	151,534,003	\$135,758,608
2023	37,032,150	\$32,736,714	4,757,330	\$14,131,725	66,694,728	\$85,670,409
2024	50,568,973	\$37,460,347	4,556,272	\$12,110,212	138,369,665	\$118,478,889
2025	86,718,394	\$49,223,672	4,694,604	\$10,179,031	176,641,099	\$125,203,280
Totals	459,352,864	\$321,726,674	44,275,750	\$139,539,129	1,204,296,518	\$1,097,512,121
Avg/Yr	38,279,405	\$26,810,556	3,689,646	\$11,628,261	100,358,043	\$91,459,343

Total California commercial landings for the 2014 – 2025 timeframe:

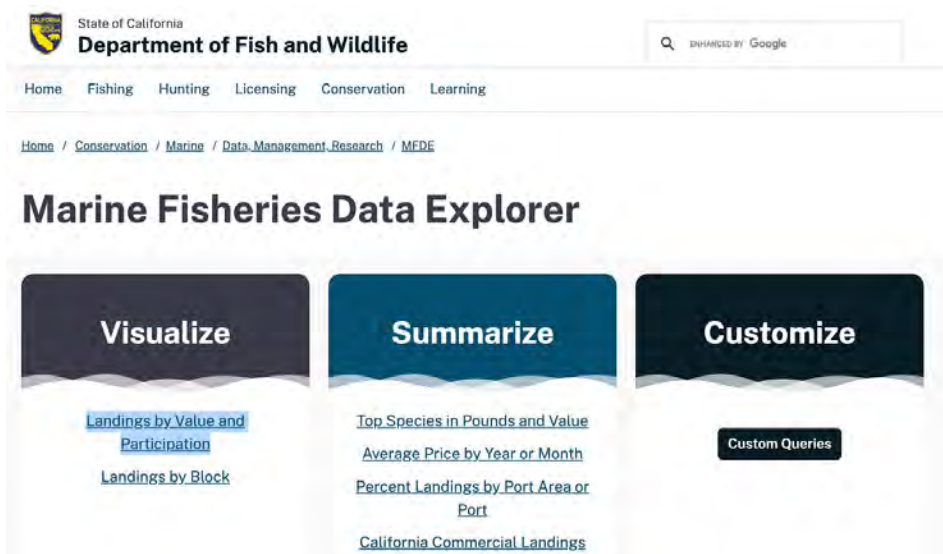
Year	Pounds	Ex-vessel Revenues
2014	359,788,715	\$235,288,948
2015	186,211,406	\$130,401,993
2016	167,362,266	\$199,996,291
2017	207,753,769	\$195,740,196
2018	179,021,098	\$183,016,122
2019	110,348,687	\$151,047,860
2020	105,648,217	\$135,381,284
2021	148,290,480	\$202,531,941
2022	184,657,058	\$198,784,105
2023	110,947,842	\$161,262,970
2024	177,809,700	\$189,340,728
2025	216,901,596	\$212,062,481
Totals	2,154,740,834 lbs	\$2,194,854,919
Avg/Year	179,561,736 lbs	\$182,904,577

Appendix 2 – Collecting Fishery Specific Data from the State of CA

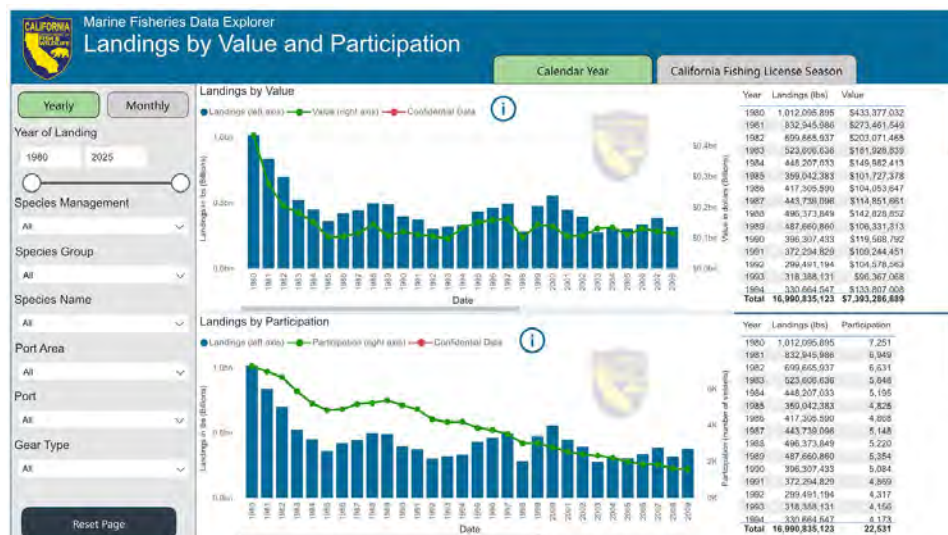
Here we describe how the reader can access fishery specific data within each Port Area/Complex using the Marine Fisheries Data Explorer (MFDE) site. This will be useful when researching or describing the value of your fishery in any comment letters you may prepare.

Step 1 – Go to CDFW’s MFDE website (<https://wildlife.ca.gov/Conservation/Marine/Data-Management-Research/MFDE>). You may be asked to check a box agreeing to the Data Disclaimer.

Step 2 – Select the “Landings by Value and Participation” tab under the Visualize Header



Step 3 - When given the option, click on the “Go Fullscreen” option. Note – it may take awhile for the next page to load.



Step 4 – Click on the drop down menus on the left side of the screen to narrow down the information presented. For example, if you were interested in seeing Dungeness crab landings between 2014 and 2025 in the Northern California offshore oil and gas Planning Area, which includes the Eureka and Fort Bragg Port Areas – you would select the following entries for the fields on the left:

- Year of Landing: 2014 – 2025
- Species Management – Marine State Managed Invertebrates
- Species Group – Crabs
- Species Name – Crab, Dungeness
- Port Area – Select both Eureka and Fort Bragg
- Port – all (unless you are looking for landing information for just a specific port)
- Gear type – all (unless you are looking for information for a specific gear type)

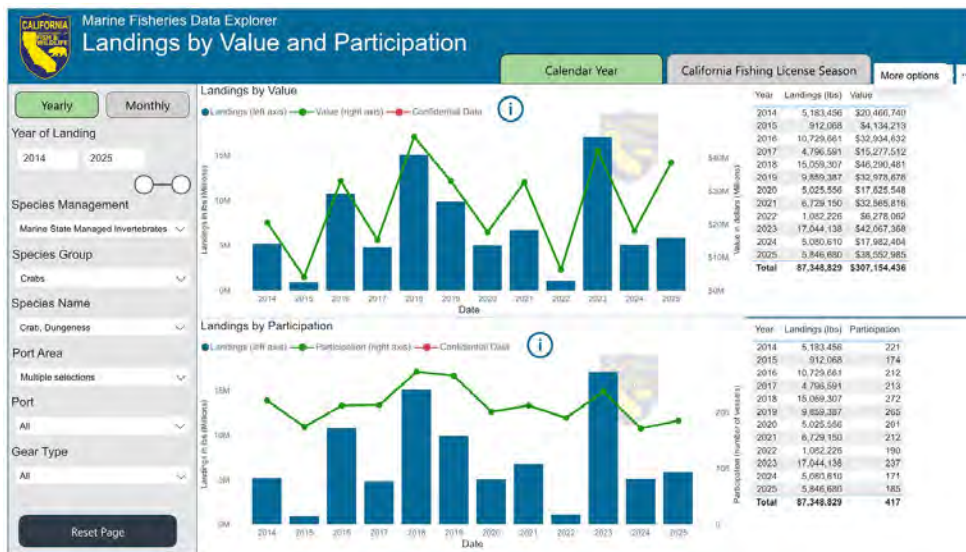
The page will automatically update to show the following:



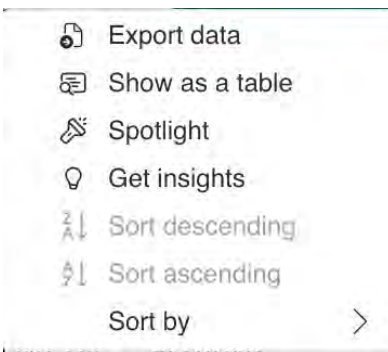
The top chart displays landings (in lbs) information in the dark colored bars and revenue values along the green line. The right-hand side of the top chart displays landings and revenues for each of the years in the query.

The bottom chart displays the same landing information in the dark colored bars and participation along the green line. Participation represents the number of unique vessels that made landings of dungeness crab in those Port Complexes/Areas over the 2014 – 2025 time frame.

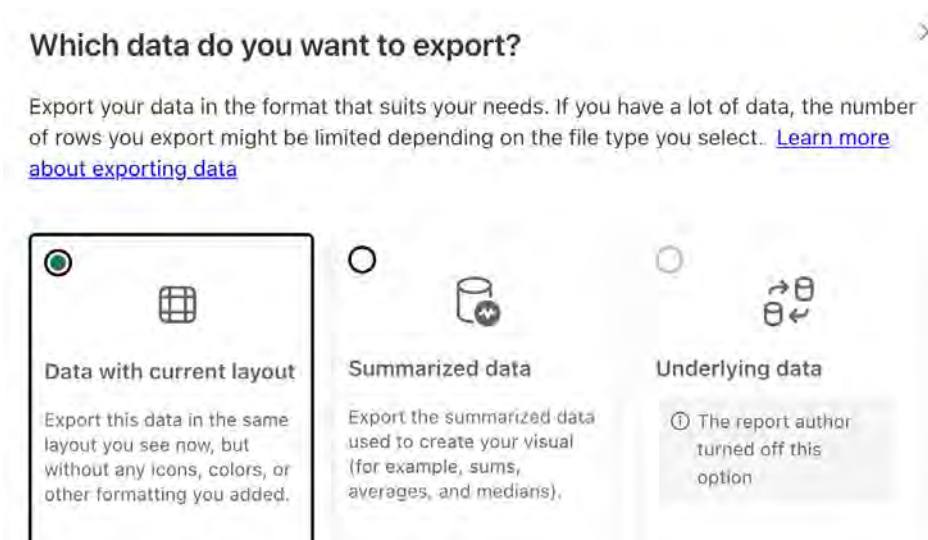
Step 5 (Optional). You can export a summary of the data into an excel spreadsheet. You would click on the three dots (...) “More Options” on the upper right side above the summarized data on the right.



Step 6 (Optional). When you click on the three dots (...) you will see the following.



Step 7 (Optional). Click the Export data option and you will see the following.



Step 8 (Optional). Click the “Summarized data” option ensuring the file format reads “.xlsx (Excel 150,000-row max)”. Then click “Export” to generate the Report and download.

Appendix 3 – Seismic Surveys

Offshore seismic surveys are geophysical methods that use sound waves to image the subsurface geology beneath the ocean floor, helping locate potential oil and natural gas reservoirs before drilling.

A typical seismic survey involves releasing compressed air into the marine environment, creating short, high-energy sound pulses. These pulses travel through the water and penetrate the seabed, reflecting off different rock layers. The reflected waves are recorded by towed hydrophone streamers (long cables with hundreds of sensors) that can detect signals from depths exceeding 6,000 meters.

Recent research has linked high-intensity seismic noise to dramatic short-term declines in commercial fish catch rates. A 2026 study in Australia’s Gippsland Lakes found whiting catch rates dropped by 99.9% in the first three months after a seismic survey. Some 290 days after the survey, the catch rate was still 98 per cent lower.⁹⁶ The study supports the hypothesis that seismic surveys can reduce fish availability, potentially causing economic harm to regional fishing industries.

An August 2026 study⁹⁷ acknowledges limited understanding of how marine seismic surveys may affect fish and fisheries. This study, in the South Atlantic, utilized a two decade dataset encompassing roughly 310,000 square miles of marine seismic surveys along the Brazilian coast. The study found marine seismic surveys can cause significant, measurable impacts on fish stocks, with spatial and species-specific vulnerabilities. Addressing the knowledge gaps in modeling, baseline data, and ecosystem-scale effects is critical for effective environmental management and sustainable offshore oil and gas development.

While it is clear that seismic surveys will impact marine life, the extent and duration of those impacts remain uncertain. Encouraging additional research should be a priority in addition to ensuring adequate mitigation measures (up to and including compensatory mitigation).

Offshore seismic surveys, including high-energy seismic surveys and 3D seismic surveys, are allowed in California, but are subject to strict permitting, environmental review, and operational guidelines under the California State Lands Commission.⁹⁸

96 <https://www.abc.net.au/news/2026-05-15/lower-commercial-fish-catch-linked-to-seismic-testing/106268904>

97 José Amorim Reis-Filho, Acácio Ribeiro Gomes Tomás, Domingos Garrone Neto, Eurico Noleto-Filho, Neglected impacts and modeling uncertainties of seismic surveys on fish and fisheries: Knowledge gaps and research needs, *Marine Environmental Research*, Volume 220, 2026.

98 See - <https://www.slc.ca.gov/leases-permits/geophysical/>

Appendix 4 - Biological and Ecological Effects of Oil and Gas Development Activities on Fishes

Impact Producing Factor	Primary Biological Mechanisms	Resources Most Likely Affected	Typical Magnitude	Duration
Underwater Noise	Behavioral avoidance, masking of communication, stress responses, altered migration, reduced feeding efficiency	Marine mammals, salmon, herring, rockfish, squid, larval fishes	Moderate-High	Temporary to chronic depending on activity
Vessel Traffic	Vessel strikes, behavioral displacement, wake disturbance, introduction of invasive species	Whales, sea turtles, seabirds, forage fish	Moderate	Temporary-continuous
Routine Operational Discharges	Water quality degradation, contaminant exposure, sediment contamination	Benthic invertebrates, EFH, shellfish, demersal fish	Low-Moderate (regulated)	Chronic
Seafloor Disturbance	Habitat loss, sediment resuspension, burial of benthic organisms, EFH alteration	Corals, sponges, benthic communities, rockfish habitat	Moderate-High	Long-term
Artificial Lighting	Attraction/disorientation, altered predator-prey interactions, changes in diel behavior	Squid, forage fishes, seabirds, pelagic fishes	Moderate	Continuous during operations
Offshore Infrastructure	Habitat creation (artificial reef effect), predator aggregation, invasive species colonization	Rockfish, lingcod, invertebrates, marine mammals	Mixed (Beneficial and Adverse)	Long-term
Space Use Conflict	Habitat displacement from exclusion zones and operational footprints	Fishing grounds, migratory corridors, EFH	Moderate	Long-term

Appendix 5 - Economic Effects of Oil and Gas Development Activities on Fisheries

Impact Producing Factor	Primary Economic Mechanisms	Fisheries Most Likely Affected	Typical Magnitude	Duration
Underwater Noise	Reduced catchability due to fish avoidance; altered fish distribution	Salmon, herring, groundfish	Low-Moderate	Temporary
Vessel Traffic	Navigation delays, gear conflicts, increased operating costs, safety risks	Commercial and recreational fleets	Moderate	Temporary-continuous
Routine Discharges	Perceived seafood contamination, localized fishing avoidance	Shellfish, nearshore fisheries	Low-Moderate	Chronic
Seafloor Disturbance	Loss or degradation of fishing habitat reducing productivity	Bottom trawl, fixed gear, crab fisheries	Moderate-High	Long-term
Artificial Lighting	Redistribution of target species affecting catch efficiency; potential attraction benefits for some species	Squid, pelagic fisheries	Low-Moderate (species dependent)	Continuous
Offshore Infrastructure	Loss of fishing access around safety zones; potential increased catches near reef habitat	Hook-and-line, recreational fisheries, commercial rockfish	Mixed	Long-term
Space Use Conflict	Reduced access to traditional fishing grounds; displacement; increased travel time and fuel costs	All fleets	High	Long-term