

DECOMMISSIONING and RIGS to REEFS in the PACIFIC REGION

FREQUENTLY ASKED QUESTIONS

(as of October 11, 2017)

This document contains answers to frequently asked questions (FAQs) surrounding decommissioning of federal oil and gas platforms in the Pacific Region. It contains the following category of questions: (1) Decommissioning and Platform Removal (Q1-Q5); (2) Rigs-to-Reefs (Q6-Q9); and (5) Federal Agency Roles (Q10).

These FAQs were developed by the Department of the Interior's (DOI) Bureau of Safety and Environmental Enforcement (BSEE) and Bureau of Ocean Energy Management (BOEM).

DECOMMISSIONING AND PLATFORM REMOVAL

Q1: What is decommissioning of offshore platforms?

A1: Decommissioning is the process of ending oil and gas operations at an offshore platform. Decommissioning includes dismantling and disposing of platforms and returning the ocean and seafloor to pre-lease conditions. In certain circumstances partial structure removal or toppling in place may also be considered (see more on Rigs-to-Reef below).

The Outer Continental Shelf Lands Act (OCSLA) and implementing regulations establish decommissioning obligations to which an operator must commit when they sign an offshore lease under OCSLA, including the requirement to apply for and obtain approval for subsequent removal of platforms. Outer Continental Shelf (OCS) leases typically require the operator to remove seafloor obstructions, such as offshore platforms, within one year of lease termination, or prior to termination of the lease if either the operator or the Department of the Interior deems the structure unsafe, obsolete, or no longer useful for operations.

OCSLA regulatory and lease requirements for decommissioning offshore platforms are designed to minimize the environmental and safety risks inherent in leaving unused structures in the ocean, and to reduce the potential for conflicts with other users of the Federal OCS (i.e., commercial fishing/aquaculture, military activities, transportation industry, other oil and gas/renewable energy operations, etc.).

Decommissioning an offshore platform generally entails:

- Plugging all wells supported by the platform and severing the well casings 15 feet below the mudline;
- Cleaning and removing all production and pipeline risers supported by the platform;
- Removing the platform from its foundation by severing all bottom-founded components at least 15 feet below the mudline;

- Disposing the platform in a scrap yard or fabrication yard, or placing the platform at an artificial reef site; and
- Performing site clearance verification at the platform location to ensure that no debris or potential obstructions to other users of the OCS remain.

OCSLA regulations administered by BSEE require that operators obtain approval of the platform removal methodology prior to removal of the platform through an application process. To satisfy National Environmental Policy Act obligations, a site-specific environmental review is conducted for each removal application. BSEE imposes any necessary protective mitigation measures as conditions of approval.

Q2: Have any offshore oil and gas platforms on the Pacific OCS been decommissioned?

A2: No platforms on the Pacific OCS have been decommissioned. To date, all platform decommissioning in federal waters has occurred in the Gulf of Mexico. Currently, there are 23 offshore oil and gas platforms in federal waters off southern California.

Q3 Can inactive oil and gas platforms be marked for navigation and left standing in place?

A3: In general, under OCSLA and DOI's implementing regulations, non-producing platforms must be removed because they can create serious safety, environmental, and navigational risks. Abandoned platforms may deteriorate, making them more susceptible to structural failure, or can be toppled by storms, potentially damaging neighboring active infrastructure. Under certain circumstances, a platform may remain in place for the creation of an artificial reef; this is known as reefing-in-place, which differs from abandonment of the platform.

Q4: How are platforms removed? Are explosives used?

A4: OCSLA regulations require the operator to sever bottom-founded objects and their related components at least 15 feet below the mudline before removal. Platform operators typically use one of two primary options to sever structures attached to the sea bottom - "mechanical severance" or "explosive severance." BSEE regulations do not mandate which method or tool is to be used, as not all cutting options work in every single situation. The operators use their knowledge of the facility, its components, and other parameters in coordination with their contractors to determine which method should be used. Neither method creates debris on the seafloor.

"Mechanical severance" options include abrasive-water jets, sand-cutters, diamond-wire saws, carbide-cutters, shears, and guillotine saws. In the Gulf of Mexico, where the only OCS decommissioning has occurred, mechanical methods are used in approximately 35% of all removal operations. Mechanical severance proceeds more slowly than "explosive severance" options, and may involve use of additional personnel (including divers) and/or additional equipment. Historically, the slower speed and use of additional personnel, including divers, has resulted in more injuries and higher costs when compared to explosive severance.

“Explosive-severance” options rely on the use of specially-designed bulk or shaped charges attached to the platform. Charges are made up of explosive material with specific properties (i.e. velocity, density, brisance, specific energy, and weight strength) to produce enough stress upon detonation to completely sever the platform’s bottom-founded components. These bottom-founded components are typically steel, pipe-like targets of varying diameters and wall thickness, depending on the platform’s configuration and location on the OCS. An explosive charge is generally deployed from above the water surface inside the pipe-like target and set at a depth 15-25 feet below the seabed.

The use of charges with explosive weights up to 500 lbs. may be allowed but successful severance is typically effective with charges from 50 – 200 lbs. in explosive weight. As noted, explosive severance options requires fewer people and has historically resulted in fewer human injuries and lower costs compared to mechanical severance.

Q5: Does the use of explosives harm marine life?

A5: The underwater detonation of explosives does result in a shock-wave and acoustic energy that can kill or harm marine species (i.e., fish, sea turtles, and marine mammals). In addition, underwater detonation may disrupt or damage marine life established on, at, or near the platform structure. Operators, therefore, are required to mitigate risks to protected species and all decommissioning operations must comply with a variety of Federal laws and regulations designed to protect endangered and threatened species as well as marine mammals. Mitigation activities typically include the use of passive acoustic monitoring and extensive surface and aerial monitoring before and after detonations to ensure that marine mammals and sea turtles are and remain clear of impact zones. Over the past 28 years of decommissioning activities in the Gulf of Mexico, there have been no recorded adverse impacts to marine mammals and six recorded sea turtle mortalities.

Fish kills from explosive-severance activities do occur at various levels depending on the location and how long the platform has attracted marine life. Localized fish kills of species such as red snapper have been observed as a result of explosive removals. Available information indicates that the overall impact of explosive removals is limited and should not undermine current stock status or recovery strategies of managed species. (See Estimation of Fisheries Impacts Due to Underwater Explosives Used to Sever and Salvage Oil and Gas Platforms in the U.S. Gulf of Mexico, <https://www.bsee.gov/reports/safety/final-report-estimation-of-fisheries-impacts-due-to-underwater-explosives-used-to>)

RIGS-TO-REEFS

Q6: What is Rigs-to-Reefs?

A6: Rigs-to-Reefs is a process, managed by Federal and State agencies, by which operators choose to donate – rather than scrap – decommissioned oil and gas platforms to coastal States to serve as artificial reefs under the National Artificial Reef Plan. Decommissioned structures are typically toppled in place, partially removed near the surface, or towed to existing reef sites or reef planning areas. The decommissioned platforms, like artificial reefs and natural hard surfaces underwater, attract various encrusting organisms such as barnacles and bivalves which colonize on them and, in turn, attract fish and other marine life as found on natural reefs.

Q7: What is the National Artificial Reef Plan?

A7: The National Artificial Reef Plan provides guidance on various aspects of artificial reef use, including types of construction materials, and planning, siting, designing, and managing of artificial reefs for the benefit of aquatic life.

The Department of Commerce, under the auspices of the National Oceanic and Atmospheric Administration (NOAA), developed the National Artificial Reef Plan in order to guide understanding of the many facets of artificial reef development and use, including the roles of Federal, State, and local governments. Required under the National Fishing Enhancement Act of 1984, NOAA most recently updated the Plan in 2007 (in coordination with Atlantic, Gulf, and Pacific States Marine Fisheries Commissions, as well as interested State and Federal agencies).

The Plan is intended to respond to the information needs of a wide variety of users, including reef regulators, fishery and environmental managers, prospective donors of reef material, government officials, and the general public by facilitating effective artificial reef programs and performance monitoring. The Plan emphasizes the use of the most recent and best information available, establishes standard terminology to improve communication between parties interested in reefs, and assists in developing more uniform permitting procedures and clear guidance on materials acceptable for construction of marine artificial reefs. The U.S. Army Corps of Engineers is responsible for permitting the placement of decommissioned platforms as artificial reefs under section 10 of the Rivers and Harbors Act of 1899. The Plan also encourages the States to develop plans for artificial reefs in State waters and to participate in the planning for reefs in nearby Federal waters.

Q8. Does California have a Rigs-to-Reef program?

A8. In 2010, AB 2503 (Perez) enacted the California Marine Resources Legacy Act to authorize the state of California to take title to a decommissioned offshore oil and gas structure that has been converted into an artificial reef, under specified requirements. These requirements include, but are not limited to the California Ocean Protection Council making a determination that such a conversion provides a net benefit to the marine environment, the California State Lands Commission making a determination of the cost-savings, and the California Department of Fish and Wildlife (CDFW) agreeing to take on management of the reef. CDFW would have final word on approving any proposal for reefing a platform. AB 2503 also created the California Endowment for Marine Preservation (Endowment), as a non-profit corporation, to be funded by a specified portion of the cost savings realized by an oil and gas platform owner/operator. The Endowment would be governed by a five-member board, including two ex-officio members, and three members appointed by the Governor, the Speaker of the Assembly, and the Senate Rules Committee, respectively. The funds would be used to establish a permanent source of funding for projects that conserve, protect, restore, and enhance marine resources.

Q9. Who decides whether to reef a decommissioned platform?

A9. The decision to pursue donation of a decommissioned platform to a coastal State under the Rigs-to-Reefs process is optional and completely at the discretion of the lessee. The intent to do so must be outlined in the company's decommission application to BSEE.

FEDERAL AGENCY ROLES IN RIGS-TO-REEFS

Q10: What are the roles of the U.S. Department of the Interior, the U.S. Department of Commerce, the U.S. Army Corps of Engineers, the U.S. Coast Guard, and the U.S. Environmental Protection Agency in Rigs-to-Reefs?

A10: The **U.S. Department of the Interior (DOI)** has authority under OCSLA to manage the responsible development of conventional and renewable energy resources and marine minerals. With the reorganization of the Department of the Interior's Mineral Management Service, the role of DOI in Rigs-to-Reefs was split, as follows:

Within DOI, the **Bureau of Safety and Environmental Enforcement (BSEE)** is responsible for regulatory, safety, environmental and conservation compliance for the development of the nation's offshore oil and gas and renewable energy resources. BSEE ensures the regulatory requirements for decommissioning of oil and gas platforms are met. These regulations allow the appropriate conversion of decommissioned platforms to artificial reefs when such platforms are permitted for that purpose by the U.S. Army Corps of Engineers and the accepting state.

The **Bureau of Ocean Energy Management (BOEM)**, also within DOI, conducts the environmental review required under the National Environmental Policy Act for the removal of obsolete structures in support of the approval issued by BSEE. BOEM also has an ongoing environmental sciences program to, among other things, complete studies regarding the potential environmental impacts of DOI authorized activities such as decommissioning.

The U.S. Army Corps of Engineers (USACE) permits structures or work in or affecting navigable waters of the United States pursuant to section 10 of the Rivers and Harbors Act of 1899 to prevent obstruction to navigation by artificial islands, installations, and other devices. Also under section 404 of the Clean Water Act, USACE regulates the placement of dredged or fill material (which includes the placement of an artificial reef), in the waters of the United States. USACE permitting applies to placement of decommissioned platforms.

The U.S. Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) implements the National Artificial Reef Plan, working with State and Federal agencies to promote responsible and effective artificial reef use based on the best scientific information available. NOAA serves in a consultative role for activities such as providing comments on the creation, siting, and permitting of artificial reefs as well as standards for the transfer, cleaning, and preparation of certain reef materials.

Under Section 7 of the Endangered Species Act, action agencies consult with FWS and NOAA on actions that may affect listed species. Decommissioning activities typically require Section 7 consultation.

NOAA also has responsibility for implementation of the Marine Mammal Protection Act (MMPA). This act directs NOAA to allow, upon request, the incidental taking of small numbers of marine mammals within a specified geographical region if certain findings related to negligible impacts and subsistence

use are made. Typical areas of concern with regard to MMPA include vessel strikes and noise-producing activities. The U.S. Coast Guard's responsibility in the proper removal of decommissioned platforms addresses the safety, security, and efficiency of marine navigation. Coast Guard regulations provide that any solid structure must have a minimum clearance of 85 feet and be marked with navigational buoys.

FOR MORE INFORMATION, PLEASE VISIT THE FOLLOWING WEBSITES:

**U.S. Department of the Interior, Bureau of Safety and Environmental Enforcement
Decommissioning Offshore Platforms**

<http://www.bsee.gov/Regulations-andGuidance/Decommissioning/index1.aspx>

U.S. Department of the Interior, Bureau of Ocean and Energy Management

<https://www.boem.gov/Decommissioning/>

U.S. Department of Commerce, National Oceanic and Atmospheric Administration

Artificial Reef Plan, www.nmfs.noaa.gov/sfa/PartnershipsCommunications/NARPwCover3.pdf

Essential Fish Habitat Information, www.habitat.noaa.gov/protection/efh/index.html

Endangered Species Act and Marine Mammal Protection Act Information, www.nmfs.noaa.gov/pr/laws/

U.S. Coast Guard

www.uscg.mil

U.S. Army Corps of Engineers

www.usace.army.mil

U.S. Environmental Protection Agency

Artificial Habitat, <http://www.epa.gov/ged/coralreef/models/ArtificialHabitat.html>

Creating Artificial Reefs, http://water.epa.gov/type/oceb/artificialreefs_index.cf

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