



Workers attempt to clean a beach in California after an oil pipeline ruptured.



The Valero refinery in Port Arthur, Texas.

Offshore Drilling, Onshore Damage

Broken pipelines, dirty refineries and the pollution impacts of energy infrastructure

The Trump administration has proposed opening much of the Atlantic, Pacific and Arctic oceans off the U.S. coast to offshore oil and gas drilling. The onshore infrastructure that is needed to support expanded offshore drilling poses dangers to the environment, communities and public health.

Onshore infrastructure and impacts

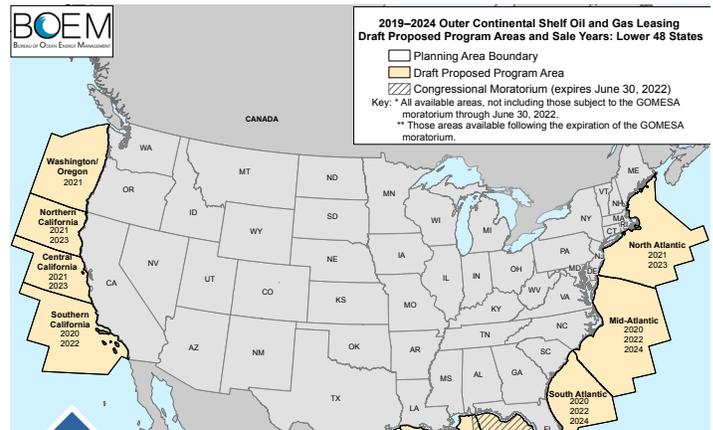
Offshore drilling requires a supporting network onshore, including pipelines to deliver oil and gas to refineries or distribution networks; refineries to produce gasoline and other petroleum products; ports for sending equipment and maintenance boats to offshore rigs; and waste disposal facilities.

Onshore infrastructure and activities that support offshore drilling create multiple risks to public health and the environment, including air pollution, groundwater contamination and oil spills.

Pipelines may damage habitat

Oil and gas produced offshore are often delivered via pipelines to onshore storage or processing facilities. More offshore oil and gas production could require the construction of new pipelines.

- Constructing pipelines can damage sensitive and fragile ecosystems such as wetlands and estuaries.
- Pipelines can fail, spilling oil. In 2015, a rupture in an underground, onshore pipeline transporting oil from drilling platforms in the Santa Barbara Channel to inland refineries spilled more than 120,000 gallons of crude oil. Oil flowed into the ocean, coated birds and mammals, and forced the closure of two state beaches.



The Trump administration has proposed opening large areas of ocean to new or expanded offshore drilling.



Oil from a ruptured pipeline coats Refugio Beach near Santa Barbara, California, in 2015.

Onshore waste disposal

Offshore drilling creates many kinds of waste, including some that may contain oil, toxic contaminants or radioactive material. These materials may be brought onshore for disposal. Transporting and disposing of this waste creates risks.

- Liquid waste may be injected into disposal wells, which are porous underground rock or sand formations. However, injection wells may leak, polluting nearby freshwater supplies.
- Other waste may be spread on soil, exposing oil to microbes capable of digesting it and diluting other contaminants. Land application may create water pollution if heavy rain or flooding washes soil off the site.

Ports and oil terminals

Ports support the production of offshore oil and gas by providing a base for the equipment and personnel needed for offshore operations and by serving as an important waypoint for waste generated at offshore drilling operations. Marine oil terminals – berths or piers where tankers can unload oil from offshore production or other sources – help move crude oil to refineries.

- Spills in ports or at oil terminals can occur during routine operations such as unloading oil from barges and tankers. From 1990 to 2013, there were eight spills of 42,000 or more gallons of oil from tankers while in port. Smaller spills can also threaten public health. Regulators issued public nuisance violations to Phillips 66 in Rodeo, California, and a ship docked at the facility for an oil sheen found on the water in 2016. People nearby complained of foul odors and more than 100 residents went to the hospital.
- Oil spills in port can be devastating for the function of the surrounding ecosystems, coating wildlife in oil and damaging estuaries that are critical for shrimp, crabs and fish.



Onshore petroleum facilities along the Houston ship channel.

Threats from oil refineries

Increased offshore oil production may require new or expanded refineries, which are a major source of air pollution.

- Even when operating normally, refineries release particulate pollution, which exacerbates asthma and has been linked to lung cancer, and pollutants that contribute to smog.
- Malfunctions at refineries can create acute air pollution episodes that threaten public health. A fire at ExxonMobil's Baytown, Texas, refinery in March 2019 led to releases of sulfur dioxide, hydrogen sulfide and benzene for more than a week.

Policy recommendations

- The Trump administration should withdraw its proposal to expand offshore oil and gas production in the Atlantic, Pacific and Arctic oceans. This will avoid the need for new or expanded onshore infrastructure, as well as the risks to marine ecosystems and beaches posed by offshore drilling itself. The nation should permanently prohibit expansion of offshore drilling and close existing offshore facilities.
- States should protect coastal areas by blocking construction of infrastructure needed to support expanded offshore drilling. States, not the federal government, control permitting and siting for onshore infrastructure.
- Federal, state and local officials should pursue public policies to reduce America's dependence on oil and gas, thus reducing the environmental threats posed by fossil fuels throughout their lifecycle.



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