Frequently Asked Questions About Oil Spills

Spill Response

Q: How many gallons of oil are in a barrel?

A: 42 gallons

Q: What is the Unified Command System? Who has authority?

A: When a significant spill occurs in California waters, state and federal agencies establish a Unified Command to oversee the response. The unified command consists of the U.S. Coast Guard and/or the U.S. Environmental Protection Agency (lead federal agencies for spills), the Office of Spill Prevention and Response (OSPR; California Department of Fish and Wildlife), and the responsible party (the spiller). The incident commanders work together to plan and direct the spill response. In case of disagreements, the federal agencies have overriding authority, though usually any differences are worked out. Spill response professionals in the incident command work together in the planning, operations, logistics and finance sections, and perform command staff positions. The National Contingency Plan calls for the responsible party to be part of the Unified Command.

Q: Who investigates the spill?

A: The U.S. Coast Guard, the U.S. EPA, and OSPR investigate spills and may seek fines and penalties according to state and federal laws and regulations. These investigations may lead to civil, criminal, or administrative charges.

Q: How do local government agencies fit in?

A: The state liaison officer, who is part of the unified command, establishes a multi-agency committee made up of local government stakeholders. Through the liaison officer, local government concerns and offers of assistance are reported to the Unified Command. If necessary, the Coast Guard may approve one local representative to serve in the Unified Command.

Q: What is an OSRO?

A: An OSRO is an Oil Spill Response Organization. Vessel owners, oil companies and others contract with these organizations to respond to oil spills. OSROs have equipment such as skimmers and boom pre-staged throughout the state, close to ports and oil facilities, in order to respond quickly to spills.

Q: How do you know where the oil came from if nobody confesses to spilling it?

A: The OSPR Petroleum Chemistry Laboratory (near Sacramento), the Coast Guard Marine Safety Laboratory (in Groton, Connecticut), as well as private analytical laboratories, use gas chromatography and mass spectrometry to produce a "fingerprint" of oil taken from wildlife or oiled habitat (spill sample). Oil samples are also taken from vessels, pipelines or facilities that were in the area at the time of the spill (source samples). Matching or chemically consistent fingerprints between spill and source samples allow us to identify the responsible party.

Q: What is boom?

A: Boom is a floating physical barrier used to contain oil spills. Boom floats on the surface of the water, but parts may extend above and below it. Because oil floats on water, the boom needs only to prevent surface movement at the top of the water to be effective. Boom is not a perfect containment device. Waves/currents can carry oil over a boom and a current may force oil under it. Boom is more effective directing oil which moves at a slight angle to the line of boom than as a barrier blocking the slick's movement. A skimmer device is often used to remove oil contained by boom.

Q: What are dispersants? How do they work?

A: Dispersants are chemicals, primarily surfactants, which are applied to spilled oil in order to break down the oil into small particles and move the particles of oil into the water column, where they will eventually be broken down by bacteria and other microorganisms into carbon and oxygen. The primary goal of dispersant use is to move the oil from the surface waters, where the oil can pose a threat to sea birds and marine mammals for up to several weeks, to the water column, where the impact to marine resources are typically measured in days.

Q: What is in-situ burning?

A: "In-situ" is Latin for "in-place," so in-situ burning means burning something where it is found. In some cases, this may be the most effective way to remove oil from the environment and protect sensitive ecosystems, but, like all response methods, it has drawbacks. Burning oil creates a noxious plume of smoke and airborne particulate matter, so this method of removing oil from water would only be considered in an area and under weather conditions in which the smoke would not affect human populations, far offshore, for example, with only offshore winds.

For a burn to work, the oil must be a certain thickness on the water to ignite, and it must be ignited within a few hours of being spilled, before the high-end, volatile chemicals evaporate. Not all oil is burnable. Specialized equipment must be readily available, and weather and oceanographic conditions must be favorable. In California, approval is required before a unified command can choose to burn spilled oil. This process involves numerous state and federal agencies, officials, and local air quality management district(s).

Q: Can you use biological agents? What are they and how do they work?

A: Biological agents, approved by the U.S. EPA and the State, can be used during spill response.

Biological agents (i.e. bioremediation) are used primarily as a final or “polishing” process to remove the remaining oil following initial cleanup activities, or in areas where the more commonly used cleanup procedures are not appropriate. Biological cleanup agents are typically chemical fertilizers that are applied to an oiled area to stimulate the growth of existing oil degrading bacteria. These bacteria will in turn breakdown the oil into carbon and oxygen. The efficacy of this process will depend on the type of oil spilled and environmental conditions.

Q: What should the public do if they see oil in a place where it shouldn’t be (a spill)?

A: Report it by telephoning (toll-free) 800-852-7550. Spills can also be reported to the Oil Spill Task Force, by calling 800-OILS-911.

Habitat and Wildlife Impacts

Q: What is NRDA?

A: NRDA is the acronym for Natural Resources Damage Assessment. NRDA investigators study the spill site and assess the amount and types of injuries to plants, fish, wildlife and their habitat as well as cultural and public-use losses. They then determine what restoration actions are needed to compensate for the injuries and estimate the cost.

Q: How does oil affect fish and wildlife?

A: Fish and wildlife can be harmed when their bodies contact oil. For aquatic birds and furred mammals, oil may cause feathers and fur to lose the ability to trap air and keep water out. These animals are then susceptible to hypothermia and reduced buoyancy. Aquatic birds that are oiled will often attempt to come ashore to escape the cold water. When oil coats fish and invertebrates, it can lead to smothering or tissue damage. There are also toxic effects from ingesting or inhaling petroleum products. Depending on the amount and type of oil ingested, fish and wildlife may die or experience a variety of toxicological effects including immune and reproductive system effects and disrupted organ function. In addition to direct effects on fish and wildlife, oil also can also contaminate and persist for long periods in the habitats upon which these animals rely.

Q: Who takes care of injured animals?

A: OSPR’s Veterinary Services unit and California’s Oiled Wildlife Care Network (OWCN) staff and volunteers care for wildlife. These groups include experienced wildlife veterinarians, scientists and rehabilitators with advanced training, who are responsible for the care of birds and animals injured by spills.

Q: What is the Oiled Wildlife Care Network (OWCN)?

A: The OWCN is a statewide network of more than 30 wildlife care organizations that consist of wildlife health professionals, care facilities, and trained volunteers. They capture, clean and rehabilitate living oiled wildlife, and collect the dead for scientific purposes. When a spill occurs near an existing wildlife facility, that facility’s operators may assist and/or provide temporary shelter for oiled animals. The OWCN is funded through OSPR’s Oil Spill Prevention Administration Fund (OSPAF) and operated by the University of California, Davis Wildlife Health Center.

Q: What process does the animal go through after capture?

A: The bird or animal is handled very carefully by experts in wildlife rehabilitation in order to limit stress while being evaluated and receiving initial First Aid treatments. Oiled birds are often hypothermic and dehydrated, so they must be warmed and given fluids as soon as possible. Once an animal is stabilized in the field, it is then transported to a primary care facility where it receives more intensive veterinary care. After the animal is medically stable (usually 24-48 hours after arrival), it is washed with warm water and an oil-dispersing detergent, dried, and held in captivity until it is healthy enough to be released to the wild. On average, this entire process requires 7-10 days.

Q: How successful is rehabilitation?

A: That depends on several variables, such as the animal's species, physical condition prior to oiling, the time of year, weather conditions, the length of time between initial contact with oil and the animal's capture, the type of oil, and whether there is an oiled wildlife care facility with trained veterinary staff nearby when it was captured. In OSPR's experience, the survival rate of animals affected by marine oil spills that reach one of our facilities alive is, on average, about 50-75 percent. However, we constantly strive to improve both the survival rate and rehabilitation process through research and working with other professionals in the wildlife care field. Having a properly-equipped and staffed care facility near the spill increases survival rates. Because of this, the OWCN has purpose-built facilities in Santa Cruz, Humboldt, Solano, Los Angeles, and San Diego counties and has agreements with facilities and vets in other areas to be on-call, in case of spills.

Volunteers

Q: Can people volunteer to help?

A: Yes, there are a variety of jobs that volunteers can safely do in response to an oil spill. Hazardous materials training may be required for some of these jobs. Each incident is unique, however, and whether or not volunteers are used during a spill response is the decision of the Unified Command. To learn more about volunteer opportunities during an oil spill, interested people may call OSPR's toll-free phone number at 800-228-4544.

Public Health and Safety

Q: What about public health?

A: The public is advised to avoid contact with the oil and to keep pets on leashes away from beaches/shorelines/riverbanks where the product has accumulated. In addition, they should not attempt to rescue oiled wildlife. Untrained individuals who attempt to rescue wildlife may cause more harm than good and may injure themselves in the process. If oiled animals are scared back into the water by pets or people, their chances of survival decrease dramatically. If someone comes in contact with the oil, he/she should wash it off with warm water and soap, baby oil, or a widely used, safe cleaning compound such as the cleaning paste sold at auto parts stores.

The safety officer in the Unified Command will set up air monitoring equipment, as needed, to identify atmospheric hazards for spill responders. He or she will provide the data collected to the Unified Command and to the local public health department, which will determine whether the human population is endangered. The local public health department is responsible for alerting the public if there is a health hazard. People may smell spilled petroleum product, even when there is no threat to public health. Some may experience headaches and/or nausea, as well. If discomfort, such as headaches, develops the affected person should consult his/her personal physician.

Q: Who would handle an evacuation of the community?

A: This is extremely rare; however, the local Office of Emergency Services (OES) would handle the evacuation of communities threatened during a spill. If the OES decides there is a risk to public health, they will tell local radio and television stations to notify the public via the Emergency Broadcast System. Local law enforcement personnel would direct the evacuation, and possibly make public address announcements from vehicles being driven through the affected area.

Q: What should people do if they think they've been exposed to toxins?

A: Contact your local Public Health Department, and then get medical attention from your personal physician, just as you would for any illness or injury. Anyone without a personal physician will be advised on further action by the health department staff.

Funding

Q: How is OSPR funded?

A: OSPR has two main funds: The Oil Spill Prevention and Administration Fund (OSPAF) and the Oil Spill Response Trust Fund (OSRTF).

The OSPAF is funded by a fee of 9.1 cents per barrel (42 gallons) on crude oil and petroleum products received at marine terminals and refineries in the state. The fee collection at refineries began with the expansion of the OSPR program in 2014, and includes oil produced within the state, or imported into the state and renewable fuels. The OSPAF is also supported by a fee on non-tank vessels (vessels of 300 gross tons or more that do not carry oil as cargo). This Fund supports the day-to-day operations of the OSPR program, primarily spill prevention, preparedness, and readiness activities, as well as the Oiled Wildlife Care Network, a program housed at the University of California at Davis for recovering and rehabilitating oiled wildlife. The OSPAF also supports oil spill prevention programs within the California State Lands Commission.

The OSRTF is used by OSPR to fund response activities in the event of an oil spill that impacts state waters, or in the event of an imminent threat of an oil spill. By law, the responsible party is liable for response costs and other spill-related expenditures from the Fund.(see Cost Recovery and Financial Responsibility below). In 1991, this Fund reserve was created through the collection of a 25-cents per-barrel fee on crude oil and petroleum products received at California marine terminals from a point of origin outside of California. It currently has a cap of $55 million. An additional $55 million in

the form of financial security is available should there be an extremely significant spill.

Q. What if you can't find a Responsible Party?

A. In the case of a "mystery spill" – where the spiller can't be identified, located, or is insolvent – a rapid response will be funded by either the state or federal oil spill response trust funds. In many cases, the state fund can be reimbursed by the federal fund. If not, and the amount is significant, the response fee may be re-imposed on the oil industry to replenish the response fund. Since the Oil Spill Prevention and Response Act of 1990 was enacted, the response fee has not been re-imposed.

Q: Who can access the State Oil Spill Response Trust Fund?

A: The OSPR Administrator (who is appointed by the Governor), has full access to the funds, and is given power to spend money for spill cleanup and remediation. The Administrator is advised by OSPR's professional staff, and works closely with numerous federal, state, and local agencies to make such determinations.

Q: Where can I get more information about California spills?

A: Visit the CDFW-OSPR Web site at www.wildlife.ca.gov/ospr