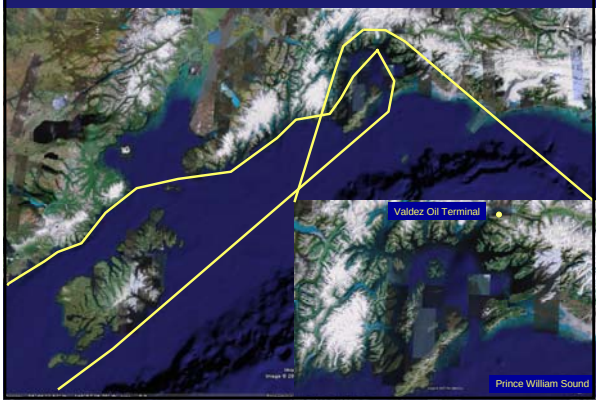
Sea Otter Capture and Transport

IWR

The ability to successfully rehabilitate sea otters during an oil spill depends on a rapid and efficient response. Such a response requires trained personnel familiar with the techniques and regulations for safely capturing and transporting sea otters.

Potential oil spill impact area



Because sea otters often inhabit remote areas of coastline, knowledge about their geographic distribution and life history is invaluable to the response effort.

The U.S. Fish and Wildlife Service (USFWS) under the Marine Mammal Protection Act has lead management responsibility for sea otters in Alaska. The capture of oiled sea otters will be conducted or supervised by experienced wildlife biologists from the USFWS and other state and federal agencies.

A rescue program should be able to initiate a response within six hours. The success of a rescue and rehabilitation program will depend on capturing oiled sea otters quickly and transporting them to a rehabilitation center.

Three levels of expertise may be involved in a capture operation: volunteers, technical professionals (vessel operators), and scientific professionals.

Safety should always be the number one priority. Capture operations should never be conducted when weather or sea conditions present a danger to personnel.

The following regulations should be implemented: U.S. Department of Transportation, U.S. Coast Guard, and state regulations for vessel operation.

U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), and state regulations for handling hazardous substances.

Personal Protective Equipment

- Rubber boots
- Rain jacket and trousers
- Rubber gloves
- Personal Floatation
- Tyvek coveralls
- Safety glasses
- First aid

Personal Protective Equipment

Wet weather clothing

Insulated/protective gloves

First aid

Warm undergarments

Personal Floatation

Immersion suits

Float coats

Life vests

Oil Exposure Protective Gear

Tyvek coveralls

Rubber and Nitrile gloves

Eye protection

Capture Equipment and Techniques

Logistical Support

Communication between capture teams, transport vessels, and rehabilitation facility is essential for a successful sea otter rescue program.

Capture and support vessels: the most efficient way to capture sea otters is to deploy 40-60 ft fishing boats with one or two skiffs each. A larger support vessel may be necessary to receive otters for transport to the rehabilitation center. It should have seawater pumping capability to clean cages and rinse down otters, and a freezer that can store 200 lbs of seafood to feed otters.

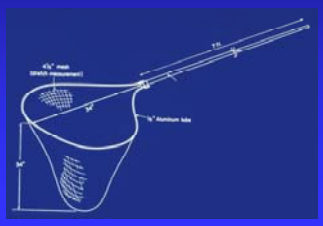
Aircraft: If the capture operation is more than fifty miles from the rehabilitation center, helicopters and floatplanes should be used to transport the sea otters.

Capturing sea otters

Three methods are currently used to capture sea otters: dip net, tangle net, and Wilson trap. The method of choice will depend on location, the activity level of the otter, level of expertise of the capture team, and ocean conditions.

Dip net

This method requires the least amount of specialized equipment. It is best suited for capturing sea otters that have hauled out or are lethargic. Adult sea otters that are feeding or otherwise attentive are least likely to be captured with a dip net.



The dip net method requires:

1) a maneuverable skiff (generally 16 to 20 feet in length)
2) a stout, long-handled salmon dip net
3) an experienced boat driver
4) a strong person to handle the dip net.

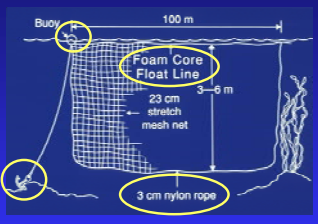
The capture boat should be equipped with Coast Guard required safety equipment.

The skiff operator approaches the sea otter at high speed and then throttlesback as the person scoops the animal into the net. The netted otter should be held against the side of the boat at the surface of the water until the skiff operator or an assistant can help bring the animal into the boat.

A sea otter that evades the skiff will be difficult to capture with a dip net. No more than five attempts should be made to capture an otter. If the animal is vigorous enough to evade easy capture with a dip net, then it probably does not require rehabilitation.

Tangle net

This passive method of capture should be used in areas of predictable or regular sea otter movements. A large number may be captured with time and patience, but this method is the least selective capture technique and requires constant monitoring.



Tangle nets should be deployed with the anchor up current so that the net will be stretched out by the flow of water.

Sea otters can drown once they become entangled. Therefore, tangle nets should be continuously monitored and the entangled otters quickly removed. If it is not possible to quickly retrieve the otters, then tangle nets should not be used.

Tangle nets should not be deployed under the following conditions: 1) in shallow water where nets can snag on rocks, 2) in stormy weather and rough sea conditions, 3) in nursery areas with many females and pups, or 4) overnight in areas with abundant sea otters.

To remove an otter, the net should be pulled across the side of the boat. The entangled animal should be lifted onto the boat and placed into a restraint box. A stuff bag (a nylon duffle bag filled with foam rubber or rags) should be pressed firmly against the otter's chest while it is untangled or the net is cut away. This physically demanding process requires two experienced people.

Tangle nets need constant maintenance. Holes should be repaired after each capture. During an oil spill, nets often become contaminated and should be washed with dish washing detergent.

Wilson trap

The Wilson trap is designed to capture sea otters resting on the water's surface. The capture team requires a minimum of four people; at least two divers, a dive tender, and a boat operator. This method of capture requires experienced personnel and would probably not be used during an oil spill.

Handling Otters on the Vessel

Sea otters are highly susceptible to capture-related stress. Therefore, handling should be minimized. Despite their sensitivity to stress, sea otters have sharp claws and powerful jaws that can inflict serious wounds. Only experienced wildlife biologists should handle sea otters.

The following equipment is required for handling these animals:

1) net bag
2) restraint box
3) leather glove
4) kennel cages
5) capture forms

Seafood and ice should be available for otters awaiting transport. Scales for weighing the animals, equipment for tagging them, and capture forms should be stored on the capture or support vessels. Daily record keeping is essential.

If a dependent pup is recovered:

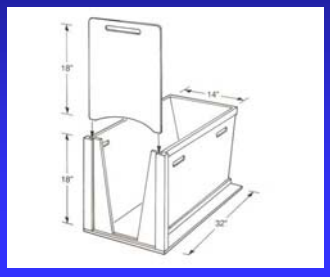
1) Keep it with the mother if at all possible
2) Transport it to the rehabilitation center as soon as possible
3) Stabilize the mother and pup
4) Avoid hypothermia or hyperthermia

Once an otter has been captured, it should be transferred to a kennel cage as soon as possible. This can take place either aboard the support vessel or on shore.

Small, lethargic otters may be moved by picking the animal up by its hind legs. The animal is held upside down, twelve inches or more in front of the handler, with its head facing away from the handler.

Each animal should be weighed and visually examined before transfer from the net or restraint box to the kennel cage. Weight, sex, estimate of age class, state of vitality, and estimated degree of oiling should be recorded on the capture data forms.

Identification tags should be attached to the hind flippers pulling the hind flippers through the sliding, vertical door at the end of the restraint box.



If a veterinarian or animal care specialist is aboard the vessel, the otter should be examined for signs of hypothermia, hyperthermia, or other medical problems. If veterinary support is not available, monitor otters for significant changes in behavior or health and record them on the capture form.

Heavily or moderately oiled otters are susceptible to hypothermia and should be placed in sheltered areas on the support vessel. Seafood should be offered to all of the otters every three hours. The time, type of food, and amount eaten should be recorded on the capture form which is sent with the otter to the rehabilitation center.

Place crushed ice in one corner of the cage to prevent dehydration.

Transport to the Rehabilitation Center

Transportation of the sea otters from the support vessel to the rehabilitation center may occur by boat, aircraft, or truck. The goal is to move the sea otter to the rehabilitation facility as quickly and safely as possible, minimizing the time between capture and treatment.

At least one person accompanying the otters should be an animal care specialist. Air temperature should not exceed 60ºF (15ºC).

Dead Otters

1. Place dead oiled otters in clear plastic bags.
2. Fill out documentation, place in ziploc bag.
3. Place dead otter bag and ziploc bag in second clear plastic bag.
4. Contact Task Force Leader with information and number of dead animals.
5. Place in cool place or refrigerate until pick-up.
6. Transport to refrigeration van, usually located at the Rehab center.
7. Deliver documentation to agency personnel.

Personal Care

1. Capturing and transporting oiled sea otters can be physically and mentally demanding.
2. Personal hygiene and proper personal care are important to avoid disease transmission.
3. No pets or other domestic animals are allowed on the capture or transport vessels. This will avoid exposing otters to domestic animal diseases.
4. Clean and disinfect your vessel before and after each trip.
5. Be sure to include all documentation and report any personal first aid incidents.

Summary

The effectiveness of a capture operation depends on pre-spill planning, quick notification of trained personnel, the ability to rapidly assess the number of otters at risk, and the efficient mobilization of well-equipped response teams. Experience from the EVOS showed that the first several weeks of a spill pose the greatest risk to sea otters. An immediate response during this critical period will ensure that the capture operation will provide the greatest benefit to the otter population, especially when the threatened population is small or endangered.

2009 Conoco Phillips and Wildlife Response Spill Drill:
A Few Lessons Learned

Support vessels and capture boats

Capture kits

Deploying tangle nets

Removing an otter from a tangle nets and placing in kennel cage

Exercise Evaluation: Areas of Improvement

- Safety could have been improved by providing shore-based members with portable radios for better communication with the vessel. Activities could have been more efficient if each vessel had been provided with capture kits. The availability and use of a GPS unit to mark locations of animals was identified as important, particularly when returning for carcass retrieval.
- Animals were not handled with care during transport and there was inconsistent use of PPE and equipment; animals were loaded into skiffs and onto fishing vessels in a rough manner that did not adequately protect the them from further harm or wind/weather.
- Some of the skiffs used during this exercise may not have been safe if the weather was less than optimal. A standard practice has been to use vessels that are maneuverable and fast. A recommendation was made to review skiff assignment, minimum specifications, and the risks associated with their use for wildlife capture and transport in more difficult weather situations.

- The animal capture and transport forms were difficult to use and time consuming to complete. These are Alaska Regional Response Team and USF&WS forms that would benefit from a review and update.
- Wildlife experts and some evaluators were concerned that vessels needed to have more trained wildlife crew members and, ideally, one expert per vessel.