

Procedure – Oil/Chemical Spill Wildlife Response – Search and Rescue

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1. Application / Scope

In the event of a major oil or chemical spill which is threatening to impact on wildlife, pre-emptive action can be taken to keep wildlife away from contaminated areas thereby reducing the number of potential casualties – see procedure [Oil Chemical Spill Wildlife Response – Pre-emptive Action](#). Where this is not possible, or wildlife has already been impacted by the spill, search and rescue operations will be required.

The aim of search and rescue is to safely capture affected animals as quickly as possible and begin early treatment and rehabilitation with a view to releasing healthy animals back into their natural environment.

A planned, coordinated and timely search and rescue response by involved agencies will maximise the success of the operation.

This procedure assists personnel involved in search and rescue operations for wildlife affected by an oil or chemical spill. It does not address activities associated with subsequent rehabilitation efforts which are addressed in separate procedural documents. Refer to procedures listed at the end of this document.

2. Abbreviations / Definitions

- JSA – Job Safety Analysis (similar to Safe Work Method Statement)
- PPE – personal protective equipment ie any clothing, equipment or substance required to protect personnel from risks of injury or sickness
- SWMS - Safe Work Method Statement (similar to Job Safety Analysis)

3. Resources / Equipment

A range of equipment and resources may be required, including:

- All-terrain vehicles for ground surveillance and rescue
- Aircraft for aerial surveillance
- Boats for surveillance and capture of some birds
- Communication equipment (mobile phone/radio)
- First aid kit/s
- Appropriate personal protective equipment (PPE) as indicated in relevant Job Safety Analysis
- Long handled nets, casting nets, seal nets/herding boards, snares (depending on affected species)
- Towels or similar (to help restrain birds or cover animals)
- Containers and cotton bags or pillow cases for carrying affected wildlife. Well-ventilated pet packs and pillow cases are suitable for birds. Stronger, more specialised containers may be required for mammals.
- Recording sheets, tags/labels and pens etc
- Camera – digital, waterproof and charged
- Suitably equipped vehicles for transporting animals to triage/first aid facilities

4. Warnings

- Search and rescue operations are affected by weather conditions, tides, poor light, slippery or otherwise dangerous surfaces (rocks, oil on the shoreline). Human safety is the highest priority and rescue attempts must not be undertaken in unsafe conditions. Risks are to be evaluated and strategies developed to deal with them ahead of rescue operations. These

are to be detailed in a Job Safety Brief for the operation, which is prepared by Operations Unit staff.

- Personnel can be affected by exhaustion, dehydration, sunburn and hypothermia and strain injuries and steps must be taken to minimise risk. Skin and eye irritation and other toxic effects must also be considered and suitable protective equipment provided.
- Rescue Crews must be made aware of the toxicity dangers of oil/chemical spills. Safety procedures are to be covered in the Job Safety Brief prior to deployment.
- Rescue Crews generally work along shorelines, often in conjunction with shoreline cleanup teams, either on foot or in vehicles, and are often required to work in or around water. Reference should be made to the following Safe Work Method Statements(SWMS)/Job Safety Analyses (JSA):
 - [Driving Vehicles](#)
 - [Boating Operations](#)
 - [Using & Transporting Quad/Motor Bikes](#)
 - [Working on and Around Water](#)
- Wildlife can be aggressive and rescue attempts should only be made by individuals trained in animal handling and provided with suitable protective equipment. Refer to the SWMS [Handling of Animals](#). Personnel handling wildlife must have a current Tetanus vaccination.
- In general, mammals have greater capacity than birds to injure humans by biting, clawing or kicking. Catching and handling of mammals, particularly larger species, is therefore challenging. Training, experience and the correct equipment are all important if capture is to proceed without injury to the animals and with minimum risk to human safety.
- Dead animals pose a contamination risk to other wildlife and to humans. Retrieval of carcasses should only be undertaken when safe. Immediate refrigeration is recommended where possible then transport to a suitable facility for necropsy. After necropsy and sampling have been undertaken, carcasses may be frozen until disposal. Museums and universities may be interested in obtaining specimens for research. If there is no scientific interest, carcasses must be disposed of in consultation with the combat agency's Waste Management Unit.
- Spread of disease is possible from animals to humans when large numbers of animals are confined in close proximity to each other.
- Wildlife rescue attempts are likely to attract public and media attention. Some situations dictate that some species or individual animals will not be rescued and information should be made available promptly. Similarly, not all carcasses will be collected for disposal if it is not safe to do so.
- Human intervention can be stressful to wildlife. To avoid more stress than is necessary, access to areas where search and rescue operations are to be undertaken should be restricted to personnel involved.

5. Procedure

To maximise the rescue effort, affected animals need to be found and captured as quickly and safely as possible (based on a risk assessment for the task), in a way that minimises distress and further injury, and delivered to a triage/first aid facility.

5.1. Pre-planning

- Search and rescue operations will be coordinated by the Rescue Divisional Commander and undertaken by Rescue Crews. Operations will be guided by the Incident Action Plan and a Job Safety Brief which will be discussed with Rescue Crews before operations commence. Operations will be based on the extent of the spill, the numbers and the location of affected wildlife and will factor in weather and tide conditions, terrain and other potential hazards and personnel safety requirements.
- Information about the location and numbers of affected wildlife may come from a range of sources including:
 - the Aviation Unit conducting routine aerial surveillance of the spill

- members of Shoreline Cleanup Crews
- members of the public and other local people such as commercial operators (dive boats, whale/dolphin watch boats and fishermen)
- National Parks and Wildlife Service regional officers, who can identify important colonies or roosting areas for wildlife and foraging distances from these areas.
- Field biologists with local knowledge who can provide useful information about where species are located
- the Oil Spill Response Atlas (OSRA), available from NSW Maritime

5.2. Search and Rescue

- Not all affected wildlife will necessarily be captured. The decision to capture will be made by Rescue Crews based on a range of considerations including criteria stipulated in the Incident Action Plan, safety, the degree of exposure to oil/chemicals, the behaviour of the animal and an assessment of whether intervention may be more harmful than doing nothing.
- Capturing affected wildlife should be done quickly, as prolonged pursuits may cause further injury or distress. Facilities for triage/first aid should be established before search and rescue teams commence operations to ensure stabilisation and treatment can begin as soon as possible after animals are captured.
- Wildlife search and rescue will be carried out by Rescue Crews of 2-4 people trained in animal handling. Each crew will be assigned a search area and will liaise closely with Shoreline Cleanup Crews who are likely to be the first to find affected wildlife. Shoreline Cleanup Crews should be instructed not to touch wildlife as capture will be undertaken by Rescue Crews.
- Sufficient Rescue Crews should be deployed to provide adequate coverage of the affected area. Crews will search assigned areas which could be on or offshore and may require personnel with training in the operation of boats and various all-terrain vehicles
- Crews will capture animals identified as requiring treatment and collect carcasses, where safe and resources are available to do so. The priority is to capture live animals.
- Beached animals should be captured first followed by those still in the water but priority may be given to the rescue of any endangered or threatened species. Live animals are to be taken to the Triage/First Aid Facility for assessment.
- Collected carcasses are to be either transported to necropsy facilities or disposed of following appropriate recording on the [Wildlife Rescue and Release Form](#).
- Each animal captured is to be placed in a suitable container with a lid or in a cotton bag and tied off with rope and tagged with species name, rescuer, location and time, in preparation for carrying or transporting to the triage/first aid facility. One member of each Rescue Crew will be a designated recording officer and will take photographs of affected wildlife and complete details about each animal captured/collected on a [Wildlife Rescue and Release Form](#).

5.3. Capturing birds on shore

- Work to be undertaken in accordance with a risk assessment for the task.
- Rescue Crews should be trained in handling birds
- Working in pairs, stand between the bird and the shore or any other escape route
- Avoid driving the bird into vegetation which will make it more difficult to retrieve
- Avoid chasing the bird and subjecting it to repeated capture attempts as this causes stress and can prolong rehabilitation time
- Using a long-handled net, approach the bird from the back or the side and position the net in front of the bird so that it will run into it should it try to escape
- Wearing gloves (for protection from bites/scratches and oil/chemical exposure), approach the bird from behind or the side and remove it from the net gently to avoid injury. Small

birds can be handled by using a body hold. The bird is held gently around its body using both hands to keep its wings against its body.

- For larger birds, the head should be controlled first by grasping the bill where it joins the head or by cupping its head in the palm of the hand. Placing a towel or other cloth over the bird may make handling easier. Once the head is controlled, the body should be secured by folding the bird's wings against its body. The towel can be wrapped around the bird gently but firmly to help keep its wings secured close to the body.
- Once the bird is secured, depending on its size, place it in a bag or pillowcase or a suitable container with a lid, tie or secure the container and attach a tag detailing time, date, location, species and identity of rescuer. (Temporary tags will be attached to animals during triage to facilitate tracking while in care). Similar details should be recorded for dead animals collected but should also indicate cause of death, if known.
- Transport the animal to the Triage/First Aid Facility, if on site, or to a designated transport vehicle if facilities are located off-site.

5.4. Capturing debilitated birds on water

- Wildlife Rescue Crews using boats should have at least three people, including one designated as the driver, who must be licensed appropriately.
- Crews using boats must only use appropriate vessels provided through the Marine Unit (eg some oil/chemical types may ignite from the spark of a petrol motor) and must be provided with appropriate personal protective equipment
- The boat should approach the bird slowly and a net brought underneath the bird from behind so it can be scooped from the water.
- Once netted, proceed as above in 5.3.

5.5. Capturing mammals

Marine mammals can be affected by oil and chemical spills but are difficult to capture unless they are extremely distressed or emaciated. Unless they are already beached, the most effective action is to use aircraft, boats or jet skis to drive animals away from the spill site and into clear waters. See procedure [Oil Chemical Spill Wildlife Response – Pre-emptive Action.](#)

Beached mammals are generally handled according to established protocols for strandings and any decisions to capture and rehabilitate mammals are made on a case by case basis by the Wildlife Coordinator in consultation with specialists. The following general principles apply when handling mammals:

- Wild animals are stressed by proximity to humans and being handled by them. Indirect handling (where the animal is not actually touched by a human) may be less stressful and this should be used where possible. For example, it may be possible to release an animal from a catching net into a carrying cage without any direct physical contact with a human.
- Mammals being caught will generally try to escape and most are capable of inflicting injuries on those holding them.
- Covering the head quietens most species and also reduces their ability to direct attacks upon handlers.
- Physical capture of larger species may be difficult and require several people.
- Most animals are less stressed when they cannot see the humans around them. Blindfolds and/or covers should be applied whenever possible and as soon as possible. Covering the holding cage also reduces stress on captive wildlife.
- Many animals will calm down to some degree once they are within a confined dark space
- Cetaceans should never be picked up by the pectoral flippers, the dorsal fin or the tail.

[The above information was adapted from [the Wildlife Information Network and Wildpro.](#)]

For specific handling techniques see:

- NPWS Marine Wildlife Management Manual
- [Catching and handling of Seals](#)
- [Lifting and Moving of Stranded Whales and Dolphins](#)

5.6. Capturing water rats

Capture will be undertaken by Rescue Crews using the following techniques:

- Water-rats are captured using wire mesh cage traps, which are set at the water's edge or near burrows and baited with fresh or tinned fish. An ideal sized trap for capturing Water-rats is 30cm x 30cm x 60cm.
- Traps must be used in accordance with Sections 4.2.1 to 4.2.3 of [Animal Ethics Committee](#) guidelines.
- Captured animals will generally be taken to a temporary holding facility until such time as they can be released back into their natural habitat.
- Water-rats can be very aggressive and inflict serious bites. They should be transported to the intended holding facility in the cage and should only be removed by experienced handlers. Handlers must have a current Tetanus vaccination.

5.7. Field stabilisation

If a decision is taken to capture mammals, field stabilisation may be used if a delay of more than one to two hours is anticipated before animals will reach a rehabilitation centre. This includes:

- assessment of and treatment for hypothermia or hyperthermia, as appropriate
- treatment for dehydration: oral and subcutaneous fluids
- treatment for shock
- removal of oil/chemical from around the nose/mouth to ensure that the airways are clear
- removal of oil/chemical from the eyes
- provision of fluids, antibiotics and vitamins which may improve survival

5.8. Capturing turtles

Marine turtles can range enormously in size and weight and as a result, catching and retrieving injured animals can either be relatively simple or a major exercise requiring special equipment.

The following should be undertaken when dealing with large marine turtles:

- Assess potential danger to rescuers, e.g. environmental conditions, or handling large or aggressive animals (e.g. be aware of slapping flippers and biting, cuts from scutes and shells on carapace and animal weight when lifting)
- Place a light towel or cloth over the turtle's head to obscure vision – this will reduce avoidance movements and minimise risk of biting. Do not block mouth or nostrils
- The ventral surface (plastron) can be easily damaged if moved across a rough/hard surface. If turtles can not be lifted, they can be dragged by placing them on foam/soft material and a tarpaulin or strip of carpet, to minimize damage to the plastron
- Small animals (up to 10 kg approx.) can be carried by a single person using the carapace as a hand-hold, i.e. grasp carapace at base of neck with one-hand and at rear of carapace above tail; hold animal away from the body so that flapping flippers don't loosen your hold
- For larger animals ranging up to approx. 100kg at least two people will be required to lift an animal. A wheel-barrow; figure 8 rope sling; net stretcher or special purpose turtle harness can be used
- For even larger animals mechanical equipment may be needed. In such instances a cargo net may be used to lift an animal. Care should be taken to ensure the flippers do not become entangled. Animals near the water's edge may be returned to the water and floated onto a boat trailer adapted to carry an animal, rather than lifted directly off the sand
- Avoid unnecessary handling

- Be conscious of possible injuries, such as fractures of the carapace, when handling injured animals
- Marine turtles should be transported and handled in such a way as to minimise stress. Efforts should be made to minimise transport time but, if extended trips are unavoidable, the animal should be checked on a regular basis.
- The following measures must be undertaken when transporting marine turtles, irrespective of the type of transport used:
 - Turtles should always be transported in an upright position, i.e. with the dorsal surface (carapace) uppermost
 - Turtles should be kept out of direct sunlight, not left in vehicles in the sun and kept away from any direct heat sources (e.g. vehicle engine, exhaust or heater, hot floors of travelling vehicles). Most species are only able to maintain their deep body temperature to within about 3°C above the ambient temperature, and are vulnerable to overheating
 - Small animals can be put in a carry-box eg 6-pack cooler or similar properly secured and ventilated container with a damp foam material in the base to protect the plastron
 - Larger animals can be transported in any suitable vehicle which allows the animal to lay on its ventral surface and the plastron to be protected by a wet blanket/foam; movement to be restrained as best as possible; and airflow/ air-conditioning to prevent overheating
 - It is difficult to restrain turtles from moving, so confinement in a box/crate is recommended
 - If unable to move the animal out of direct sunlight, turtles can be kept cool by covering them with cloth and keeping them moist
 - Turtles will always move toward light so covering the transport box/crate with a dark cloth is recommended
 - Loggerheads and hawksbills can become aggressive (and bite) when confined with other turtles, so separation is recommended. Green turtles are not usually aggressive to other turtles.

5.9. Capturing sea snakes

Taking sea-snakes into captive care should only be undertaken if it is considered likely they can be rehabilitated and returned to their natural environment. The decision should be based on an assessment by a veterinarian and/or an experienced sea snake handler.

All marine snakes are venomous with a potentially fatal bite and must be caught, handled and treated by persons experienced in snake handling.

- Sea snakes may be picked up with a net or a snake hook and placed in a bucket for transport. The bucket should be lined with moist foam and covered by a secure lid with ventilation holes.
- Special care should be taken when picking up sea snakes with tongs. An inexperienced person who grips a sea-snake too tightly near the head can do critical damage to the animal.

5.10. While awaiting transport

- A period of rest prior to transport may improve survival.
- For hyperthermic individuals, cooling may be initiated by gentle spraying with water, or by placing ice cubes on the top of the cage, so that the melting water will drip onto the animal.
- Hypothermic animals should be placed in a sheltered location out of the wind, while ensuring that good ventilation is maintained to minimise inhalation of petroleum fumes.

6. References

Procedures

- [Wildlife Response – Cleaning and Drying Wildlife](#)
- [Wildlife Response – Pre-emptive action](#)
- [Wildlife Response – Rehabilitation of Wildlife](#)
- [Wildlife Response – Release of Wildlife](#)
- [Wildlife Response – Scaling Down and Demobilisation Response](#)
- [Wildlife Response – Set up and Use of Wildlife Treatment Facilities](#)
- [Wildlife Response - Transporting Wildlife](#)
- [Wildlife Response – Triage and First Aid](#)

Forms

- [Wildlife Rescue and Release Form](#)

Safe Work Method Statements / Job Safety Analysis

- [Boating Operations](#)
- [Driving Vehicles](#)
- [Handling of Animals](#)
- [Using and Transporting Quad/Motor Bikes](#)
- [Working on and Around Water](#)

Role descriptions

- [Rehabilitation Division](#)
- [Rescue Division](#)
- [Wildlife Coordinator & Logistics Support](#)

Information

- [Animal Ethics Committee Guidelines](#)
- [Catching and handling of Seals](#)
- [Lifting and Moving of Stranded Whales and Dolphins](#)
- [Wildlife Information Network and Wildpro](#)
- NPWS Marine Wildlife Management Manual

Legislation

- [National Parks and Wildlife Act 1974](#)
- [Threatened Species Conservation Act 1995](#)
- [Environment Protection and Conservation Act 1999](#)
- [Work Health and Safety Act 2011](#)
- [Work Health and Safety Regulation 2011](#)

7. Appendices