

Procedure - Oil/Chemical Spill Wildlife Response – Triage and First Aid

Authorised by	Deputy AASFAC	Authorisation date	02/05/2012
Authorisation period		Effective date	02/05/2012
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Revision History

Version	Date	Amendments	
		Section	Details
1	6 Mar 2012		For approval

Table of Contents

1. Application / Scope	2
2. Abbreviations / Definitions	2
3. Resources / Equipment	2
4. Warnings	3
4.1. Contaminated waste	3
4.2. Disposal of carcasses	3
4.3. Hygiene and quarantine	3
4.4. Other hazards	3
5. Procedure	4
5.1. Initial triage assessment	4
5.2. Basic treatment	4
5.3. Stabilisation prior to transporting / cleaning	5
5.4. Preparing animals for transportation to cleaning facility	6
6. References	6
7. Appendices	7

1. Application / Scope

The aim of a wildlife response following an oil or chemical spill is to rescue and rehabilitate as many animals as possible and return them to their natural environment in a healthy condition.

In the event of a major spill, where large numbers of wildlife are affected and require care, it will not be possible to treat every individual animal immediately. To deal effectively with large numbers, a system of triage will be required in order to quickly evaluate and prioritise animals for treatment and identify those which should be euthanased. The decision to euthanise may be based on the poor likelihood of survival of particular individuals or on the basis of inadequate resources to treat such large numbers and the need to focus resources to best effect.

This procedure assists personnel involved in the initial triage, first-aid and stabilisation of wildlife captured during search and rescue operations of a wildlife response at an oil or chemical spill. It does not relate to any other aspects of the wildlife response which are covered in other procedural documents. See list of associated procedures at the end of this document.

2. Abbreviations / Definitions

- PCV - packed cell volume - the fraction of the total blood volume made up of red blood cells
- Triage - a process for sorting oil/chemical affected wildlife into groups based on their need for or likely benefit from immediate medical treatment so that care and resources can be focussed on those most likely to survive.
- SWMS – safe work method statement (equivalent to a Job Safety Analysis - JSA)

3. Resources / Equipment

- A minimum of two marquees or tents (4x4 metres) with sides if facilities are to be established at the rescue site
- Cardboard boxes, or other suitable containers depending on animal species, with lids and breathing holes
- Appropriate personal protective equipment for crew members
- Rags, gauze, swabs, cotton buds, absorbent cloth or paper to wipe excess oil/chemical from animals
- Water based eye drops
- Thermometers for tasking cloacal temperatures
- Trestle tables (not wooden)
- Cotton ponchos (pillow cases with corners cut out) or cloths to put over animals
- Bins and plastic bags to hold contaminated rags for either disposal or laundering
- Gastric tubes suitable for birds and mammals (eg 3mm, 5mm and 8mm gauge for birds)
- Buckets
- Scissors
- Syringes (1ml, 2ml, 5ml, 10ml, 20ml and 50ml)
- Sharps containers
- Scales to weigh animals – species dependant (100g to 100kg)
- Oral rehydration fluids
- Lethobarb for euthanising animals (must be stored in a locked cabinet, use restricted and usage recorded)
- Record sheets and pens
- Facilities for personnel to disinfect clothing and equipment
- Footbaths with antiseptics to set up outside buildings housing wildlife
- Personal hygiene facilities (toilets and showers) for staff

4. Warnings

4.1. Contaminated waste

The cleaning process for oiled wildlife can produce large amounts of contaminated waste requiring specialist disposal procedures. This must be done in consultation with the incident's Waste Management Unit.

See AMSA website for detailed information on [Management and Disposal of Oil Spill Debris](#).

4.2. Disposal of carcasses

Carcasses pose a contamination risk to live wildlife and to humans. Immediate refrigeration is recommended so that samples and specimens may be taken for pathology studies. After necropsies have been conducted and appropriate samples taken, carcasses may be frozen, if facilities are available, 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 incident's Waste Management Unit.

4.3. Hygiene and quarantine

When large numbers of birds and/or other animals are confined in close proximity to each other the spread of disease is possible from animal to animal or to/from humans. Any animal that is suspected of carrying an infectious disease should be immediately quarantined from others.

Personnel with impaired immune systems and those with colds/flu should not be permitted near affected wildlife.

All personnel should be informed of quarantine requirements and appropriate signage installed. Facilities for disinfecting clothing and equipment should be set up early in any wildlife response.

Footbaths with antiseptic (such as Halisept ®) should be set up outside buildings housing wildlife. These areas should be restricted to authorised personnel only and should display appropriate signage to that effect. Separate and dedicated clothing, gum boots, gloves and other personal protective equipment should also be available.

Personal hygiene facilities for staff, such as portable toilets and hand washing areas are required. It is essential that all staff wash thoroughly before eating, drinking or smoking. These areas should be set up away from the wildlife, quarantine, cleaning, treatment, and rehabilitation areas.

4.4. Other hazards

- Wildlife can be aggressive and may bite or scratch. Washing and drying should only be undertaken by personnel trained in animal handling. Personnel handling animals are to have a current tetanus vaccination. Refer to the safe work method statement – [Handling of animals](#).
- Precautions should be taken in wash areas, such as the installation of rubber mats, to reduce the risk of personnel slipping on wet floors
- Personnel may experience back strain, overheating, dehydration and exhaustion and should be rostered to take adequate rest breaks and provided with regular drinks.
- Assessment of the environmental conditions should be undertaken and include consideration of the air temperature, air flow, ventilation, toxic fumes etc
- Personnel should be monitored for exposure to toxic fumes. Monitoring regimes will be based on risk assessments of the particular substance involved by the Environmental Services Functional Area and/or the NSW Health Services Functional Area.
- Refer to the SWMS – [Marine mammal euthanasia & necropsy](#).

5. Procedure

5.1. Initial triage assessment

Rescued wildlife need to be assessed to determine whether rehabilitation is feasible or whether euthanasia is required. Initial assessment may be conducted at facilities set up at the rescue scene or at an established first aid facility depending on the distances involved.

A Triage Crew will assess each animal on the basis of physical condition and conservation significance, recommend appropriate treatment and assign one of the following priorities for treatment:

Priority 1
<ul style="list-style-type: none"> • Species listed on the schedules of the Threatened Species Conservation Act 1995 • Migratory species listed on the Japan-Australia Migratory Bird Agreement, the China-Australia Migratory Bird Agreement and ROKAMBA – Republic of Korea-Australia Migratory Bird Agreement. • Culturally significant species • Animals with a good chance of rehabilitation as assessed by a Veterinarian or species specialist
Priority 2
<ul style="list-style-type: none"> • Animals showing severe signs of toxicity such as convulsions • Animals with additional injuries such as fractures • Common species
Priority 3
<ul style="list-style-type: none"> • Animals with low or no chance of survival requiring euthanasia by a veterinarian or person qualified in euthanasia

- The Triage Crew will contain a veterinarian (preferably with avian expertise), vet nurses or appropriately trained individuals. Crew members are to be trained in animal handling and at least one member should have good animal/bird identification skills.
- The Triage Crew will complete details of species, condition, recommended first-aid treatment and any drugs administered on a [Wildlife Rescue and Release Form](#).
- The Triage Crew will ensure that animals are temporarily marked with a number or have identification tags or bands attached, to facilitate tracking while they are in care, and that number, tag or band details correspond to details on the [Wildlife Rescue and Release Form](#).
- The Triage Crew may undertake euthanasia of wildlife if required and record details, bag and store animals in freezer prior to disposal.

5.2. Basic treatment

First Aid Crews are to treat animals in the order of priority determined by the Triage Crew and should provide the following basic treatment for each animal:

- Clear eyes, nostrils and mouth of oil or any other foreign material using gauze swabs or cotton buds

- Flush eyes with ophthalmic irrigation fluid and apply water based antibiotic/anti-inflammatory drops if eyes are inflamed
- Wipe oil/chemical and water from the animal using absorbent cloth or paper
- Weigh the animal
- Take the animal's cloacal temperature
- Provide oral fluids
- Cover animal with a cloth or poncho and ensure it is warm and stabilised before it is transported to the Wildlife Treatment Centre for cleaning and rehabilitation

5.3. Stabilisation prior to transporting / cleaning

If there are large numbers of wildlife casualties and it is decided that birds should be stabilised prior to transportation to washing and treatment facilities, then an on-site treatment (stabilisation) centre should be set up.

5.3.1. Stabilisation of birds

Before a bird is subjected to the stressful experience of being washed it is important that it is has been stabilised and is assessed as being fit to withstand this extra stressor. Often, 48 hours of stabilisation treatment may be required before birds are in a fit state.

Criteria for washing:

- Birds should be bright, alert and responsive, and need to meet established criteria for core body temperature, weight, hydration level and blood values, as well as absence of apparent infectious disease.
- Packed cell volume (PCV) of at least 30% and total proteins of at least 25 g/L on a blood sample taken within 24 hours of the proposed wash
- For birds with PCV below 30% and/or total proteins of less than 25 g/L individual examination and clinical judgment by a veterinarian experienced with oiled birds is required.
- Normal core body temperature, suggesting that the bird is in a stable condition i.e. 39-40.5°C.
- Normal hydration status.
- Weight within the range for the species, age and sex.

In certain circumstances a quick wash may be given to individuals that have not been stabilised:

Birds arriving oiled with highly toxic oil such as diesel or jet fuel may be given a "quick-wash" soon after arrival to remove the bulk of the oil and thus the fumes from the oil, but without trying to restore waterproofing.

Note: a quick wash and rinse in these circumstances should only take about one to three minutes.

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

5.3.2. Stabilisation of marine reptiles

For stabilisation of marine reptiles seek specialist advice through Liaison Officers.

5.3.3. Stabilisation of mammals

The process of being cleaned is stressful to an animal and giving the individual a chance to recover strength after capture before being washed is beneficial.

A veterinary examination should be conducted prior to cleaning, considering the animal's general physical condition and strength, alertness, blood parameters and any abnormalities noticed on general physical examination. Only animals passing this assessment should be subjected to cleaning.

It is recommended that oiled marine mammals should be given supportive care, including treatment to restore normal body temperature, to correct dehydration and to provide nutrition, for at

least 24 hours before being washed. However, with heavily oiled animals, or those covered with fresh oil, washing as soon as possible is suggested to reduce exposure to petroleum hydrocarbons by absorption or with ingestion associated with grooming.

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

5.4. Preparing animals for transportation to cleaning facility

First Aid Crews will ensure animals have retained their identification tags and place them in well ventilated, secured containers ready for transporting to the Wildlife Treatment Centre for cleaning and rehabilitation. When selecting suitable containers, consideration should be given to the safety of the animals and the handlers.

Cardboard boxes with ventilation holes are suitable for most birds but must be big enough to allow the bird to turn around inside. For larger birds plastic pet carriers may be suitable but should be lined with non-slip material on the bottom. Cages may also be used but wire ones should be avoided, or covered with cloth, because of the risk of birds catching their feathers.

Good ventilation is required for pinnipeds, such as seals. Smaller ones can be transported in boxes or plastic airline kennels but, for larger ones, lightweight (eg aluminium) cages with doors at either end are recommended. Lift points for winch attachments would be useful for lifting cages into vehicles.

To minimise stress, animals should be kept in a warm, quiet place while they are awaiting transport.

Crews are to ensure that the [Wildlife Rescue and Release Form](#) accompany the animals to the wildlife treatment facility.

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 – Search and Rescue](#)
- [Wildlife Response – Set up and Use of Wildlife Treatment Facilities](#)
- [Wildlife Response - Transporting Wildlife](#)

Forms

- [Wildlife Rescue and Release Form](#)

Safe Work Method Statements / Job Safety Analysis

- [Handling of animals](#)
- [Marine mammal euthanasia & necropsy](#)

Role descriptions

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

Information

- [Management and Disposal of Oil Spill Debris](#)

- [Wildlife Information Network and Wildpro](#)

Legislation

- [Animal Research Act, 1985](#)
- [China-Australia Migratory Bird Agreement](#)
- [Environment Protection and Conservation Act 1999](#)
- [Japan-Australia Migratory Bird Agreement](#)
- [National Parks and Wildlife Act 1974](#)
- [Republic of Korea-Australia Migratory Bird Agreement](#)
- [Threatened Species Conservation Act 1995](#)
- [Work Health and Safety Act 2011](#)
- [Work Health and Safety Regulation 2011](#)

7. Appendices