



Department of Planning and Environment

# Code of Practice

For injured, sick and orphaned marine mammals



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## Preface

The *Code of Practice for Injured, Sick and Orphaned Marine Mammals* (the code) is intended for those authorised to rescue, rehabilitate and release marine mammals. The code has been developed to ensure the welfare needs of these mammals are met and the conservation benefits stemming from their rehabilitation and release are optimised. It also aims to ensure that risks to the health and safety of volunteers rescuing and caring for these animals are reduced and easily managed.

Compliance with the code does not remove the need to abide by the requirements of the:

- *Prevention of Cruelty to Animals Act 1979*
- *Poisons and Therapeutic Goods Act 1966*
- *Veterinary Practice Act 2003*
- *Animal Research Act 1985*
- *Local Government Act 1993*
- *Firearms Act 1996*
- *Fisheries Management Act 1994*
- *Biosecurity Act 2015*
- *Protection of the Environment Operations Act 1997*
- Antarctic Treaty System 1961
- Convention for the Conservation of Antarctic Marine Living Resources 1982

or any other relevant laws and regulations.

Compliance with the standards in the code is a condition of a biodiversity conservation licence (BCL) to rehabilitate and release sick, injured and orphaned protected animals issued under the NSW *Biodiversity Conservation Act 2016* (BC Act). A person who contravenes a condition of a BCL is guilty of an offence under section 2.14 (4) of this Act.

The code is neither a complete manual on animal husbandry, nor a static document, and must be implemented by a person trained in accordance with the *Marine Mammal Rehabilitation Training Standards for the Volunteer Wildlife Rehabilitation Sector* (DPE 2022). It will be periodically reviewed to incorporate new knowledge of animal physiology and behaviour, technological advances, developments in standards of animal welfare, and changing community attitudes and expectations about the humane treatment of marine mammals. The Department of Planning and Environment (the department) will consult with licence holders regarding potential changes to the code and give written notice when the code is superseded.

# 1. Introduction

This code sets standards for the care and housing of a marine mammal that is incapable of fending for itself in its natural habitat. It refers to the 50 species of whales, dolphins, seals and the dugong found in New South Wales.

The blue whale, southern right whale and dugong are listed as endangered, while a further 4 species of marine mammals are listed as vulnerable in New South Wales (See Appendix A).

Under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) 2 species of seals and 2 species of whales are listed as endangered, while a further 3 species are listed as vulnerable (see Appendix A).

This code comprises both enforceable provisions and guidelines. Enforceable provisions are identified by the word 'Standards' and they must be followed.

## Principles

The development of the code has been guided by 4 key principles which apply to all aspects of marine mammal rescue, rehabilitation and release:

### Prioritise the welfare of marine mammals

The main objective of wildlife rehabilitation is to relieve suffering in sick or injured wildlife. The rehabilitation and release of marine mammals to the wild is the primary objective. It must not be pursued to preserve life of the animal at all costs or to achieve broader conservation outcomes where the animal is subject to unreasonable and unjustifiable suffering.

### Avoid harm to wild marine mammal populations and other wildlife communities

In wildlife rehabilitation there is a risk of adverse ecological outcomes. The inappropriate release of animals can have significant detrimental effects on ecosystems and wildlife communities. At all stages of wildlife rehabilitation, the potential adverse ecological outcomes must be considered, and conservation benefits for wild marine mammal populations maximised.

### Minimise the risks to human health and safety

There are many risks in all aspects of rehabilitation, including both personal injury and disease, requiring consideration to ensure preventative measures are in place. All personnel involved in rescue, rehabilitation and release of marine mammals must understand practical health and safety measures such as undertaking a risk assessment, using personal protective equipment (PPE) and even delaying action to ensure safety measures are in place to protect their health and safety.

### Optimise capacity to care

Wildlife rehabilitators must ensure they have the capacity to provide for the essential needs of marine mammals undergoing rehabilitation, and the resources to adequately prepare the marine mammal for release back into the wild. When the wildlife rehabilitator's capacity to care is exceeded, unacceptable standards of care or welfare may result. Wildlife

rehabilitators must be mindful of their capacity to care, particularly when there is an influx of wildlife requiring care due to major incidents, significant weather events or disease outbreak.

When the capacity to care is exceeded there are 3 acceptable management options:

- refer the marine mammal to another licensed wildlife rehabilitator with a current capacity to care for the animal
- increase the capacity to care by increasing or pooling resources
- lower the euthanasia threshold in combination with early-stage triage of newly rescued animals and proper veterinary assessment and prognosis of marine mammals in care.

Lowering the standards of care, such that they are not consistent with this code, is not an acceptable response to exceeding the capacity to care. In circumstances involving major catastrophic events and where capacity to care is exceeded, lowering the threshold for euthanasia is more appropriate than not rescuing animals in distress.

## **Response is led by the NSW National Parks and Wildlife Service**

Incidents involving marine mammals present special features making them complex to manage. These can include large numbers of animals ashore in a mass stranding; the size and weight of even the smaller whales, dolphins and dugongs; large numbers of curious onlookers; and the long time frames sometimes required.

The NSW National Parks and Wildlife Service (NPWS) partners with other organisations when managing marine mammal events, but it remains responsible for the overall event and must be accountable for the decisions made.

For larger events that require multiple agencies, NPWS uses the Australasian Inter-Service Incident Management System (AIIMS) as the framework for a coordinated response. This framework provides.

- a defined structure under the command of the incident management team and led by the incident controller
- an objective-led and consultative response
- clearly defined paths of communication
- a flexible and adaptable response that is scalable if needed
- facilitation by NPWS to include involvement by different partners and agencies including wildlife rehabilitators, veterinary specialists and research facilities.

All wildlife rehabilitators must follow the directions of NPWS and respect the authority of the incident controller.

NPWS facilitates and supports the involvement of local Aboriginal people wherever possible, including representatives of local Aboriginal communities (local Aboriginal land councils, Elders and native title holders and claimants) to offer the opportunity to express and practice relevant cultural or spiritual protocols connected with a marine event (e.g. a smoking ceremony for a dead marine mammal).

## **Interpretations**

### **Objectives**

‘Objectives’ are the intended outcomes for each section of this code.

## Standards

'Standards' describe the mandatory specific actions needed to achieve acceptable animal welfare levels. These are the minimum standards that must be met. They are identified in the text by the heading 'Standards' and use the word 'must'.

## Guidelines

'Guidelines' describe the agreed best practice following consideration of scientific information and accumulated experience. They also reflect society's values and expectations regarding the care of animals. A guideline is usually a higher standard of care than minimum standards, except where the standard is best practice.

Guidelines will be particularly appropriate where it is desirable to promote or encourage better care for animals than is provided by the minimum standards. Guidelines are also appropriate where it is difficult to determine an assessable standard. Guidelines are identified in the text by the heading 'Guidelines' and use the word 'should'.

## Notes

Where appropriate, notes describe practical procedures to achieve the minimum standards and guidelines. They may also refer to relevant legislation.

## Definitions

In this code:

**Baleen whales** refers to whales from the suborder Mysticete that have a double blowhole and filter their food through baleen plates that hang from their top jaw. The plates resemble bristles and are made from keratin.

**Barrier nursing** means husbandry protocols used to provide complete isolation of a patient to minimise the risk of cross-contamination between patients and from patients to the wildlife rehabilitator responsible for their care. It includes the physical separation of patients, avoiding sharing tools and furniture equipment between animals, wearing PPE (e.g. masks, eye protection, gloves, gowns, aprons, overshoes) and using infection control procedures (e.g. equipment sterilisation and regular use of disinfectant).

**Cetacean** means an animal of the infraorder Cetacea and includes whales, dolphins and porpoises. Cetaceans are grouped into 2 suborders defined by the contents of their mouths and their blowholes.

**Dependent calf** is a whale, dolphin or dugong totally dependent on its mother for its nutrition.

**Dolphin** refers to an animal of the family Delphinidae.

**Eared seal** refers to any member of the family Otariidae. They have external ear flaps and can turn their hind flippers forward.

**Elements database** is the incident database system used by NPWS staff and approved licensed wildlife rehabilitation providers to report marine wildlife events.

**Experienced marine mammal rehabilitator** means someone who has an extensive knowledge of current rehabilitation techniques gained through training courses and many years of successfully rehabilitating and releasing marine mammals.

**Fluke** is the horizontally flattened tail of whales, dolphins and dugongs.



**Fur seal** is a seal from the genus *Arctocephalus* and is distinguished from sea lions, which are the other members of the family Otariidae, by their denser underfur and more pointed snouts.

**Haul out** is when a seal comes ashore temporarily (e.g. to give birth, rest, avoid predators or thermoregulate) and this is a natural behaviour.

**Immediate risk of injury** means the likelihood of an animal becoming injured and requiring care is high if immediate intervention is not undertaken, based on a reasonable situation assessment.

**Juvenile seal** means a young seal that has been weaned and is not totally dependent on its mother for its nutrition.

**Marine mammal** means any whale, dolphin, dugong or seal that is native to Australia or that periodically or occasionally migrates to Australia.

**Marine park** is defined as an area declared and managed under the *Marine Estate Management Act 2014*.

**Neonate** is a newborn whale or dolphin and can be identified by the presence of lines (foetal folds) on their sides from being folded within the womb, and soft, floppy dorsal fins and flukes which help them during birth. Many neonate whales have hairs on the rostrum or beak which disappear within a couple of weeks of birth.

**Park** means a national park, historic site, state conservation area, regional park, nature reserve, karst conservation reserve or Aboriginal area, or any land acquired by the Minister under the *NSW National Parks and Wildlife Act 1974*.

**Protected animal** means any amphibian, reptile, bird or mammal (except dingos) referred to in Schedule 5 of the BC Act that is native to Australia or that periodically or occasionally migrates to Australia (including their eggs and young).

**Pup** is a seal totally dependent on its mother for its nutrition.

**Recovery**, when referring to an individual, means a return to a functional condition after an injury or illness. This includes the natural ability of an animal to feed, interact, move, and evade risks and hazards in a wild situation.

**Rescue** refers to capturing, herding or relocating a marine mammal; it does not include the monitoring of a hauled out seal or a free-ranging whale, dolphin or dugong.

**Seal** means an animal of the family Otariidae or Phocidae.

**Stranding** refers to a cetacean or dugong when it is aground and unable to return to the water unaided. When a stranding involves one or 2 animals (usually a mother and calf) it is referred to as a single stranding, while strandings that involve 3 or more animals are referred to as a mass stranding.

**True seal** is a seal of the family Phocidae. True seals are also known as earless seals because they lack external ear flaps.

**Tail stock** is the heavily muscled rear third of a whale, dolphin or dugong's body, which drives the flukes.

**Thermoregulation** is the ability of an animal to maintain a constant body temperature. As the flippers of a seal have little blubber and the blood vessels are close to the surface, seals will often lift a front flipper or flick either sand or pebbles up over its back to keep cool.

**Toothed whales** are from the suborder Odontocetes, which includes all dolphins, porpoises and some whales. They have a single blowhole and use their teeth to feed.

**Whale** means an animal of the infraorder Cetacea other than a dolphin or porpoise.

**Wildlife rehabilitator** means someone who is either authorised by a wildlife rehabilitation provider or zoological park or is individually licensed by the department to rehabilitate and release protected animals.

**Wildlife rehabilitation** means the temporary care of an injured, sick or orphaned protected animal with the aim of successfully releasing it back into its natural habitat.

**Wildlife rehabilitation provider** means an incorporated wildlife rehabilitation group, individually licensed wildlife rehabilitator or facility that is licensed by the department under the BC Act to rehabilitate and release protected animals.

**Zoonoses** are diseases that can be transmitted from animals to humans.

## 2. Case assessment

### 2.1 Assessing marine mammals

#### Objective

To assess a marine mammal in order to determine the type of intervention required. The primary objective of rehabilitation is the successful reintegration of the marine mammal back into the wild population, and all decisions are in pursuit of this goal. This will mean that some marine mammals may benefit from rehabilitation, whereas others will need to be euthanased.

#### Standards

- 2.1.1 The decision tree in Figure 1 must be followed when determining how to respond to a marine mammal encounter.
- 2.1.2 Antarctic or subantarctic seals (e.g. leopard seals, subantarctic fur seals, southern elephant seals and crab-eater seals) rehabilitated in a facility must not be released back into the wild. If captured in New South Wales, they must either be euthanased or taken into permanent care in an approved care facility. This is due to environment protection provisions established under the Antarctic Treaty System and the Convention for the Conservation of Antarctic Marine Living Resources and the subsequent recommendation, in 1994, by the Scientific Committee on Antarctic Research (SCAR) to prevent potential disease or pathogen transmission from rehabilitated seals to wild seals and possibly to other Antarctic wildlife.

#### Notes

- An animal creating a nuisance for the public generally refers to an animal that has entered a person's house or represents a human health risk. It does not include an animal defending its territory or exhibiting other normal behaviour (e.g. a seal hauling out on a jetty).
- The department has a range of procedures for managing negative interactions with aggressive wildlife.

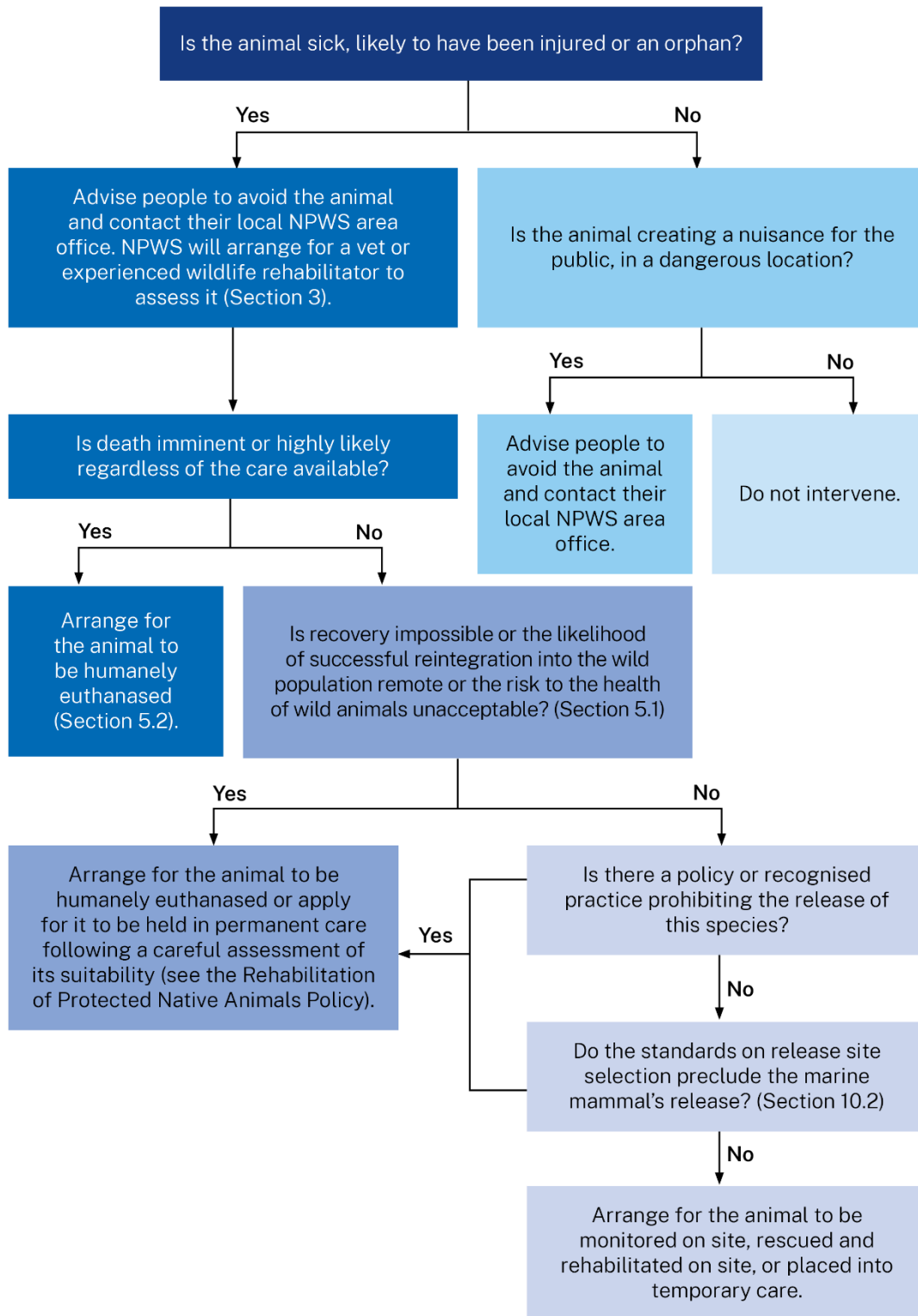


Figure 1 Decision tree for course of action when a marine mammal is encountered

## 3. Rescue

### 3.1 Rescuing marine mammals

#### Objective

To conduct a marine mammal rescue to minimise further stress and injury to the animal.

#### Standards

- 3.1.1 Before a rescue attempt, the rescuer must assess the risks to themselves and members of the public.
- 3.1.2 Before a rescue attempt, the rescuer must assess the risks to the marine mammal from environmental hazards and from capture.
- 3.1.3 The rescue of a marine mammal must be undertaken only by individuals that hold an authority by a wildlife rehabilitation provider licensed for marine mammals as listed in Section 2.15 of the Biodiversity Conservation Regulation 2017.
- 3.1.4 The capture or relocation of a seal must be undertaken only with approval from NPWS and led by trained NPWS staff, the Royal Society for the Prevention of Cruelty to Animals (RSPCA), or a wildlife rehabilitation facility approved for seal capture.
- 3.1.5 Rescuers must employ the correct rescue equipment and techniques for the size, condition and species of the marine mammal and be trained in its use (see Section 11 'Training'). For example;
  - rescuing whales, dolphins and dugongs requires the use of specialised lifting mats, stretchers, straps and multiple rescuers
  - every seal capture or relocation must be undertaken only by an approved rehabilitation institution and requires the use of nets, herding boards and specialist training in capture techniques
  - the rodeo method can be used for capturing a free-ranging dugong
  - the operation of a pontoon system for large whale and dolphin rescue must be led by at least one member trained in its use
  - nets can be used for small dolphins in shallow water.
- 3.1.6 Wildlife rehabilitators must use suitable work health and safety (WHS) techniques to minimise the risk of injury to the rescuer. For example:
  - wearing PPE such as gloves, glasses and mask for all activities on land to reduce the threat posed from zoonoses
  - wearing covered shoes at all times to minimise the risk of cuts and abrasions or slipping and falling when working on wet, slippery surfaces
  - staying clear of tail flukes
  - wearing wetsuits in the water and limiting time in the water to reduce hypothermia
  - wearing sunscreen and hats to reduce the risk of hyperthermia
  - ensuring any activity that requires someone to enter the water is undertaken only by personnel who can swim

- ensuring all on-water operations conform with the *Marine Safety (Domestic Commercial Vessel) National Law Act 2012* and associated 2013 Regulation, as well as Australian Maritime Safety Authority (AMSA) requirements
  - not launching vessels if the seas have more than a 1.5-m swell and 1-m wave height or if the wind is over 15 knots unless a risk assessment has been undertaken, including a vessel capability assessment
  - ensuring adequate food, water and breaks so personnel fatigue is managed
  - not entering the water with waves and a large rolling whale or dolphin
  - not entering the water if other marine predators (e.g. sharks) are in the immediate vicinity
  - considering weather condition and available light before any rescue action.
- 3.1.7 Wildlife rehabilitators must take steps to protect the marine mammal from additional stressors during rescue, such as onlookers, loud noises and other animals. For example:
- onlookers must be kept at a safe distance (e.g. 50 m away)
  - noise must be kept to a minimum
  - the number of people around a cetacean or dugong at a stranding must be limited
  - dogs must be kept away.
- 3.1.8 Wildlife rehabilitators must attempt to rescue a marine mammal only when a sufficient number of trained personnel for that situation and species are involved. For example:
- 2 people for 10–30 kg seals
  - 4 people for 31–100 kg seals
  - 6 people for 101–200 kg seals
  - when using a whale mat or stretcher, each person must carry a maximum load of 20–30 kg
  - no-one must attempt to move animals longer than 3 m without adequate personnel.
- 3.1.9 Wildlife rehabilitation providers must immediately notify NPWS (by contacting the local NPWS office during business hours or calling 13000 PARKS) for all:
- whale, dolphin and dugong strandings or entrapments
  - suspected and confirmed entanglements or vessel strikes
  - whales, and dolphins with a heavy parasitic load (e.g. whale lice) or skin disease (e.g. severe skin sloughing)
  - hauled out seals with a body condition of 2 or less, severe injury (e.g. fracture, wound penetrating the body cavity, wound covering a large area, infected or injured eye) or signs of disease (e.g. coughing, coloured nasal discharge)
  - hauled out seals out of their regular geographic range (e.g. seal species from Antarctic region, Australian sea lion and any seal hauled out north of Newcastle)
  - hauled out seals in immediate risk of danger (e.g. on dog leash-free beaches, busy jetties, boat ramps or high profile locations such as Sydney Opera House steps)
  - marine mammals in ports or harbours that may impact operations (e.g. whales in Sydney Harbour, seals hauled out and impeding oil refinery operations)

- dependent calves or pups that have been abandoned
  - all marine mammal carcasses.
- 3.1.10 Wildlife rehabilitators must monitor hauled out seals or free-swimming whales, dolphins or dugongs rather than immediately attempting to rescue them, to identify if the animal:
- is entangled
  - is emaciated
  - has a severe injury (fracture, wound penetrating the body cavity, wound covering a large area, infected or injured eye)
  - is showing signs of illness (e.g. abnormal breath sounds, discharge from eyes or nostrils, diarrhoea, skin lesions, abnormal swimming posture or abnormal gait in a seal)
  - is threatened by dangerous pollution levels (e.g. extensively covered in oil)
  - is at risk of attack from domestic or feral animals
  - has parents nearby for a neonate and dependent calf or pup
  - has no escape route or significant changes in salinity for whales, dolphins and dugongs in rivers or streams.
- 3.1.11 For all stranded whales, dolphins and dugongs, wildlife rehabilitators must (unless it is unsafe):
- dig shallow holes under the animal's pectoral fins to ensure they rest in a natural position and they are not bearing any pressure
  - pour fresh cool water over the animal (avoiding the blowhole) to prevent overheating
  - provide drainage channels for water pouring off the animal
  - ensure the pectoral fins of a whale or dolphin are tucked close to the body when rolling them on their side or transporting them in stretchers and mats
  - ensure the head of a stranded animal is pointed towards land to deter communication with any free-swimming animals still in the water or they may also strand
  - keep the animal perpendicular to the waves to prevent rolling
  - keep the animal upright and ensure the animal's body mass is evenly supported
  - ensure the blowhole is clear and above the water surface
  - ensure the eyes are protected from rough surfaces such as sand
  - move or place padding under an animal on sharp rocks or other objects
  - ensure their hands are free of sand and sheets and coverings are not abrasive, to protect the animal's delicate skin.
- 3.1.12 The following methods must not be used when rescuing a marine mammal:
- dragging a whale, dolphin or dugong by the tail fluke
  - using the flippers or dorsal fins as lifting handles
  - using a vehicle to push an animal
  - using an electric prod to herd a seal
  - rolling a whale, dolphin or dugong down or along the beach
  - capturing a seal larger than 15 kg using a net while it is in the water as it may drown

- 3.1.13 Whale, dolphin and dugong disentanglement must be undertaken only with approval from NPWS and by personnel trained to the minimum standards specified in the *Marine Wildlife Management Manual 2021* (DPE 2022), due to the significant risks.
- 3.1.14 Contact and activation of other agencies (e.g. Department of Primary Industries [DPI], Marine Rescue, NSW Police Force, Port Authority) must be undertaken by NPWS, who coordinates rescues for whales, dolphins and dugongs that are suspected or confirmed to be entangled, stranded, entrapped or in a port or harbour to ensure effective incident management.
- 3.1.15 No-one must enter the water near an entangled large cetacean.
- 3.1.16 Removing an entanglement from a seal must be undertaken at the rescue location wherever possible. When the entangled seal is in the water, it must be disentangled only from the safety of a vessel, using trained crews with large whale disentanglement cutting equipment.
- 3.1.17 If a hauled out seal is suspected to be an Antarctic or subantarctic species (e.g. leopard seals, subantarctic fur seals, southern elephant seals and crab-eater seals), before intervening, wildlife rehabilitators must contact NPWS to consider the availability of long-term housing for the animal and intervene only where the animal's welfare or public safety overwhelmingly warrant such action. This is because these animals must not be released back into the wild if rehabilitated in a facility, to prevent potential disease or pathogen transmission from rehabilitated seals to wild seals and possibly to other Antarctic wildlife.
- 3.1.18 Whales and dolphins in a mass stranding must be labelled with a temporary cotton tag marked with the date, time and animal number.
- 3.1.19 Moulting seals will stay on land for an extended period of time while their fur regrows. This is a natural occurrence and the patchy and tatty fur can be misinterpreted as ill health. They must be monitored and protected from immediate risk of injury (e.g. in an off-leash dog area, or area with high levels of human activity).

## Guidelines

- 3.1.20 Wildlife rehabilitators should collect the following key information to report to NPWS for all reports of entangled whales and dolphins:
  - location
  - direction and speed of travel
  - photos of the whole animal and the entanglement
  - close-up photos of any identifying features of the entanglement
  - photos of identifying features of the animal (e.g. dorsal fin for a dolphin, underside of tail fluke for a humpback whale, callosity pattern for a southern right whale).
- 3.1.21 Wildlife rehabilitators should avoid all direct contact with all animal excrement including saliva, urine, faeces and blood, by wearing PPE (e.g. gloves) to avoid zoonoses.
- 3.1.22 Wildlife rehabilitators should check the surrounding beaches and headlands when a toothed whale is stranded. Only toothed whales and dolphins mass strand and as they can strand over an extended area there may be many more stranded animals.



## Notes

- During a rescue, removing all jewellery and keeping hands clear from sand will reduce the damage to a whale or dolphin's skin, which is very fragile.
- Mass strandings may involve animals of the same or different species.

## 4. Transport

### 4.1 Moving marine mammals

#### Objective

To minimise further stress and injury to a marine mammal during transport. This section applies to all movements of marine mammals including from the point of rescue to a veterinary surgery or secondary rehabilitation site, between rehabilitation facilities and to a release site.

#### Standards

- 4.1.1 The transport of a rescued marine mammal for temporary care at a rehabilitation facility must be undertaken only with approval from NPWS in consultation with the CEO of the facility and a veterinarian with experience in marine mammals.
- 4.1.2 The transport of a rescued whale, dolphin or dugong to a secondary rehabilitation site (e.g. nearby harbour) must be undertaken only with approval from NPWS.
- 4.1.3 Transport methods and container sizes must be appropriate for the species, size, temperament and strength of the marine mammal. For example:
  - transport carriers for small fur seals with enough space for the seal to stretch to its full length, sit up and turn around
  - stretchers and mats for transport over short distances
  - trailers and trucks for cetaceans
  - pontoons attached to boats or jet skis for larger cetaceans moved through water.
- 4.1.4 Containers must be designed and set up to prevent injuries to the marine mammal. For example:
  - covering floors with a non-slip, non-ingestible, tangle-free surface
  - ensuring transport containers are free of sharp projections
  - supporting marine mammals unable to remain upright with rolled up towels or foam padding
  - lining the floor of vans, uncovered utilities and trailers with soft waterproof mats, foam padding or a layer of sand covered with a sheet
  - securing the animal or the transport container for small seals to prevent movement
  - never moving the animals in the buckets or forks of heavy machinery, instead creating a sling from lift ropes and strong poles for support
  - keeping whales and dolphins wet with a fine mist spray to prevent overheating
  - protecting the animal from sun, heat and wind.
- 4.1.5 Containers must be designed and set up to prevent injuries to the wildlife rehabilitators. For example:
  - moving a large marine mammal onto a mat or stretcher by folding a portion of the mat against its belly and gently rolling the animal onto the opposite side and pulling the folds clear

- lifting and carrying an animal on a rescue mat with equal numbers of people on either side
  - ensuring there is a police escort and a slow set speed when transporting large animals and occupants of a van are unable to wear a seatbelt.
- 4.1.6 Containers must be designed to prevent the animal from escaping.
- 4.1.7 Containers should be structurally sound and suitable for the size and strength of the animal. For example:
- following the manufacturer’s guidelines for size and weight for transport carriers
  - ensuring the transport vehicle has the legal capacity for the animal or carcass being transported, including complying with the legal dimensions and mass limits in the *Heavy Vehicle National Law (NSW) No 42a of 2013 (HVNL)*.
- 4.1.8 The marine mammal must be positioned so its breathing is not restricted, and its pain or discomfort is minimised. For example:
- pectoral flippers must be tucked closed to the body of a whale or dolphin
  - the blowhole or the nostrils must be clear of any obstruction and never covered
  - a soft substrate of foam, mattress, sheets, towels or sand must be provided for whales and dolphins or large seals being transported in trailers, vans or on the back of uncovered utility vehicles.
- 4.1.9 The condition of the marine mammal and the ambient temperature must be monitored regularly during transport, and steps taken to ensure the animal does not overheat. For example:
- protecting the animal from sun, heat and wind
  - making frequent stops to check the animal when wildlife rehabilitators are unable to be in the trailer or truck with the animal
  - keeping whales and dolphins wet with a fine mist spray or a bucket of cool water to prevent overheating.
- 4.1.10 Marine mammals being transported in the back of uncovered utility vehicles or car boots that are separate from the main cabin must be protected from extremes of temperature and provided with shade.
- 4.1.11 Small seals must not be transported on the rescuer’s lap.
- 4.1.12 When transporting small seals in a closed vehicle (back seat, station wagon, van) there must be good ventilation (open windows), and occupants must wear a mask to minimise the risk of zoonoses.
- 4.1.13 Containers for seals must minimise light, noise and vibrations (e.g. cover the container with a breathable dark cloth) and prevent contact with young children, pets, cigarette smoke and strong smells (e.g. exhaust fumes).
- 4.1.14 All marine mammals must be placed facing forward in the direction of travel.
- 4.1.15 The use of medication to facilitate transport must be undertaken with consultation and approval by a veterinarian.
- 4.1.16 Transport of the marine mammal must be the sole purpose of the trip and undertaken in the shortest possible time.

4.1.17 Marine mammals being transported by plane must be transported:

- in containers that meet the approved requirements of the airline
- with the container clearly marked to indicate the top
- with the cabin or hold temperature between 21 and 25°C
- on a stretcher within a marine mammal box and secured in position.

## **Guidelines**

4.1.18 Transport of marine mammals should be at night or early in the morning as long as welfare is not compromised.

## **Notes**

- Further information on transporting heavy loads can be found at Transport for NSW: loads and height restrictions.

## 5. Euthanasia

### 5.1 When to euthanase

#### Objective

To end a marine mammal's life in situations where death is imminent, full recovery is impossible, the likelihood of successful reintegration into the wild population is remote, or the mammal poses an unacceptable disease risk to other animals in the wild once released.

#### Standards

5.1.1 A marine mammal must be euthanased without exception when:

- death is imminent or highly likely regardless of the treatment provided (e.g. copious haemorrhaging from the mouth, blowhole, genital opening or anus, rectal temperature of 42°C or above, loss of jaw tone in whales and dolphins, protruding penis in male whales, dolphins and dugongs)
- it is suffering from chronic, unrelievable pain or distress
- it is carrying (or suspected to be carrying) an incurable disease that may pose a health risk to other wild animals
- its ability to locomote normally (i.e. swim, climb, crawl, or run) is permanently impaired, e.g. severe skull fracture, spinal fracture, dislocated or broken tail stock on a whale, dolphin or dugong
- its ability to consume food unaided is permanently impaired (e.g. severe fracture of the jaw or missing jaw, blind in both eyes)
- an experienced wildlife veterinarian makes that recommendation
- it is either a solitary or one of a pair of survivors from a large, socially interdependent group in a mass stranding of whales and dolphins
- it is an individual in a mass stranding that is deteriorating despite treatment and rehabilitation, and its continued presence prejudices the survival of the remainder
- it has degenerative conditions associated with advanced age (e.g. worn teeth, degenerative arthritis) that render it unable to survive in its natural habitat
- it is not at an age to survive by itself (less than a year old) for a dependent baleen or large odontocete calf (species that grow to at least 6 metres) when the mother has not been located within 24 hours.

5.1.2 A marine mammal must be euthanased (unless the department has granted permission to hold it in permanent care) when:

- it is not at an age to survive by itself for a dependent small odontocete calf (less than a year old) when the mother has not been located within 24 hours, a dependent dugong calf or dependent seal pup
- its ability to sense its environment (i.e. see, hear, smell, taste or feel) is permanently impaired due to a missing or injured organ
- its ability to successfully forage is permanently impaired
- it is habituated.

Only in exceptional circumstances (necessary for genuine scientific or educational purposes or any other purpose connected with the conservation or protection of marine mammals), the

department may grant permission to hold such animals in permanent care or arrange placement with an authorised animal exhibitor licensed by DPI. See the Rehabilitation of Protected Native Animals Policy for details.

## Guidelines

- 5.1.3 A marine mammal should be euthanased (unless the department has granted permission to hold it in permanent care) when there is severe blistering and sloughing or skin disease covering a large portion of the body surface for whales, dolphins and dugongs.
- 5.1.4 An entangled seal should be euthanased when location and geography prohibit access.

## Notes

Dwarf sperm whales and pygmy sperm whales expel a reddish dye from the anus when stressed. This is a normal feature of these species and not bleeding from the anus.

## 5.2 How to euthanase

### Objective

To induce death with minimal pain and distress to the marine mammal.

### Standards

- 5.2.1 A euthanasia method must be used which produces a rapid loss of consciousness immediately followed by death.
- 5.2.2 Death must be confirmed immediately following euthanasia and before disposal of the carcass. The absence of a heartbeat and the loss of corneal reflexes indicate death has occurred.
- 5.2.3 Acceptable methods for euthanasia of marine mammals include:
- anaesthesia followed by an intravenous (preferred) or intracardiac injection of sodium pentobarbital; this must be performed by a veterinarian
  - anaesthesia followed by an intracardiac injection of a saturated solution of potassium chloride; this must be performed by a veterinarian
  - gunshot to the brain for whales and dolphins less than 6 m (excludes sperm whale [*Physeter macrocephalus*], dugongs and seals [see Section 5.2.6])
  - cranial implosion for whales larger than 6 m.
- 5.2.4 The following euthanasia methods must not be used on marine mammals:
- suffocation via drowning, strangulation, chest compression or obstructing the blowhole
  - freezing or burning
  - carbon dioxide or carbon monoxide in any form
  - poisoning with household products
  - air embolism
  - exsanguination, cervical dislocation or decapitation without prior stunning

- electrocution or microwave irradiation
  - chloroform or strychnine
  - neuromuscular blocking agent
  - soft-nosed bullets, as they distort or fragment when travelling at high velocities of between 850 and 1,000 m per second resulting in an uncertain trajectory through body tissue and are prone to deflection on low-angle contact with bone.
- 5.2.5 If euthanasia is not possible, as is the case in some circumstances with large whales, then these animals must not have their suffering increased by inappropriate attempts to kill them. Palliative care, including keeping them wet and limiting exposure to further stress to provide a benign death, must be undertaken.
- 5.2.6 Shooting must be undertaken by licensed, skilled and experienced staff from NPWS or the RSPCA.
- 5.2.7 The euthanasia site must be screened from public view.

## Guidelines

- 5.2.8 A marine mammal that requires euthanasia should not be exposed to additional stressors such as large numbers of onlookers, people touching it, loud noises or extremes of temperature.
- 5.2.9 Signs of life can be difficult to detect in whales and dolphins as some stranded whales and dolphins may hold their breath for a prolonged period (30 minutes or more). Testing for reflexes should be undertaken with a stepped approach:
- touch anywhere on the animal's body and look for reflexive skin movements
  - if there is no response, gently rub around (1 to 2 cm from) the blowhole and look for responsive skin movements
  - if there is no response, gently rub the skin around (1 to 2 cm from) the eye
  - if there is still no response, gently touch the eye itself.

## Notes

- For further information on appropriate euthanasia methods refer to:
- Australian Code for the Care and Use of Animals for Scientific Purposes (8th edition, NHMRC 2013).
- Australian Veterinary Association policy for marine mammal euthanasia.
- The *Firearms Act 1996* specifies animal welfare as a genuine reason for having a firearms licence.
- The *Veterinary Practice Act 2003* places restrictions on the types of procedures non-veterinarians can perform on animals.
- The *Poisons and Therapeutic Goods Act 1966* places restrictions on the types of poisons people can possess.

## 5.3 Disposal of carcasses and animal waste

### Objective

To dispose of waste so the risks of disease or contamination are minimised.

### Standards

- 5.3.1 Wildlife rehabilitation providers must immediately notify NPWS (by contacting the local NPWS office during business hours or calling 13000 PARKS outside business hours) for all marine mammal carcasses.
- 5.3.2 Carcasses and organic waste must either be incinerated (under NSW Environmental Protection Authority licence), taken to a licensed waste facility or, if on private land, buried at a depth that will prevent scavengers from reaching them.
- 5.3.3 A marine mammal that has died must not be fed to other animals.

### Guidelines

- 5.3.4 A deceased marine mammal should, whenever possible, undergo a necropsy by a veterinarian.
- 5.3.5 If a veterinarian is unable to undertake a necropsy, wildlife rehabilitators should contact NPWS to seek advice on collecting samples where they have the necessary PPE and equipment, and it is safe to do so.
- 5.3.6 Standard measurements and photographs should be collected for all marine mammal carcasses. (Requirements are listed in Appendices B and C). This is particularly important for species rarely seen in New South Wales or if the animal is in an unusual location or far out of its usual range.
- 5.3.7 Wildlife rehabilitators should make every effort to reduce the risk of contracting zoonoses caused by marine strains of brucella (*B. ceti* and *B. pinnipedialis*), salmonella, giardia, cryptosporidium, *Mycoplasma phocacerebrale* (seal finger), *Mycobacterium pinnipedii*, *Leptospira* spp. and *Toxoplasmosa gondii* by:
  - wearing PPE such as a mask and latex or nitrile gloves when handling carcasses, tissues or fluids
  - wearing waterproof outerwear or disposable overalls to protect clothing from contamination
  - covering surface wounds with protective dressings before handling animals
  - washing exposed skin and clothing after handling animals, before eating or drinking and at the end of an operation
  - having vaccinations for tetanus.

### Notes

For further information on carcass disposal refer to:

- Management of deceased whales on the department's website
- DPI fact sheet: Animal carcass disposal, including particular information on the proper construction and location for a burial site to protect the water table.



## 6. Care procedures

### 6.1 Assessment

#### Objective

To identify the severity of wounds, injuries or disease to determine the best course of action for a marine mammal undergoing rehabilitation.

#### Standards

- 6.1.1 The species of marine mammal and stage of development (see definitions) must be identified.
- 6.1.2 A hauled out seal must be checked from a distance for:
  - body condition score (1–5)
  - abnormal mobility
  - coloured discharge from the eyes
  - discharge from the mouth or nose
  - bleeding or wounds
  - respiration and open-mouth breathing
  - entanglements, vomiting or abnormal faeces
  - alertness (e.g. response to people and noise around them)
  - unusual vocalisations
  - swimming in circles.
- 6.1.3 A free-swimming whale, dolphin or dugong must be checked from a distance for:
  - body condition score (e.g. emaciated animals have a peanut-shaped head)
  - swimming in a circle
  - buoyancy (e.g. not listing to one side)
  - bleeding or wounds
  - entanglements
  - signs of agitation (e.g. tail slapping, chuffing, body throws)
  - skin lesions
  - escape routes for suspected entrapments.
- 6.1.4 Veterinary assessment (not a distance assessment) of a marine mammal must include details in a distance assessment (see 6.1.2 and 6.1.3) and must also check for:
  - bone fractures
  - a broken jaw, beak or jaw misalignment
  - elevated heart rate
  - hydration levels
  - shock and blood loss (e.g. pale or white palate)
  - blowhole condition
  - genital slit condition

- eye condition, e.g. no eye movement, opaque eyes, sunken eyes, blood in the eye
  - internal mouth condition (e.g. teeth, colour, smell, oral lesions, throat swelling or obstruction, tongue condition)
  - parasites (e.g. whale lice)
  - abnormal faeces
  - uncharacteristic smells
  - neurological disorders
  - signs of infection.
- 6.1.5 On admission to a rehabilitation facility a marine mammal must be weighed.
- 6.1.6 Once identified, disease or injury must be managed according to severity and this will generally require veterinary input. Management of marine mammals in care must always strive for optimal animal welfare. Recognition and management of pain is important.
- 6.1.7 A triage process must be used at a mass stranding to assign a health category to each animal to determine the appropriate response action. Triage is based on clinical assessment. Animals will be placed in one of 4 groups (below) and temporarily marked (e.g. using coloured zinc marking):
- green – healthy
  - yellow – minor incapacity (requires treatment)
  - red – major incapacity (may require euthanasia)
  - black – deceased.
- As rehabilitation is often protracted, an animal may be re-categorised in terms of health status during the course of operations.
- 6.1.8 All seals being assessed must not be in rooms containing other wildlife or domestic pets to minimise stress and ensure disease is not transferred.

## Guidelines

- 6.1.9 The gender of the marine mammal should be identified.
- 6.1.10 Minimum examination of a marine mammal by a veterinarian should include:
- thorough physical examination (under anaesthesia if a seal is stressed or completely entangled in fishing net)
  - X-ray for animals with suspected trauma (e.g. fractures)
  - examination of eyes with an ophthalmoscope and fluorescein stain for mammals with a suspected eye injury
  - additional tests that may be indicated, including blood work (e.g. a complete blood count and serum biochemistry including lactate levels), samples from lesions and faecal examination
  - tuberculosis testing (TB) for seals.

## Notes

- The respiration of a hauled out seal can be measured without breaching the 40-m approach distance by using a pair of binoculars. One person will watch the side of a

resting seal to identify chest movement while a second person notes the number of breaths per minute on a timer or time piece which includes seconds.

## 6.2 Monitoring

### Objective

To check the health of a marine mammal undergoing rehabilitation so concerns can be promptly identified and managed. The type and frequency of monitoring will vary with the species, age and stage of development, type of injury or illness, and required treatment.

### Standards

#### 6.2.1 Monitoring a hauled out seal must entail:

- visually assessing body condition, including weight loss or gain over time
- noting demeanour (alert to loud noises and human approach)
- checking for signs of injury, wounds, entanglements, disease and parasites
- assessing fur and skin condition
- noting quantity and quality of faeces and urine
- noting regurgitation levels
- noting normal behaviour (e.g. grooming, thermoregulating and fur seals returning to water in the late afternoon)
- noting abnormal behaviour (e.g. seizures, shivering or shaking, lethargy)
- checking mobility levels for movement to and from the water
- length of time in the haul-out location.

#### 6.2.2 Monitoring a free-swimming whale, dolphin or dugong must entail:

- visually assessing body condition, including weight loss or gain over time
- noting foraging behaviour
- noting demeanour (e.g. active foraging, both active strong swimming and slow resting behaviour, or listless with limp flukes or flippers)
- checking for ability to dive and hold breath for a length of time
- checking for signs of injury, wounds, entanglements, disease and parasites
- assessing skin condition
- noting abnormal behaviour (e.g. whales and dolphins with atypical swimming patterns including swimming in circles, listing to one side or unable to right themselves)
- changes in respiration
- length of time in the location
- salinity, pH and turbidity levels.

#### 6.2.3 Monitoring a stranded whale, dolphin or dugong must entail:

- visually assessing body condition
- checking for discharges from the mouth, blowhole or anus
- noting demeanour (types of vocalisations and eyes open)
- checking for signs of injury, wounds, entanglements, disease and parasites

- assessing hydration
  - assessing skin condition
  - noting quantity and quality of faeces and urine
  - changes in respiration.
- 6.2.4 Monitoring of marine mammals undergoing rehabilitation in a facility must determine food intake levels and measure weight gain over time.
- 6.2.5 Wildlife rehabilitators must monitor the ambient temperature within enclosures containing thermal support (e.g. blankets, electric heat mats, water heaters) to ensure appropriate temperatures are maintained. A thermostat must regulate electrical heat sources.
- 6.2.6 When multiple marine mammals are in pre-release care, they must be discretely monitored for signs of aggression.
- 6.2.7 Antibiotics must be given only by or under the guidance of a veterinarian and with extreme caution due to the spread of antibiotic resistance and to avoid harm to wild populations.
- 6.2.8 Disturbance to seals in intensive care and the risk of increasing stress levels must be considered when deciding the frequency of monitoring. For example, monitoring at the same time as treatment and feeding.
- 6.2.9 Once out of intensive care, seals undergoing rehabilitation must be discretely monitored every 3 hours during the day.
- 6.2.10 Whales, dolphins and dugongs being rehabilitated in a facility in intensive care must initially be monitored continuously, slowly increasing in intervals to every 3 to 4 hours. They must be supported to ensure their blowhole or nostrils are above the water.
- 6.2.11 Whales, dolphins and dugongs being rehabilitated in a facility being prepared for release must be monitored twice a day.
- 6.2.12 Stranded whales, dolphins and dugongs being rehabilitated in situ must be monitored closely as they can rapidly become overheated and stressed. The following preventative measures must be undertaken. For example:
- place the animal upright
  - keep the animal cool (e.g. cover with light-coloured wet sheets [natural fibres only]; provide shade; keep blowhole, tail flukes and pectoral flippers uncovered)
  - keep the animal moist at all times (e.g. gently pour water continuously over the body with care to avoid the blowhole)
  - limit noise, with people only directly involved in the rehabilitation near the mammal
  - approach the animal from the side in line with the eyes so it can see the approach
  - if the animal is in the water, keep the blowhole above the water to ensure breathing is not restricted.
- 6.2.13 Marine mammals being rehabilitated in a facility must be weighed before release.
- 6.2.14 When monitoring a hauled out seal, wildlife rehabilitators must not block the seal's access to water.

- 6.2.15 When monitoring hauled out seals and free-swimming whales, dolphins and dugongs for longer than 3 days, wildlife rehabilitators must provide NPWS with a written update and photographs at least twice a week (uploaded into the Elements database) indicating behaviour, body condition or health changes over time to assist in evaluation by veterinary specialists.

## Guidelines

- 6.2.16 Monitoring a hauled out seal should include determining sex.
- 6.2.17 Monitoring a dolphin should include measuring heart rate (beats per minute).

## 6.3 Controlling disease transmission between animals

### Objective

To prevent the spread of diseases among marine mammals undergoing rehabilitation. Stressed animals are more susceptible to contracting and expressing infectious diseases.

### Standards

- 6.3.1 Each newly arrived marine mammal must be isolated in a separate area until its disease status can be determined by a veterinarian.
- 6.3.2 A marine mammal suspected or known to be carrying an infectious disease must be kept under strict quarantine conditions (e.g. an individual enclosure in a separate room) throughout its rehabilitation, and wildlife rehabilitators must wear PPE (e.g. gown, mask and gloves).
- signs of disease may include abnormal breath sounds; discharge from eyes or nostrils; diarrhoea; skin lesions; unable to right itself for a whale, dolphin or dugong; abnormal swimming posture or abnormal gait in a seal.
- 6.3.3 If an unusual disease or mortality event is suspected, the wildlife rehabilitator must immediately notify the DPI Emergency Animal Disease Hotline (24 hours) on 1800 675 888 for immediate assessment of emerging health threats.
- 6.3.4 Dedicated cleaning equipment must be used for enclosures housing marine mammals with a suspected or confirmed infectious disease. This equipment must not be shared.
- 6.3.5 Wildlife rehabilitators must wash their hands thoroughly with soap or disinfectant before and after handling each animal in care at a facility.
- 6.3.6 All enclosures, transport containers, enclosure furniture, food and water containers food utensils must be thoroughly cleaned and disinfected between each occupant with an appropriate disinfectant which contains both antibacterial and antiviral properties. Single-use materials, equipment unable to be disinfected after use and biological and hazardous waste must be disposed of properly and in accordance with the *Protection of the Environment Operations Act 1997*.
- 6.3.7 When handling multiple animals, rehabilitators must start with the healthiest and finish with the sickest to reduce the risks of disease transmission.
- 6.3.8 A marine mammal undergoing rehabilitation must be prevented from coming into contact with domestic pets or other animals with an unknown disease status.

## Guidelines

- 6.3.9 Wildlife rehabilitators should make every effort to reduce the risk of contracting zoonoses caused by marine strains of brucella (*B. ceti* and *B. pinnipedialis*), salmonella, giardia, cryptosporidium, *Mycoplasma phocacerebrale* (seal finger), *Mycobacterium pinnipedii*, *Leptospira* spp. and *Toxoplasmosa gondii* by:
- wearing PPE such as a mask and latex or nitrile gloves when handling except for rehabilitation undertaken in the water
  - covering surface wounds with protective dressings before handling animals
  - washing hands routinely, using soap or sanitiser where available
  - washing exposed skin and clothing after handling animals, before eating or drinking and at the end of an operation
  - having vaccinations for tetanus.
- 6.3.10 Wildlife rehabilitators should consider the method of disposal of all animal excrements to avoid further disease transmission.
- 6.3.11 Pest control is recommended for all rehabilitation facilities.
- 6.3.12 Wildlife rehabilitators should be trained in barrier nursing.

## Notes

- Wildlife rehabilitators should seek medical advice for any bites, cuts or injuries, and if unwell, advise the doctor they have been caring for a sick animal and there is a possibility of having contracted a disease.
- It is recommended that pregnant women or immunocompromised people do not handle or care for sick animals.

## 7. Husbandry

### 7.1 Food and water

#### Objective

To ensure the marine mammal has a feeding and watering regime that encourages rapid recovery, supports growth in juveniles, and assists with the maintenance of foraging behaviour necessary for survival in the wild.

#### Standards

- 7.1.1 Clean, fresh drinking water must be available at all times for seals and changed daily.
- 7.1.2 Marine mammals must be provided with a balanced and complete diet that supports growth and development and is appropriate for the species, size, stage of development, mobility and physiological status of the animal. For example:
  - whales, dolphins and seals require a variety of fish species (e.g. pilchards, whiting and yellow tail) as well as squid and octopus
  - dugongs require seagrass, cos lettuce or leafy green vegetables
  - marine mammals with poor body condition must not be overfed when first in intensive care to avoid refeeding syndrome. Food must be introduced slowly (one-third of their energy requirement for the day) and increased as their appetite returns and they are able to tolerate the extra food
  - juvenile dugongs or dugongs with gastric issues require the introduction of faecal matter (orally in paste form in the mouth or via a stomach tube) to stimulate gut bacteria
  - milk formulas for juvenile marine mammals requires supplements (calogen and a probiotic for gut flora for seals and dugongs).
- 7.1.3 Food that is available in the wild or that mimics food in the wild (e.g. kale, endive or lettuce to replace seagrass for dugongs) must form the basis of the animal's diet.
- 7.1.4 Feeding interaction with seals must be minimised to ensure human contact is minimised and habituation is limited. Food must be:
  - tossed from behind a visual barrier for the seal and discretely observing the seal self-feed
  - feeding from a PVC and hose system behind a visual barrier so the seal does not associate humans with the fish entering the pool system
  - placed in the rehabilitation pool when the seal is not present.
- 7.1.5 Feeding and hydration assistance required for marine mammals must be undertaken only by a veterinarian or by senior staff in a licensed marine mammal facility.

#### Guidelines

- 7.1.6 Dugongs being prepared for release should be transitioned to their natural wild food diet (i.e. seagrass).

## Notes

- The feeding of live vertebrate prey to an animal is only acceptable under certain circumstances, as set out in the NSW *Prevention of Cruelty to Animals Act 1979*. Rehabilitators are encouraged to contact the DPI Animal Welfare Branch for further information.
- Follow the exact measurement directions for hydration products, as modifying the amounts and adding extra product into a solution will hinder rehydration.
- Water circulating within a seal's rehabilitation pool will assist with mimicking the natural movement of a fish for feeding.

## 7.2 Hygiene

### Objective

To maintain clean rehabilitation facilities so diseases are prevented or contained.

### Standards

- 7.2.1 Faeces must be removed:
- as soon as it is seen for all cetaceans and dugongs
  - at the same time as handling for treatment and feeding for a seal, to reduce stress.
- 7.2.2 Faeces must be disposed of so it cannot be consumed by other animals (e.g. in closed garbage or compost bins).
- 7.2.3 Food utensils and water containers (seals only) must be cleaned daily. Cleaning involves the use of water, detergent and the physical removal of all residues.
- 7.2.4 Enclosures, transport containers and weighing equipment must be disinfected and rinsed for each new marine mammal.
- 7.2.5 A marine mammal must be gently cleaned (hosed or wiped down with fresh water) when soiled with faeces, urine or uneaten food. Detergents must not be used.
- 7.2.6 Wildlife rehabilitators must minimise the disturbance to the marine mammals when cleaning.
- 7.2.7 Water quality must be maintained by passing water through a mechanical filtration system and biological filters (e.g. sand or carbon filters) or by replacing the water every day for mammals in intensive care and every few days for mammals being prepared for release.
- 7.2.8 Food that requires thawing must be thawed in a refrigerator (less than 4°C) over 24 to 48 hours, and unused food must never be refrozen. Food that is thawed and has been in a fridge for 24 hours and not fed to the marine mammal must be discarded.
- 7.2.9 Wildlife rehabilitators must wash their hands and clean all food preparation surfaces and equipment before preparing marine mammal food.

### Guidelines

- 7.2.10 Water quality should be tested daily, and water pumped in from an external source should be tested before use. Water quality should be within the following parameters:
- pH levels between 7.5 and 8.4



- salinity between 20 and 35 parts per thousand (PPT)
- free chlorine levels less than 0.5 parts per million (PPM)
- the water is treated total bromine levels should not exceed 1.0 mg per litre
- coliform bacteria less than 500 most probable number (MPN) per 100 ml of water.

## 7.3 General care procedures

### Objective

To ensure marine mammals have a care regime that encourages rapid recovery, supports growth in juveniles, and assists with behaviours necessary for survival in the wild.

### Standards

- 7.3.1 All husbandry requirements must be covered in training specific to marine mammal rehabilitation (see Section 11 'Training').
- 7.3.2 Each marine mammal in a rehabilitation facility must have a husbandry plan.

### Guidelines

- 7.3.3 Marine mammals are very prone to habituation and imprinting. All care should be taken to minimise social interactions with humans, and natural behaviours should be allowed to develop.
- 7.3.4 Stranded whale and dolphin calves should be placed near an adult female to reduce stress.

### Note

Gentle rocking can help whales and dolphins regain their balance, relieve muscle stiffness and restore circulation.

## 8. Housing

### 8.1 General requirements

#### Objective

To ensure a marine mammal undergoing rehabilitation is housed in enclosures that keep it safe, secure and free from additional stress.

#### Standards

- 8.1.1 Enclosures must be escape-proof. For example:
- seals require an unscalable fence
  - pools for whales, dolphins and dugongs require padding (e.g. mattresses) on the horizontal surfaces around the pool to stop them sliding out
  - all animals must be observed for escape attempts.
- 8.1.2 Housing must be made safe for a marine mammal to live in by excluding hazards that might harm it, including:
- shielding the drains, pool grates and intake pipes to prevent accidental entrapment and a drowning risk
  - ensuring all enclosure furniture is secured
  - removing all stretchers from the enclosure once the whale, dolphin or dugong is free-swimming
  - removing the door of crates placed in an enclosure to ensure a seal's flippers are not caught
  - securing crates placed in an enclosure so they cannot slip into the pool
  - shielding an electrical heat source so that it is bite-proof
  - removing small pebbles, non-food items or inappropriate substrate to prevent ingestion
  - excluding rough or abrasive surfaces, sharp protrusions or exposed wires
  - providing protection from direct sunlight.
- 8.1.3 Housing must be made safe for the rehabilitator by excluding hazards that may harm them including:
- ensuring all electrical devices have a residual current device (safety switch) to protect against electrocution from electrical equipment near water
  - regular cleaning of the bottom of pools to prevent risks of slipping due to algae and faecal matter accumulating on the bottom of the pool
  - adequate clothing to protect wildlife rehabilitators from hyperthermia when rehabilitating in the water
  - sun protection.
- 8.1.4 Housing must be designed and positioned:
- to protect the marine mammal from pests and physical contact with wild animals
  - so the marine mammal cannot see domestic pets

- so rehabilitators can readily access the marine mammal.
- 8.1.5 Housing must be positioned so the marine mammal is not exposed to strong vibrations, noxious smells (e.g. smoke) or loud noises (e.g. radios and televisions, vehicles and barking dogs).
- 8.1.6 Housing must be constructed from non-toxic materials that can be easily cleaned and disinfected.
- 8.1.7 Substrate must be a soft, non-slip material that can be changed easily, e.g. rubber matting, or towels. Straw, hay, shredded paper, grass clippings or sawdust must not be used as it can lead to infection.
- 8.1.8 If multiple marine mammals of the same species are kept within a single enclosure, there must be sufficient space for individuals to avoid undue conflict and stress with each other, and they must be monitored for signs of aggressive interactions.
- 8.1.9 Whale, dolphin and dugong mother and calf pairs must be kept in the same enclosure.

## 8.2 Intensive care

### Objective

To facilitate frequent monitoring, treatment, feeding and rehydration during the period immediately after coming into care and until the marine mammal is stabilised.

### Standards

- 8.2.1 For a seal, intensive care housing must provide sufficient space for the seal to maintain a normal posture and to sit up and turn around without hitting its head.
- 8.2.2 For a whale, dolphin or dugong, intensive care housing must provide sufficient space for the animal to stretch out and swim a short distance. Consideration must be given to ensure the water is not too deep for a whale, dolphin or dugong that cannot keep its blowhole above water. Wildlife rehabilitators will need to support it and there must be enough water so its flukes touch the floor but its head remains above water.
- 8.2.3 Intensive care housing must provide a constant temperature appropriate to the species, age and nature of the illness or injury. For example:
  - dolphins need to be in a water temperature of 20–28°C
  - seals need to be in a water temperature where they do not need to expend energy to keep warm (e.g. 16–28°C).
- 8.2.4 The temperature in intensive care housing must be monitored at least once a day using a thermometer.
- 8.2.5 Electrical heat sources must be regulated by a thermostat and shielded to prevent burns and disturbance to the seal.
- 8.2.6 Seals in intensive care housing must experience a light–dark cycle that replicates outside conditions. If an artificial light source is used, it must be separate from any artificial heating.
- 8.2.7 During intensive care where continuous monitoring is needed and a whale, dolphin or dugong is being supported in the water, continuous low light will be required to ensure the safety of wildlife rehabilitators. Once an animal is stable and able to

support itself, lighting must replicate the light–dark cycle of outside conditions. If an artificial light source is used, it must be separate from any artificial heating.

- 8.2.8 Intensive care housing must be designed and positioned so that visual and auditory stimuli are reduced.
- 8.2.9 Intensive care housing must be adequately ventilated without allowing excessive drafts.

## 8.3 Pre-release housing

### Objective

To give the marine mammal the opportunity to regain its physical condition, acclimatise to current weather conditions and practice natural behaviour. At this stage of rehabilitation, interactions between the marine mammal and humans will be greatly reduced.

### Standards

- 8.3.1 Pre-release housing must provide sufficient space for the marine mammal to move about freely and express a range of natural behaviours.
- 8.3.2 Pre-release housing must contain habitat elements that enable the marine mammal to perform a range of natural behaviours. For example:
  - seals require an area to haul out and a pool deep enough to swim
  - whales, dolphins and dugongs need a pool large enough to swim freely including in 2 directions and deep enough to submerge
  - dugongs need a pool deep enough for their diving ability to be assessable
  - fur seals require enrichment furniture that will encourage mobility and climbing
  - enrichment furniture must not encourage habituation (e.g. balls and pool noodles).
- 8.3.3 Pre-release housing must provide areas where the marine mammal can gain exposure to prevailing weather conditions and areas where it can shelter.

## 9. Suitability for release

### 9.1 Preparations for release

#### Objective

To ensure the marine mammal is physically fit and has the appropriate survival skills before its release. Preparations for release will start at the time of rescue and continue throughout the rehabilitation process. Many species will gradually lose their survival skills in captivity, so it is vital their time in care is kept to a minimum.

#### Standards

- 9.1.1 A marine mammal must not be released until it is physically ready. This status has been achieved when:
- it has recovered from any injury or disease (e.g. swims, dives and walks normally)
  - its weight and body condition are within the appropriate range for the species, stage of development and sex
  - it has appropriate fitness levels as determined by observation. For example:
    - all marine mammals need to swim strongly
    - a whale or dolphin demonstrates normal balance, keeps upright, breathes regularly, keeps eyes open and has a strong tail action
    - a dugong dives and submerges for an extended time
    - a seal has good mobility in and out of water
      - its fur and skin are adequate for survival in its natural habitat (i.e. there is less than 30% skin damage)
      - it has acclimatised to prevailing climatic conditions
      - it is alert (responsive to external stimuli such as touch and wave action)
      - respiratory rate and body temperature are within normal ranges
      - it has all the measured body reflexes.
- 9.1.2 A marine mammal must not be released until it is behaviourally ready. This status has been achieved when:
- it is not attracted to humans or to sights, sounds or smells that are specific to captivity (i.e. not habituated or imprinted)
  - it can recognise, catch and consume appropriate, naturally available food (e.g. marine mammals must be self-feeding); this is not required for marine mammals being released after in situ rehabilitation
  - it can recognise and avoid predators, including pets (i.e. it has not been allowed to associate with domestic animals during rehabilitation so its natural instinct to avoid predators remains intact)
  - it can navigate effectively through its natural environment (e.g. avoid obstacles and swim in more than one direction)
  - it can recognise and interact normally with members of its own species.

- 9.1.3 A marine mammal's readiness for release must be confirmed by a veterinarian or experienced NPWS officer.
- 9.1.4 Dependent whale, dolphin or dugong calves must not be released without the mother present if it is a single stranding or without an adult female if it is a whale or dolphin mass stranding.
- 9.1.5 Antarctic or subantarctic seals (e.g. leopard seals, subantarctic fur seals, southern elephant seals and crab-eater seals) that have been in a rehabilitation facility must not be released back into the wild to prevent potential disease or pathogen transmission from rehabilitated seals to wild seals and other Antarctic wildlife.
- 9.1.6 In cases where an animal is determined to be non-releasable, the wildlife rehabilitation provider must:
- consider euthanasia (see Section 5 'Euthanasia')
  - if euthanasia is not considered appropriate, contact the Wildlife Team ([wildlife.licensing@environment.nsw.gov.au](mailto:wildlife.licensing@environment.nsw.gov.au)) and apply for permanent care
  - notify the Wildlife Team ([wildlife.licensing@environment.nsw.gov.au](mailto:wildlife.licensing@environment.nsw.gov.au)) to arrange placement with an authorised animal exhibitor licensed by DPI.

## Guidelines

- 9.1.7 A marine mammal should not be released until its health and fitness is assessed by a veterinarian with
- a complete blood count and serum biochemistry profile with normal results
  - clinical examination (preferably under anaesthesia for seals) showing no signs of disease
  - tuberculosis testing (TB) for seals with negative results.

## 10. Release considerations

### 10.1 Timing of release

#### Objective

To ensure a marine mammal is released as soon as it is ready and at a time that minimises stress and maximises its chances of survival in its natural habitat.

#### Standards

- 10.1.1 Once a marine mammal is deemed ready for release, it must be released as soon as conditions are suitable (see below for what suitable conditions are).
- 10.1.2 A marine mammal must be released when weather conditions encourage high activity levels. Release during extremes of temperature and storms must be avoided.
- 10.1.3 A marine mammal must be released at a time of day that enables it to immediately investigate its environment. For example:
  - whales, dolphins and dugongs must be released with enough daylight to monitor for re-stranding
  - whales, dolphins and dugongs must not be released on an incoming tide.

### 10.2 Release site selection

#### Objective

To ensure the wild marine mammal populations and natural environment are not negatively impacted by the release of a marine mammal, and the released marine mammal has the highest likelihood of survival.

#### Standards

- 10.2.1 A marine mammal must be released in the nearest suitable environment to the location it was found. A suitable environment for release is one that:
  - contains appropriate habitat and adequate food resources
  - does not place the marine mammal at a high risk of injury (e.g. near a shark meshing program)
  - does not have extremes of weather including high wind and swell
  - is within the natural range of the species. e.g. dugongs must be released in Queensland, Australian and New Zealand fur seals must not be released north of Yamba
  - is near the capture site for species belonging to a highly localised population (e.g. resident populations of Indo-Pacific bottlenose dolphins)
  - is not near a breeding colony or regular haul-out site for seals that have been rehabilitated in a facility as they may be carrying transmissible diseases picked up in captivity
  - has safe access for the rescuers and staff involved.

10.2.2 A marine mammal can only be released in a park if:

- it was originally encountered in that location
- written consent for the release has been obtained from the relevant NPWS Area Manager (issued under c.11 of the National Parks and Wildlife Regulation 2019)
- the release complies with the relevant Department of Planning and Environment policies on translocation.

These conditions also apply to the release of a marine mammal in a location where it might reasonably be expected to immediately enter a park (e.g. on a beach adjoining a park).

10.2.3 A marine mammal can only be released in a marine park if:

- written consent for the release has been obtained from the relevant marine park manager
- the release complies with the relevant Department of Planning and Environment policies on translocation.

## Guidelines

10.2.4 A marine mammal should be released in an area that is connected to other suitable habitat.

10.2.5 Marine mammals can travel over a wide range of distances. Consultation with a specialist in the life cycle and territory of that species will help in identifying a suitable release site.

## Notes

- Migratory whales, dolphins and seals may move across eastern Australia with currents playing an important role in the movements of some species.
- Wildlife rehabilitators who propose to release a marine mammal outside these standards and guidelines require additional approval. Contact the Wildlife Team via email at [wildlife.licensing@environment.nsw.gov.au](mailto:wildlife.licensing@environment.nsw.gov.au).

## 10.3 Release techniques

### Objective

The use of release techniques that ensure the released marine mammal has the highest likelihood of survival, and information is collected regarding the rehabilitated marine mammal's fate after release so the relative merits of different rehabilitation and release techniques can be compared.

### Standards

10.3.1 Whales and dolphins being released after a mass stranding must be released simultaneously or in grouped phases but never singly with the following considerations:

- releasing stronger females from a pontoon or sling, slightly offshore, so their vocalisations will entice the rest of the pod seaward



- boats and people on shore creating a noise barrier (e.g. striking metal objects or rocks against rocks, held under water, revving engines and slapping hands against hulls) to deter them from re-stranding
  - if enough trained and experienced people are present, a human chain can be used to herd the animals out to open sea. For safety reasons, attempt this technique only with smaller species of cetaceans, such as dolphins, and only in suitable sea conditions when occupational health and safety requirements can be met.
- 10.3.2 When releasing from a boat, the marine mammal must be released on the seaward side of the boat ensuring there are no physical obstructions (e.g. another boat or a shark meshing program) and the swell will not push them back onto the boat.
- 10.3.3 Marine mammals must be released at the rescue location after an entanglement is removed and the wounds caused by entangling material are minor.
- 10.3.4 When releasing seals that have been chemically restrained by a veterinarian due to severe entanglement, recovery will take several hours and care must be taken to ensure the animal has fully recovered.
- 10.3.5 Freeze branding must not be used to mark marine mammals.

## Guidelines

- 10.3.6 If a marine mammal has been rehabilitated with a buddy, they should be released together.
- 10.3.7 Wildlife rehabilitators should arrange for marine mammals to be micro-chipped, satellite tagged or marked as appropriate for individual identification before release. Wildlife rehabilitation providers and zoological parks are encouraged to participate in post-release monitoring programs to determine survivorship.
- 10.3.8 Non-toxic paint or other impermanent methods of marking (e.g. hair dye or shaved patches of fur for seals) may be used to mark released animals to facilitate post-release monitoring.

## Notes

- Photographic or video records of stranded animals made before their release can be useful for recording distinctive natural features such as unusual fin or fluke shapes, scars, markings or colour patterns. This is especially important when monitoring the movement of some animals, and a description of the animal needs to be passed from one NPWS area office to another.
- All research involving protected animals requires a licence issued under the BC Act and an ethics approval issued under the *Animal Research Act 1985*.

# 11. Training

## 11.1 Requirements

### Objective

To ensure wildlife rehabilitators have appropriate knowledge and skills to ensure the welfare of marine mammals in their care.

### Standards

- 11.1.1 New wildlife rehabilitators must undertake an introductory training course (excluding paid staff in DPI-licensed facilities).
- 11.1.2 Before undertaking marine mammal rehabilitation, a person must undertake specialist training.
- 11.1.3 A specialist training course must:
  - teach the standards and guidelines described in this code
  - focus on what a person will be able to do as a result of completing the course (i.e. be competency-based)
  - teach health and safety issues associated with marine mammal rehabilitation (e.g. disease transmission and operating in hazardous locations)
  - have a written assessment component
  - teach how to keep accurate records.
- 11.1.4 Wildlife rehabilitators must be assessed as competent in the relevant areas before undertaking rescue, rehabilitation or release of marine mammals.
- 11.1.5 Training must be accompanied by ongoing in-field support from experienced marine mammal rehabilitators.
- 11.1.6 All wildlife rehabilitators must undertake professional development and refresh their training for marine mammals every 3 years, e.g. refresher or advanced training course, attendance at marine mammal conferences or seminars.
- 11.1.7 Wildlife rehabilitators must have an understanding of:
  - the objectives of marine mammal rehabilitation
  - wildlife ecology (e.g. population dynamics, habitat selection, competition, and predator–prey interactions)
  - marine mammal behaviour (e.g. feeding, predator avoidance, age-appropriate behaviour and social interactions)
  - migratory and nomadic behaviours.
- 11.1.8 Wildlife rehabilitators must be proficient in:
  - species identification
  - marine mammal handling techniques
  - first aid for injured marine mammals
  - recognising the signs of disease, pain and stress
  - animal husbandry
  - marine mammal anatomy and physiology.

## Guidelines

11.1.9 Wildlife rehabilitators should continue their professional development by keeping up to date with the latest findings from scientific papers on marine mammals.

## Notes

- The department has prepared *Marine Mammal Rehabilitation Training Standards for the Volunteer Wildlife Rehabilitation Sector* (DPE 2022), including a marine mammal trainer's guide to ensure volunteers are trained to be competent in the implementation of this code.
- Attendance at marine mammal conferences or seminars may require pre-approval from a wildlife rehabilitator's group training coordinator to be eligible for consideration.

## 12. Record keeping

### 12.1 Keeping a register

#### Objective

To maintain a database of marine mammals that have been reported to wildlife rehabilitation providers, to inform improved rehabilitation outcomes for individual animals and contribute to our knowledge of the ecological viability of marine mammal species.

#### Standards

12.1.1 Licensed wildlife rehabilitation providers and zoological parks must maintain a current register of all protected marine mammals reported, encountered or rescued.

The register must contain the following information on each animal:

- encounter details (date, location, encounter circumstances, the animal's condition and unique ID number)
- species data (species name, sex and stage of development)
- care providers details (name and address of the initial assessor, name and address of the marine mammal rehabilitator)
- fate details (date, final disposition, release location and any permanent marking).

These records must be submitted to the Elements database within 2 weeks of the encounter.

12.1.2 Wildlife rehabilitators record the following additional information at the time of rescue:

- when the marine mammal was discovered (time of day)
- details of the haul-out or stranding site, e.g. high-tide mark, rock pool
- environmental history, e.g. unusual weather events or recent oil spill
- any treatment provided before transport.

12.1.3 Wildlife rehabilitators must record the following additional information at the time of assessment by a veterinarian or experienced marine mammal rehabilitator:

- details of wounds, injuries, diseases and external parasites
- details of mobility
- details of abnormal behaviour
- recommended management (e.g. euthanasia or prescribed treatment).

12.1.4 Wildlife rehabilitators must record the following additional information at the time of entry into a rehabilitation facility:

- initial weight
- identifying features if the marine mammal is to be housed communally.

12.1.5 Wildlife rehabilitators must record details of the following daily care information:

- the type and quantity of food and liquid ingested
- treatment and diagnostics (e.g. medication, therapy, DNA sampling, pathology results)
- instructions from veterinarians

- changes to general fitness and behaviour
  - enclosure cleaning (e.g. quantity and quality of faeces and urine).
- 12.1.6 Wildlife rehabilitators must record the following additional information regarding fate:
- if released, details regarding the type of release (e.g. off the beach or back of a boat)
  - if released, details regarding the condition of the animal
  - tag number or microchip number.
- 12.1.7 Wildlife rehabilitators must record the weight of the marine mammal taken into a facility so changes can be identified quickly (weighing frequency will depend on the type of care provided; see Section 6.2 'Monitoring').
- 12.1.8 When a marine mammal is transferred to another wildlife rehabilitator or organisation for any reason, copies of its records must be transferred with it.
- 12.1.9 If the death of a marine mammal is suspected to be the result of a serious disease outbreak, the wildlife rehabilitator provider must immediately contact the DPI Emergency Animal Disease Hotline (24 hours) on 1800 675 888 to ascertain whether tissue analysis or a necropsy is required.
- 12.1.10 Wildlife rehabilitators uploading information to the Elements database must check to see if the event has already been recorded before adding a new event. If an event already exists, they must check their involvement has been captured correctly.
- 12.1.11 Record keeping at mass strandings is difficult and complex and care must be taken to ensure that all records for each animal are taken methodically. Each whale or dolphin must be labelled with a temporary cotton tag marked with the date, time and animal number.

## Guidelines

- 12.1.12 Wildlife rehabilitators should record who discovered the marine mammal (name and contact details) at the time of rescue.
- 12.1.13 Wildlife rehabilitators should record the following details at the time of transport:
- vehicle type (e.g. whale trailer, car, van or open-backed utility vehicle)
  - length of time in transport
  - extra transport requirements (e.g. police escort).
- 12.1.14 Wildlife rehabilitators should keep duplicates or backups of records to avoid information being lost.
- 12.1.15 Sightings of marine mammals that are not in need of rescue should be uploaded to NSW BioNet and should contain encounter details (date, location, encounter circumstances and a unique ID number) as well as whether the marine mammal was alive or dead.
- 12.1.16 Wildlife rehabilitators should record the following additional information for dead marine mammals:
- cause of death
  - necropsy notes
  - disease testing and DNA testing results
  - records of care of previous rehabilitation
  - weight of marine mammals taken to a licensed waste facility.

12.1.17 If the injury or death of a marine mammal is suspected to be the result of animal cruelty (e.g. premeditated poisoning or shooting), the RSPCA should be contacted.

## Notes

- Transport vehicles entering the licensed waste facility are weighed upon entry and then reweighed when departing. The difference in weight can be used as an effective method to determine the weight of a marine mammal carcass.

## 13. Further reading

Cowardine M 2020, *Handbook of Whales, Dolphins and Porpoises*, Bloomsbury PLC, London UK.

Geraci JR & Lounsbury VJ 2005, *Marine mammals ashore: a field guide for strandings*. National Aquarium in Baltimore.

Gulland F, Dierauf L & Whitman K 2018, *CRC Handbook of Marine Mammal Medicine* (3<sup>rd</sup> edition), CRC Press, Boca Raton Florida, USA.

Huggenberger S, Oelschläger H & Cozzi B 2018, *Atlas of the Anatomy of Dolphins and Whales*, Academic Press, London, United Kingdom.

Jefferson T, Webber M, Pitman R & Gorter U 2015, *Marine Mammals of the World: A Comprehensive Guide to Their Identification*, 2nd Edition, Elsevier, London UK.

Kirkwood R & Goldsworthy S 2013, *Fur Seals and Sea Lions*, CSIRO Publishing, Collingwood VIC, Australia.

Reeves R, Stewart B, Clapham P, Powell J & Folkens P 2002, *Sea mammals of the World: A Complete Guide to Whales, Dolphins, Seals, Sea Lions and Sea Cows*, A & C Black Publishers Ltd, London UK.

Shirihai H & Jarrett B 2006, *Whales, Dolphins and Porpoises: A Field Guide to the Marine Mammals of the World*, A & C Black Publishers Ltd, London UK.

Vogelnest L & Portas T (eds) 2019, *Current Therapy in Medicine of Australian Mammals*, CSIRO Publishing, Clayton South VIC, Australia.

Vogelnest L & Woods R (eds) 2008, *Medicine of Australian Mammals*, CSIRO Publishing, Clayton South VIC, Australia.

Würsig B (ed) 2019, *Ethology and Behavioural Ecology of Odontocetes*, Springer International Publishing, Cham, Switzerland.

Wursig B, Thewissen JGM & Kovacs K (eds) 2017, *Encyclopedia of Marine Mammals*, (3<sup>rd</sup> edition), Academic Press, London, United Kingdom.

### More information

- [Animal Research Act 1985](#)
- [Antarctic Treaty System \(1961\)](#)
- [Australian Code for the Care and Use of Animals for Scientific Purposes](#)
- [Australian Veterinary Association – Policy for Marine Mammal Euthanasia](#)
- [Biodiversity Conservation Act 2016 Schedule 5](#)
- [Biodiversity Conservation Act 2016 section 2.14 \(4\)](#)
- [Biodiversity Conservation Regulation 2017](#)
- [Biosecurity Act 2015](#)
- [Commission for the Conservation of Antarctic Marine Living Resources \(CCAMLR\)](#)
- [DPI Animal Welfare Branch](#)
- [DPI Emergency Animal Disease Hotline](#)
- [DPI fact sheet: Animal carcass disposal](#)
- [Environment Protection and Biodiversity Conservation Act 1999](#)
- [Firearms Act 1996](#)

- Fisheries Management Act 1994
- Local Government Act 1993
- Management of deceased whales
- Managing Interactions with Fauna that may Impact on the Community
- Marine Estate Management Act 2014
- Marine mammal euthanasia
- Marine Mammal Rehabilitation Training Standards for the Volunteer Wildlife Rehabilitation Sector
- National Parks and Wildlife Act 1974
- National Parks and Wildlife Regulation 2019 c.11
- NSW BioNet
- Office locations
- Poisons and Therapeutic Goods Act 1966
- Practise simple hygiene by washing hands regularly
- Prevention of Cruelty to Animals Act 1979
- Protection of the Environment Operations Act 1997
- Rehabilitation of Protected Native Animals Policy
- Scientific Committee on Antarctic Research (SCAR)
- Translocation operational policy
- Transport for NSW: Heavy vehicle loads and height restrictions:
- Veterinary Practice Act 2003
- Zoonoses and Australian marine mammals



## Appendices

### Appendix A: Marine mammal species relevant to this code

BioNet Atlas code	Common name	Scientific name	BC Act 2016 NSW listing	EPBC Act 1999 federal listing
<b>Sirenians – Dugong</b>				
1558	Dugong	<i>Dugong dugon</i>	Endangered	
<b>Pinnipeds – Seals and sea lions</b>				
<b>Family Otariidae – Fur seals and sea lions</b>				
1543	New Zealand fur seal	<i>Arctocephalus forsteri</i>	Vulnerable	
1882	Australian fur seal	<i>Arctocephalus pusillus doriferus</i>	Vulnerable	
1013	Subantarctic fur seal	<i>Arctocephalus tropicalis</i>		Endangered
1539	Australian sea lion	<i>Neophoca cinerea</i>		Endangered
<b>Family Phocidae – True seals</b>				
1549	Leopard seal	<i>Hydrurga leptonyx</i>		
1555	Crab-eater seal	<i>Lobodon carcinophaga</i>		
1546	Southern elephant seal	<i>Mirounga leonina</i>		Vulnerable
<b>Cetaceans: whales, dolphins and porpoises</b>				
<b>Family Balaenidae – Right whales</b>				
1561	Southern right whale	<i>Eubalaena australis</i>	Endangered	Endangered
<b>Family Neobalaenidae – Pygmy right whale</b>				
1564	Pygmy right whale	<i>Caperea marginata</i>		
<b>Family Balaenopteridae – Rorquals</b>				
1570	Dwarf minke whale	<i>Balaenoptera acutorostrata</i>		
1901	Antarctic minke whale	<i>Balaenoptera bonaerensis</i>		
1572	Bryde's whale	<i>Balaenoptera edeni</i>		
1567	Blue whale	<i>Balaenoptera musculus</i>	Endangered	Endangered
1569	Fin whale	<i>Balaenoptera physalus</i>		Vulnerable
1571	Sei whale	<i>Balaenoptera borealis</i>		Vulnerable
1575	Humpback whale	<i>Megaptera novaeangliae</i>	Vulnerable	
<b>Family Physeteridae – Sperm whale</b>				
1578	Sperm whale	<i>Physeter macrocephalus</i>	Vulnerable	
<b>Family Kogiidae – Dwarf and pygmy sperm whales</b>				
1581	Pygmy sperm whale	<i>Kogia breviceps</i>		
1582	Dwarf sperm whale	<i>Kogia sima</i>		

BioNet Atlas code	Common name	Scientific name	BC Act 2016 NSW listing	EPBC Act 1999 federal listing
<b>Family Ziphiidae – Beaked whales</b>				
1584	Southern bottle-nosed whale	<i>Hyperoodon planifrons</i>		
1594	Andrews' beaked whale	<i>Mesoplodon bowdoini</i>		
1590	Blainville's beaked whale	<i>Mesoplodon densirostris</i>		
1038	Ginko-toothed beaked whale	<i>Mesoplodon ginkgodens</i>		
1587	Cuvier's beaked whale	<i>Ziphius cavirostris</i>		
1591	Strap-toothed beaked Whale	<i>Mesoplodon layardii</i>		
1593	Gray's beaked whale	<i>Mesoplodon grayi</i>		
1595	Hector's beaked whale	<i>Mesoplodon hectori</i>		
1596	True's beaked whale	<i>Mesoplodon mirus</i>		
1597	Arnoux's beaked whale	<i>Berardius arnuxii</i>		
1598	Shepherd's beaked whale	<i>Tasmacetus shepherdi</i>		
<b>Family Delphinidae – Oceanic dolphins</b>				
1600	Killer whale	<i>Orcinus orca</i>		
1603	False killer whale	<i>Pseudorca crassidens</i>		
1639	Melon-headed whale	<i>Peponocephala electra</i>		
1650	Pygmy killer whale	<i>Feresa attenuata</i>		
1605	Short-finned pilot whale	<i>Globicephala macrorhynchus</i>		
1606	Long-finned pilot whale	<i>Globicephala melas</i>		
1609	Risso's dolphin	<i>Grampus griseus</i>		
1616	Common dolphin	<i>Delphinus delphis</i>		
1619	Striped dolphin	<i>Stenella coeruleoalba</i>		
1620	Spinner dolphin	<i>Stenella longirostris</i>		
1621	Pantropical spotted dolphin	<i>Stenella attenuata</i>		
1624	Fraser's dolphin	<i>Lagenodelphis hosei</i>		
1625	Dusky dolphin	<i>Lagenorhynchus obscurus</i>		
1630	Southern right whale dolphin	<i>Lissodelphis peronii</i>		
1642	Rough-toothed dolphin	<i>Steno bredanensis</i>		
1655	Australian humpback dolphin	<i>Sousa sahalensis</i>		
1908	Australian snubfin dolphin	<i>Orcaella heinsohni</i>		

Code of Practice for Injured, Sick and Orphaned Marine Mammals

<b>BioNet Atlas code</b>	<b>Common name</b>	<b>Scientific name</b>	<b>BC Act 2016 NSW listing</b>	<b>EPBC Act 1999 federal listing</b>
1899	Indo-Pacific bottlenose dolphin	<i>Tursiops aduncus</i>		
1900	Bottlenose dolphin	<i>Tursiops truncatus</i>		

## Appendix B: Measurement form for deceased whales and dolphins

### Deceased whale and dolphin reporting sheet

Date

Species

ID number

Location GPS

Location description

Life stage

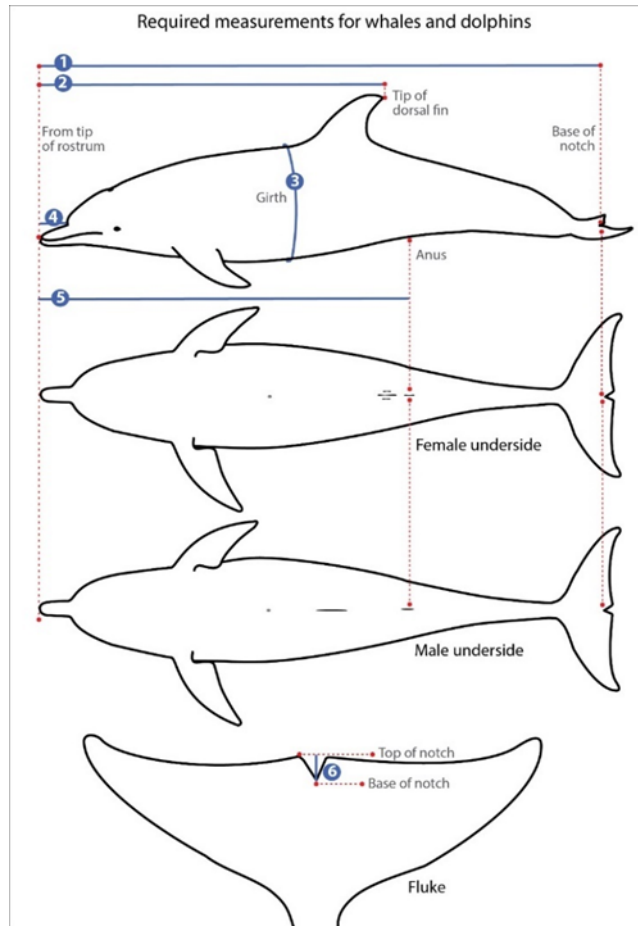
Sex

Rehabilitator name

Signature

#### Required measurements cm

1. Total length (upper jaw to tail notch)
2. Tip of jaw to tip of dorsal fin
3. Girth (front of dorsal fin, widest part if no dorsal fin)
4. Rostrum (or beak) length
5. Tip of Jaw to centre of anus
6. Depth of tail notch
7. Number of teeth
  - a. upper jaw
  - b. lower jaw



#### Required photographs

1. Full profile from each side
2. Head profile
3. Dorsal fin profile
4. All injuries, wounds, distinctive markings or entanglements
5. Genital and anus area (from umbilicus to the tail fluke)
6. Inside of the mouth

## Appendix C: Measurement form for deceased seals

### Deceased seal reporting sheet

Date

Species

ID number

Location GPS

Location description

Life stage

Sex

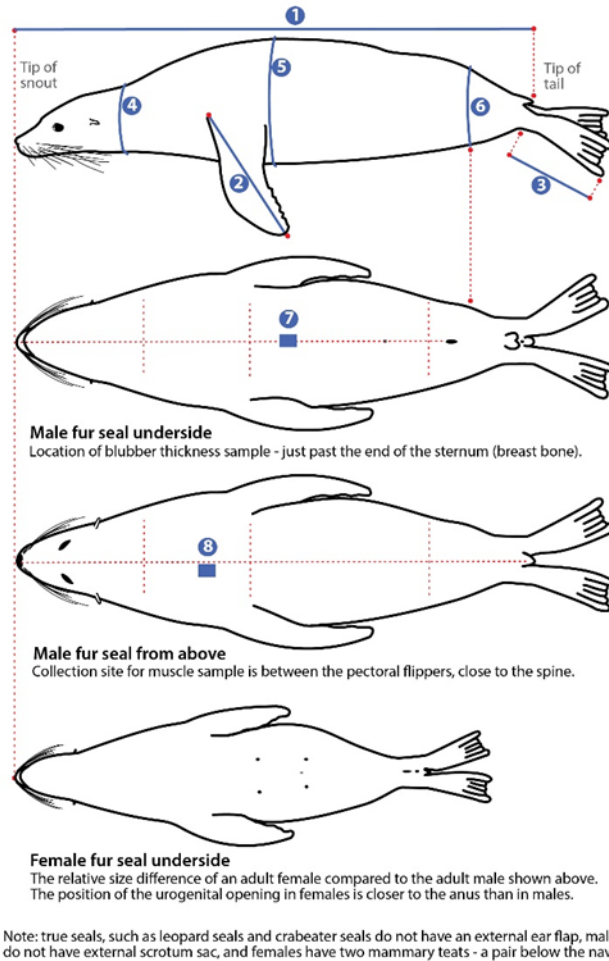
Rehabilitator name

Signature

#### Required measurements

1. Total length (tip of snout to end of tail)
2. Length of pectoral flipper
3. Length of rear flipper
4. Girth at neck
5. Girth behind front flippers
6. Girth at pelvis
7. Blubber sample location
8. Muscle sample location

#### Required measurements for seals



Note: true seals, such as leopard seals and crabeater seals do not have an external ear flap, males do not have external scrotum sac, and females have two mammary teats - a pair below the navel.

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#### Required photographs

1. Full profile from each side
2. Head profile
3. Flippers (details of trailing edges)
4. All injuries, wounds, distinctive markings or entanglements
5. Genital and anus area (from umbilicus to the tail)
6. Inside of the mouth