



Australian Seabird & Turtle Rescue

Policies and Procedures

Freshwater Turtle Husbandry Policy and Procedures

www.seabirdrescue.org.au

ASTR aims to reduce the human impact on the environment

This policy applies to staff and volunteers of Australian Seabird & Turtle Rescue

Summary:

This document lays down the framework for managing the clinical operations for rescuing, treating, rehabilitation and release of freshwater turtles.

AUSTRALIAN SEABIRD & TURTLE RESCUE

FRESHWATER TURTLE HUSBANDRY POLICY AND PROCEDURE

Title: Freshwater Turtle Husbandry Policy and Procedure

Replacing existing policy plan or procedure No

Type of document: Policy Plan Procedure

Related Legislation or other Documents

Office of Environment and Heritage, Code of Practice for the Private Keeping of Reptiles 2013
National Parks and Wildlife Act 1974 (NPW Act).
NSW Biodiversity Conservation Act 2016
Veterinary Practice Act 2003
ASTR Interaction with Veterinarians Policy 2021

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1 Title: Freshwater Turtle Husbandry Policy and Procedures

2 Background

Australian Seabird & Turtle Rescue (ASTR) is licensed to rehabilitate and release sick, injured and orphaned reptiles by the Department of Planning, Industry & Environment NSW under license no MWL000100290. ASTR is committed to follow the DPIE Codes of Practice for the treatment and rehabilitation of protected fauna.

Australia is home to about 23 species of freshwater turtle. Most common are Eastern snake/long necked turtle and Murray River turtle (short neck). New South Wales is home to 7 species of native freshwater turtle. To identify species consult

<https://www.environment.nsw.gov.au/topics/animals-and-plants/native-animals/native-animal-facts/freshwater-turtles>

3 Purpose

The purpose of this policy is to provide a framework to enable a responsive and effective approach to the rescue, care and rehabilitation of sick and injured freshwater turtles.

4 Policy

It is the policy of ASTR that the rescue, care and rehabilitation of freshwater turtles is carried out in accordance with the DPIE Code of Practice. It is also the policy of ASTR that this care will only be carried out by licensed members of ASTR who have undergone appropriate training and assessment.

5 Procedure

5.1 Rescue

When conducting a freshwater turtle rescue these measures must be undertaken to minimise further stress and injury to the animal.

- Prior to a rescue attempt, the rescuer must assess the risks to the marine reptile from environmental hazards and from capture.
- Rescuers should take steps to protect freshwater turtles from additional stressors during rescue, such as onlookers, loud noises, other animals and extremes of temperature.
- Rescue details must be recorded on a rescue data form (Appendix 1).
- Freshwater turtles with an injury to their carapace or plastron may require immediate first aid to stabilise the injury prior to transport. (e.g. use a splint and a self-adhesive bandage around the break on the carapace).
- Freshwater turtles with injuries to their carapace and/or plastron must be lifted on a solid object with cushioning such as a mat or foam or towel. This prevents further movement of the carapace and will minimise pain and prevent further injury.
- Freshwater turtles must remain dry during transport.

5.2 Admission and Assessment

Upon admission a Freshwater turtle must be checked for:

- disease or infection e.g. wart-like lesions, abnormal breath sounds, diarrhoea, red colouration on the plastron, softness of the plastron or carapace, fractures or serious trauma to the carapace, plastron, limbs, head or jaw.
- body or limb reflex - gently touching the back of the neck, forward of the carapace should cause the turtle to lift or retract its head. Touch foot/limb should induce retraction of the limb.
- corneal reflex - by touching the corner of the eye or skin near the eye, a healthy response results in a retraction of the eyeball touched.
- body condition - e.g. sunken eyes, a concave plastron and poor muscle mass indicating insufficient fat stores.
- Weight.
- ability to raise its head out of water.
- floating or buoyancy disorders.
- check for head tilt that could be caused by brain or middle ear disorder.
- check for holes in the plastron - pectoral bones can wear through due to sickness and emaciation.
- common illnesses include: vitamin A deficiency, respiratory diseases, abscesses, shell infections, shell fractures, and parasites.
- All freshwater turtles are to be referred to the wildlife veterinarian within 48hr.

5.3 Housing

- A quarantine period not less than 30 days should be employed for a newly acquired turtle.
- Upon admission a freshwater turtle should be placed in a separate (quarantine) dry tank with water source (bowl), heater lamp, UVB source lamp and green material so it can hide to avoid stress.
- Handlers should be vigilant in washing hands to avoid risk of Salmonella infection.
- Feeding is conducted in a separate wet tank so that turtle can submerge itself to find food.
- Initial feeding can be turtle cubes – vegetable or meat options.
- Lighting - Maintain day/night lighting cycle.
- A reptile's UV requirements can most easily be met by providing it with regular access to unfiltered sunlight or installing a UV globe in their enclosure. Turtles require sunlight/UVB to enable them to internally synthesise VitD essential for bone health. If

using UV light Glass must not be placed between the UV light source and the reptile as it reflects UV light. Keep UV light on for minimum 6 hours daily.

5.4 Record Keeping

- Data Collection – All freshwater turtles admitted to the Turtle Hospital will have their rescue details, measurements, weight, condition, stage of development/age and species identified.
- Each freshwater turtle will have its own clinical file and care plan

5.5 Treatment

- All turtles will be weighed weekly and have the weight recorded on the rehab record.
- The following daily observations are to be made and recorded on the rehab record:
 - Amount and type of food consumed and at what time.
 - Any faeces passed (record volume and consistency) while they are in a quarantine tank.
 - Any change in condition or activity and behaviour.
- Veterinarian treatment as ordered.

5.6 Tank Care

- Uneaten food must be removed after three hours and disposed of.
- Faeces must be removed as soon as it is seen.

Freshwater turtles may be housed in:

- a wet tank with dry dock, or
- a dry tank with wet tank feeding.

5.6.1 Wet tank with dry dock.

- In this case the turtle is to be housed in a semi-permanent water filled tank with dry dock for drying/basking. The tank can have bare bottom or substrate. If there is no filter, then substrate is required to house bacteria for break-down of faeces. It takes time (4-6 weeks) to establish sufficient bacteria in the substrate for break-down of faeces.
- NB. Town water contains various chemicals (including chlorines, chloramine, ammonia, fluoride) which need to be removed (by Commercial water conditioner) to ensure turtle health and allow bacterial build up in the substrate.
- Water change - 25% of water should be changed every week to prevent ammonia build up and allow for bacterial health in the tank. Changing larger volumes of water must be avoided.

- pH - Add Cuttlefish bones, Shell grit or Limestone to raise the carbonate hardness and keeping the pH stable. Optimum pH 7.8.
- Basking - A dry dock is provided for turtle to bask under heat lamp (basking temperature of 33-36°C)
- UV - UVB lamp is left on during daylight.

5.6.2 *Dry tank with wet tank feeding.*

- In this case a sick turtle is housed in a dry tank and fed in a wet tank where turtle can submerge. The water is changed daily as the turtle spends most of its time in the dry tank.
- Dry tank has towel on the bottom and this is changed daily, with observations for faeces and urine.
- In dry tank provide a basking site with heat lamp (basking temperature of 33-36°C)
- The wet tank is emptied and refilled daily after F10 disinfect/clean out. When filling tank turtle must be able to submerge itself to eat.
- Each feeding the wet tank must be cleaned with detergent, disinfected with F10, rinsed and have a complete change of water for each new marine reptile arrival.
- Water from isolation tanks cannot be returned to the natural water system but should be disposed of into a sewer.

5.7 **Feeding**

- A general rule for how much to feed is a meal roughly the size of the turtle's head twice a week for adults and every two days for younger turtles.
- Feed turtles more frequently in summer and less in winter as appetites will vary. If temperature is below 16° C turtles cannot digest.
- Turtles can be fed commercial turtle cubes available as vegetable and meat options.
- They should also be offered live food such as crickets, wood-roaches, silkworms, fly larvae, and mealworms, earthworms, fish, yabbies, glass shrimp, black worm.
- Food should be varied and periodically enriched with vitamins and calcium.
- For long term patients and permanent residents freshwater plants can be provided. True aquatic natives include Native Vallisneria, and Pogostemon Stellatus. Also, can use fast growing and safe plants like Mayaca, Ambulia, Milfoil, Wisteria, Green and Red Myro as well as floating duck weeds.

5.8 **Hatchlings**

- Freshwater turtle hatchlings are rescued in a container on a wet towel.
- Hatchlings must be housed in a wet tank with dry dock.
- Water - Change only 25% of the water weekly. Any town water is treated with conditioner.

- Substrate should be larger than the turtle can swallow.
- Vitamin D is important as baby turtles grow very fast, so they need UVB light or sunlight. If the tank is put in sunlight, it must be covered with mesh to prevent predation by birds.
- Baby turtles require a heat lamp (basking temperature of 33-36C).

5.8.1. Identification Marking

- Because hatchlings are difficult to distinguish from one another, it is helpful to mark them – such as with children’s nontoxic nail polish applied as a number or combination of dots to the dry carapace – for feeding and medication records. Nail polish is not a permanent mark and reapplication may be needed depending on the length of stay.

5.8.2 Diet

- Hatchlings can be fed turtle cubes or small live food.
- Calcium is essential. Cuttle bone, shell grit or other calcium source is necessary in the tank. Calcium will slowly dissolve out of the shell.

5.9 Hibernation/Brustivation.

Turtles hibernate or Brustivate (a form of partial hibernation) during winter to save energy.

Carers can prevent this by providing heating. or if turtles are allowed to Brustivate then they need a quiet spot with vegetation cover such as dry leaves to bury themselves. Leave them alone until they come out to search for food. Water must be always available.

In the ASTR rehabilitation situation freshwater turtles will be provided with a food source and will not be left to hibernate/Brustivate.

5.10 Release

- Release of freshwater turtles is to be authorised by the ASTR staff and the wildlife veterinarian. Freshwater turtles are to be released where there are known to be other freshwater turtles living.

The criteria for releasing a freshwater turtle are:

- The ability to locate and eat food (and thus catch prey),
- The ability to swim and dive effectively,
- Lack of any injury that would inhibit its survival,
- Absence of any infectious disease.