

AEC STANDARD OPERATING PROCEDURES

SOP No:	02
SOP	Tortoises
Scientific Name:	<i>Emydura macquarii</i> (Murray Short Necked) <i>Cheloddina longicollis</i> (Common Long Necked)
Category:	2 or 3
Approval Level:	Category 2: School Principal may delegate Category 3: School Principal may NOT delegate
Authority:	Government Schools – Department for Education and Childhood Development Animal Ethics Committee Independent and Catholic Schools – Non-Government Schools Animal Ethics Committee (NGSAEC)
Authority Approval Date:	1 August 2010
Last Update:	17 December 2018
Disclaimer:	<i>This document may be updated at any time. You should check the web site regularly to ensure that you are meeting the most recent recommendations. If you note any concerns with the information provided (inadequate, incorrect) please contact the relevant AEC.</i>
Licensing Requirement:	Not applicable
Compliance Requirement:	The keeping of this species requires approval from the School Principal. It is recommended that this Standard Operating Procedure be followed as a minimum in the provision of appropriate care and housing for this species.

General Information: Freshwater tortoises are reptiles with clawed and webbed feet. They live on land and in water. They breathe air and need to be able to reach the surface easily. They are heavily armoured with a shell. The carapace above connected to the plastron underneath. They are cold-blooded animals.

Baby tortoises are usually available in summer from pet shops. They are bred for pets and not taken from the wild. No tortoise should be collected from the wild as it is illegal.

- Physical Attributes:**
- **Size (adult):** 25-48cm top shells.
 - **Weight (adult):** Varies with size.
 - **Life span:** 10-20 years.
 - **Sexual maturity:** Murray short necked males 5-6 years, females 9-11 years.
 - **Gestation period:** However incubation for Murray's is 65-85 days and Common is 120-180 days.
 - **Number of offspring:** Females lay 10-15 eggs in holes dug in the banks.

- Behaviour:**
- **Normal:** Tortoises are active during the day and rest at night.
 - **Socialisation:** Generally once past the baby tortoise stage a tank will only be suitable for one tortoise. In large ponds several tortoises can live together.
 - **Activity levels (hibernation, moulting etc):** They will be slow and sluggish during winter. If they are housed outside or in cold tanks they will hibernate. If they are housed indoors in warmer tanks they are unlikely to hibernate. Their temperature lowers and their heart beat slows during this time. Tortoises also shed their outer skin (scale like pieces). This can occur at any time of the year.

- Environment:**
- **Space:** Outside ponds require; old bath, fibre glass pond, baby's bath – flush with the ground or ramped to allow the tortoise to crawl out. Outside enclosures **MUST** be fenced 1 metre high and 30 cm below ground. They must also have a wire roof to prevent predator attacks. Shade – cloth or vegetation is essential. Some natural materials – soil, bark leaves, sand for them to crawl over, plants etc enhance the environment. Ensure children cannot fill the pond with items. Indoors you will need an aquarium. Initially with baby tortoises this can be small

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with half pond and half garden area. Remember they must be able to climb out or will tire and drown. As they grow they will need larger tanks. They should be able to swim and turn freely, dive under the water and come out onto rocks. Smooth pebbles can be placed on the bottom of the tank.

- **Movement:** Tortoises have four legs. They can swim strongly and walk well. When necessary they can move very fast both in water and on land. They retract their legs and head into their shell, particularly for defence.
- **Water:** Ponds and tanks can be filled with tap water. In South Australia mains water is safe for tortoises after the Chlorine or Chloramine has been removed. Chlorine, and the chlorine part of Chloramine, can be removed by adding one of the common aquarium water conditioners. Note that in some areas of South Australia, including the Adelaide Hills, the level of Chloramine added is very high and up to five times the recommended dose of water conditioner may need to be used. Tap water should be allowed to stand for at least 12 hours to allow the chlorine to evaporate. Good quality rainwater can be used, with a rainwater conditioner. Most bore and spring waters are suitable for tortoises. Tortoises are not affected by alkaline conditions, but prolonged acidity is harmful. Preferably the water should be a room temperature. Water can be partially changed every few weeks and fully changed each term or as required.
- **Temperature:** Temperatures should remain between 20-30°C. Water temperature should not exceed 30°C. Tanks should not be exposed to direct sunlight in summer. The rest of the year they can be placed near a window to ensure they receive sunlight for strong bone growth. Severe fluctuations of water temperature may cause respiratory illness.
- **Filtration:** Essential for providing the tortoise with oxygen absorption in the water and keeping the water clean. The rate of circulation should be moderate. Filtration is not required but helpful in outdoor ponds.
- **Lighting:** Where natural lighting or time outside in the sun is not provided a light is necessary.
- **Covering:** Where the tortoises are at risk from younger children or where the water is closer than 20cm to the top of the aquarium a glass and mesh covering over the aquarium should be provided. DO NOT spray chemicals near tanks.
- **Shelter:** The aquarium should provide an area for refuge from lights and action. This can be created with plants and rocky overhangs or a towel at one end of the tank.
- **Cleaning:** It is recommended that conditioned water of the same temperature be used to replace approx 25% of the water each week or two. Let the water stand for ½ day before adding. Regular removal of solid waste is required. To clean the whole tank clean the glass with a clean cloth. Rinse the tank carefully and fill again with conditioned water. Bacterial scum growing on the tank must be removed regularly as it could cause illness. Rocks and gravel should be rinsed before replacing

Feeding:

- **Diet:** Tortoises eat in water. If the water is too cold or they are preparing for hibernation they cannot digest the food and may not feed. Food includes turtle pellets, frozen turtle meat blocks (thaw to feed), fish, meat, and shrimps. To avoid soiling the main tank consider using a smaller 'feeding' tank/container.
- **Daily requirements:** Adults can be fed 3-4 times a week, baby tortoises daily or twice daily.
- **Supplementary feeding:** Slugs, snails, worms and insects can be provided.
- **Equipment:** Remove uneaten food from the tank after feeding. A piece of fine feeding wire or thick fishing line can be used to dangle food for baby tortoises and to stimulate them to eat.

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Breeding:	<ul style="list-style-type: none">• Mating: Little is known about their mating and breeding.• Pregnancy: The female goes ashore to excavate a hole in which to lay the eggs where they incubate.• Fate planning: Tortoises are unlikely to breed unless they have suitable environments for laying eggs. Breeding stock must be re homed. They must NEVER be released into the environment.
Handling:	<ul style="list-style-type: none">• Human: Tortoises can be handled safely by adults. Be aware they may be frightened and struggle. Do not drop them. One hand at the front side and one hand at the rear or one hand on either side will assist. Do not crush the tortoise. Do not touch their head. Baby tortoises should be handled as little as possible. They suffer pain, fear and stress and should be handled carefully.• Equipment: They can be wrapped in a towel to carry them.• Transporting: Tortoises can be transported in an enclosed ventilated box or container. Transport quickly and do not leave unattended or allow the tortoise to heat. Do not transport on days that are over 32 degrees.• Children: Should not handle tortoises. Observation only. They can sit in circles and observe the tortoises moving, they can touch the shell but not the head. Do this in an area where the turtle cannot escape.
Hygiene:	<p>The wastewater from tank cleaning must not be discarded into the stormwater drains or septic tank systems. It can be placed onto gardens or it must be treated with 1:5 ratio of bleach to water and be poured into the toilet. Thoroughly wash hands with soap and running water for at least 10-15 seconds after working or handling any animals. Dry hands with clean paper, cloth towel or air dryer. Turn off the tap with the paper towel if possible.</p> <p>All reptiles have the potential to transmit diseases. Keeping their enclosures clean and using good hygiene should assist with this. A range of protozoa and bacteria infections such as Salmonella sp can occur. Follow first aid procedures should a bite occur.</p>
Signs of illness:	<ul style="list-style-type: none">• Indicators: loss of appetite, lethargic, skin lesions, pink skin, injuries, failure to thrive, and soft shell. NEVER drill a hole in their shell. If their shell becomes covered in algae DO NOT use hard scourers, chemicals or scrub their shell.
Treatments:	Assistance from a veterinarian should be sought for confirmation of conditions and treatment options. Many aquarium treatments are not suitable for tortoises and may cause further distress or death.
Euthanasia:	When an illness or injury is such that recovery is unlikely then the tortoise must be euthanised by a veterinarian. Any death must be reported to the Animal Ethics Committee using the appropriate form (see section relating to ADVERSE EVENTS). Forms are available on the relevant websites
Disposal/fate planning:	When no longer required tortoises must be re homed. As they must NEVER be released into the environment or waterways. Bodies must be disposed of correctly in accordance with local council regulations.
Holiday and weekend care:	As they require large tanks they would not cope well with being rostered to family carers. They need to be checked daily and fed regularly over weekends and holiday periods.
Approved activities:	Observation
Resources:	http://www.zoossa.com.au www.worldwildlife.org