Frog Census Handbook

Melbourne Water
Enhancing Life and Liveability

Introduction

Why are frogs important?

Frogs play an important role in the ecology of wetlands and waterways. Tadpoles are grazers of algae, aquatic plants and detritus. Tadpoles can limit the abundance of algae in wetlands and transfer energy up wetland food chains as they are eaten by predators such as waterbirds. Adult frogs are both predators and prey – they are voracious predators of invertebrates and are themselves eaten by predators such as waterbirds and reptiles. Frogs sit in the middle of wetland food chains and are a key link sustaining the wider wetland ecosystem.

Frogs are dependent on water for breeding (egg-laying and tadpole life stages) and adult life stages. Frogs breathe and drink through their skin and so are sensitive to drought and pollution. For the above reasons, frogs are valuable as ecological indicators of the wider health of our local environments.

Join the Frog Census and help conserve frog populations

The Frog Census, established in 2001, is a community-based monitoring program managed by Melbourne Water.

Through this citizen science program, far more data can be collected on the state of our frog populations than would otherwise be possible.

Frog Census data is valuable because it:

- helps to greatly improve our understanding of the health of our waterways and wetlands
- helps us understand frog population trends
- is used to influence and inform management and planning decisions made by Melbourne Water and other organisations concerning waterway health.

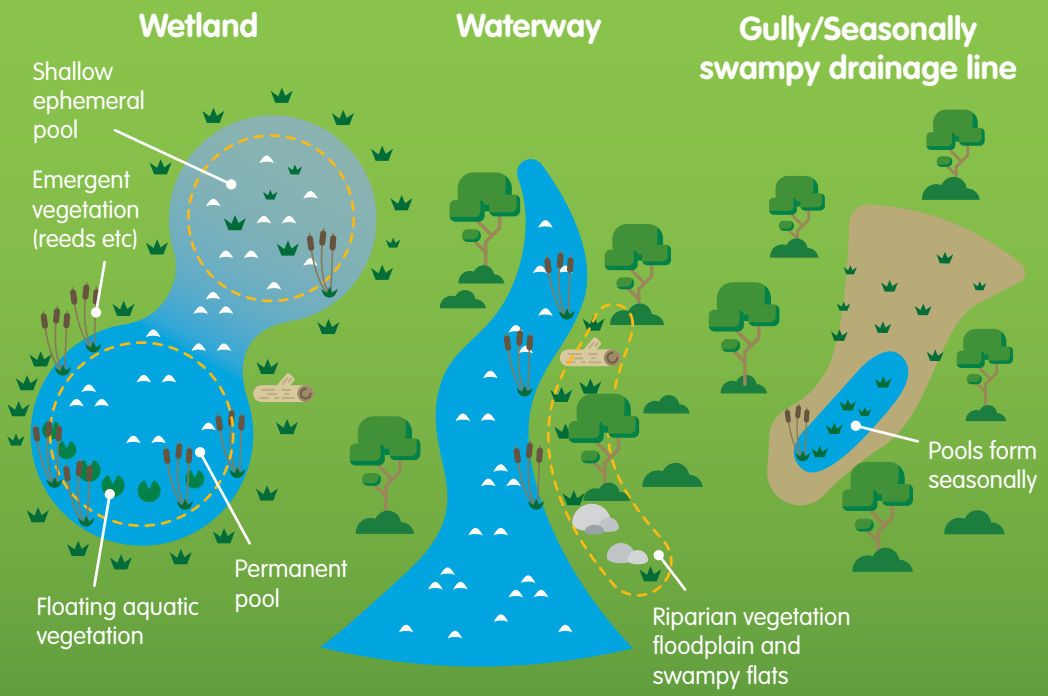
All frog data collected by Frog Census volunteers is publicly available on the Frog Census app map function, and shared with the publicly accessible Atlas of Living Australia and Victorian Biodiversity Atlas.

Atlas of Living Australia
ala.org.au

Atlas of Living Australia

Victorian Biodiversity Atlas

Where to find frogs



You can get involved in Frog Census in a number of ways:

1. Record frog calls each year during fixed 'Frog Census months' (April, August, October, November - see below). Go 'frogging' and visit and explore a range of sites for calling frogs during these time periods
2. Organise a longer-term Frog Census repeated survey program in a specific site in the local area by collecting data for a year or more. This frog monitoring program could be organised with the help of community groups or schools.
3. Casually record and report frog calls whenever you hear them, throughout the year.

Southern Brown Tree Frog *(Litoria ewingii)*. (Photo by Peter Robertson)

The endangered Growling Grass Frog *(Litoria raniformis)*.
(Photo by Peter Robertson)

How to record and report frog calls

Key monitoring months

APR	AUG	OCT	NOV

- Visit at least 30 minutes after sunset
- Wait 5 minutes after arrival for frogs to become accustomed
- Always record for the same set timeframe each visit to ensure standardised data
- Do not visit sites at night alone. Tell others your movements
- Clean boots / tyres between sites to avoid spreading disease

The basics: getting started with the Frog Census

Frogs are most likely to be found somewhere in close proximity to a waterway such as a river, creek, lake or wetland, but are also found in drier habitats. You can maximise your chance of hearing (and possibly seeing) frogs by finding the closest known frog habitat. Use the Atlas of Living Australia or the Victorian Biodiversity Atlas maps for amphibians to locate likely sites.

The Frog Census App, developed by Melbourne Water, makes frog monitoring easy and provides a great opportunity to contribute to an important citizen science project. The app can be used on both Apple and Android devices.

Follow the prompts on the Frog Census app to record and submit your data to Melbourne Water. **Be sure to read the safety and field hygiene sections on the app first.** Once submitted, your frog recordings (and any photos) will be verified by professional ecologists.

Your data will appear on the Frog Census app map function. Once verified, your data will also be added to the Victorian Biodiversity Atlas and the Atlas of Living Australia databases. These publicly accessible databases are used to make decisions about the status of native animal populations including threatened species nominations.

The optimum time to record frog calls is at dusk on warm still nights just after or before it rains. To maintain consistency, begin recording at least 30 minutes after sunset.

When conducting surveys avoid heavy rain and breezes stronger than 20 km/h, as these are not optimal conditions for frogs to call and can make recording difficult. During the November season, try to avoid temperatures below 12°C. Check the Bureau of Meteorology website (www.bom.gov.au) before heading out.

Before making a recording, it is important to test your device to see that it is functioning properly and capable of picking up frog calls amongst ambient noise.

A summary of the methodology is provided in the checklist on the back page.

Conducting a repeated survey program

If you or your community group would like to contribute frog data on a site or a number of sites over a twelve month period or longer, it is a good idea to structure the monitoring program to ensure that the data from each monitoring event is comparable. Not only are you contributing Frog Census data, you are also collecting valuable longitudinal data from the site/sites that can be analysed for changes to frog populations over time. This is a valuable approach if you are restoring habitat, such as building a frog pond, as frog species using the site may change over time as plantings mature.

Melbourne Water recommends surveying in April, August, October and November. This will increase your likelihood of detecting the widest range of species on your site, as calling periods vary between species. The site/sites should be visited two or three times during these monitoring periods, for a minimum of eight visits per year.

For repeated surveys, you should record for five minutes (the maximum recording time on the Frog Census app).

Even if you hear no frogs it is still very important to make the recording for five minutes. Maintaining a set time for all recordings provides standardised data for more accurate analyses.

Arrive at the survey site at least 30 minutes after sunset and finish before 1 am. Wait 5 minutes after arrival to allow frogs to become accustomed to your presence.

Stand about 10 to 20 metres away from the waterway or wetland, as frogs that are very close can cause distortion to the recording and can make it difficult to discern other species or individuals nearby. If there is traffic nearby that could impact on the recording, put your back to the traffic and the recorder in front of you to block as much unwanted noise as possible.

Submit the recording via the Frog Census App. A summary of the methodology is provided in the checklist on the back page.

Individuals and groups conducting long-term, fixed site monitoring are eligible for additional resources and support from Melbourne Water Frog census (enquire at: frogs@melbournewater.com.au)

Field Hygiene

The spread of chytrid fungal disease is a major threat to amphibians globally. To ensure you don't spread this and other potentially threatening pathogens, please follow these recommendations:

- Stick to paths when available. Avoid walking through mud if possible.
- Use a stiff brush to remove any mud that may be stuck to shoes or clothing
- Use methylated spirits or bleach to disinfect shoes or contaminated clothing. After a few minutes you can rinse off the disinfectant
- Wash down vehicles if there is mud on tyres
- Do not handle frogs. They are protected wildlife and disturbing them may stress individuals as well as increase the risk of spreading disease between frogs.

Safety Guidelines

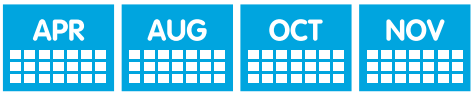
For your own safety, when participating in the Frog Census program, please follow these simple safety recommendations:

- Take care of yourself and do not take unnecessary risks
- Don't go to your sites alone. Work in groups of two or more.
- Avoid high risk weather conditions, such as flooding and extreme fire danger days
- Provide your destination and activity details to another person prior to going out in the field.
- Carry a mobile phone with you
- Limit your recording sites to areas within public land
- Bring a map of the area you are going to
- Wear appropriate clothing and footwear for fieldwork (flat, sturdy shoes and long pants)
- Dress according to the weather conditions. Take extra clothing for changes in the weather.
- During daylight hours protect yourself from the sun (hat, long-sleeve shirt and sunscreen)
- Carry water with you
- When working at night carry a torch
- To avoid insect bite use insect repellent and/or covered clothing
- Beware of snakes in long grass and near waterways. Should a snake bite occur seek medical attention immediately.
- If an incident occurs whilst participating in the Frog Census please report this to Melbourne Water by phoning 131 722.

Emergencies should be immediately reported to the authorities (police, fire, ambulance etc.) on 000.

Repeated survey checklist

- ☐ If possible, conduct call surveys at each site at least twice during each of the following months:



- ☐ Check weather conditions are optimal for recording e.g. wind speed less than 20 km/h; no heavy rain
- ☐ Check that the recording device is working and the Frog Census app is installed
- ☐ Follow field hygiene recommendations and safety guidelines before visiting site
- ☐ Arrive at site at least 30 minutes after sunset and finish before 1am
- ☐ Wait 5 minutes after arrival to allow frogs to become accustomed to your presence
- ☐ Stand 10–20 metres away from waterway or wetland to record
- ☐ If there is nearby traffic, put your back to the road and hold recorder in front of you. Begin 5 minutes of recording. At the conclusion of your recording, follow the prompts on the app to review and submit the recording. Ensure your site selection is accurate when using the map function during your report.

  A video tutorial and guidelines for using the Frog Census app can be found at www.melbournewater.com.au/frogcensus

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Frog Census App

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