National Waterbug Blitz

Citizens assessing Australian waterways

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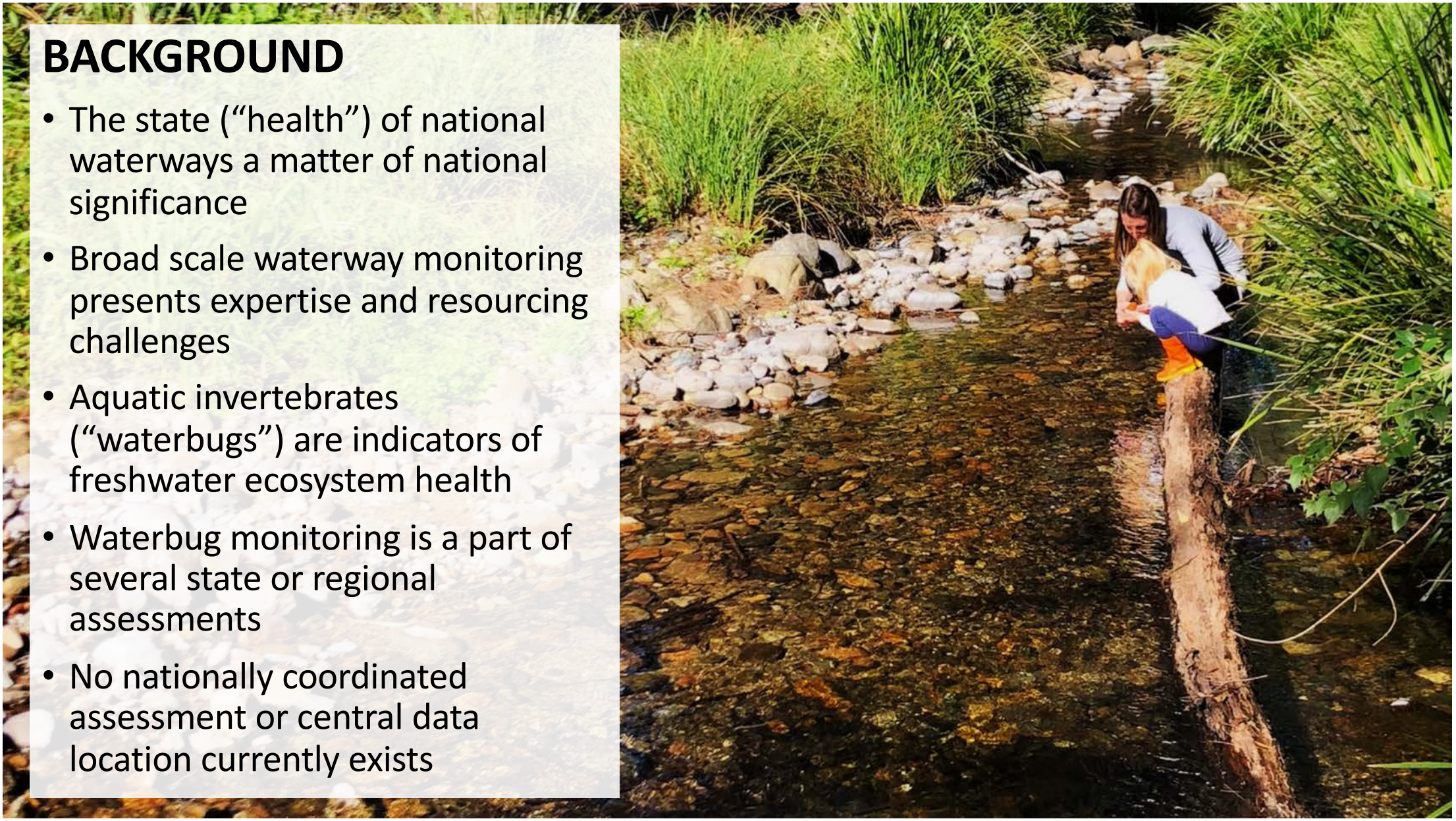
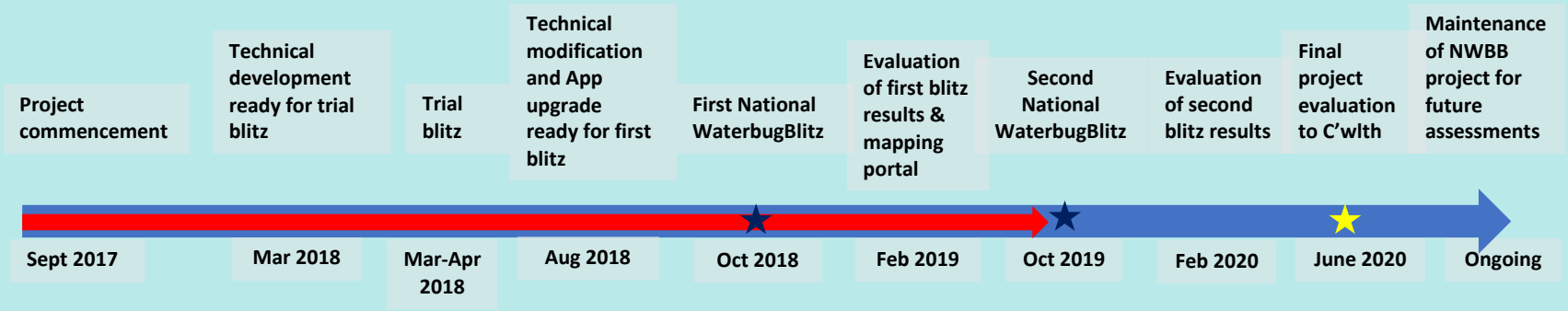
BACKGROUND

- The state (“health”) of national waterways a matter of national significance
- Broad scale waterway monitoring presents expertise and resourcing challenges
- Aquatic invertebrates (“waterbugs”) are indicators of freshwater ecosystem health
- Waterbug monitoring is a part of several state or regional assessments
- No nationally coordinated assessment or central data location currently exists



Getting the project going – Partnerships!



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Project Significance

- Delivering a national freshwater assessment program aimed at **capturing geographically diverse measures of river health**
- Scientists and citizen scientist **of all ages** working together.
- **Use of The Waterbug App** for data collection and reporting
- Online mapping results and historic data.
- Increasing scientific and digital literacy in communities, and **getting them outdoors** into nature!
- And… **anyone can be involved**!!!!

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Waterbugs and STEM

- **Ecology** - learning about how waterbugs interact with other organisms and their surrounding environment
- **Taxonomy** - identification of waterbugs; and
- **Environmental monitoring** - discovering how the presence of each waterbug type helps tell us about the health of waterway. Repeated data collected over time can be useful to show changes in aquatic health.

Adaptable topic to fit with all sorts of curriculum outcomes, and it gets the kids and community OUTSIDE & HANDS ON connecting with nature.

Getting involved!

Focus is on Spring (Sept-Nov), but can be done anytime of year

1. www.waterbugblitz.org.au
2. Decide on your level of involvement –

Blitz	Level of difficulty	What does it involve?	Time commitment
Mayfly Muster	EASY	Can you see any mayflies?	Approx. 20 minutes
Basic survey	QUICK	Identify the obvious waterbugs such as dragonflies and water striders. *This level is for kids and for introductory groups who identify to taxonomic Order level only.*	Approx. 1-2 hours
ALT Survey	DETAILED	Complete a full assessment of your site identifying as many animals as you can with a magnifying glass, using the Agreed Level Taxonomy (ALT) method, beyond the taxonomic Order level.	A few hours, or make a day of it!

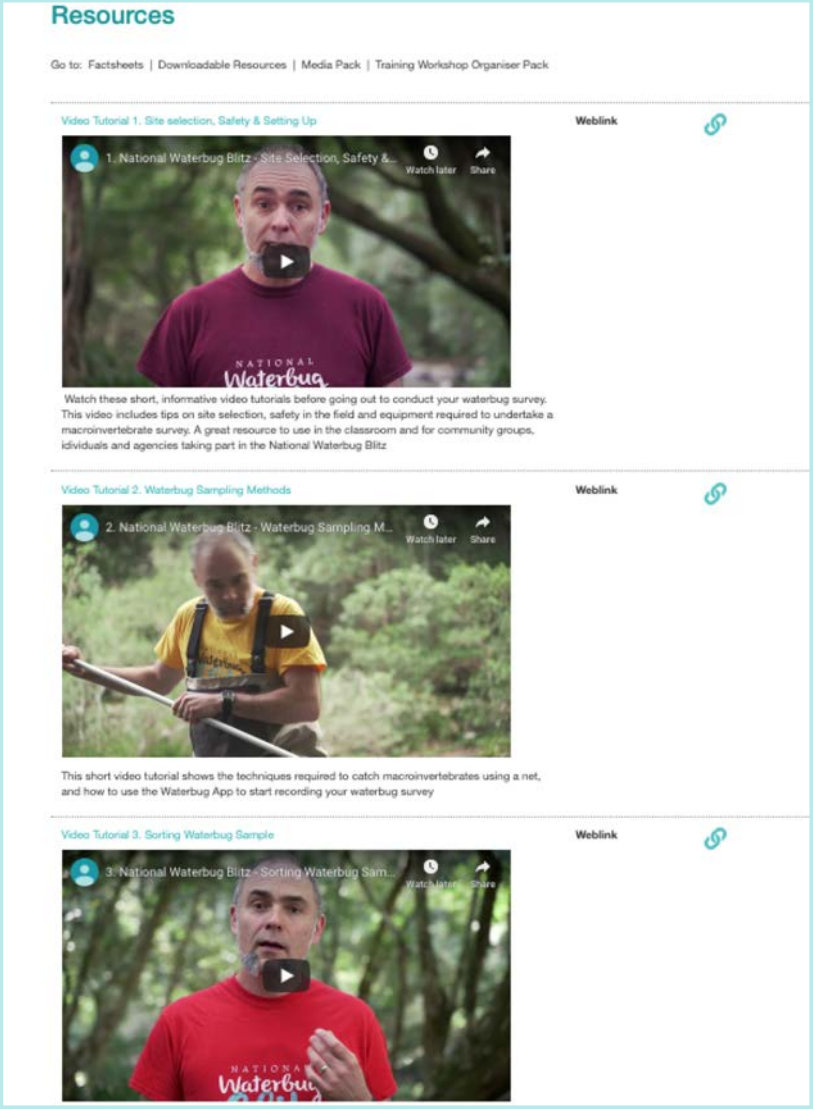
3. Download The Waterbug App

- Create a login
- Upload site assessment and waterbug data + photos via App
- Will work on & offline

4. Get Equipment –
The Waterbug Shop

One stop shop for all your Blitz needs!

www.thewaterbugshop.com.au



5. Watch the online videos for how to do a waterbug survey …

In our Resources page on our website and on YouTube

6. Head to your local waterway to do a Waterbug Blitz

Optional: Training Workshops

Working with Councils, Waterwatch and NRM regions
to help host Blitz training events for community & teachers.

CAN HAPPEN ANYTIME OF YEAR!

Training isn't required to participate, but can help to get things started in your area!

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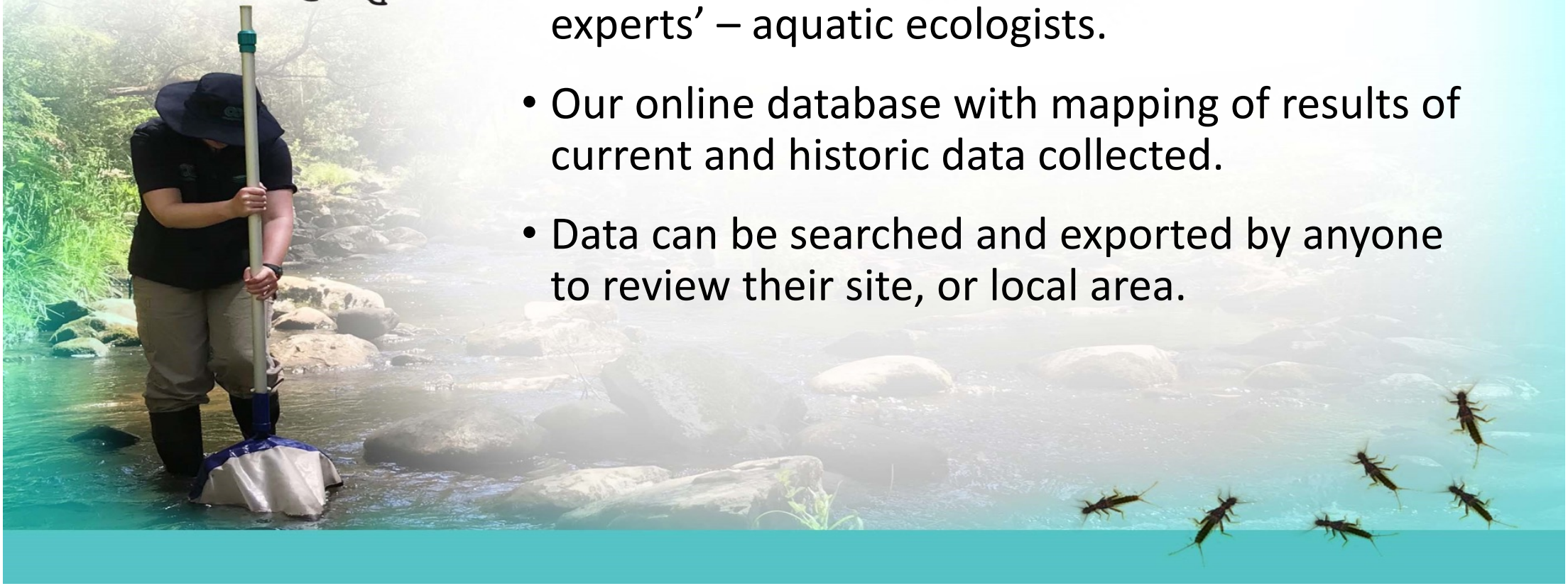
What happens to the data?

- All data uploaded is verified by our ‘waterbug experts’ – aquatic ecologists.
- Our online database with mapping of results of current and historic data collected.
- Data can be searched and exported by anyone to review their site, or local area.



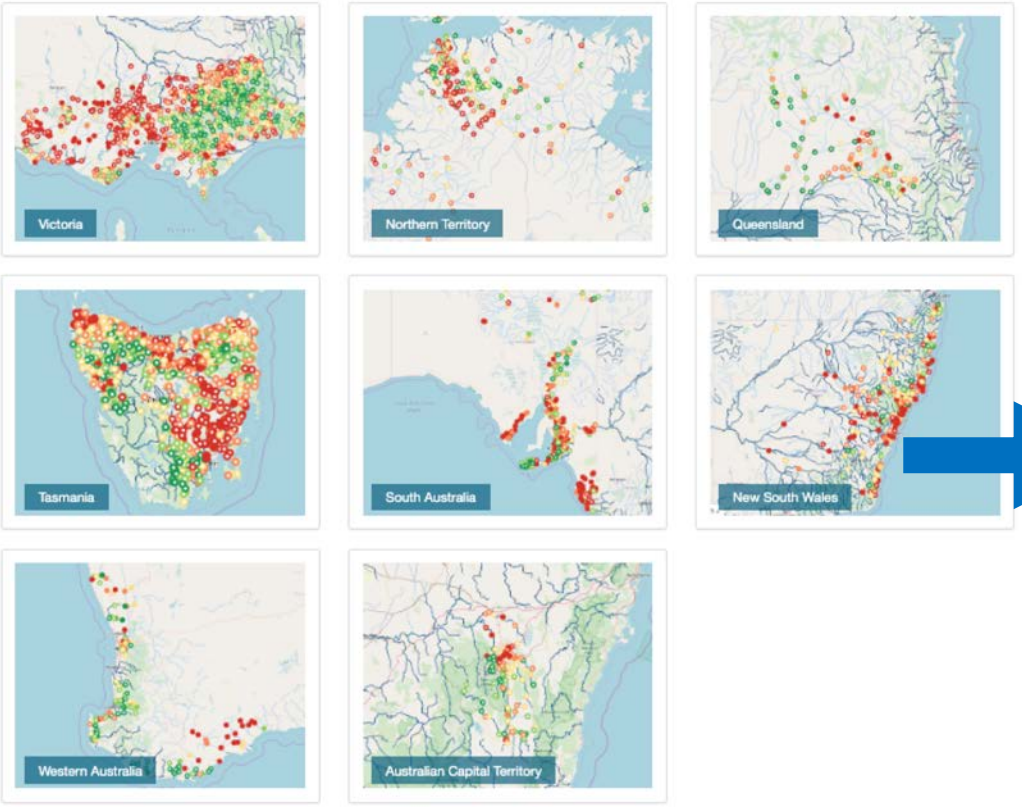
Visualising the data

Waterbug Data Portal

These maps bring together data from water authorities around Australia, and model it so that it shows site assessments that are comparable with those that you can do using The Waterbug App.

Eventually, the data submitted from the app will sit alongside these assessments, but in the meantime, explore your catchment. Where looks healthy, where needs help?
A detailed description of how SIGNALT scores (the numbers behind the dots) were created, and how to interpret them can be found here www.waterbugblitz.org.au/signalt

Click on site markers in the map for specific rivers, lakes or wetlands. There is a search box you may also find helpful if you are looking for a particular waterway name eg Avoca River. Don't forget to click the Go button.

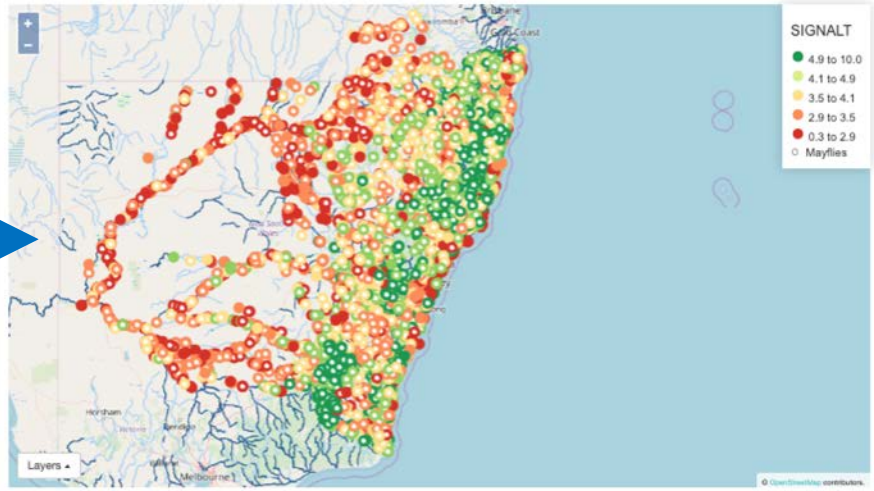


New South Wales

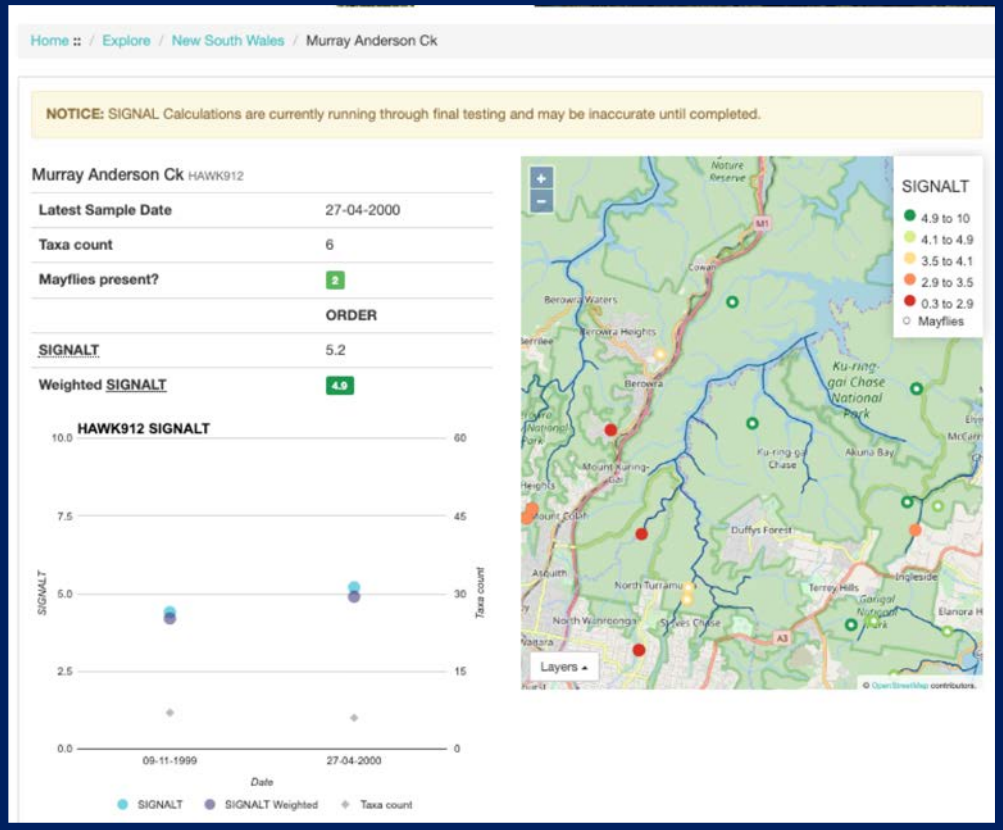
Data shown has been sampled from the years of 1994 to 2018.

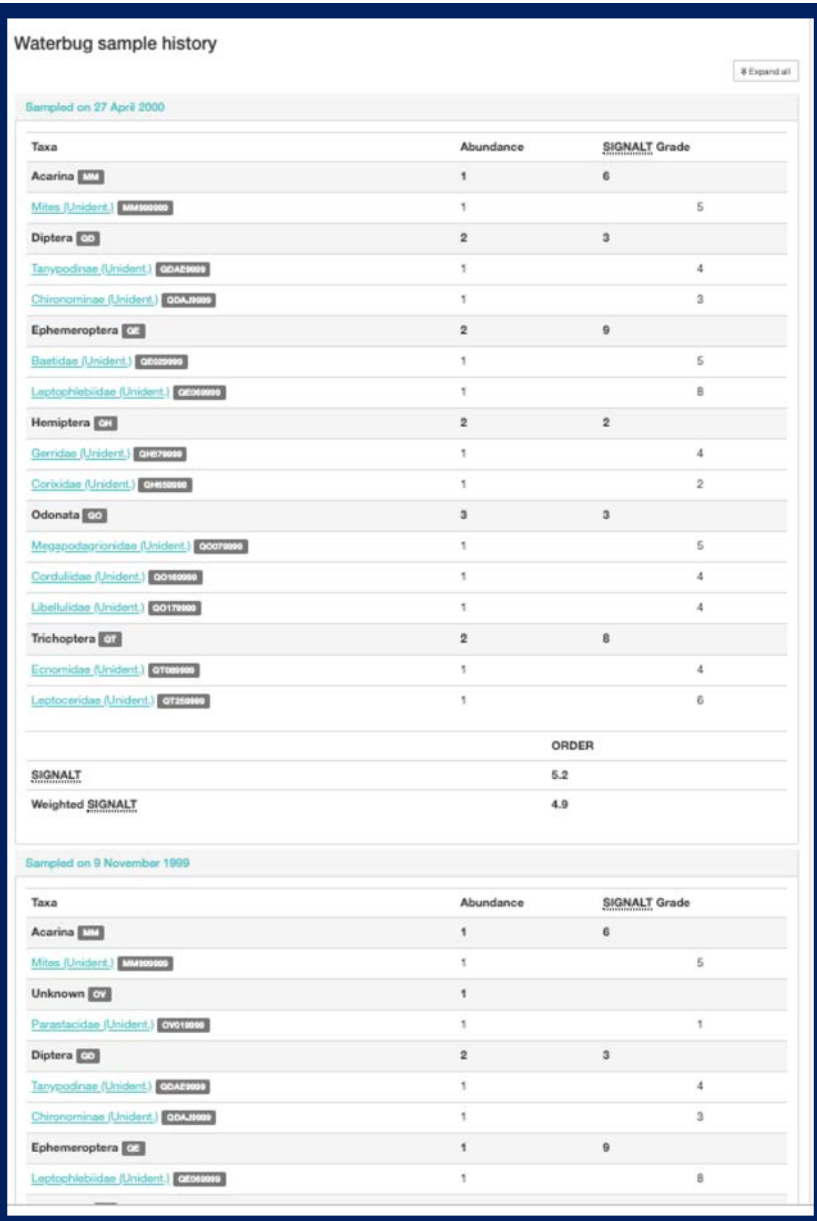
Blue Mountains City Council | Office of Environment and Heritage | Waterwatch New South Wales

NOTICE: SIGNAL Calculations are currently running through final testing and may be inaccurate until completed.

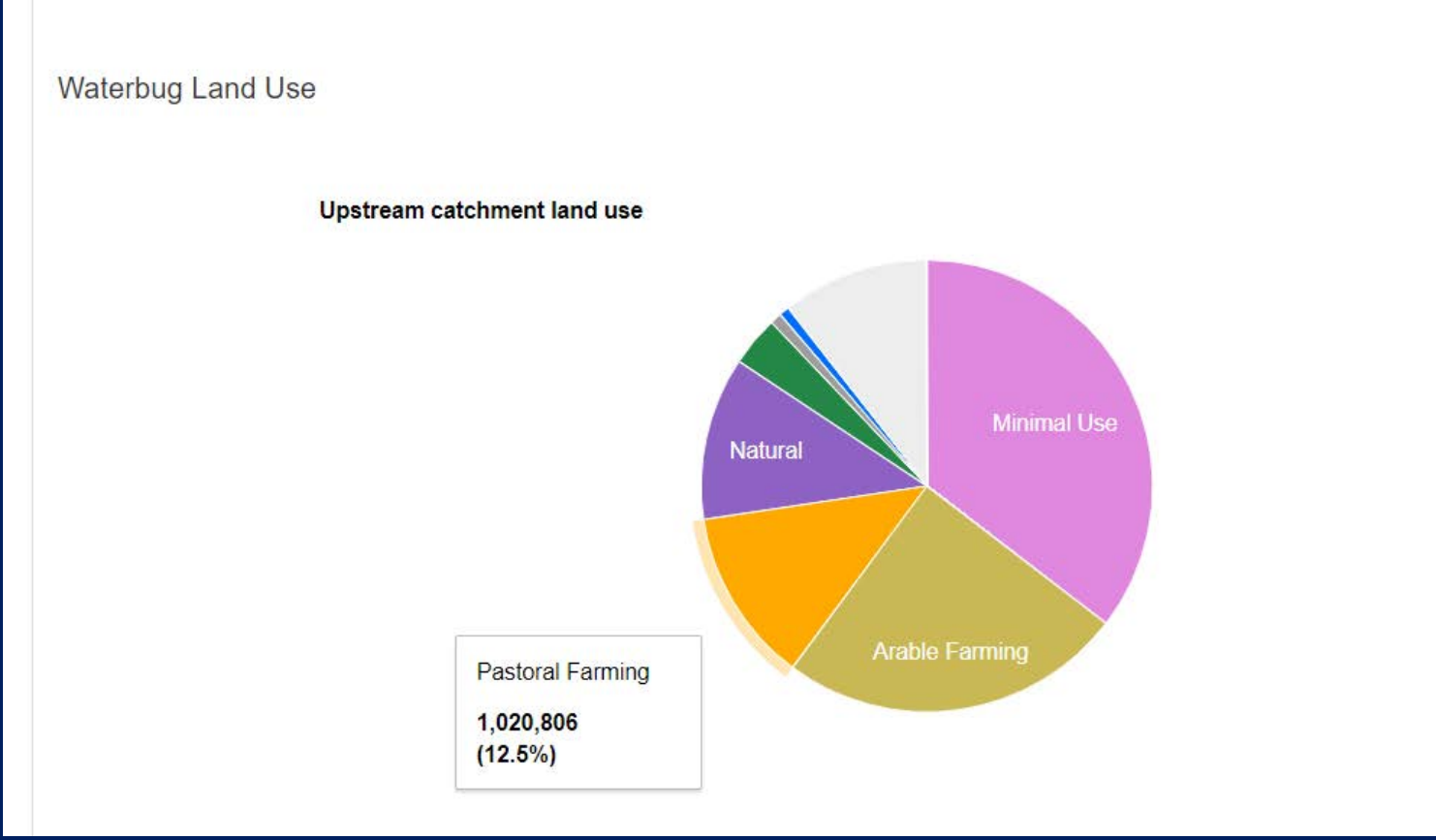


Visualising the data





Current work in progress – incorporating landuse with waterbug data for contextual results



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Key points:

- The wellbeing of our freshwater ecosystems is vitally important, and this project will help us look after them.
- Everyone can get involved to help put our waterways under the magnifying glass by collecting valuable data.
- Citizen science isn't just great for the environment - it's fun, good for you and good for the community.

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