We're collecting

Environmental DNA

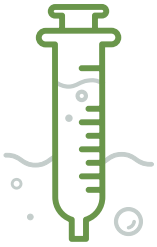
in your area

Environmental DNA (eDNA) is a method for identifying some of the species we share our waterways with. It is simple, effective and it does not disrupt or harm the environment.

This is how it works:

1 We collect a sample

We take a small sample of water from the area and push it through a filter, capturing the DNA in the water.



2 The lab identifies the DNA

The filter is sent to the lab for analysis. The DNA collected is then matched up to a comprehensive database of species.

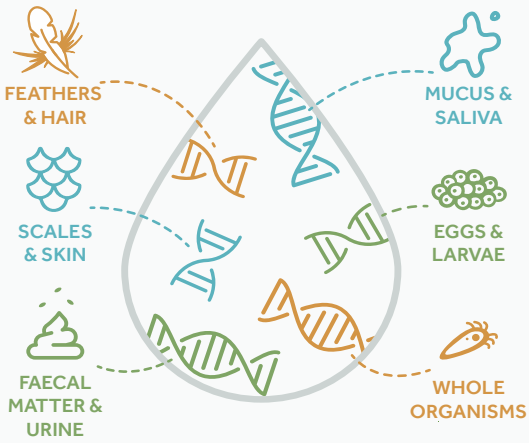
3 We get an environmental 'snapshot'

We will be using a method of eDNA called '**metabarcoding**'. This method gives us a summary of all species represented in the sample - a 'snapshot' of what species might be in the area.

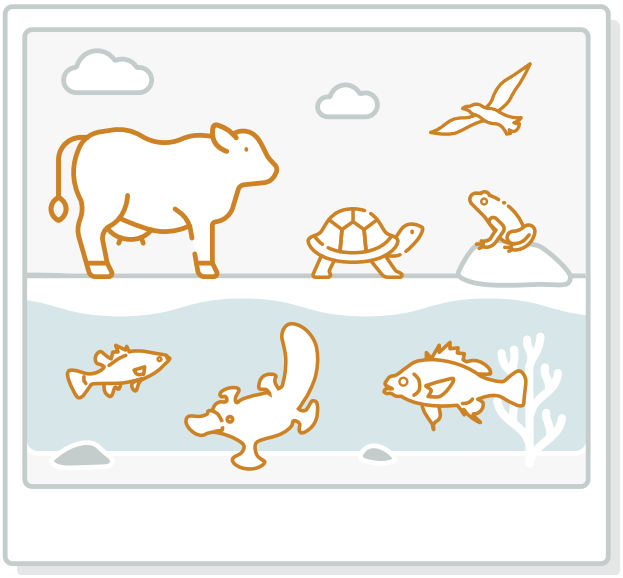
Adapted from **EnviroDNA** (envirodna.com) and **Wilderlab** (wilderlab.co.nz).

eDNA can also be used to check for a specific species in the area. This can help identify pests and locate rare or threatened species.

What could we find in a sample?



The eDNA filter picks up the DNA of fish, insects and other aquatic animals. It also picks up organisms as small as bacteria, and non-aquatic wildlife such as birds and mammals. All it takes is for a small amount of DNA (perhaps from a dropped feather or some saliva from drinking) to end up in the sample.



Scan to learn more about Refreshing Rivers

refreshingrivers.org.au

refreshing **rivers**

Healthy water, healthy land.

Why is Refreshing Rivers using eDNA?

Using eDNA gives us a great opportunity to learn what species are present in the area. We can use this knowledge to inform what we do in the **riparian zone** (between the paddock and the river), whether that is restoring habitats, controlling weeds, or something else. Targeted actions like these can **make a real difference** to the waterway.

We use eDNA because:

- it can pick up the presence of species that are rare or hard to find,
- it is efficient and effective,
- it is non-invasive and low-impact, and
- changes over time may indicate patterns.

eDNA can tell us:

- ✔ what might live in or use the water,
- ✔ what may be nearby, and
- ✔ whether a particular species is present.

eDNA cannot tell us:

- ✖ all species present *(some can be missed)*,
- ✖ how many individual animals/ organisms are present,
- ✖ about breeding or other behaviour, or
- ✖ how the DNA got in the water sample.

eDNA is great for gathering broad information. We use it as one tool in our toolkit, along with other methods such as electrofishing that can give us detailed information.

Rakali (Hydromys chrysogaster)

How can landholders help?

We are looking for landholders to be part of the Refreshing Rivers Program. Working with the project team, you will learn about the natural assets on your property, and develop targeted ways to improve waterway health on your land.

For more information, go to refreshingrivers.org.au and contact one of our Project Officers.

What is Refreshing Rivers?

Refreshing Rivers is a 10-Year Program to improve waterway health across three Target Areas: **Central Billabong, Upper Billabong and Riverina Highlands.**

Land management practices have a significant impact on our our waterways, so one of our main approaches is to work with landholders to improve land management practices.

By working together to develop **strategic, coordinated and evidence-based solutions,** we have the best chance at tackling the complex and persisting challenges facing our rivers.

Refreshing Rivers is a collaboration between government, industry, research, and community organisations, led by Local Land Services. Learn more at **refreshingrivers.org.au**

Releasing fingerlings (baby fish) into the waterway

This Program has been assisted by the New South Wales Government through its Environmental Trust.

refreshing rivers
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