

About the Maribyrnong River Catchment

Transcript

Andrew Mellor, Melbourne Water, Manager Flood Awareness Communications:

High in the southern slopes of the Great Dividing Range, water begins its journey.

From smaller headwater streams and springs, it flows through valleys, farmland and towns – gradually coming together to form the Maribyrnong River system.

To understand this study, it's important to understand the Maribyrnong River catchment itself.

This is a large and complex system – covering around 1400 square kilometers, stretching from Macedon Ranges right through to the lower Maribyrnong River and Port Phillip Bay.

It includes a network of waterways such as:

- Jacksons Creek
- Deep Creek
- Emu Creek
- And many smaller tributaries.

These waterways all come together at a narrow point near the township of Bulla, to form the Maribyrnong River.

This catchment is incredibly diverse:

- In the upper catchment, you have natural waterways, farmland and bushland.
- In the lower catchment, you have dense urban development and highly modified or developed floodplains.

Only a small proportion of native vegetation remains, and much of the landscape has been shaped by urban development and historical land use.

Water falling in the upper catchment:

- Moves through creeks and valleys
- Converges at a narrow point near Bulla
- And then flows downstream through urban areas

This “funnel effect” means that rainfall many kilometres upstream can influence flooding downstream.

The Maribyrnong River catchment has many environmentally sensitive waterways in the catchment — and this helps to illustrate the complexity of the system.

A lot of the major waterways like Deep Creek and Jackson Creek are strongly influenced by groundwater.

- Groundwater keeps water flowing even in dry periods
- It maintains permanent pools that act as refuges for wildlife
- And supports unique vegetation and micro-habitats.

Without this groundwater connection, many of these habitats would not survive.

These waterways support important native species, including:

- Yarra Pygmy Perch — a nationally threatened fish
- Mountain galaxias and spotted galaxias
- Platypus, particularly in lower reaches near Bulla
- And amphibians like the Growling Grass Frog

These species depend on:

- Stable water levels
- Good water quality
- Connected habitats.

Many of these species are highly sensitive to changes in:

- Water flow
- Water quality
- Habitat availability.

Even small changes to the system can have significant ecological impacts.

Over time, the catchment has changed significantly.

- Urban development has expanded

- Natural vegetation has reduced
- And waterways have been modified

These changes affect:

- How water moves through the system
- Where it is stored

And how quickly it reaches the river.

Because of this, managing flood risk in the Maribyrnong catchment is not just about water.

It's about balancing:

- Community safety
- Protection of homes and infrastructure
- Environmental health
- And cultural values.

This is why the flood mitigation study takes a whole-of-catchment approach.

We are not looking at one solution in one location.

Instead, we are:

- Understanding how the system works as a whole
- Testing different options across the catchment
- And considering environmental, social and economic outcomes together.

The Maribyrnong catchment is more than a river — it is a living system shaped by water, land, people and ecology.

Understanding this complexity helps us make better decisions about how to reduce flood risk, while protecting what makes this catchment unique.