

Latrobe water fact sheet 2: Water for the environment

This fact sheet is number two in a series that illustrate how water is utilised in the Latrobe basin



Understanding the Latrobe River system

The Latrobe River originates on the Baw Baw Plateau and passes through relatively flat to undulating plains cleared for agriculture, before flowing into Lake Wellington. Notable tributaries include the Tanjil River, Narracan Creek, Morwell River, Tyers River and Traralgon Creek. The waterways of the Latrobe River System as well as the Thomson River, which joins the Latrobe River in its lower section and managed separately, support Ramsar-listed wetlands and the Gippsland Lakes.

This system of rivers, creeks, streams, wetlands and lakes supports important plants, fish, animals and birds. Some of the species found here are currently endangered or vulnerable and are critical to the ecological character of the area. The biodiversity and environmental condition of the Latrobe River, its tributaries, lakes and wetlands, are an essential part of the Latrobe region's status as a tourism and recreation destination.

The waterways of the Latrobe system are also significant to the Traditional Owners, the Gunaikurnai. Protecting and managing water is a custodial and intergenerational responsibility.

Ensuring water for the environment.

The Latrobe's rivers, creeks and wetlands don't get the water they once did. The Latrobe Valley Regional Water Study showed that annual surface water availability in the Latrobe River system has decreased significantly in the past 20 years, from around 800 gigalitres a year to about 600 gigalitres a year since 1997 (based on averages from 1975). A series of future water scenarios were tested and found that should a future 'dry climate' scenario emerge, annual water availability in the Latrobe River is projected to decline substantially. These figures show we must all plan for a drying future.

The Latrobe River system relies on freshwater flows to provide ecologically critical water cycles including low flows, freshes and high flows. These freshwater flows also contribute to the health of the

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highly valued Gippsland Lakes Ramsar Site including the lower Latrobe wetlands, namely Sale Common, Heart Morass and Dowd Morass. This water is provided through the environmental water reserve, a legally recognised volume of water set aside for the environment to preserve the environmental values and health of water ecosystems.

This reserve includes environmental entitlements, which are the legal rights to take and use water for the health and benefit of the environment (including rivers, wetlands, floodplains and lakes). In Victoria, these entitlements are held by the Victorian Environmental Water Holder (VEWH).

In the Latrobe system, the VEWH currently hold two environmental water entitlements:

The Lower Latrobe wetlands Environmental Entitlement 2010, which allows water to be diverted from the Latrobe River to three priority wetlands that form part of the Gippsland Lakes Ramsar Site (Sale Common, Dowd Morass and Heart Morass) when river levels are above specified heights.

The Blue Rock Environmental Entitlement 2013, which provides shares of inflows into the Blue Rock Reservoir. This allows the VEWH to provide targeted environmental water deliveries.

The environmental water reserve also includes water that is set aside for the environment by placing limits on how much water can be taken from the system. It is also known as above-cap water. In the Latrobe River this is by far the biggest contributor to the long-term availability of water for the environment

The benefits of environmental water

The flow of a river is essential to its ecosystem. An environmental flow regime is not simply the amount of water that flows through a river system.

It's the whole pattern of flows—from when and at what frequency it flows, how long it lasts, and at what volumes. The health of the Latrobe River system relies on its remaining freshwater flows, supplemented by deliveries from the environmental entitlements to help replace some of the ecologically critical flow components that have been lost through river regulation and water extraction for industry, towns and agriculture.

The Latrobe River system supports plants, wildlife and ecological communities, many of which are classified as threatened, vulnerable, endangered, or critically endangered. The ability for these species in particular to complete their life cycles demonstrate whether the river's flows, refuge pools and habitats are healthy.

Without these environmental flows, the entire Latrobe River system would be in poorer health. Other benefits include:

- Maintain or increase in-stream geomorphic diversity.
- Improve the condition and increase extent and diversity of submerged, emergent and riparian vegetation.
- Avoid adverse water quality conditions (such as high salinity) in the lower Latrobe River and estuary.
- Maintain or increase native fish (migratory, resident and estuary) populations including eels as well as existing populations of platypus, rakali (water rat) and freshwater turtle plus all macro- and micro-invertebrates.
- Increase frog populations and their range, while maintaining refuge habitats.

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Spotlight on Heart Morass Restorations:

Substantial restorations have been undertaken on Heart Morass from 2006 led by West Gippsland Catchment Management Authority. This large wetland area had been used for heavy grazing and suffered from acid sulphate and salinity. But through active engagement, the 1,800-hectare area is once again a diverse space that contributes to the health of the Gippsland Lakes with 30,000 birds having since returned to the wetland. Environmental water is used to replicate seasonal flooding patterns that are fundamental to sustaining Heart Morass.

The Gippsland Lakes—an environment to protect

The Gippsland Lakes are the largest estuarine lagoon system in Australia. They are Ramsar-recognised for their International Importance due to their very significant environmental values. In January 2016, the Victorian Government approved The Gippsland Lakes Ramsar Site Management Plan, which was developed by the East Gippsland Catchment Management Authority recognising the international obligations that come with a site being listed under the Ramsar Convention on Wetlands.

Commercial fishing has ceased as of 2020 in an effort to rebuild fish stocks with an emphasis on recreational fishing. However, a drying climate and increase in water use threaten the lakes as well as the significant economic benefits to the region provided by recreation and tourism.

The lakes are an important drought refuge for wildlife, regularly holding up to 20,000 waterbirds and 86 species including ducks, swans, coots and other waterfowl. It is also an important site for rare, vulnerable, endangered or threatened in Victoria birds, mammals, amphibians, fish and invertebrates. Those found in the Gippsland lakes include:

- Green and golden bell frog (vulnerable)
- Growling grass frog (vulnerable)
- Australian grayling (vulnerable)
- Australasian bittern (endangered)
- Dwarf kerrawang (endangered)
- Swamp everlasting (vulnerable)
- Metallic sun-orchid (endangered)
- Burrnan dolphin (threatened)

Top image: Freckled duck on the Latrobe River

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