



Curdies River Update May 2022

In April 2022 a blue green algae bloom commenced in the Curdies River. DELWP and partner agencies, the EPA, Wannon Water and the Corangamite CMA are aware of the ongoing toxic blue green algae (BGA) bloom and acknowledge that the incident is impacting members of the community and river users.

Community Health Information

While signage is up and the Blue Green Algae persists, people should continue to avoid any direct contact with the affected water. This includes swimming, fishing and during boating activities. If you do come into contact with any water in the affected areas, wash immediately with fresh water.

Do not eat any whole fish, shellfish or crustaceans from the river. Fish caught from affected water should have its gills and guts removed prior to cooking.

More information about blue-green algae can be found here:

<https://www.betterhealth.vic.gov.au/.../Harmful-algal-blooms>

Potential sources of Blue Green Algae in the Curdies River

The Curdies Estuary has a history of high nutrient inputs from the catchment. The estuary has a wide, shallow embayment that limits flushing. As such, it is prone to accumulation of sediment and nutrients.

A study was undertaken in 2005 by the then Department of Primary Industries and Department of Sustainability and Environment to investigate nutrient enrichment in the Curdies River Catchment. From this study, there is sufficient evidence to suggest that the following four factors contribute to diffuse movement of phosphorus:

- Dairy effluent
- Excess fertiliser runoff
- Stock rates and access (to wet areas and watercourses)
- Gully erosion and bank erosion in Scotts Creek / Cooriemungle catchment

Who is the responsible Authority for Blue Green Algae in the Curdies River?

Victoria has a statewide coordination plan to manage blue-green algae blooms.

DELWP is the Control Agency for Blue Green Algae and develops the policy for the overall algal management in Victoria. DELWP collects data on BGA to monitor trends throughout the State which helps to manage BGA blooms. During an algal bloom, DELWP will co-ordinate management activities

so that all relevant stakeholders can perform their respective roles and responsibilities at the regional level. More information can be found on the DELWP BGA page [Blue-green Algae \(water.vic.gov.au\)](http://water.vic.gov.au)

Wannon Water is the Regional Coordinator for the area including the Curdies River. The Regional Coordinator is responsible for ensuring there is a coordinated management response for local BGA blooms and planning and preparedness for managing regional BGA blooms.

DELWP is also performing the role of Local Water Manager for Blue Green Algae in the Curdies River. Local Water Managers are responsible for managing BGA blooms in the section of a waterway or water body they are responsible for, particularly to minimise impacts of the bloom including public health risks through monitoring, communications and reporting.

A range of other agencies provide support to the above agencies in relation to the planning, preparedness and response. Corangamite CMA works with private landholders to undertake catchment improvement works through implementing the Corangamite Waterways Strategy.

Who is the responsible authority for fish deaths in the Curdies River?

The '[Interim response guide – Fish death events](#)' provides guidance and clarification on the arrangements and responsibilities for the response and management of fish death events.

The public and agencies should report all fish death events to EPA by calling 1300 EPA VIC (1300 372 842), 24 hours a day.

EPA monitors, assesses and triages community and business pollution reports to ensure timely and appropriate responses. This includes direct feedback to reporters and notification of other agencies.

What are agencies doing now to respond to these events?

Blooms of BGA are common in waterways like this due to changes in water levels, nutrient inflows and temperature. The bloom is not expected to clear until there is significant rainfall and cooler temperatures which may take some time.

At the request of DELWP, Wannon Water has tested the water. The results confirm toxic blue green algae is present. It is therefore likely that this is the cause of the fish deaths. Following reports of the BGA bloom, Wannon Water carried out an inspection of the Peterborough Sewage Treatment Plant to confirm that there has been no leakage of sewage or treated effluent from the facilities to the Curdies River or estuary.

Agriculture Victoria undertook preliminary investigations regarding the cattle deaths. Due to the decomposed state of the cattle, veterinary officers were not able to take tissue samples to determine the cause of death.

Signage warning of the toxic BGA is in place around the Coastal Reserve and along the Curdies River to warn members of the public of the hazard. It will remain until testing confirms the bloom has dispersed. Alerts have been issued through the Vic Emergency App.

Cyanobacteria (blue-green algae) are a common seasonal occurrence in Victoria and a natural component of most aquatic systems, including streams, lakes, estuaries and the sea. Individual cells

are very small and are normally not visible in a water body. But numbers can increase rapidly and blooms, or scums, become easily visible across the water surface.

Blooms can be triggered by nutrient levels, low inflows, lower storage volumes and warmer weather conditions.

Agencies are working together to investigate these matters and review existing action plans and assessments. Field staff are carrying out inspections.

Corangamite CMA provides advice and incentives to land managers. In the Curdies catchment, CCMA has implemented the following programs

Corangamite Waterway Strategy 2014-2022:

The majority of the Curdies River and Estuary has been identified as a priority waterway in the Corangamite Waterway Strategy 2014 – 2022 due to high environmental and social values.

To address the identified threats to this river, such as grazing pressures, livestock access to waterways, weed infestations and pest animals, the Waterway Strategy outlined key management activities that included pest and weed control as well as fencing and revegetating the banks of the river and estuary.

Since 2014 the Corangamite CMA Waterway Protection Program has provided incentives to landholders along the Curdies River to construct 29 km of fencing to protect waterways, establish 101 ha of revegetation and undertake 100 ha of woody and non-woody weed control.

Waterways Protection Program (2021-2024):

The Corangamite CMA offers support and funding to landholders through the 'Waterway Protection Program'. Since 2005, the program has provided funding to landholders for waterway protection and restoration works with incentives available for fencing, weed control, revegetation, stock crossings and off-stream water points, willow removal and pest animal management.

A call for Expressions of Interest for the latest round of incentives closed in December 2021. From this, 8 projects on the Curdies River were successful in being funded, providing a total \$193,711.40 in funding to protect a total 13.04 km of waterway frontage and 44.65ha with fencing, weed (including willow) control and revegetation.

Australian Government Fisheries Habitat Restoration Program (2021-2023):

The Curdies Estuary Fish Habitat Restoration Project is investing \$298,886 in improving riverine and estuarine habitat for native fish, including angling species, in the Curdies estuary (immediately upstream of Curdievale to Peterborough), working in partnership with OzFish Unlimited and VRFish.

It involves pre and post intervention monitoring through scientific data collection and citizen science; community engagement delivered in partnership with OzFish Unlimited and VRFish to communicate the benefits of habitat creation and improvement works for recreational anglers and to promote opportunities to participate in their creation and improvement; on-ground works involving angler planting days along the riparian zone; and instream works involving recreational anglers in the construction of fish hotels, making use of the Timber Re-use MOU between CCMA and VicRoads.

Citizen Science

The Corangamite CMA invests in supporting Curdies River EstuaryWatch and Waterwatch groups through our Regional Citizen Science Officers.

Sustainable Dairies

The Corangamite CMA also supports dairy farmers through our 'Sustainable Dairy Management Project' delivered by the Australian Government Regional Land Partnerships Funding. This project is a partnership between the Corangamite CMA, West Vic Dairy, and Landcare to engage dairy communities to support whole of farm nutrient management in the Gellibrand and Curdies River catchments. The project offers field day opportunities and on-farm soil and effluent testing. Through this program, the Corangamite CMA has assisted in improved management of approximately 8,000 hectares across the region.

Interested landholders who wish to engage in these projects are encouraged to contact the Authority on 1800 002 262.

Past work on the Curdies:

2016-2020: Waterway Restoration Program, Angler Riparian Program and South West Fire Recovery Project invested a total \$532,056 along 20.8km of Curdies River frontage. This has included: revegetation works along the Curdies River undertaken by landholders and angling clubs; the Curdies Perch Search eDNA project conducted in 2019; fencing off waterway frontages to exclude stock from accessing the river to reduce erosion, stabilise the riverbank and facilitate flows downstream; removing willows to help increase flows, reduce nutrient inputs to the river and stabilise the river bank.

2013-2017: Saltmarsh Protection Program: this program invested \$90,000 into 23 ha of works at 3 sites along the Curdies Estuary through Peterborough Lands Trust. These sites are under 10-year management agreements that are still current.

Research and knowledge

The CMA is currently procuring Deakin University to investigate the sources of nutrient enrichment in the Curdies River and tributaries and changes over time as a basis for future monitoring and management. This updated knowledge will help CCMA, industry groups and Landcare to target management actions to address priority sources of nutrients entering the waterways.

2017 Estuary Management Plan (EMP)

The Curdies River EMP was prepared to determine the primary management activities required to maintain or improve the condition of the estuary. The EMP is used to seek funding for actions, strengthen coordination amongst stakeholders responsible for estuary management and increase community understanding.

CCMA is currently in the process of contacting all stakeholders listed as responsible for actions in the EMP to provide a progress update on these actions. This progress update will be provided to all stakeholders and the community. Actions are marked as complete, not complete or on-going.