Artificial estuary openings in the Corangamite Catchment (October 2022)

What is an estuary?

An estuary is the place where the freshwater from the river meets the salt water of the sea. Estuaries in the Corangamite catchment are known as intermittently closed/open estuaries (IOCE) which means they open and close naturally.
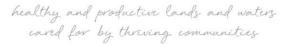
Estuaries provide key spawning and nursery grounds for many species of fish, and drought refuge and critical breeding and foraging areas for birds. They also play a pivotal role in maintaining water quality through nutrient and sediment filtering.

Estuaries underpin key social, economic and cultural heritage values within our region. They are a significant drawcard for tourism and are highly valued by the local and broader communities for scenic beauty, recreational fishing, swimming, camping, bird watching and boating.

What is the process of artificially opening an estuary?

Artificial estuary openings undertaken by Permit Holders are consistent with the relevant policies of the Victorian Waterway Management Strategy.

The Corangamite CMA (CCMA) does not open estuaries, however it is the regulator of artificial estuary mouth openings in the Corangamite region. As the regulator, CCMA issues Permits to

councils, authorities and other land managers who need to protect human assets. Holding a Permit allows them to ask CCMA's permission to open the estuary.

When a Permit Holder requests to open the estuary, CCMA undertakes a risk assessment of the proposed opening, before providing authorisation to the Permit Holder. The Permit Holder then organises earth moving equipment to open the sand bar/berm, to allow the water to flow out into the ocean, in line with their Permit conditions.

Why would an estuary be artificially opened?

Permit Holders will request to artificially open an estuary if there is a risk that water levels will impact human assets such as roads, buildings and agricultural land, that can only be alleviated by an artificial estuary opening. IOCE estuaries can open on their own, however natural openings don't always occur before human assets are at risk of inundation and intervention is required.

Estuaries in the Corangamite catchment are not artificially opened for environmental purposes as recent studies show that there is no environmental benefit, and artificial openings can put environmental values at risk. To read more about this, refer to the Aire Valley Estuary Floodplain Project (2020), the Anglesea River and Estuary Environmental Flow Study (2021) and the Should an estuary be opened or closed fact sheet on the Corangamite CMA Knowledge Base website or below.
- Corangamite CMA Knowledge Base - Aire Valley Estuary Floodplain Project - Final Report (ccmaknowledgebase.vic.gov.au)
- Corangamite CMA Knowledge Base - Anglesea River and Estuary Environmental Flows Study 2020 - Final Report (ccmaknowledgebase.vic.gov.au)
- Corangamite CMA Knowledge Base - Fact Sheet Should an estuary be opened or closed? Under low catchment inflows and low water level conditions (ccmaknowledgebase.vic.gov.au)

Why undertake a risk-based assessment?

A risk-based assessment is conducted to ensure a consistent process is used when making the decision whether or not to open an estuary. It also ensures that the decision considers the environmental, cultural and socio-economic values of each estuary.

Who is permitted to open an estuary?

Only Permit Holders may artificially open an estuary mouth. Under state legislation, opening an estuary without a permit can result in fines of up to $33,000 and or imprisonment for up to 10 years. Illegal estuary openings put environmental values at risk as they can have detrimental impacts on water quality, birds, other aquatic species, plants and the general ecology.

The water in the estuary has two layers, an oxygen-rich freshwater layer on top and an oxygen-poor saline layer on the bottom. When the estuary is opened in this condition with no freshwater inflow, it results in the oxygenated layer on top being drained into the ocean, leaving behind an estuary filled with oxygen poor water which increases the risk of a fish kill. A natural opening poses a lower risk to environmental values as it is driven by natural factors that mitigate negative effects, such as rainfall induced freshwater inflows.

If there is an actual or imminent threat to safety, health or property an opening may be conducted under emergency provisions in accordance with *By-law No. 4 Waterways Protection 2014* and the *Emergency Management Act 1986*. In such circumstances, a permit is not required.

What is EstuaryWatch and how can I get involved?

EstuaryWatch is a community water quality monitoring program where locals monitor the condition or 'health' of the estuary. This can be as simple as taking a photo of the estuary and sending it to the Corangamite CMA, or as involved as recording scientific measurements of turbidity, salinity and algal concentrations.

To join EstuaryWatch,contact the CCMA at: **estuarywatch@ccma.vic.gov.au** or phone **1800 002 262.** Or alternatively visit the EstuaryWatch website www.estuarywatch.org.au/

How do I access more information?

For more information, contact CCMA at: info@ccma.vic.gov.au or phone **1800 002 262.**

Or visit:

- The Corangamite CMA estuaries web page:
  Estuaries - Corangamite Catchment Management Authority (ccma.vic.gov.au)
- The Corangamite CMA Knowledge Base:
  Corangamite CMA Knowledge Base (ccmaknowledgebase.vic.gov.au)
- The Victorian Waterway Management Strategy (chapter 13):
  Strategies and planning (water.vic.gov.au)

Who do I contact if I am being affected by high water levels in an estuary?

Estuary	Permit Holder	Contact Details
Aire River *Glenaire*	Parks Victoria	131 963
Anglesea River *Anglesea*	Surf Coast Shire Council	5261 0600
Barham River *Apollo Bay*	Great Ocean Road and Parks Authority	1300 736 533
Curdies River *Peterborough*	Parks Victoria	131 963
Erskine River *Lorne*	Great Ocean Road and Parks Authority	1300 736 533
Gellibrand River *Princetown*	Parks Victoria	131 963
Painkalac Creek *Aireys Inlet*	Surf Coast Shire Council	5261 0600
Spring Creek *Torquay*	Great Ocean Road and Parks Authority	1300 736 533
Thompson Creek *Breamlea*	No permit is issued. Permit is requested on an as-needed basis.	Surf Coast Shire Council residents: 5261 0600 City of Greater Geelong residents: 5272 5272

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