

Anglesea Estuary Management Plan 2012-2020 2021 Review of Actions

About the Anglesea Estuary Management Plan

The Anglesea River Estuary Management Plan 2012 – 2020 (the Plan) is an eight-year action plan aimed to improve the environmental condition of the Anglesea River estuary. Protection and improvement of the estuary will ensure the estuary is able to continue to support the variety of social, economic and cultural values identified by the community.

The diversity of habitats, land use and land tenure surrounding estuaries typically results in the involvement of many groups undertaking management roles. This is the case for the Anglesea River. Details of the partners roles and responsibilities in estuary management at a state and local level can be found in the Anglesea River 2012 – 2020 Estuary Management Plan, which can be found on the Corangamite CMA Knowledgebase.

Management actions were developed in consultation with agencies responsible for management of the Anglesea River estuary and considered comments received on the draft document. Many documents were reviewed to ensure that the actions collated all previous work and discussions. Surveys of community interest also helped shape the priorities. The actions were devised to address threats impacting on the estuary's broader community values (social, economic or environmental). The actions in the Plan were also referred to in the Corangamite Waterway Strategy 2014-2022

Purpose of the review

The primary purpose of this document is to capture the status of the Plan's implementation and use that to help inform the next steps at Anglesea in light of new knowledge and changes since 2012. Secondary, this is one source of information that will be used to inform the current review of the Corangamite Waterway Strategy (2014). All actions in the Plan have been reviewed by the lead partner to provide a status on their completion. All actions are subject to funding and resourcing. The actions and their status are presented in the table below.

*healthy and productive lands and waters
cared for by thriving communities*

Key to actions table

Red	Has not occurred
Amber	Partial or in progress
Green	Has been completed

Anglesea River Estuary Management Plan Action review 2021 table

Action	Who leads implementation	Status	Notes
Develop an implementation committee to oversee plan implementation and report on plan progress annually	CCMA	Green	Initially an agency committee was established with annual meetings (quarterly for the first year), then key actions were incorporated into the The Anglesea River Working Group (ARWG) once it was established. The ARWG group meets quarterly to discuss Anglesea River and estuary matters, and consists of local business owners, stakeholders, Surf Coast Shire Council, Barwon Water, Alcoa, DELWP and the CCMA
Manage the estuary mouth opening using a risk-based approach which protects community values-social, economic and environmental	CCMA	Green	Estuary Entrance Management Support System (EEMSS) is used for all Anglesea River artificial estuary openings
Develop an estuary mouth opening management plan and ensure that the plan is applied by agencies and available to the community	CCMA	Red	As required by the process outlined in the 2013 Victorian Waterway Management Strategy, Surf Coast Shire Council and the CCMA liaise closely if SCS are considering an artificial estuary opening
Continue the Corangamite EstuaryWatch program in the Anglesea River catchment	CCMA	Amber	This is on-going with active members that monitor estuary mouth condition. There are 2 photo point sites and 5 water quality sites along the length of the estuary. Data available on the EstuaryWatch website
Construct structural habitat in priority habitat areas which support fish species reliant on this habitat component, particularly Black Bream	CCMA	Green	Completed in 2014. CCMA installed a variety of instream habitat works including rocks, root balls and 'fish hotels'. 15 sites were installed
Continue to actively encourage Anglesea River visitors and wider community to use the appropriate rubbish and recycling bins to reduce litter within the river and environs	SCS, GORCC (Now GORCAPA)	Amber	This is on-going
Finalise potential remediation options resulting from the Maher report for periods of acidity	CCMA	Green	The preparation of an Anglesea Acid Event Response Plan has been completed as identified in the 2014 Anglesea River estuary - Industry expert workshop and risk assessment undertaken by Alluvium. The Plan outlines a coordinated approach by relevant agencies to acid event management within the estuary and detail roles and responsibilities of the key agencies to ensure consistent and effective management action before, during and after an acid event. Please note, this is not a public document.

Action	Who leads implementation	Status	Notes
Undertake study to identify sources of acid within the estuary and (more detail), i.e. map Potential and Actual Acid Sulphate Soils (PASS and ASS) and pursue inclusion of this data in the planning scheme through an overlay	DEPI (Now DELWP)		Barwon Water have completed acid sulphate soils investigations as part of their monitoring and assessment program under the Bulk Entitlement. The focus of the Barwon Water investigation was guided by the Bulk Entitlement, so extensive monitoring and investigations have taken place but this has not been included in the planning scheme through an overlay. A copy of the investigation can be found on Barwon Water's website: https://www.yoursay.barwonwater.vic.gov.au/anglesea-borefield
Through the Anglesea Riverbank Precinct Masterplan, continue to identify and implement appropriate access points and pathways to and along the river and estuary with suitable infrastructure/signage to guide movement	SCS		A specific precinct master plan for the Anglesea Riverbank has not commenced however, other planning has taken place, and is ongoing, in relation to identifying and improving appropriate access points and pathways along the river. Future needs will be identified in conjunction with other land managers and agencies, and considered in Surf Coast Shire's Integrated Social Infrastructure and Open Space Plan, currently under development
Implement the new Victorian Government Public Land Tour Operator and Activity Provider Licence system	SCS		This system has not been adopted or implemented in relation to Surf Coast Shire managed public land and waterways. This system and associated fees and charges will need to be considered in line with broader fees and charges / community subsidy policies and arrangements
Develop an annual communication plan for the Anglesea EMP	CCMA		This has not occurred due to funding constraints
Detail key agency management responsibilities and contacts for the Anglesea River and estuary	CCMA/SCS		This has been completed as part of the Anglesea River Working Group and in the development of the Estuary Management Plan
Put in place land subject to inundation and floodway overlays which consider inundation associated with estuary mouth closures and storm surges, as well as catchment-based events	CCMA		This has not occurred due to funding constraints

Action	Who leads implementation	Status	Notes
Continue to develop and use the best available information relating to climate change and sea level rise and its impact on coastal vulnerability	DEPI (Now DELWP)		Progressed through the Corangamite Regional Floodplain Management Strategy 2018-2028 - https://ccma.vic.gov.au/wp-content/uploads/2021/07/Corangamite-RFMS-TEXT-for-WEB.pdf DELWP's Marine and Coastal Strategy (DRAFT 2021) will also progress this action - Draft Marine and Coastal Strategy Engage Victoria
Implement the new Guidelines for Coastal Catchment Management Authorities: assessing development in relation to sea level rise	CCMA, DEPI (Now DELWP)		This objective has been completed - Guidelines for Coastal Catchment Management Authorities: Assessing development in relation to sea level rise. June 2012. Link - https://www.planning.vic.gov.au/_data/assets/pdf_file/0008/103013/DSE-Guidelines-for-Coastal-Catchment-Management-Authorities.pdf
Review land subject to inundation layers (LSIOs) and flood overlays as significant information on climate change and sea level rise becomes available	CCMA, SCS		This has not occurred due to funding constraints
Investigate opportunities to upgrade infrastructure, including Great Ocean Road, Bingley Parade, River Reserve and Coogoorah Park pathways to remove the need to artificially open the Anglesea River estuary mouth in response to flooding of these assets, and to minimise damage associated with high stormwater flows or storm surge	VicRoads, SCS, CCMA		Planning work for Coogoorah Park Pathways has been included in the 2021/22 Council Budget, Coogoorah Park Playground Renewal has been completed, Anglesea Recreation and Sports Club Boat Landing Platform Extension has been completed, and the project investigation and scoping of works to improve Bingley Parade Boat Launching site has been completed and awaiting a future funding opportunity
Continue to monitor and store estuary water quality conditions for a continuous long-term record in accordance with agreed roles and responsibilities and/or obligations	CCMA		EEMSS water quality results are all saved on file to assist if required. Data is also stored on the Water Measurement Information System and EstuaryWatch Portal
Ensure Fish Death Response Plan, Blue Green Algal Response Plan and Municipal Emergency Management Plan (including Flood Plan) are up to date and reviewed annually	EPA, SCS, VicRoads, SES		This is on-going. Documents complete and managed by SCS

Action	Who leads implementation	Status	Notes
Continue to implement a range of best management practices, to protect associated Ecological Vegetation Classes (EVCs), including but not limited to, Estuarine Wetland, Coastal Alkaline Scrub and Riparian Scrub / Swampy Riparian Woodland Complex. Aim to maintain or increase extent and maintain or improve the condition of the EVCs associated with the estuary with the following key methods: 1) Existing indigenous vegetation should be protected, and where required, fencing or other methods to secure their health may be required. 2) Vegetation in riparian zones to be protected and replaces as required. 3) Protect and enhance remnant stands of <i>Melaleuca lanceolata</i> (Moonah), particularly within Fairyland and isolated remnant areas west of the Anglesea River downstream of Great Ocean Road. 4) Continue ongoing programs to control blackberry, sallow wattle hybrid, boneseed, broom and mirror bush, focussing on areas that threaten high value vegetation as a priority	Land manager (i.e. GORCC (Now GORCAPA), SCS, PV, DEPI (Now DELWP))		This is on-going
Review the Surf Coast Shire Stormwater Management Plan for the Anglesea estuary, and or develop a specific stormwater management strategy to reduce sediments and pollutants from the local urban and industrial sources	SCS		Have identified request for funding for investigation of part of the Anglesea stormwater network in 2023/24 financial year
Develop education and interpretation material on the sources of acid within the catchment; complexity of estuarine water chemistry; potential impacts of climate change; estuary function; and estuary mouth opening processes	CCMA		This is on-going. Anglesea River and Estuary FLOWS study summary brochure is distributed on social media, social media posts developed by CCMA are used to improve knowledge, Updates provided to the community through the Anglesea River Working Group, and education material is made available through the CMA website - Estuaries - Corangamite Catchment Management Authority (ccma.vic.gov.au)
Develop an acid sulfate soil management plan for the Anglesea estuary	DEPI (Now DELWP)		This has not occurred due to funding/resource constraints to date
Seek funding opportunities to improve vegetation cover of priority areas within Coogoorah Park which are affected by Active Acid Sulfate Soils	SCS		This has not occurred due to funding/resource constraints
Report on estuary condition in 2019 using the Index of Estuary Condition (IEC)	CCMA		This has occurred. IEC water quality monitoring was conducted by Estuary Watchers and CCMA staff. Current state IEC report was published in 2021
Review and update the existing Anglesea Riverbank Precinct Masterplan Stage 3 (Wray St to Coal Mine Road, west and east side of River including Coogoorah Park)	SCS		Master plan works review has been completed as part of a broader review of the whole of the Anglesea Riverbank precinct
Report on water quality annually using data collected from the various monitoring sources	CCMA		The Anglesea River permanent water quality monitoring station data is publicly available on the Water Measurement Information System
Install flow meters within tributaries to enhance knowledge of catchment flows and determine the role of water inputs to estuarine condition	CCMA		Barwon Water monitor flows in the upper catchment
Repeat survey for EVCs in 2018 as part of continual monitoring of estuary vegetation across the region	CCMA		This has not occurred due to funding/resource constraints

Action	Who leads implementation	Status	Notes
Investigate cost effective ways to stabilise previously walled river bank sections downstream of Great Ocean Road. Continue to stabilise river banks where erosion or structural collapse risks occur	Land manager		This has not occurred due to funding/resource constraints
Consider remediation plans for Active Acid Sulfate Soils identified in the Acid Sulphate Soil Management Plan, at priority locations containing high community values	DEPI (Now DELWP)		<p>CCMA/DELWP/BW manage flow releases from the Alcoa storage pond to mitigate the activation of ASS. The water is not provided by Alcoa, rather the water is stored in Alcoa's pond which Barwon Water have access for use.</p> <p>This will also be considered as CMA and DELWP progress a project to look at options to address acidity issues in the Anglesea River and estuary (starting in 2022).</p>
Identify opportunities to work with research institutions to address key knowledge gaps identified in Maher report, including: 1) A more detailed assessment to determine the relative contributions of trace metals during high and low flows. 2) Research on the flocculation process within the estuary. 3) Consider the settling of metals and the risk of boron to Anglesea River freshwater ecosystems downstream of the effluent discharge point. 4) The measurement of flow and trace metals concentrations above, below and at the Alcoa discharge	CCMA, DEPI (Now DELWP)		This has not occurred due to funding/resource constraints. Please note: 'Alcoa discharge point' has not been used by Alcoa since March 2016.