

Department of Biodiversity, Conservation and Attractions Biodiversity and Conservation Science We're working for Western Australia.

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

Lower Swan Canning Estuary to Upper Swan Estuary

4 March 2025

Prepared by

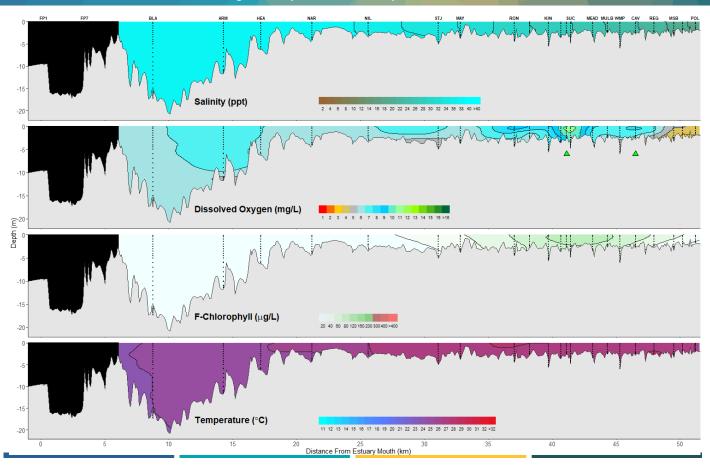
Rivers and Estuaries Science Biodiversity and Conservation Science Department of Biodiversity, Conservation and Attractions GOVERNMENT OF WESTERN AUSTRALIA

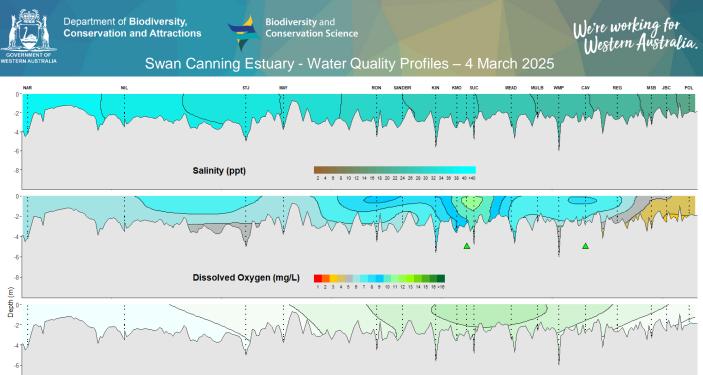
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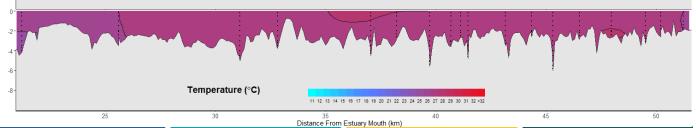
Swan Canning Estuary - Water Quality Profiles – 4 March 2025





F-Chlorophyll (µg/L)







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Date: 4 March 2025

<u>Weather & tide conditions</u>: Conditions were clear with a south-easterly breeze of up to 12 knots. The predicted tides at Barrack St were 0.71 m at 5:51 am (low tide) and 1.09 m at 2:35 pm (high tide). Perth recorded 2.2 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

<u>Oxygenation</u>: The Guildford and Caversham oxygenation plants were triggered to provide oxygen in the 24 hours prior to sampling.

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was hypersaline, waters were oxygenated or well oxygenated and chlorophyll fluorescence was low. Water temperatures ranged from 24.0 to 25.4 °C at the time of sampling.

<u>Middle Swan Estuary (NIL to RON)</u>: The Middle Swan Estuary was saline and waters were oxygenated or well oxygenated. Chlorophyll fluorescence was moderate in surface and subsurface waters at RON. Water temperatures ranged from 25.9 to 27.3 °C at the time of sampling.

<u>Upper Swan Estuary (SANDBR to POL)</u>: The Upper Swan Estuary was saline between SANDBR and SUC and brackish from MEAD to POL. Waters were oxygenated or well oxygenated, except for surface and bottom waters at MSB and POL and bottom waters at JBC which were low in oxygen. Chlorophyll fluorescence was moderate in surface and subsurface waters at SANDBR and from WMP to REG and surface and bottom waters at KIN and from SUC to MULB and was high in surface waters and moderate in bottom waters at KMO and VIT. Water temperatures ranged from 25.9to 27.2 °C at the time of sampling.

NB: Profile plots are visual interpolations of measured parameters only. Detailed data are available at wir.water.wa.gov.au.

Oxygenation Plant Operational Status:

- Operating for part or all of the 24 hours prior to sampling
- Operable but not triggered to operate in the 24 hours prior to sampling
- Inoperable for part or all of the 24 hours prior to sampling

Definitions:

 $\begin{array}{l} \underline{Salinity} - fresh < 5, \ brackish 5-25, \ saline 25-35, \ hypersaline >36 \\ \underline{Dissolved \ oxygen} - \ well \ oxygenated >6 \ mg \ L^1, \ oxygenated >4-6 \ mg \ L^1, \ low \ oxygen >2-4 \ mg \ L^1, \ hypoxic \ 0.5-2 \ mg \ L^1, \ anoxic \ <0.5 \ mg \ L^1 \\ \underline{Chlorophyll \ fluorescence \ (low \ flow)}: \ low < 50 \ mg \ L^1, \ moderate \ 50-150 \ mg \ L^1, \ high \ 150-400 \ mg \ L^1, \ extreme > 400 \ mg \ L^1 \\ \end{array}$

Recommended reference: Department of Biodiversity, Conservation and Attractions, 2025. Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 4 March 2025. Rivers and Estuaries Science (https://www.dpaw.wa.gov.au/management/swan-canning-riverpark)