Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

Lower Swan Canning Estuary to Upper Swan Estuary

17 March 2025

Prepared by

Rivers and Estuaries Science
Biodiversity and Conservation Science
Department of Biodiversity, Conservation and Attractions

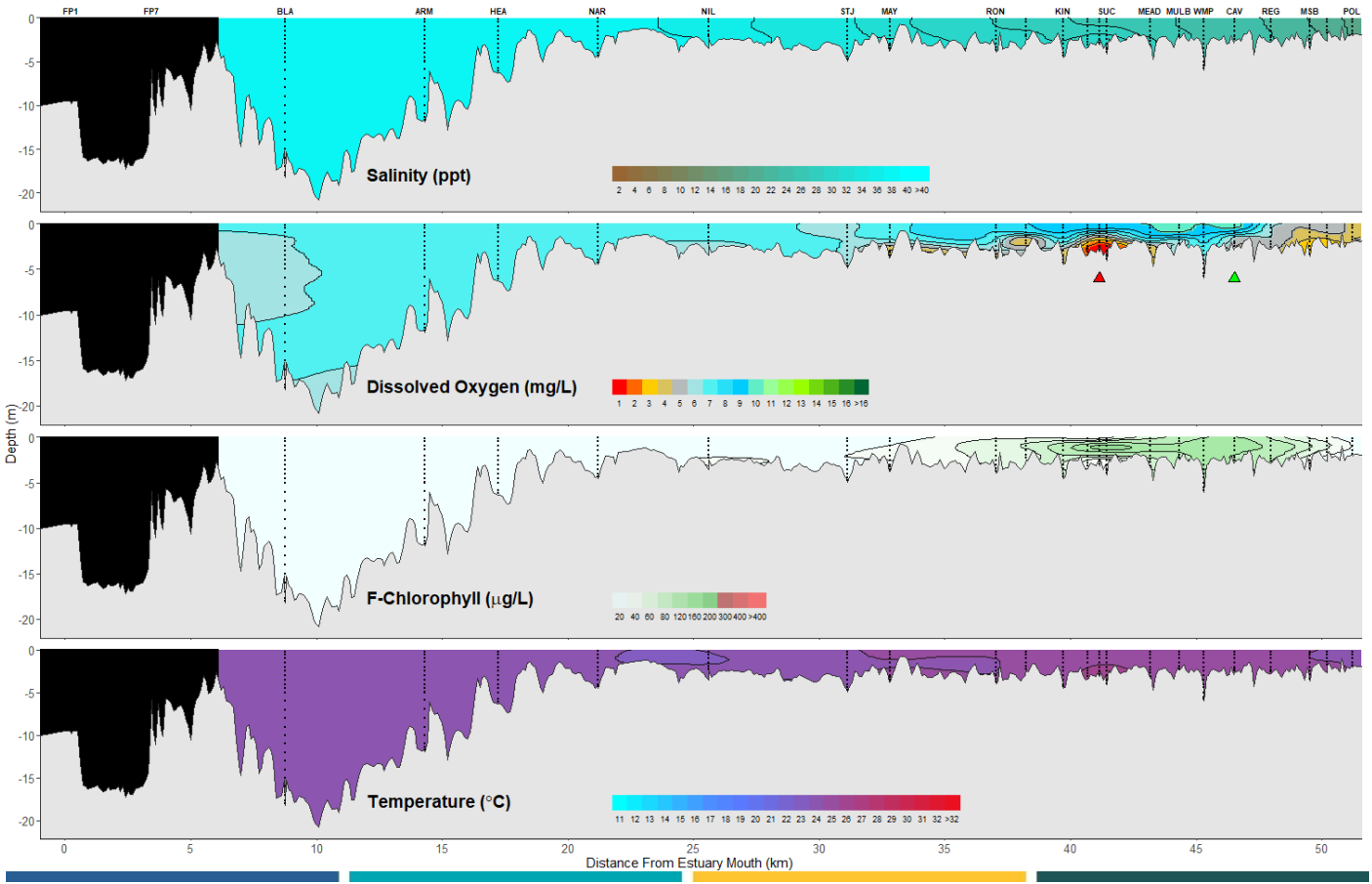
Department of **Biodiversity, Conservation and Attractions**

GOVERNMENT OF WESTERN AUSTRALIA

Biodiversity and **Conservation Science**

We're working for Western Australia.

Swan Canning Estuary - Water Quality Profiles – 17 March 2025



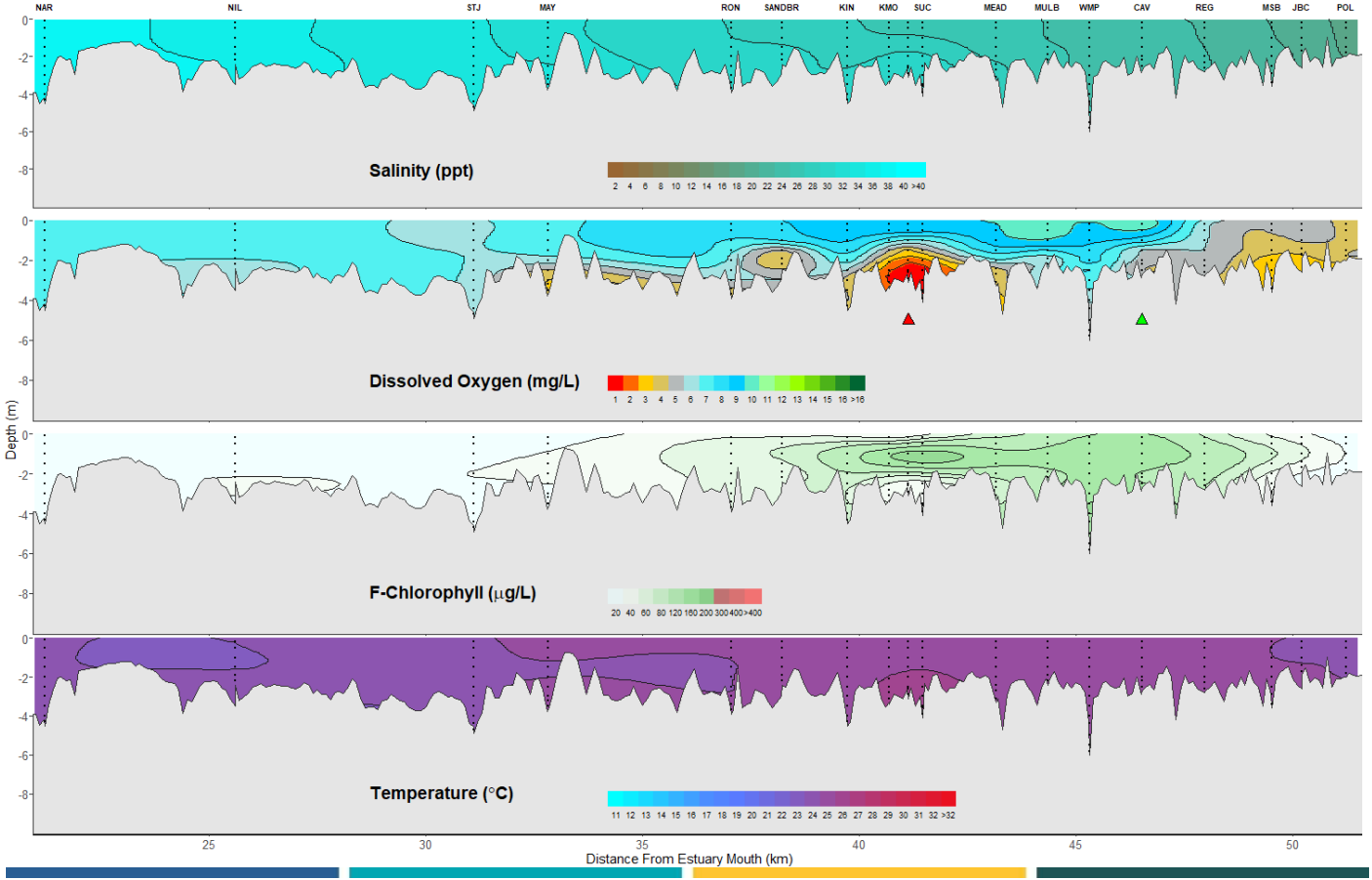
Department of **Biodiversity, Conservation and Attractions**

GOVERNMENT OF WESTERN AUSTRALIA

Biodiversity and **Conservation Science**

We're working for Western Australia.

Swan Canning Estuary - Water Quality Profiles – 17 March 2025



Date: 17 March 2025

Weather & tide conditions: Conditions were clear with a predominantly easterly breeze of up to 11.7 knots. The predicted tides at Barrack St were 0.74 m at 5:37 am (low tide), 1.05 m at 1:06 pm (high tide) and 0.81 m at 8:47 pm (second low tide). Perth recorded 13.4 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guilford oxygenation plant was offline and the Caversham oxygenation plant was 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 23.0 to 23.5 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline. Water were oxygenated or well oxygenated, except for bottom waters at MAY and RON which were low in oxygen. Chlorophyll fluorescence was moderate in surface and subsurface at RON. Water temperatures ranged from 22.9 to 24.7 °C at the time of sampling.

Upper Swan Estuary (SANDBR to POL): The Upper Swan Estuary was saline from SANDBR to KMO and at SUC, brackish over saline at VIT and MEAD and brackish from MULB to POL. Waters were oxygenated or well oxygenated, except for bottom water between SANDBR and KIN, MEAD, CAV and from MSB to POL which were low in oxygen and from KMO to SUC which were hypoxic. Chlorophyll fluorescence was moderate in surface waters at SANDBR and MSB and surface and bottom waters at KIN, MEAD, MULB and REG. Chlorophyll fluorescence was high in surface waters at CAV, subsurface waters at KMO, VIT and SUC and surface and bottom waters at WMP. Water temperatures ranged from 23.8 to 25.5 °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:
Salinity – fresh <5, brackish 5-25, saline 25-35, hypersaline >36
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}
Chlorophyll fluorescence (low flow): low < 50 µg L^{-1}, moderate 50-150 µg L^{-1}, high 150-400 µg L^{-1}, extreme > 400 µg L^{-1}

Recommended reference: Department of Biodiversity, Conservation and Attractions, 2025. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 17 March 2025.* Rivers and Estuaries Science (https://www.dpaw.wa.gov.au/management/swan-canning-riverpark)