



Department of Biodiversity,
Conservation and Attractions



Biodiversity and
Conservation Science

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Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

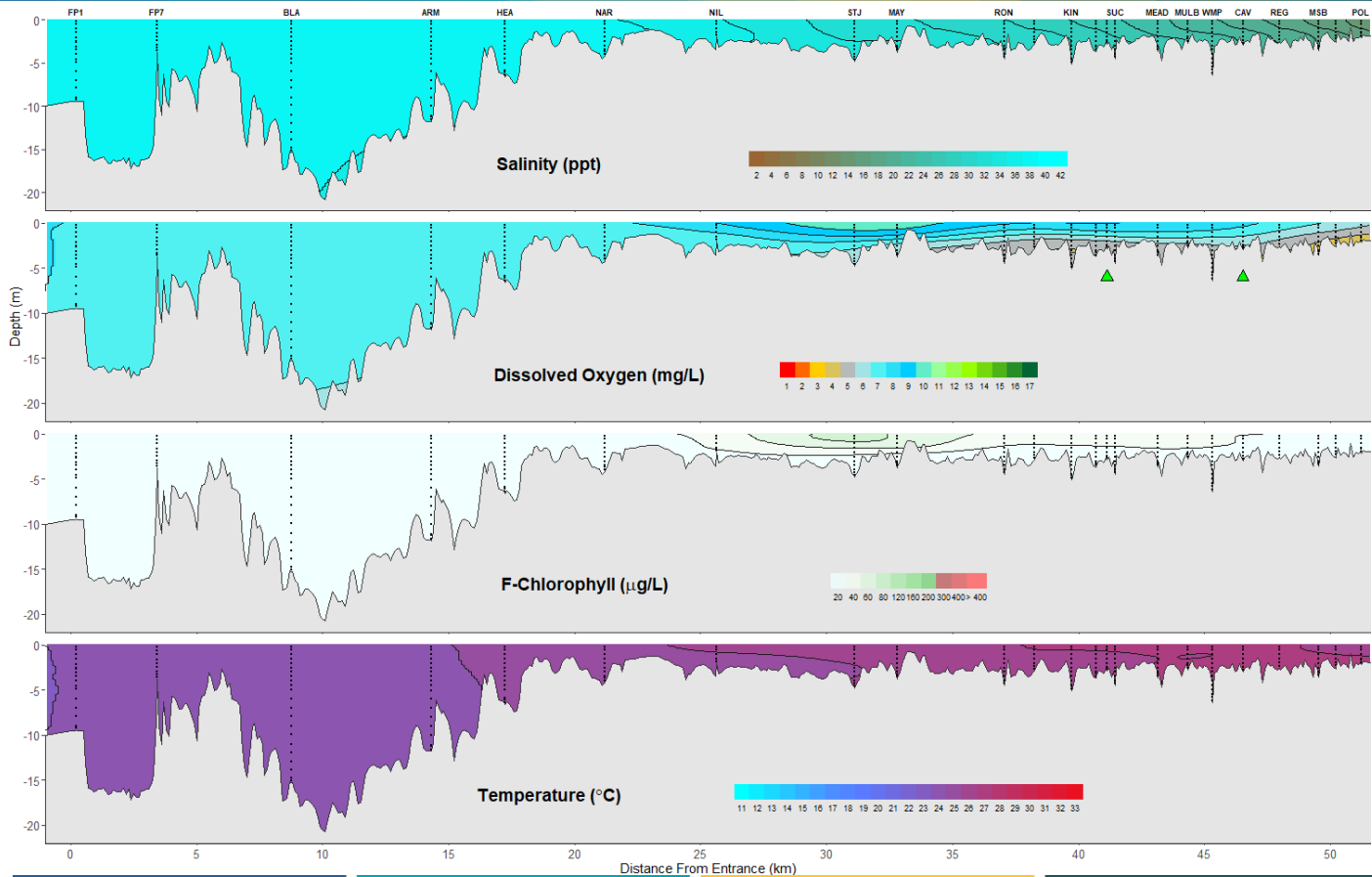
Lower Swan Canning Estuary to Upper Swan Estuary

27th February 2023

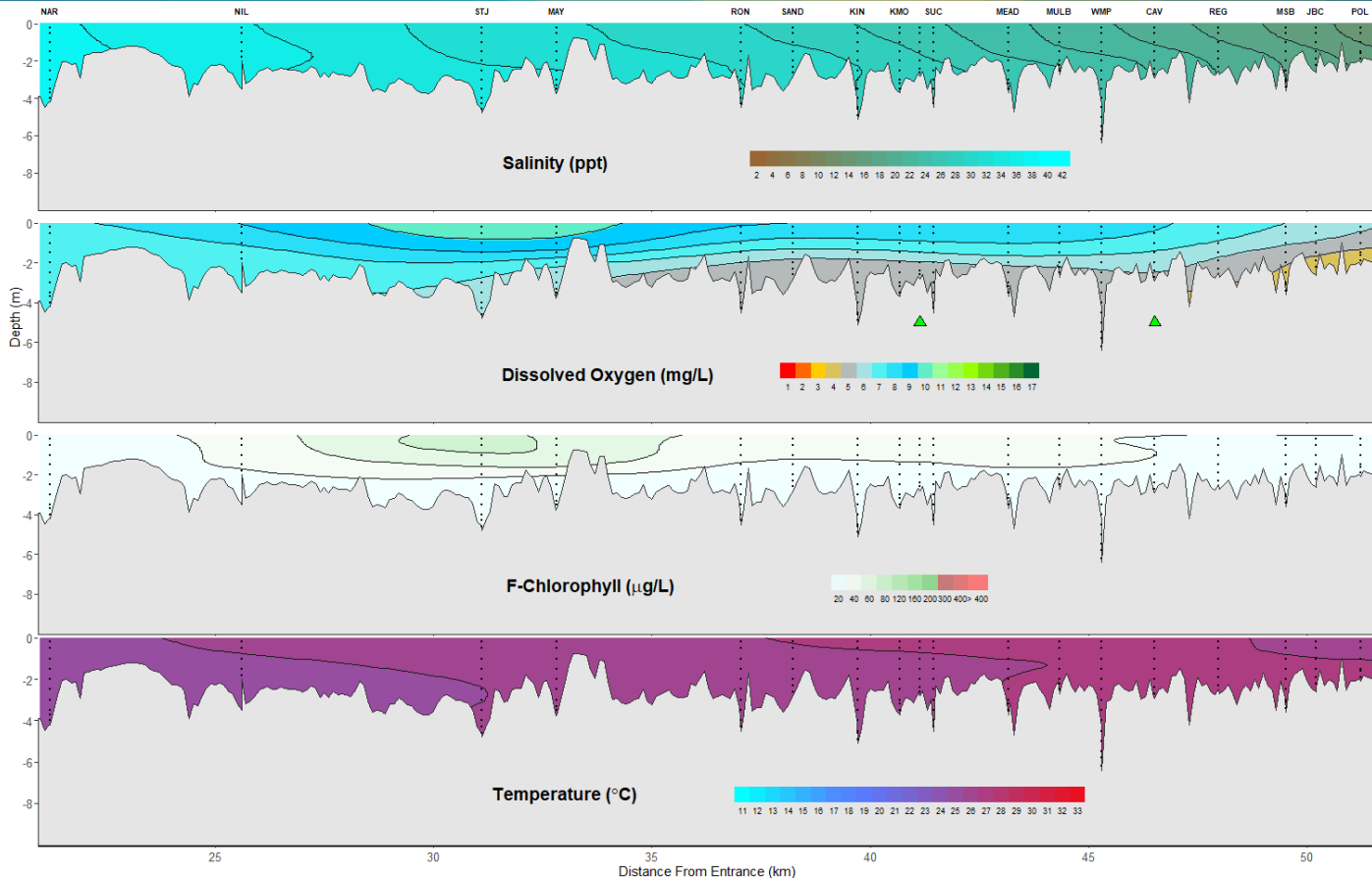
Prepared by

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Swan Canning Estuary - Water Quality Profiles - 27th February 2023



Middle and Upper Swan Estuary - Water Quality Profiles – 27th February 2023



Date: 27th February 2023

Weather & tide conditions: Conditions were overcast with a predominantly easterly breeze of up to 9 knots. The predicted tides at Barrack St were of 0.57 m at 5:34 am (low tide) and 1.07 m at 4:10 pm (high tide). Perth recorded no rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were both operable and providing oxygen in the 24 hours prior to sampling.

Lower Swan Canning Estuary (FPI to NAR): The Lower Swan Canning Estuary was hypersaline and waters were oxygenated to well oxygenated throughout. Chlorophyll fluorescence was low throughout and water temperatures ranged from 23.1 °C to 24.6 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline over hypersaline at NIL and saline from STJ to RON. Waters were oxygenated or well oxygenated throughout. Chlorophyll fluorescence was low throughout, except for surface waters at STJ and mid-column waters at MAY, where chlorophyll levels were moderate. Water temperatures ranged from 24.5 to 25.9 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was saline between SAND and KIN, brackish over saline from KMO to MEAD, and brackish from MULB to POL. Surface waters were oxygenated or well oxygenated throughout, except for the bottom waters between SAND and KMO, and MSB to POL, which were low in oxygen. Chlorophyll fluorescence was low throughout, except for moderate levels in the surface waters at KMO. Water temperatures ranged from 25.4 °C to 26.8 °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 >35
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