



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

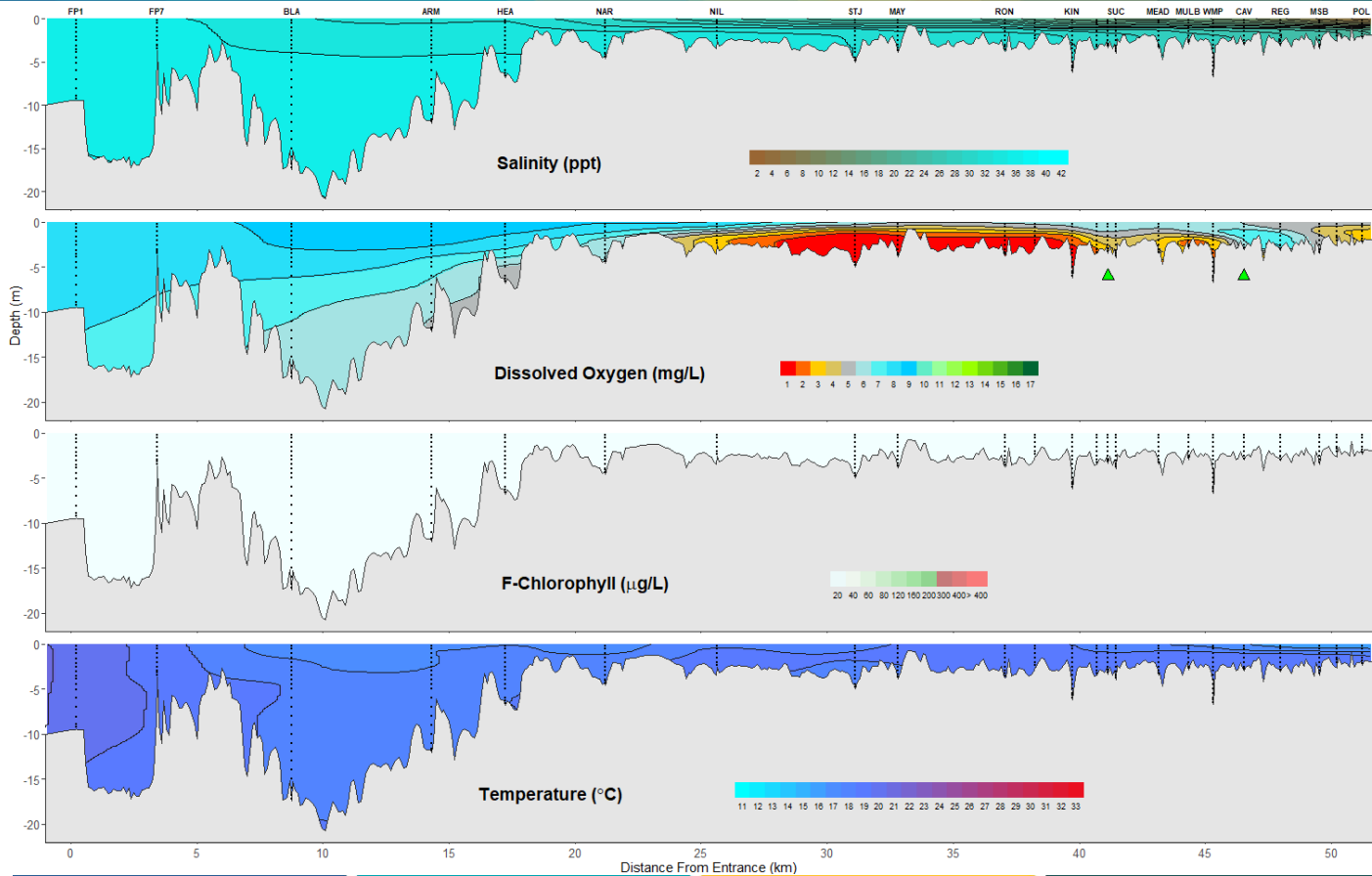
Lower Swan Canning Estuary to Upper Swan Estuary

17th June 2024

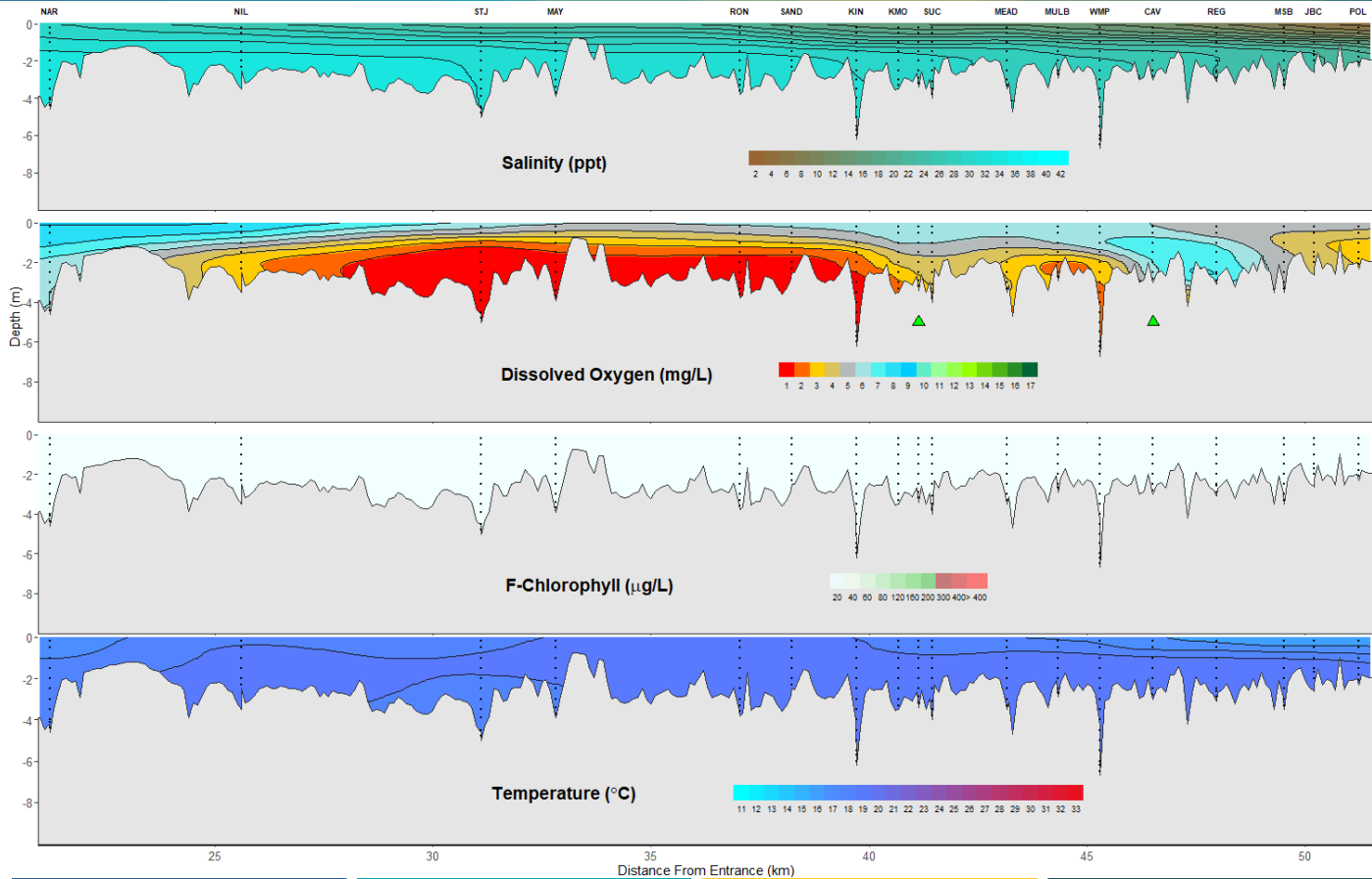
Prepared by

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

Swan Canning Estuary - Water Quality Profiles – 17th June 2024



Swan Canning Estuary - Water Quality Profiles – 17th June 2024



Date: 17th June 2024

Weather & tide conditions: Conditions were overcast with a predominately northeasterly breeze of up to 5.2 knots. The predicted tides at Barrack St were 1.19 m at 8:15 m (high tide), and 0.86 m at 7:36 pm (low tide). Perth recorded 2.8 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plant was triggered to provide oxygen in the 24 hours prior to sampling.

Lower Swan Canning Estuary (FP1 to NAR): FP1 was hypersaline over saline and saline throughout the remainder of sites in the Lower Swan Canning Estuary. Waters were well oxygenated and chlorophyll fluorescence was low. Water temperatures ranged from 16.2 to 19.7 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline at NIL, and brackish over saline from STJ - RON. Surface waters were oxygenated to well oxygenated, while subsurface and bottom waters ranged from low in oxygen (NIL) to anoxic (STJ & MAY). Chlorophyll fluorescence was low and water temperatures ranged from 17.2 to 18.9 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish over saline from SAND – CAV and brackish from REG – POL. Bottom and subsurface waters ranged from low in oxygen - hypoxic from SAND – WMP, and well oxygenated - low in oxygen from CAV - POL. Surface waters of all sites were oxygenated to well oxygenated. Chlorophyll fluorescence was low and water temperatures ranged from 15.1 to 18.9 °C.

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