



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

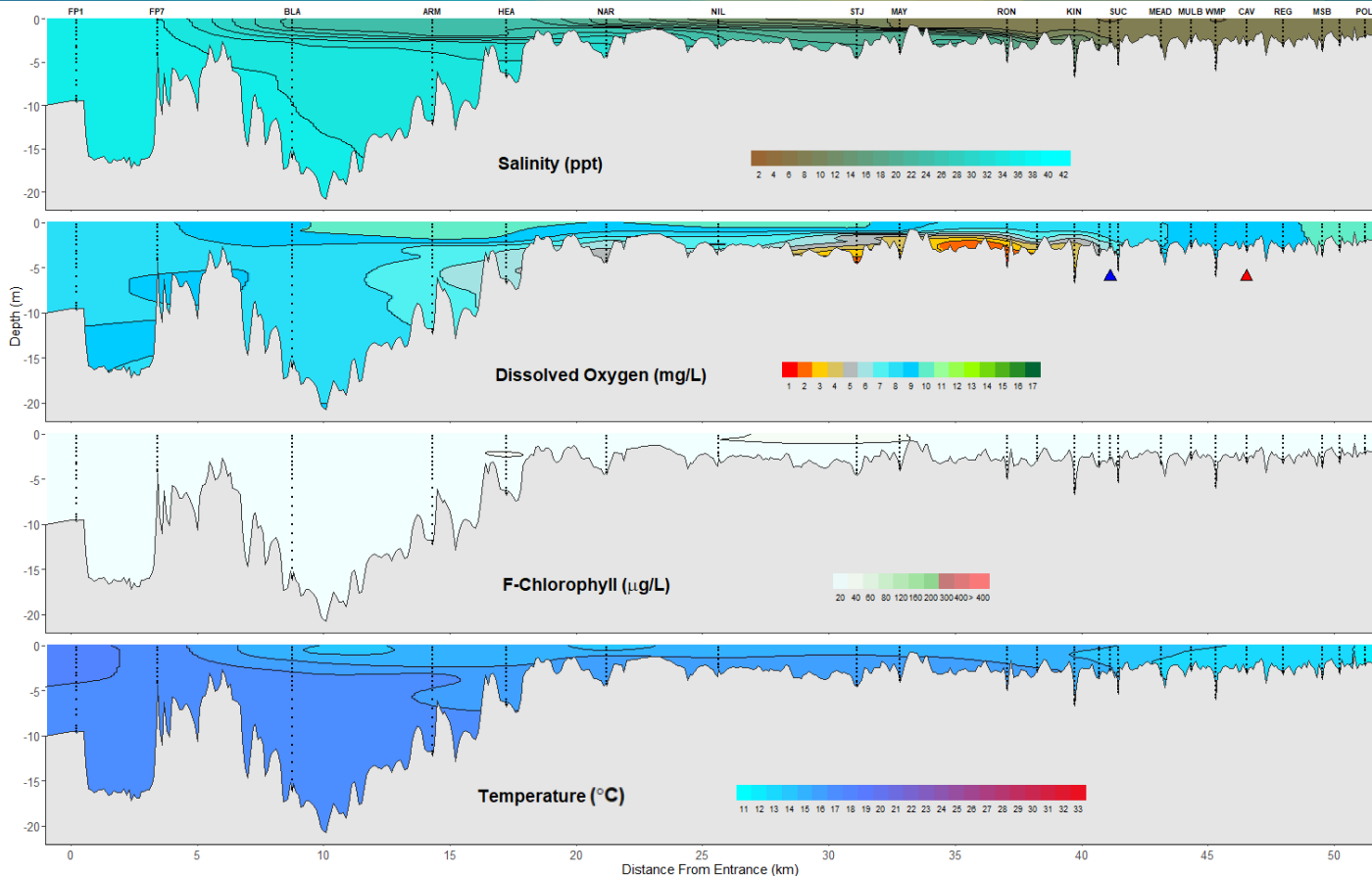
Lower Swan Canning Estuary to Upper Swan Estuary

17th July 2023

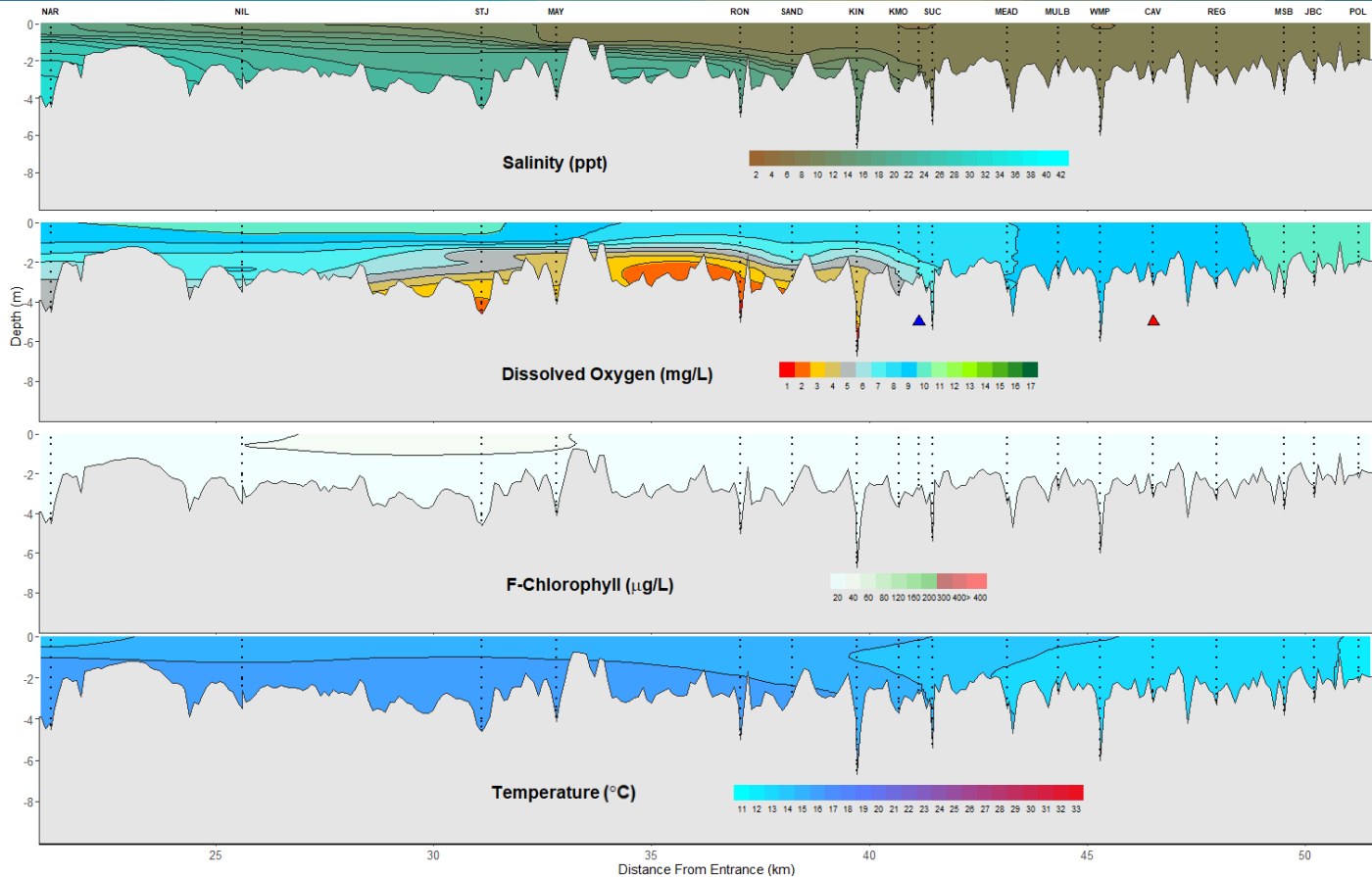
Prepared by

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

Swan Canning Estuary - Water Quality Profiles – 17th July 2023



Swan Canning Estuary - Water Quality Profiles – 17th July 2023



Date: 17th July 2023

Weather & tide conditions: Conditions were cloudy with a variable northerly breeze of up to 5.2 knots. The predicted tides at Barrack St were 1.26 m at 10:26 am (high tide) and 0.72 m at 9:18 pm (low tide). Perth recorded 8.2 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford oxygenation plant was operable but not triggered to provide oxygen in the 24 hours prior to sampling. The Caversham oxygenation plant was offline in the 24 hours prior to sampling.

Lower Swan Canning Estuary (FP1 to NAR): The Lower Swan Canning Estuary was hypersaline at FP1, saline at FP7 and brackish over saline from to BLA to NAR. Waters were oxygenated to well oxygenated, chlorophyll fluorescence was low and water temperatures ranged from 13.8 °C to 17.3 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish. Waters were well oxygenated at NIL and in surface waters of STJ and RON, while sub-surface waters between STJ and RON were low in oxygen or hypoxic. Chlorophyll fluorescence was low and water temperatures ranged from 14.3 °C to 16 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish except for bottom waters at KIN which were saline. Surface waters were oxygenated to well oxygenated at SAND and KIN, while bottom waters were low in oxygen at SAND and hypoxic at KIN. Waters between KMO to POL were oxygenated to well oxygenated. Chlorophyll fluorescence was low and water temperatures ranged from 11.9 °C to 18.4 °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 (mod/high flow): low < 60 µg L⁻¹, moderate 60-150 µg L⁻¹, high 160-400 µg L⁻¹, extreme > 400 µg L⁻¹