



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

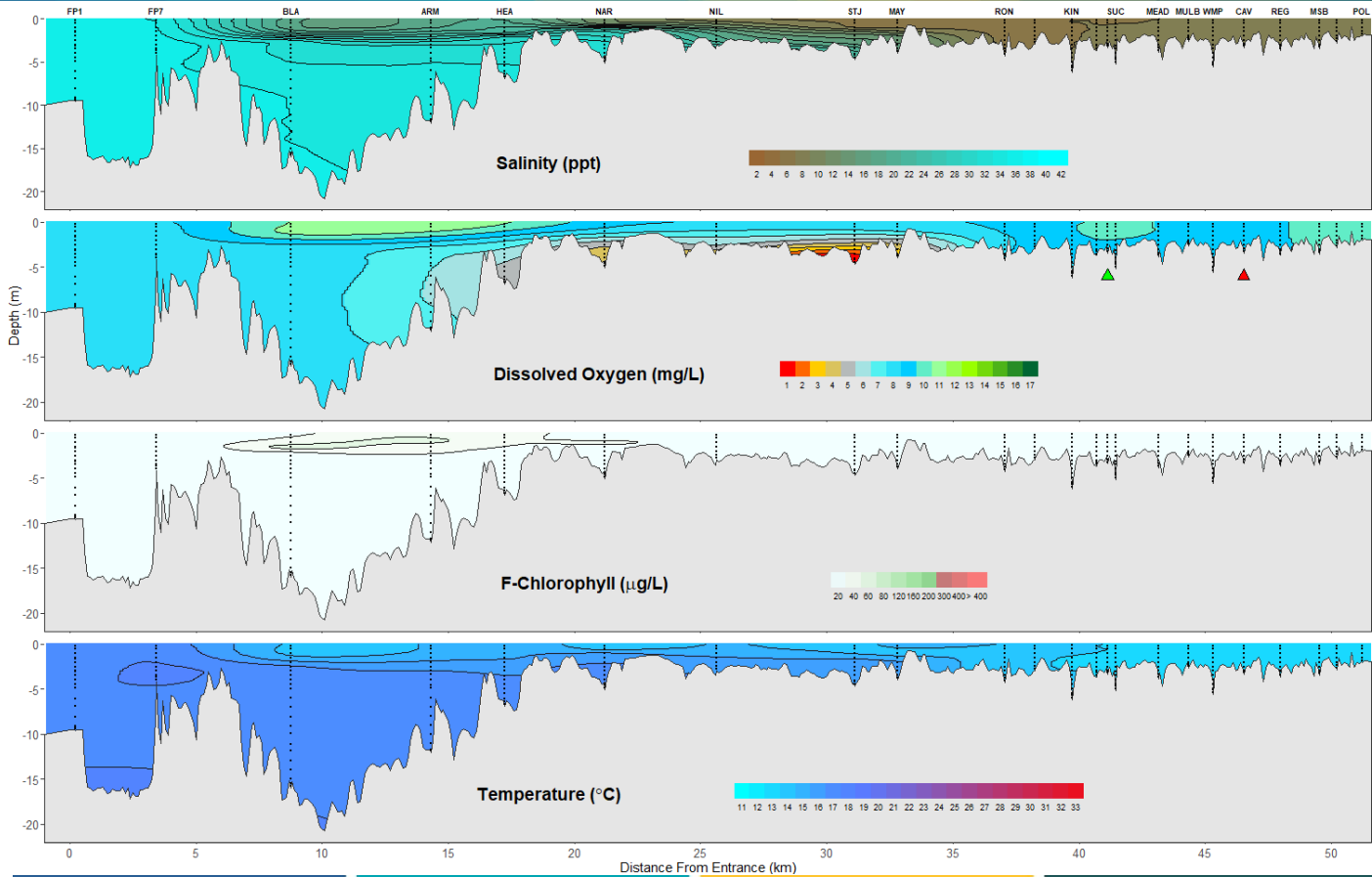
Lower Swan Canning Estuary to Upper Swan Estuary

19th June 2023

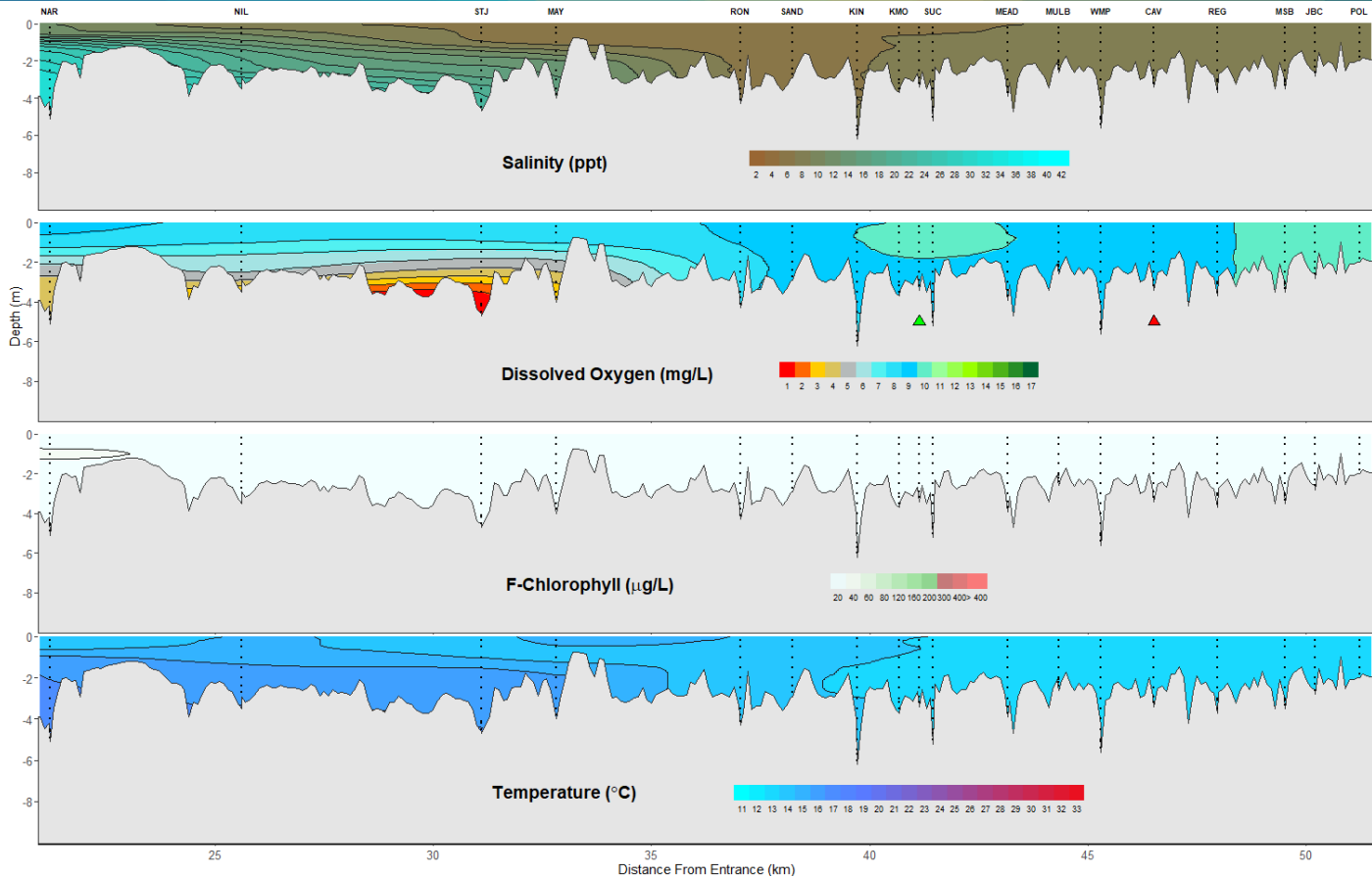
Prepared by

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

Swan Canning Estuary - Water Quality Profiles – 19th June 2023



Swan Canning Estuary - Water Quality Profiles – 19th June 2023



Date: 19th June 2023

Weather & tide conditions: Conditions were overcast with a variable easterly breeze of up to 4.5 knots. The predicted tides at Barrack St were 1.32 m at 11:15 am (high tide) and 0.73 m at 10:17 pm (low tide). Perth recorded 20.4 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford oxygenation plant was operable and provided 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 saline from FP1 to FP7, and brackish over saline between BLA and NAR. Waters were oxygenated to well oxygenated except for bottom water at NAR which were low in oxygen. Chlorophyll fluorescence was low throughout, and water temperatures ranged from 13.6 °C to 17.3 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish throughout. Waters were oxygenated to well oxygenated at NIL and RON, and in the surface waters of STJ and MAY, while the bottom and middle waters of MAY were low in oxygen, and hypoxic to low in oxygen at STJ. Chlorophyll fluorescence was low throughout, and water temperatures ranged from 13.1 °C to 16.1 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish throughout. Waters were well oxygenated and chlorophyll fluorescence was low at all sites. Water temperatures ranged from 12 °C to 13.9 °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