



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

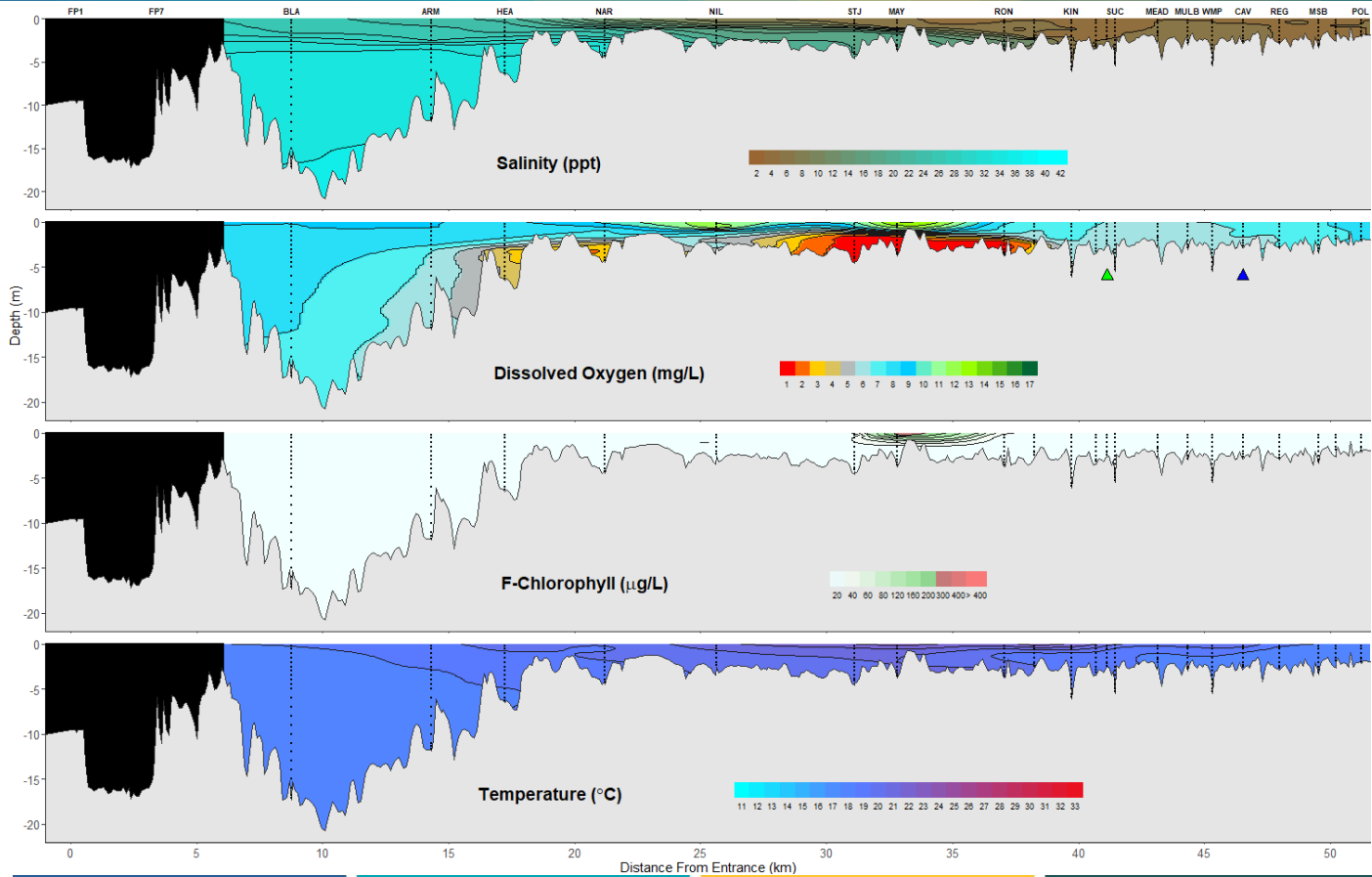
Lower Swan Canning Estuary to Upper Swan Estuary

30 September 2024

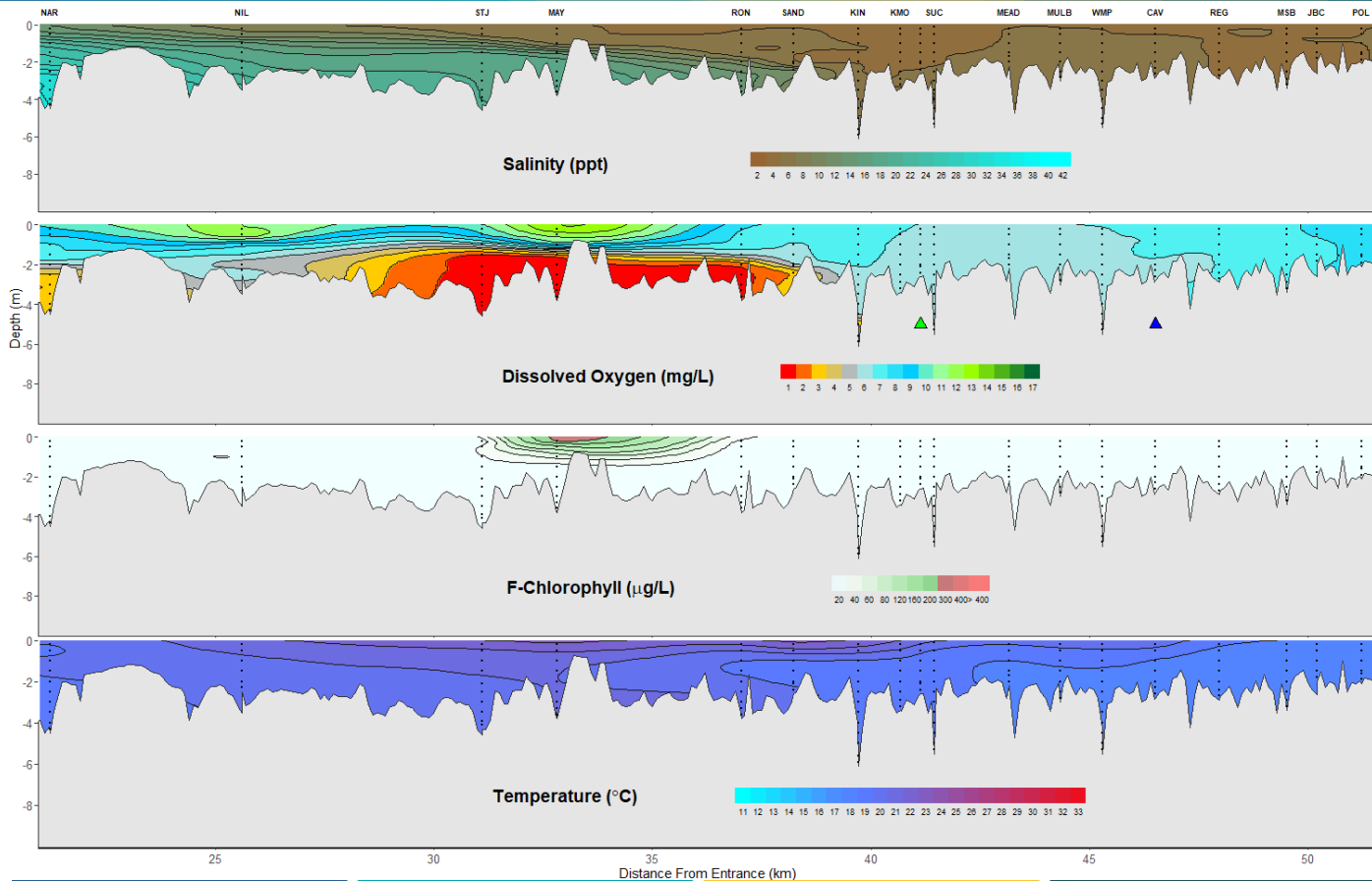
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Swan Canning Estuary - Water Quality Profiles – 30 September 2024



Swan Canning Estuary - Water Quality Profiles – 30 September 2024



Date: 30 September 2024

Weather & tide conditions: Conditions were clear with a variable breeze of up to 4.6 knots. The predicted tides at Barrack St were 0.77 m at 3:35 am (low tide), 0.94 m at 10:00 am (high tide), 0.7 m at 5:16 pm (second low tide) and 0.86 m at 11:16 pm (second high tide). Perth recorded 12.8 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

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

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was saline at BLA and brackish over saline from ARM to NAR. Waters were oxygenated or well oxygenated, except bottom waters at HEA and NAR which were low in oxygen. Chlorophyll fluorescence was low and water temperatures ranged from 17.5 to 19.3 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish at NIL and fresh over brackish from STJ to RON. Waters were oxygenated or well oxygenated, except bottom waters between STJ and RON which were hypoxic. Chlorophyll fluorescence was high in surface waters at MAY. Water temperatures ranged from 18.8 to 22.2 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was fresh over brackish from SAND to KIN and fresh between KMO and POL. Waters were oxygenated or well oxygenated, except bottom waters at SAND which were low in oxygen and KIN which were hypoxic. Chlorophyll fluorescence was low and water temperatures ranged from 17.2 to 22.7 °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 (mod/high flow): low < 60 µg L⁻¹, moderate 60-160 µg L⁻¹, high 160-400 µg L⁻¹, extreme > 400 µg L⁻¹

Recommended reference: Department of Biodiversity, Conservation and Attractions, 2024. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 30 September 2024*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)