



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

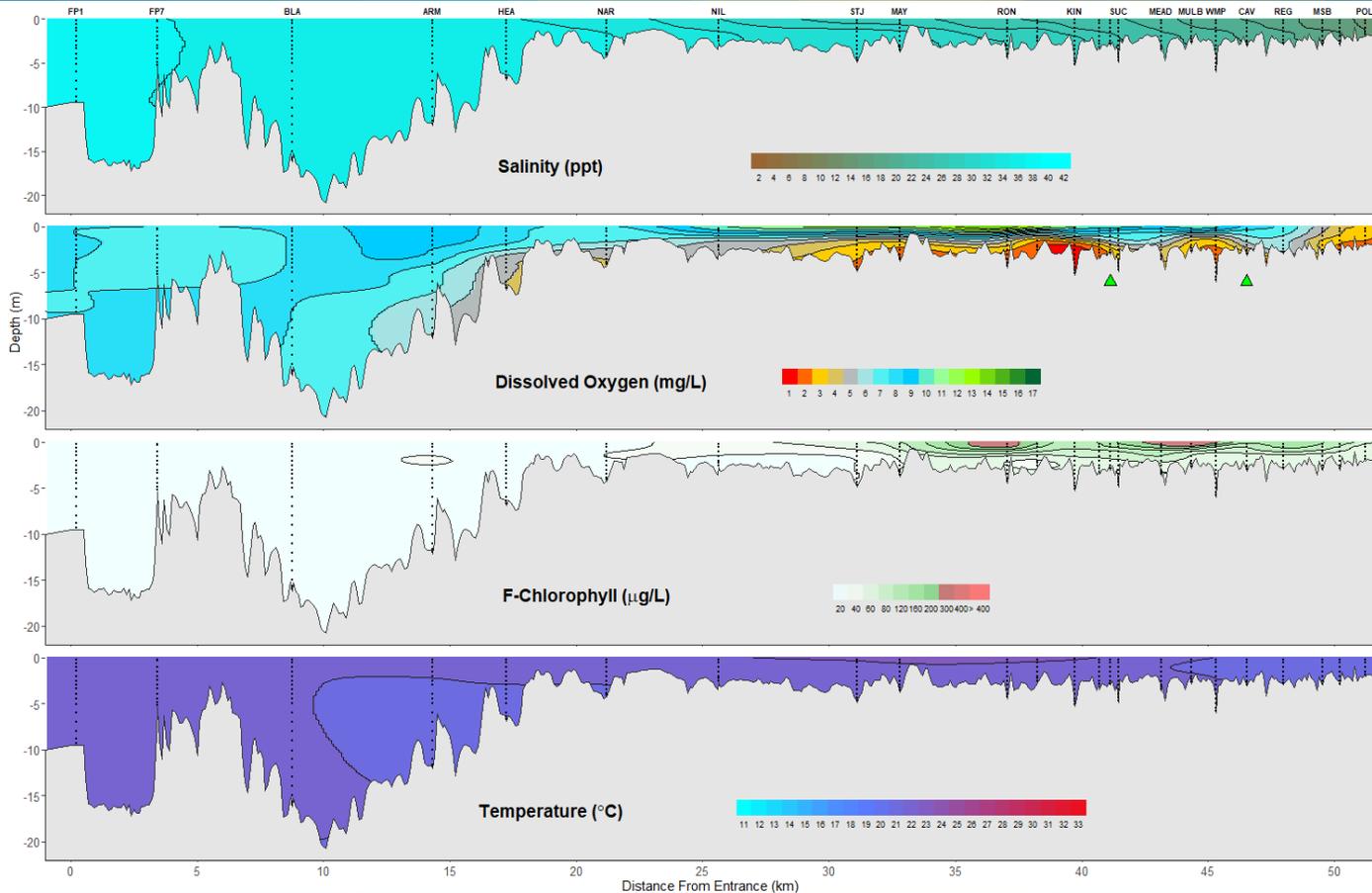
Lower Swan Canning Estuary to Upper Swan Estuary

27th April 2021

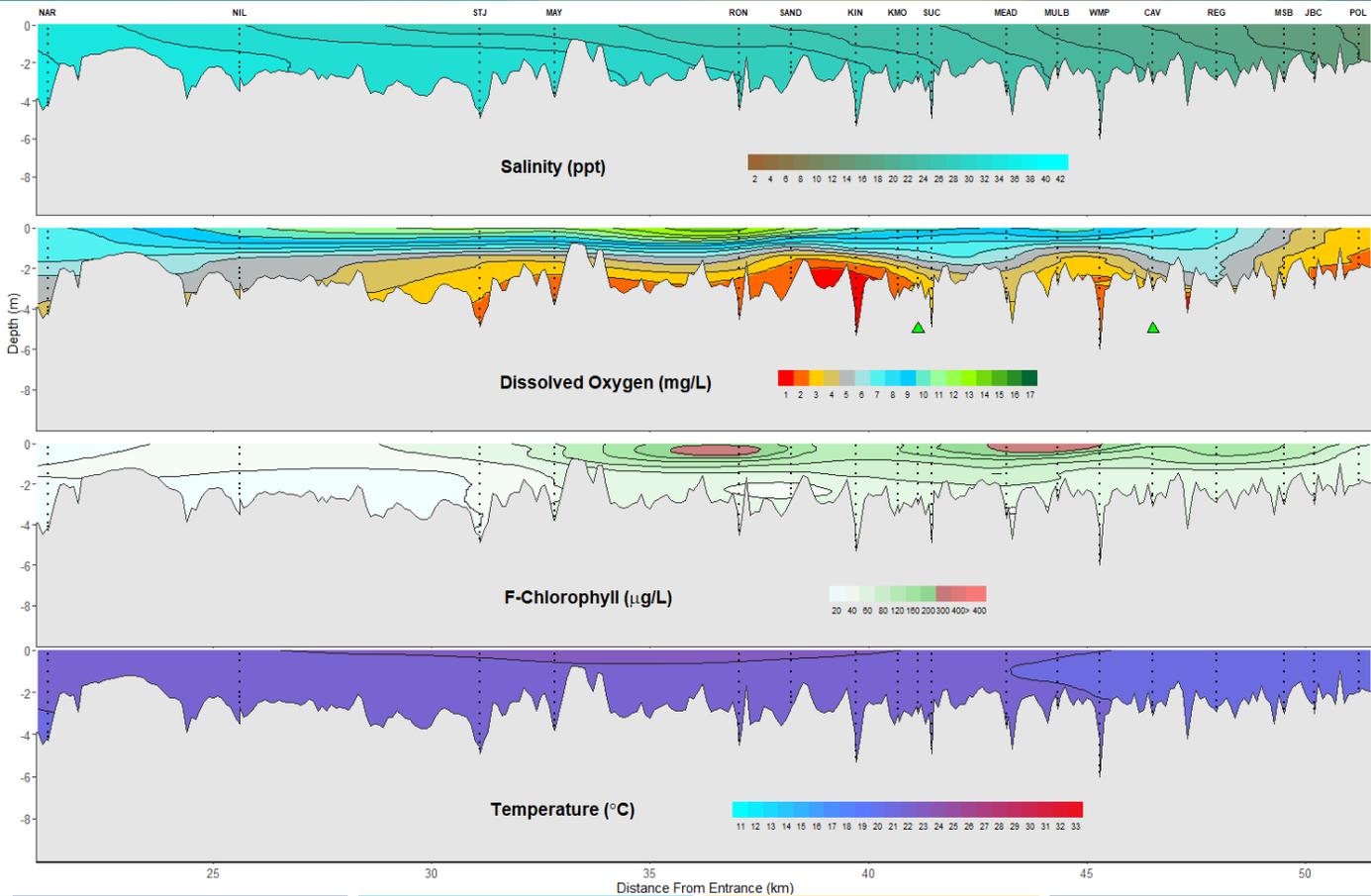
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Swan Canning Estuary- Water Quality Profiles- 27th April 2021



Middle and Upper Swan Estuary - Water Quality Profiles - 27th April 2021



Date: 27th April 2021

NB: Monitoring delayed due to public holiday on 26 April 2021

Weather & tide conditions: Conditions were partly cloudy with a variable breeze of up to 6 knots. The predicted tides at Barrack St were 0.87 m at 4:08 am (low tide), 1.16 m at 11:39 am (high tide) and 0.76 m at 8:17 pm (second low tide). Perth recorded no rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were triggered to provide oxygen during the 24 hours prior to sampling.

Lower Swan Canning Estuary (FPI to NAR): The Lower Swan Canning Estuary was saline, surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen at HEA and NAR. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 20.7 to 21.4 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline from NIL to MAY and brackish over saline at RON. Surface waters were well oxygenated and bottom waters were hypoxic from STJ to RON. Chlorophyll fluorescence was elevated at RON indicating higher microalgal activity in that area. Water temperature ranged from 21.4 to 22.7 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish over saline between SAND and KMO and brackish from VIT to POL. Surface waters were oxygenated or well oxygenated except at POL which was low in oxygen. Bottom waters were low in oxygen from VIT to MULB, CAV to JBC and at POL and hypoxic from SAND to KMO and at WMP and JBC. Chlorophyll fluorescence was elevated throughout the Upper Swan Estuary (with maximum concentrations at MULB) indicating higher microalgal activity in this zone. Water temperature ranged from 20.0 to 22.8 °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 >6mg/L, oxygenated >4-6mg/L, low oxygen >2-4mg/L, hypoxic 0.5-2mg/L, anoxic <0.5mg/L