

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

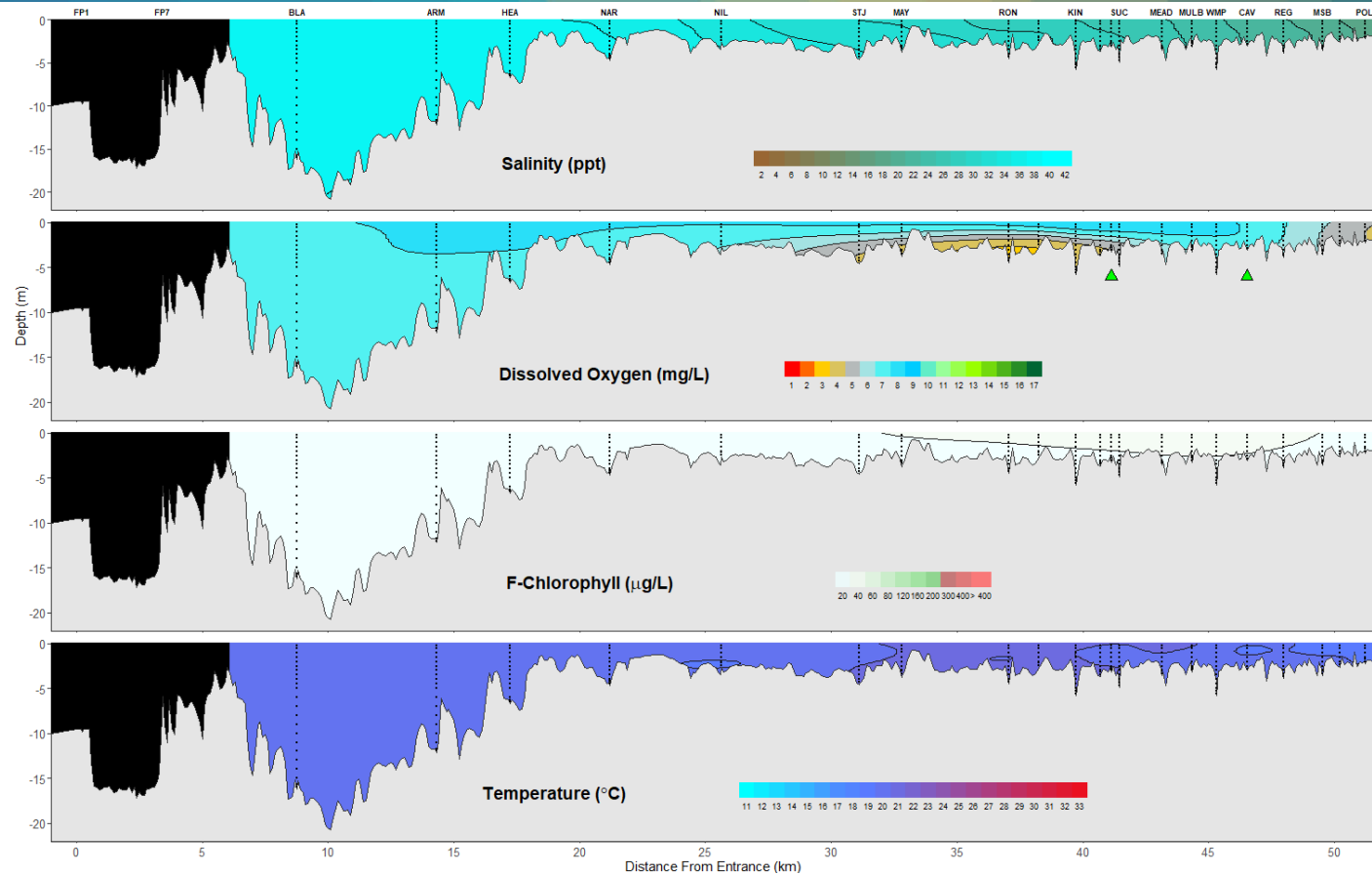
Lower Swan Canning Estuary to Upper Swan Estuary

2 May 2022

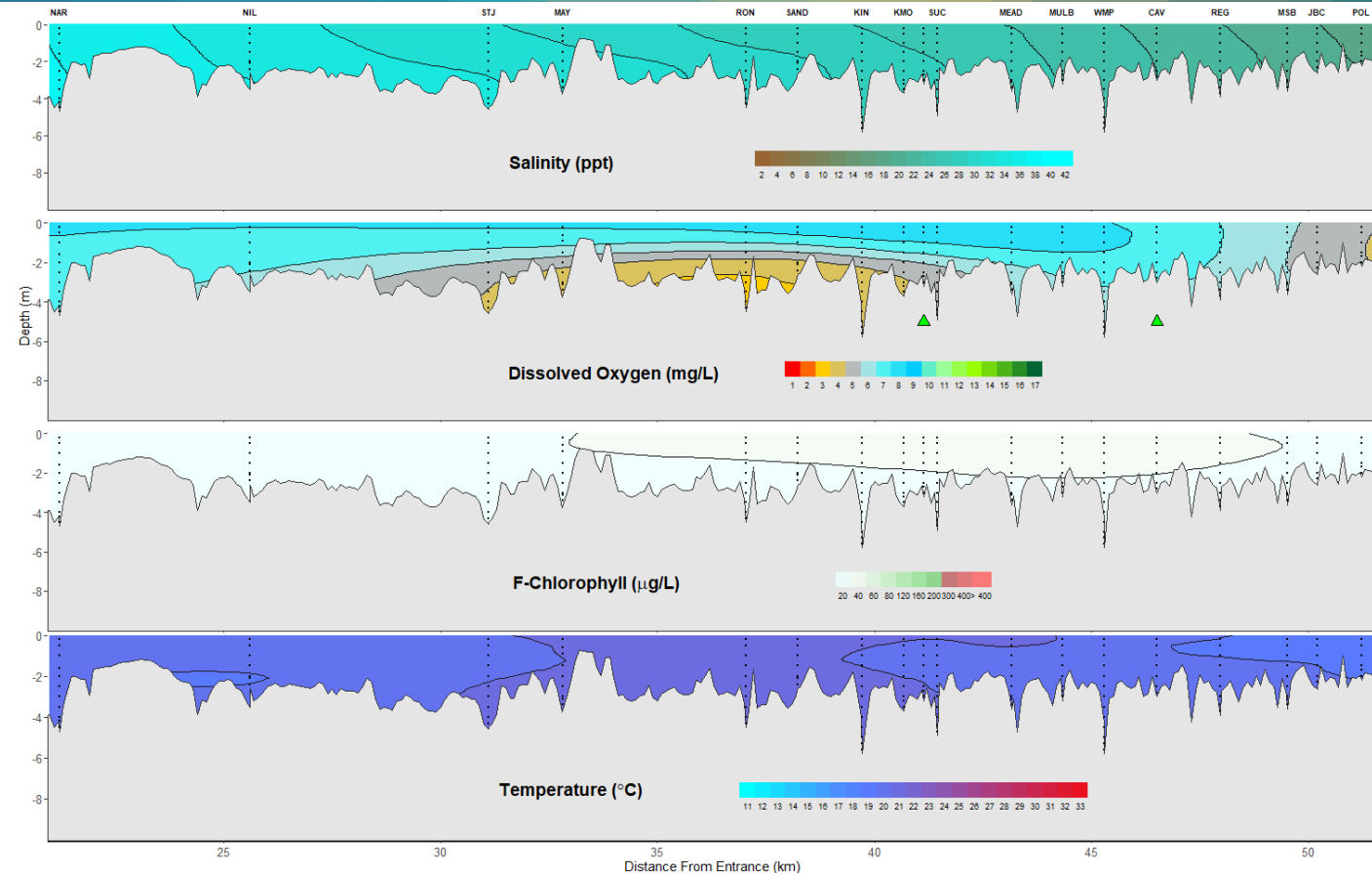
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Swan Canning Estuary- Water Quality Profiles – 2 May 2022



Middle and Upper Swan Estuary- Water Quality Profiles – 2 May 2022



Date: 2 May 2022

Weather & tide conditions: Conditions were mostly clear with a variable breeze of up to 6 knots. The predicted tides at Barrack St were 0.83 m at 3:02 am (low tide), 1.22 m at 11:45 am (high tide) and 0.77 m at 9:53 pm (second low tide). Perth recorded 28.8 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

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

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was hypersaline, waters were well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 19 to 19.6 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline. Surface waters were oxygenated or well oxygenated. Bottom waters were low in oxygen from STJ to RON. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 18.9 to 21 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was saline from SAND to SUC, brackish over saline at MEAD and brackish from MULB to POL. Surface waters were oxygenated or well oxygenated. Bottom waters were low in oxygen from SAND to KMO. Chlorophyll fluorescence was moderate in surface waters at KMO, SUC and WMP indicating higher microalgal activity in that area. Water temperature ranged from 18.3 to 20.7 °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 (summer): low < 50 µg L⁻¹, moderate 50-150 µg L⁻¹, high 150-400 µg L⁻¹, extreme > 400 µg L⁻¹