



Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

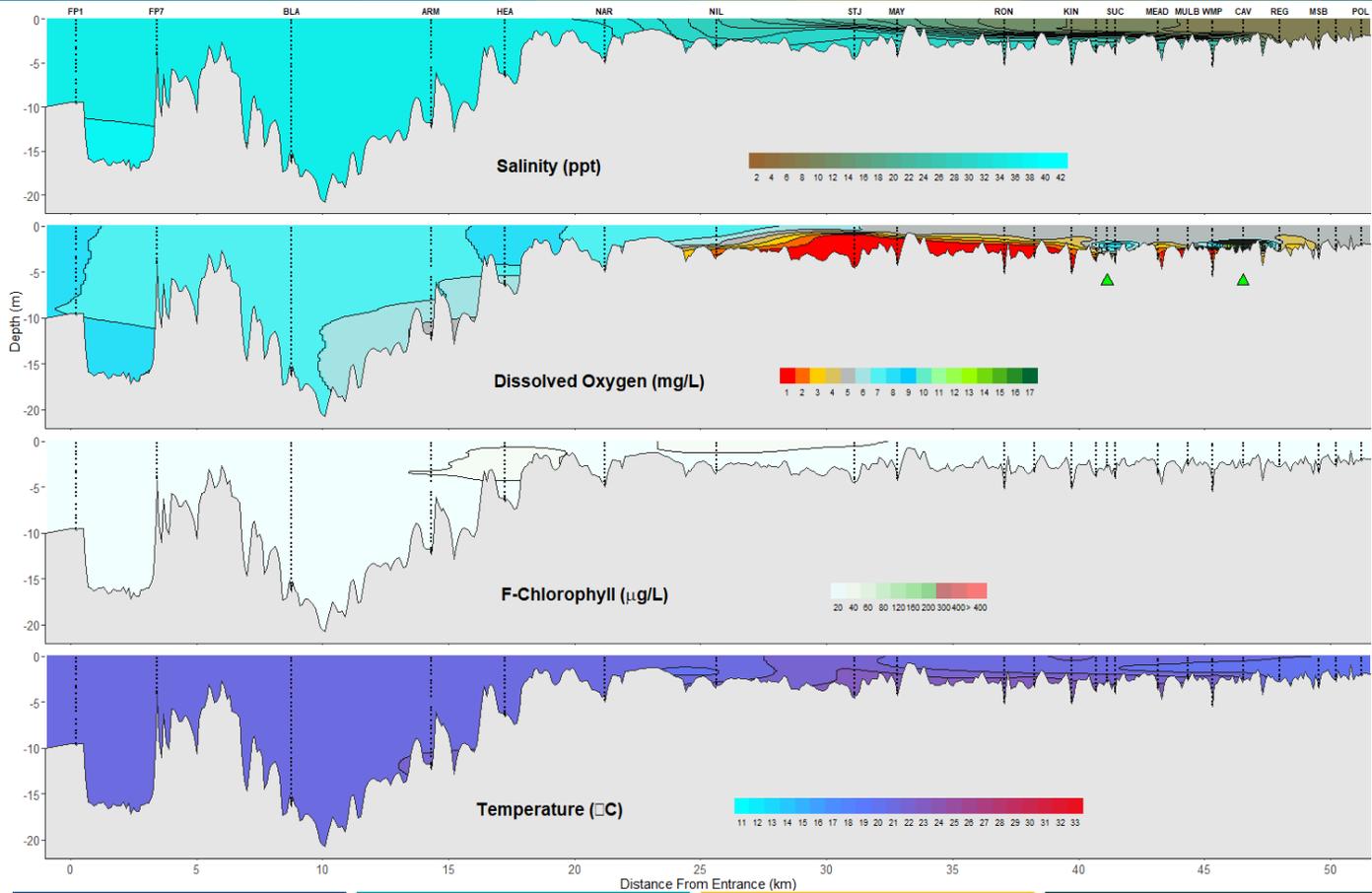
Lower Swan Canning Estuary to Upper Swan Estuary

11th April 2023

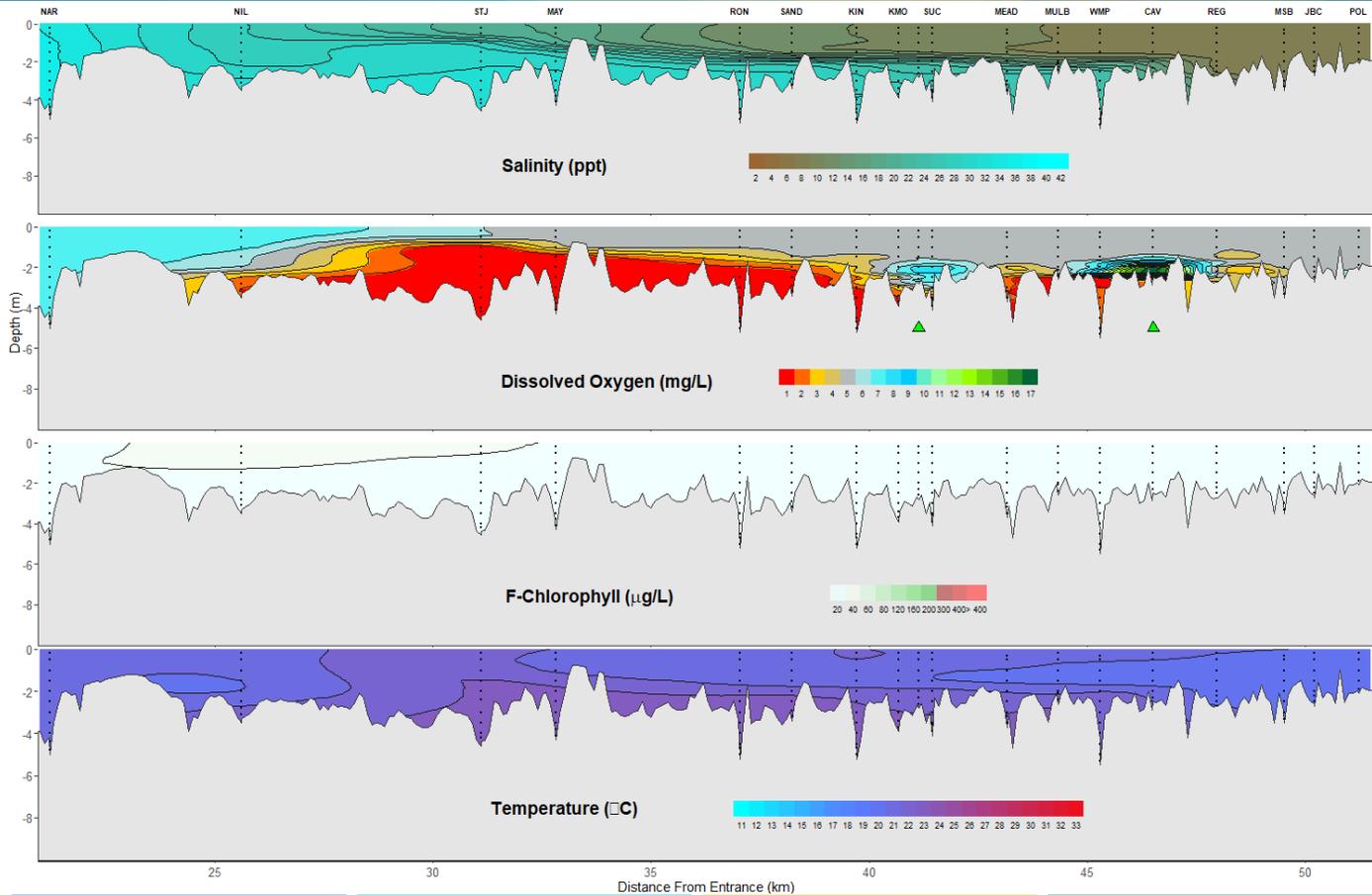
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Swan Canning Estuary - Water Quality Profiles – 11th April 2023



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Date: 11th April 2023

Weather & tide conditions: Conditions were light cloud cover with a predominantly south westerly breeze of up to 10 knots. The predicted tides at Barrack St were 0.67 m at 1:14 am (low tide) and 1.21 m at 2:14 pm (high tide). Perth recorded 8.4 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were both operable and providing oxygen in the 24 hours prior to sampling.

Lower Swan Canning Estuary (FP1 to NAR): The Lower Swan Canning Estuary was hypersaline from FP1 to the bottom waters of HEA then saline (25-35 ppt) up to NAR. Waters in this zone were oxygenated to well oxygenated, chlorophyll fluorescence was low throughout and water temperatures ranged from 20.2 °C to 21.1 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline at NIL brackish over saline from STJ to RON. Surface waters were oxygenated to well oxygenated however deeper waters were hypoxic at NIL and anoxic from STJ to RON. Chlorophyll fluorescence was low and water temperatures ranged from 20.0 to 22.2 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish over saline between SAND and MEAD, then brackish up to POL. Surface waters were oxygenated throughout however bottom waters ranged from anoxic (SAND and KIN), hypoxic (KMO to MEAD and WMP) and low oxygen (MULB and REG) to oxygenated (MSB to POL) and well oxygenated at CAV. Chlorophyll fluorescence was low throughout and water temperatures ranged from 19.5 °C to 22.3 °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 (low flow): low < 50 µg L⁻¹, moderate 50-150 µg L⁻¹, high 150-400 µg L⁻¹, extreme > 400 µg L⁻¹