



Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

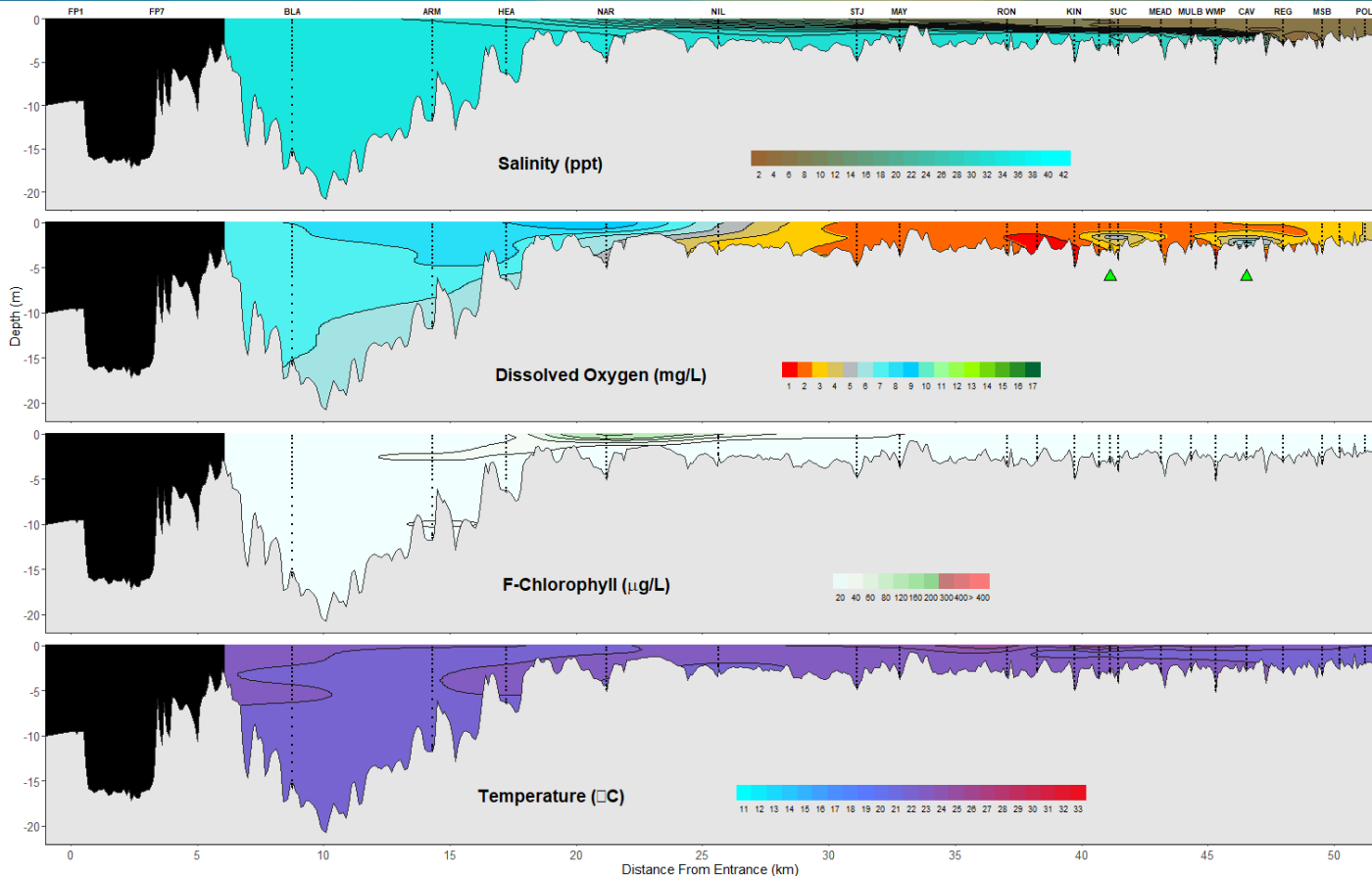
Lower Swan Canning Estuary to Upper Swan Estuary

3rd April 2023

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Swan Canning Estuary - Water Quality Profiles – 3rd April 2023



Date: 3rd April 2023

Weather & tide conditions: Conditions were clear with a predominantly south westerly breeze of up to 6 knots. The predicted tides at Barrack St were 0.71 m at 5:34 am (low tide) and 0.9 m at 12:19 pm (high tide). Perth recorded 38.8 mm of rainfall in the week prior to sampling (Bureau of Meteorology), all of this in one rainfall event across 30/31 March resulting in significant runoff and flow into the system.

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

Lower Swan Canning Estuary (FPI to NAR): The Lower Swan Canning Estuary was saline (25-33 ppt) and waters were oxygenated to well oxygenated. Chlorophyll fluorescence was low throughout most of the area except for the surface waters of Narrows, where it was moderate, and water temperatures ranged from 21.61 °C to 22.29 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish over saline. Surface waters at NIL were oxygenated while deeper waters were low in oxygen. Waters were predominantly hypoxic from STJ to RON. Chlorophyll fluorescence was low and water temperatures ranged from 21.9 to 24.3 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish over saline between SAND and MULB, fresh over saline at WMP, fresh over brackish from CAV to REG and fresh from MSB to POL. Waters were low in oxygen to hypoxic throughout, except for the middle waters of VIT and SUC (oxygenated) and bottom waters of CAV (well oxygenated) due to effects of the oxygenation plants. Chlorophyll fluorescence was low throughout and water temperatures ranged from 21.33 °C to 24.82 °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