



Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

Lower Swan Canning Estuary to Upper Swan Estuary

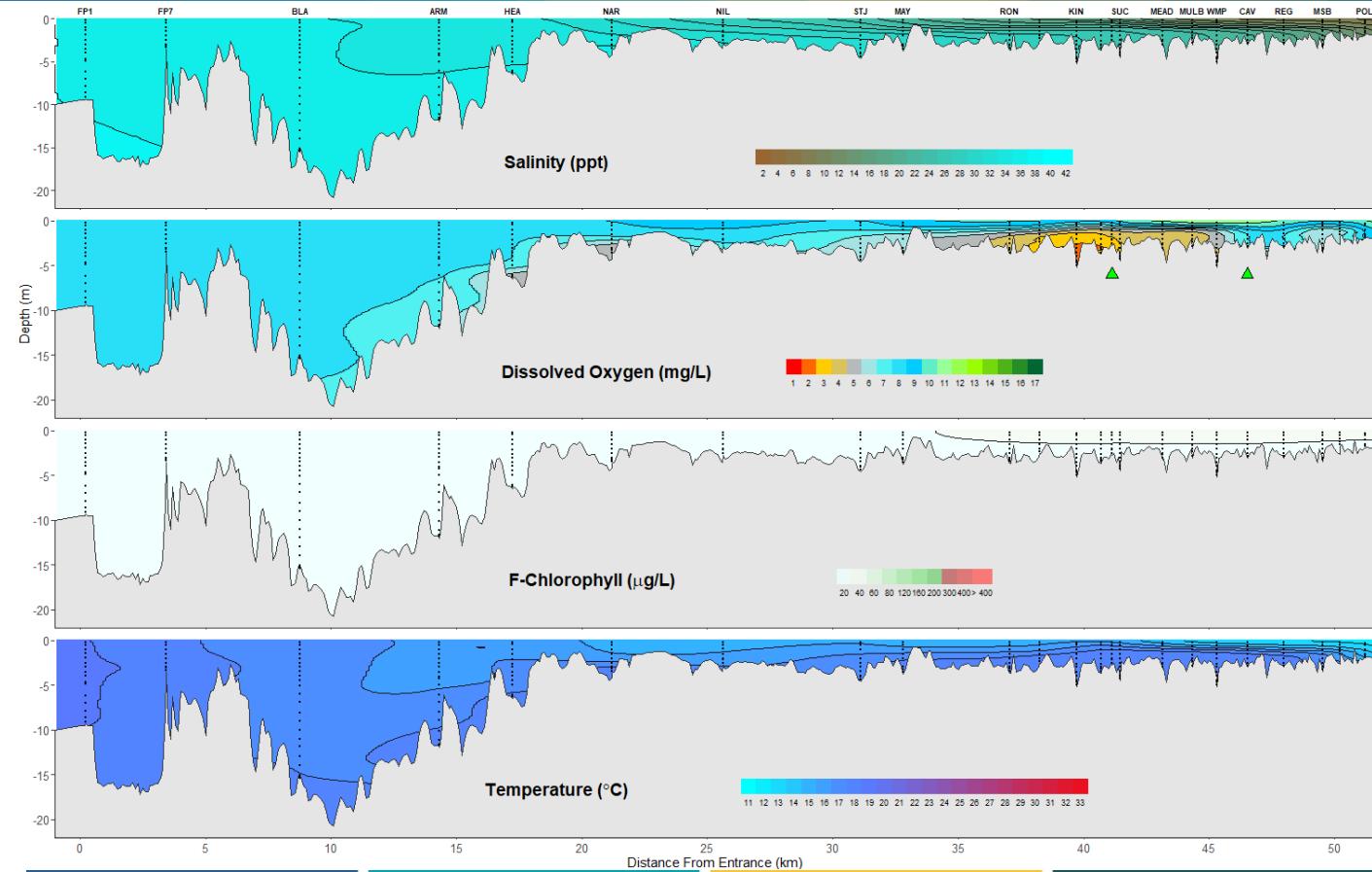
7 June 2022

Prepared by

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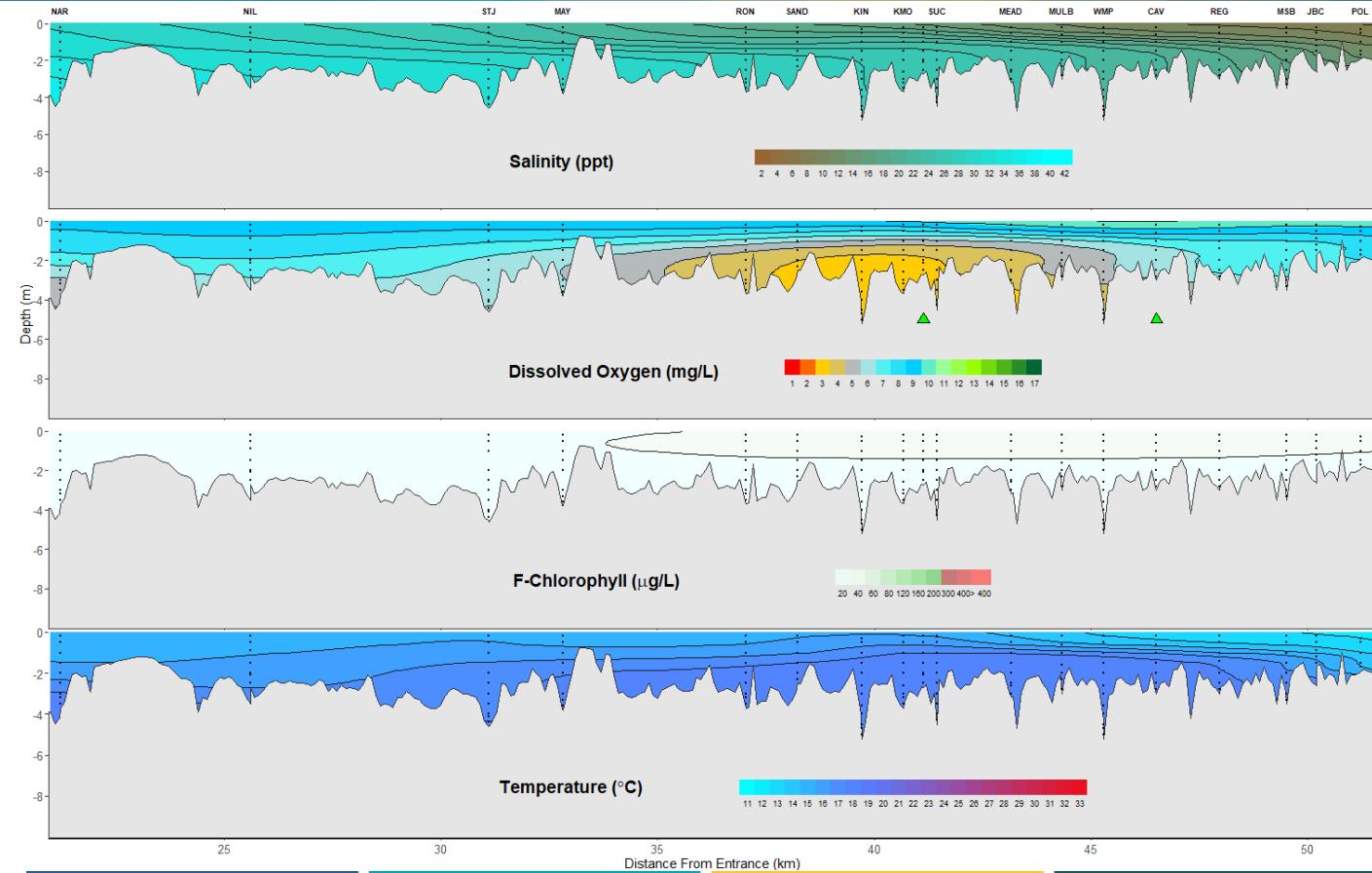


Swan Canning Estuary- Water Quality Profiles – 7 June 2022





Middle and Upper Swan Estuary- Water Quality Profiles – 7 June 2022



Date: 7 June 2022

Weather & tide conditions: Conditions were clear with a predominantly easterly breeze of up to 15 knots. The predicted tides at Barrack St were 0.8 m at 1:18 am (low tide) and 1.13 m at 2:28 pm (high tide). Perth recorded 0.8 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 (FP1 to NAR): The Lower Swan Canning Estuary was hypersaline from FP1 to FP7 and saline from BLA to NAR. Waters were oxygenated or well oxygenated throughout this zone. Water temperature ranged from 14.5 to 18.1 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline from NIL to STJ and brackish over saline from MAY to RON. Waters were well oxygenated at NIL, surface waters were well oxygenated from STJ to RON and bottom waters were oxygenated from STJ to MAY and low in oxygen at RON. Temperature ranged from 14.4 to 17.4 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish over saline from SAND to KMO and brackish from VIT to POL. Waters were oxygenated or well oxygenated at MEAD and from CAV to POL, surface waters were oxygenated or well oxygenated from SAND to SUC and from MULB to WMP and bottom waters were low in oxygen at SAND, from VIT to SUC and MULB to WMP and hypoxic from KIN to KMO. Chlorophyll fluorescence was low throughout the zones. Water temperature ranged from 12.3 to 17.8 °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 (no/low flow): low < 50 µg L⁻¹, moderate 50-150 µg L⁻¹, high 150-400 µg L⁻¹, extreme > 400 µg L⁻¹

Recommended reference: Department of Biodiversity, Conservation and Attractions, 2022. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 7 June 2022. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)