



Department of Biodiversity,
Conservation and Attractions



Biodiversity and
Conservation Science

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Western Australia.

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

Lower Swan Canning Estuary to Upper Swan Estuary

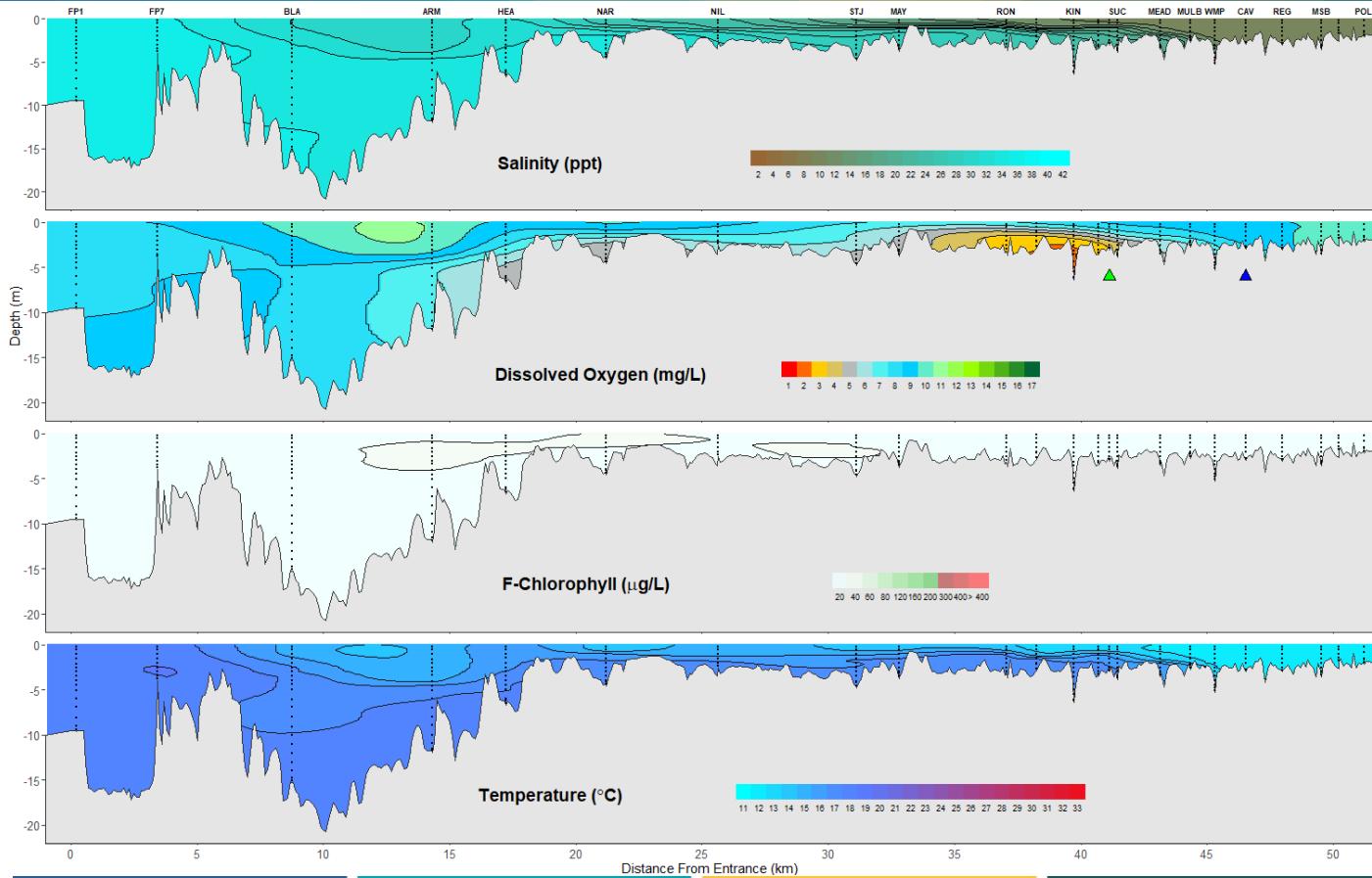
4 July 2022

Prepared by

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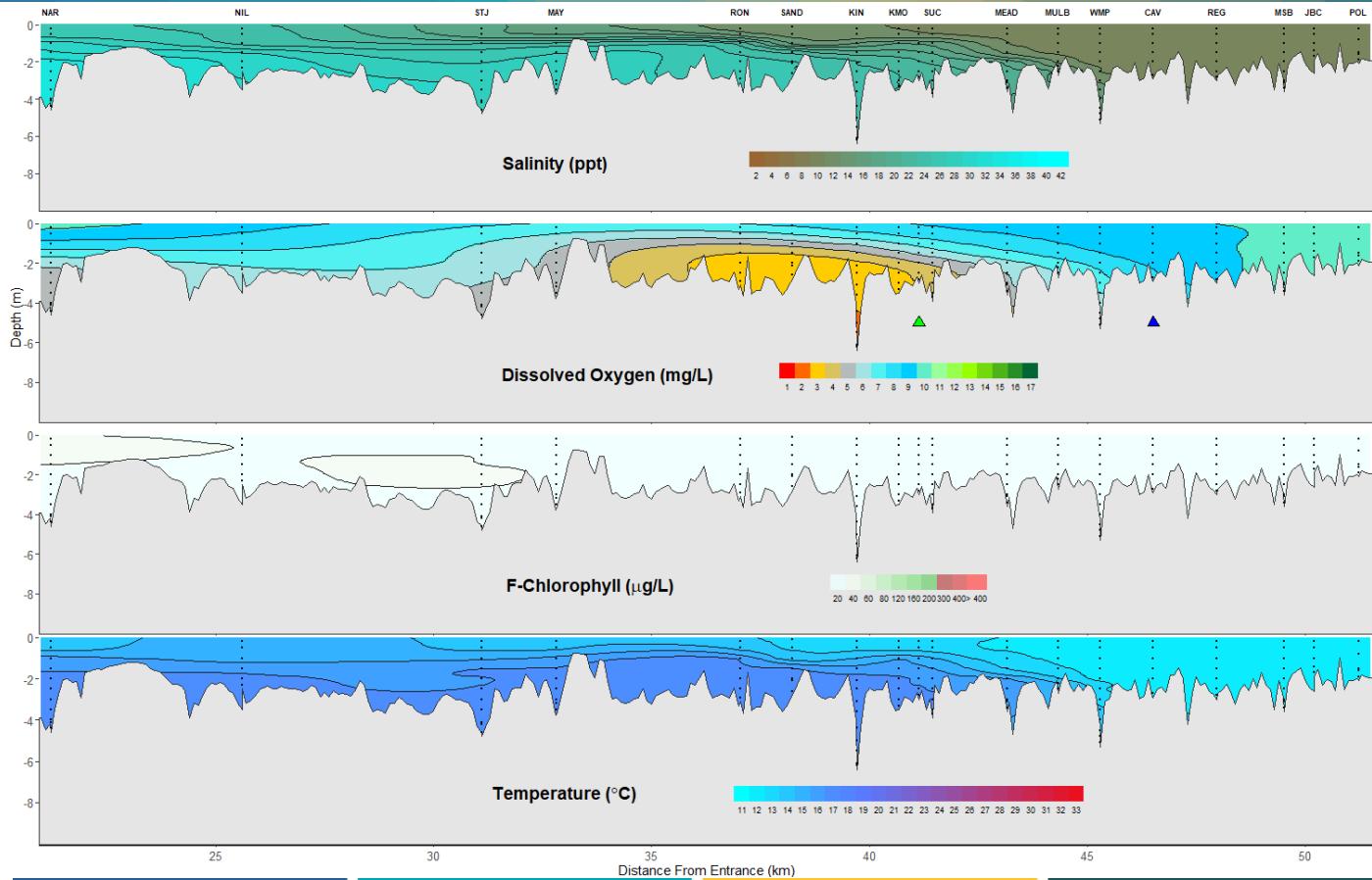


Swan Canning Estuary- Water Quality Profiles – 4 July 2022





Middle and Upper Swan Estuary- Water Quality Profiles – 4 July 2022





Date: 4 July 2022

Weather & tide conditions: Conditions were clear with a predominantly north-easterly breeze of up to 15 knots. The predicted tides at Barrack St were 1.18 m at 1:12 pm (high tide) and 0.8 m at 11 pm (low tide). Perth recorded no rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford oxygenation plant was triggered to provide oxygen and the Caversham oxygenation plant was operable but not 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 at FP1, saline over hypersaline from FP2 to FP7 and saline from BLA to NAR. Waters were oxygenated and well oxygenated throughout this zone. Chlorophyll fluorescence was low and water temperature ranged from 13.6 to 18.3 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish over saline throughout, except for RON which was brackish. Waters were oxygenated or well oxygenated throughout, except for bottom waters at RON which were low in oxygen. Temperature ranged from 13.3 to 16.4 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish throughout. Waters were oxygenated or well oxygenated throughout, except for bottom waters at SAND and from VIT to SUC which were low in oxygen and hypoxic from KIN to KMO. Temperature ranged from 11.1 to 16.5 °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