

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

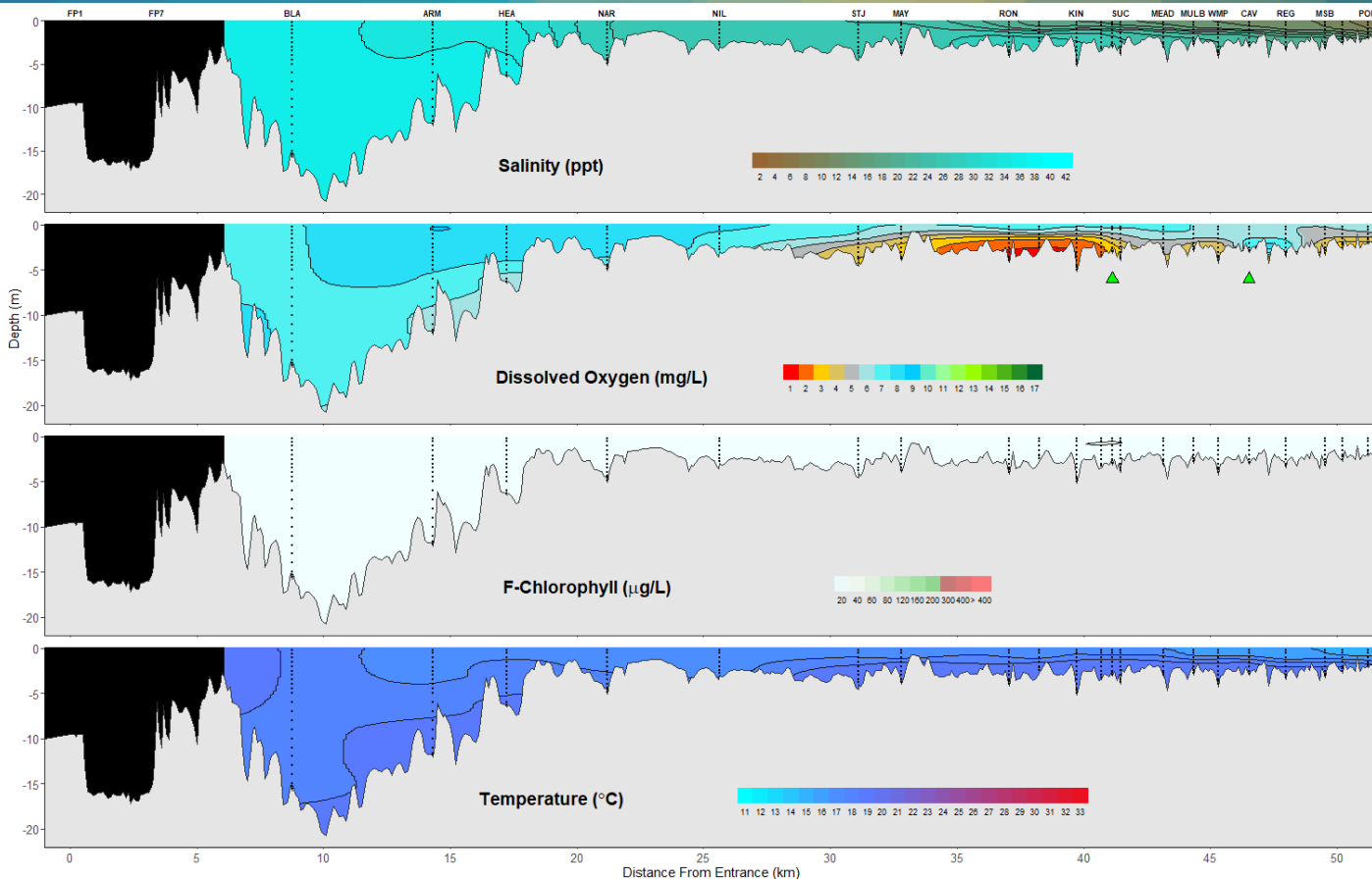
Lower Swan Canning Estuary to Upper Swan Estuary

30 May 2022

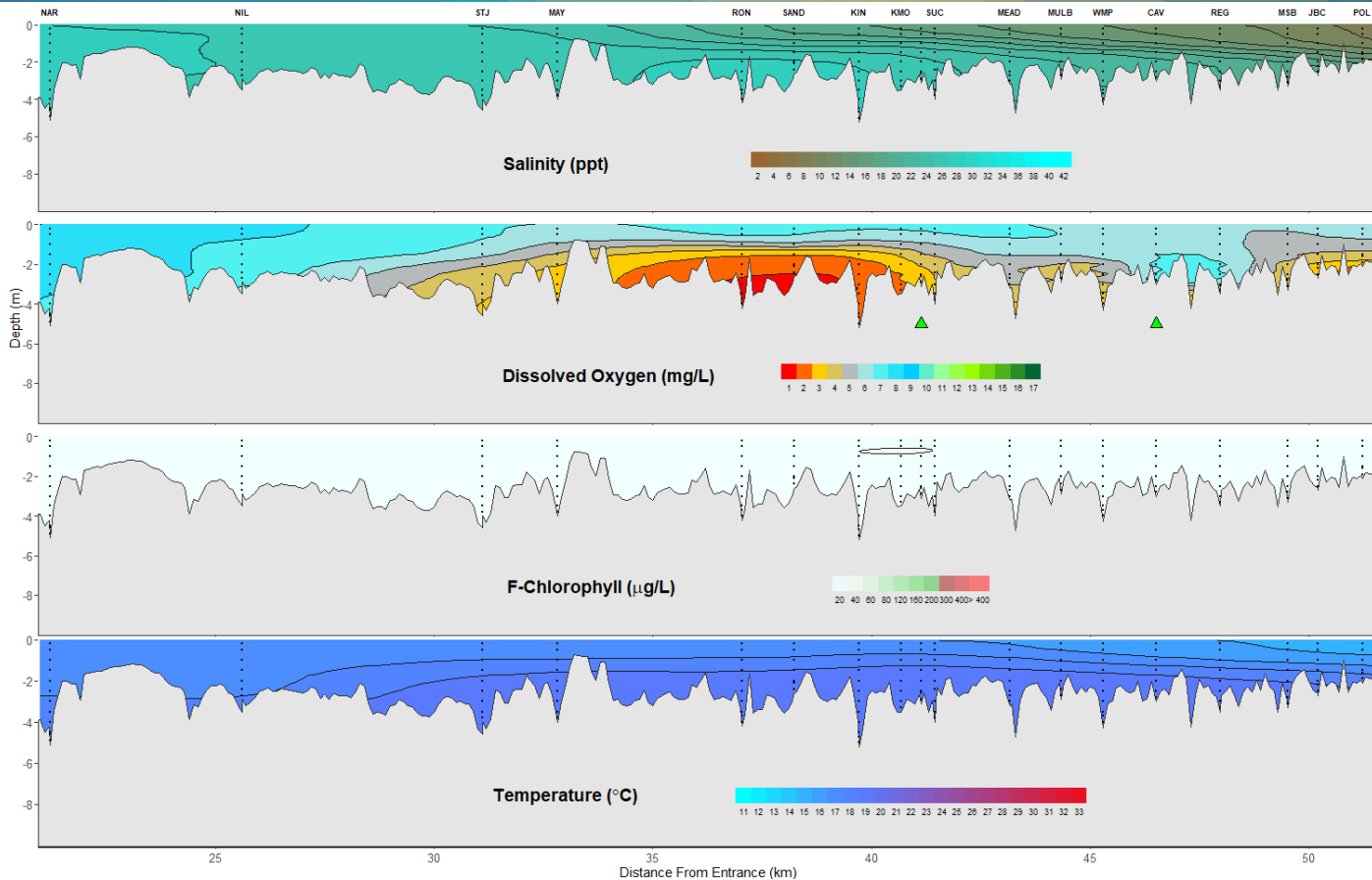
Prepared by

Rivers and Estuaries Science
Biodiversity and Conservation Science
Department of Biodiversity, Conservation and Attractions

Swan Canning Estuary- Water Quality Profiles – 30 May 2022



Middle and Upper Swan Estuary- Water Quality Profiles – 30 May 2022



Date: 30 May 2022

Weather & tide conditions: Conditions were partly cloudy with a predominantly easterly breeze of up to 8 knots. The predicted tides at Barrack St were 1.29 m at 10:38 am (high tide) and 0.77 m at 9:17 pm (low tide). Perth recorded 31.4 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 saline over hypersaline from BLA to HEA and saline at NAR. Waters were oxygenated or well oxygenated throughout this zone. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 16.4 to 18.3°C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline at NIL, brackish from STJ to MAY and brackish over saline at RON. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen from STJ to MAY and hypoxic at RON. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 16.1 to 19.0 °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. Surface waters were oxygenated or well oxygenated throughout. Bottom waters were hypoxic from SAND to KMO and low in oxygen from VIT to SUC, MULB to WMP and MSB to POL. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 14.0 to 18.6 °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 (summer): low < 50 µg L⁻¹, moderate 50-150 µg L⁻¹, high 150-400 µg L⁻¹, extreme > 400 µg L⁻¹