

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

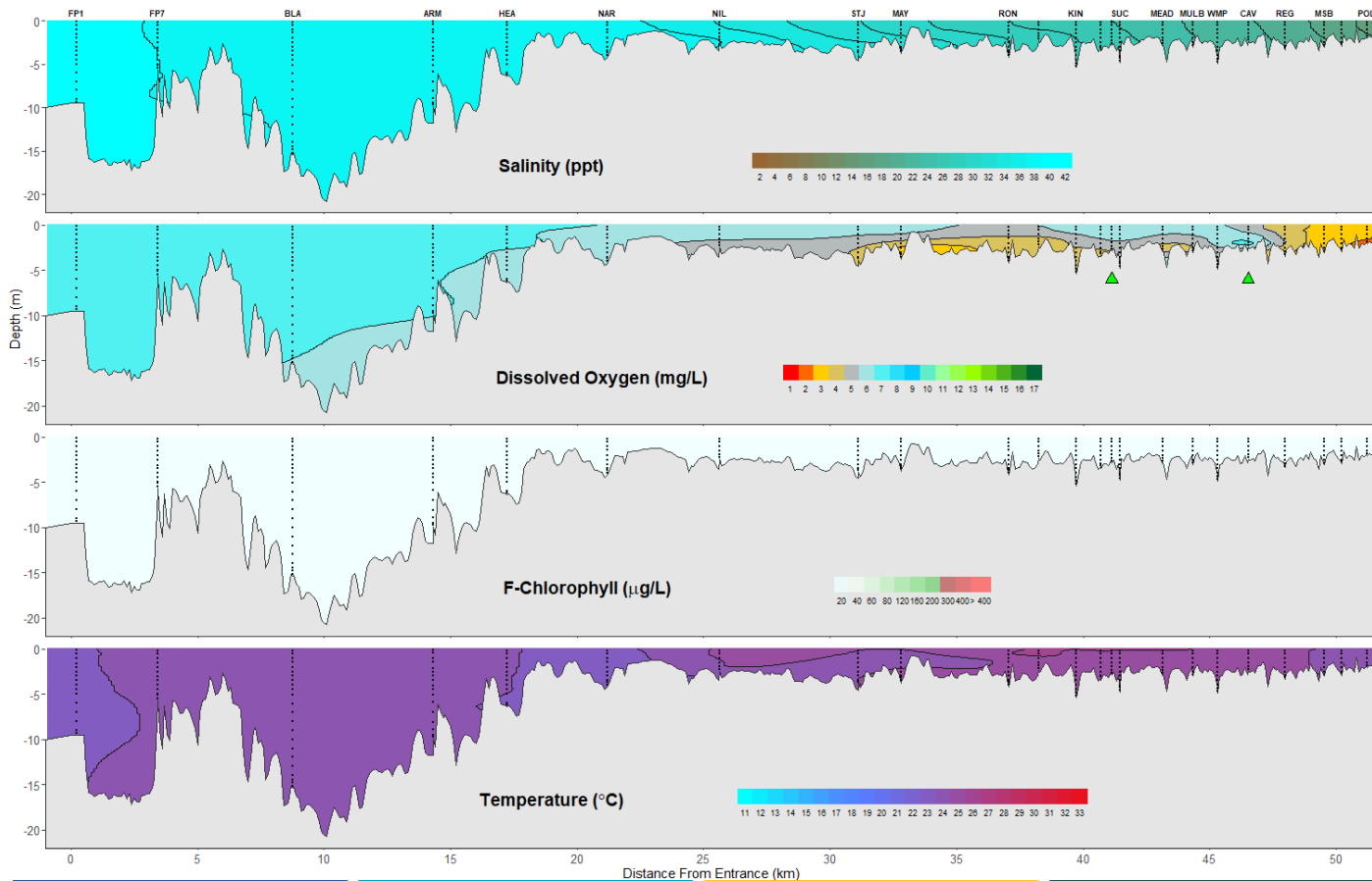
Lower Swan Canning Estuary to Upper Swan Estuary

2nd March 2021

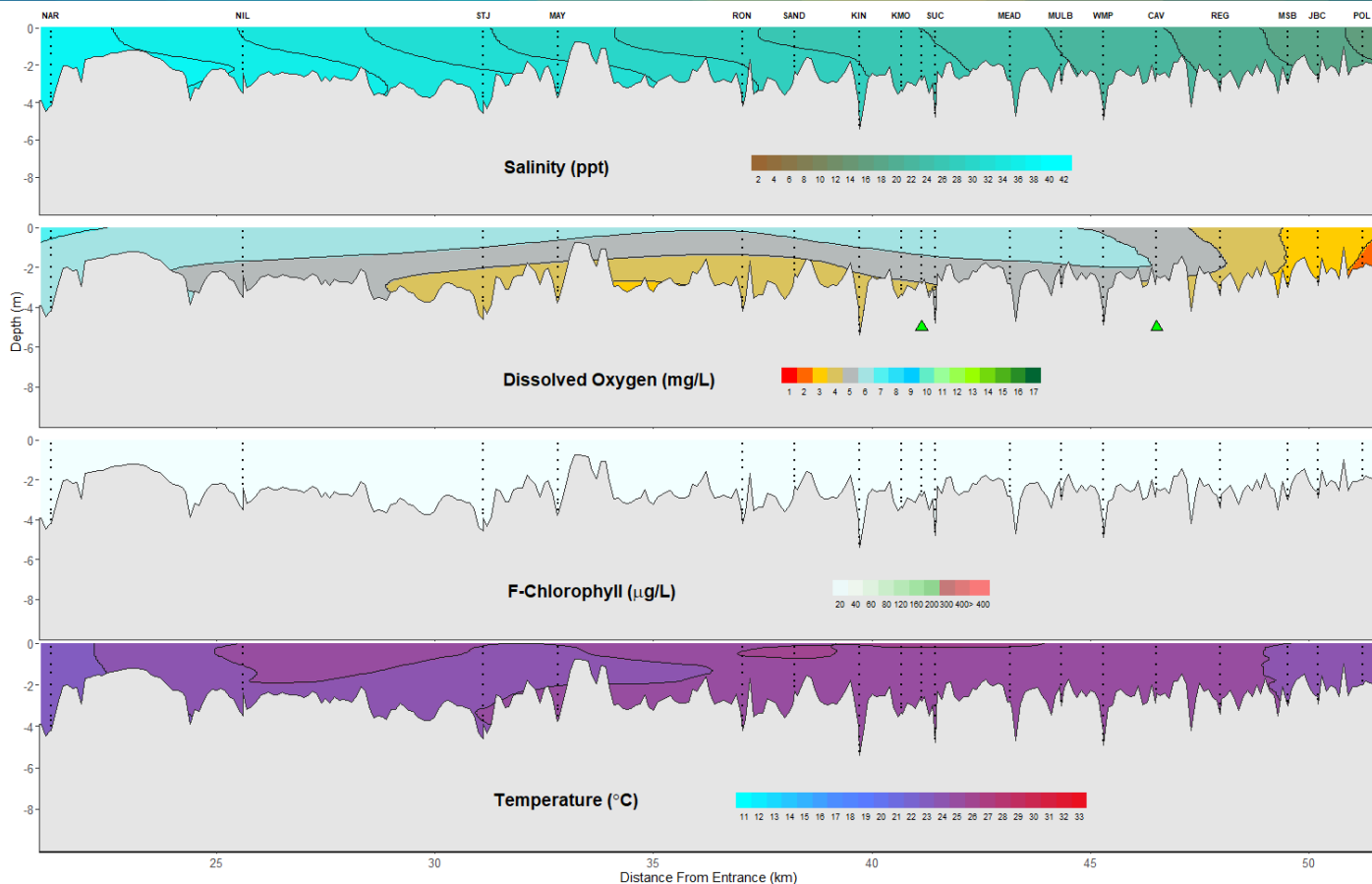
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Swan Canning Estuary- Water Quality Profiles- 2nd March 2021



Middle and Upper Swan Estuary- Water Quality Profiles- 2nd March 2021



Date: 2nd March 2021

NB: Sampled on Tuesday (2 March 2021) rather than Monday (1 March 2021) due to public holiday.

Weather & tide conditions: Conditions were overcast with a predominantly easterly breeze of up to 8 knots. The predicted tides at Barrack St were 0.70 m at 7:31 am (low tide) and 0.91 m at 2:26 pm (high tide). Perth recorded 10.6 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were 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, waters were oxygenated or well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 22.5 to 23.5 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline, surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen from STJ to RON. Chlorophyll fluorescence was highest at RON indicating higher microalgal activity in that area. Water temperature ranged from 23.6 to 25.0 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was saline from SAND to KIN, brackish over saline between KMO and VIT and brackish from SUC to POL. Surface waters were oxygenated or well oxygenated between SAND and CAV and low in oxygen from REG to POL. Bottom waters were low in oxygen from SAND to KMO, between MEAD and MULB and from REG to JBC and were hypoxic at POL. Chlorophyll fluorescence was highest at SUC indicating higher microalgal activity in that area. Water temperature ranged from 23.6 to 25.2°C.

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 >6mg/L, oxygenated >4-6mg/L, low oxygen >2-4mg/L, hypoxic 0.5-2mg/L, anoxic <0.5mg/L

Recommended reference: Department of Biodiversity, Conservation and Attractions 2021. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 2nd March 2021*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)