



Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

Lower Swan Canning Estuary to Upper Swan Estuary

26th October 2020

Prepared by

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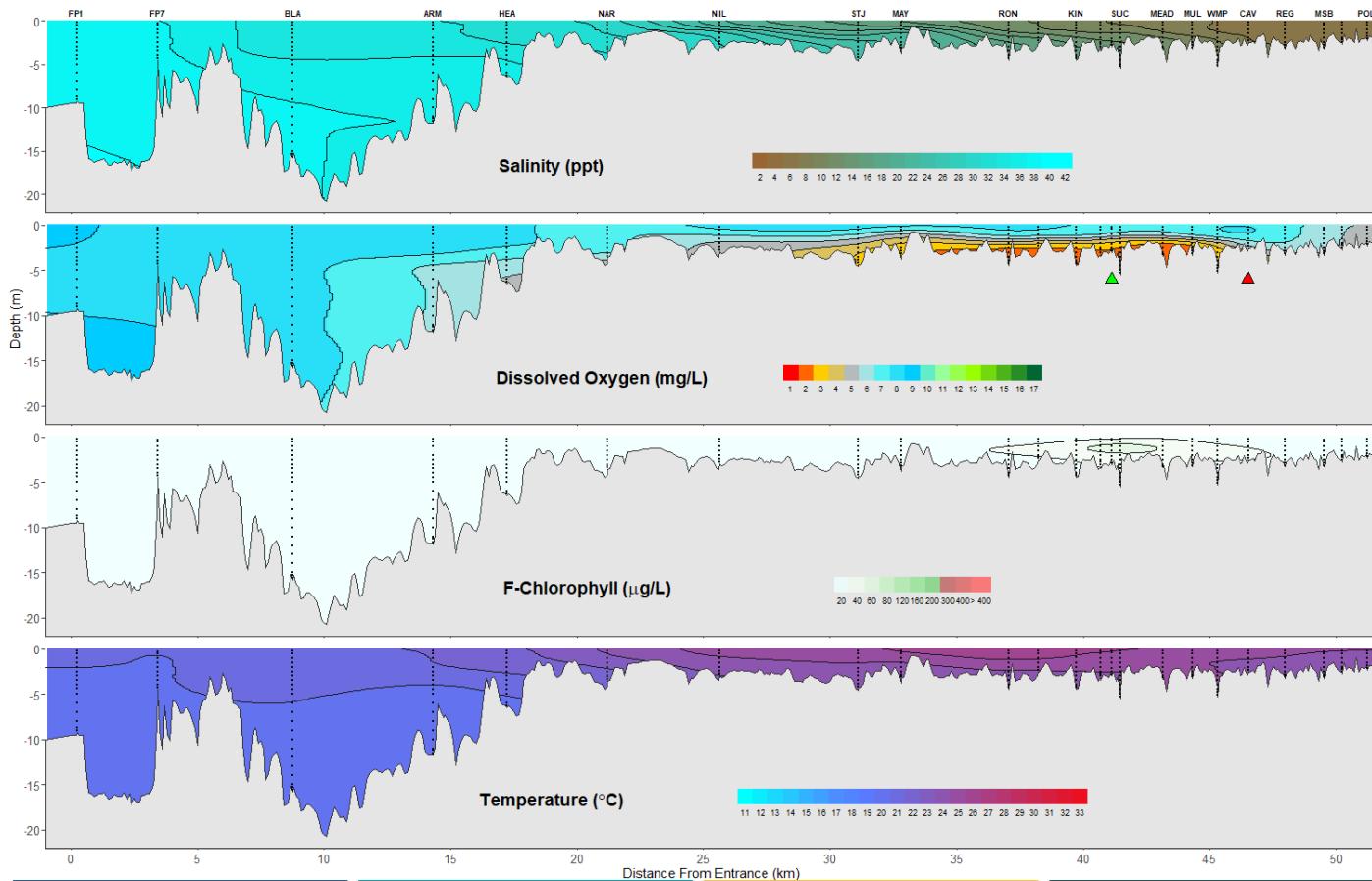
Department of Biodiversity,
Conservation and Attractions



Biodiversity and
Conservation Science

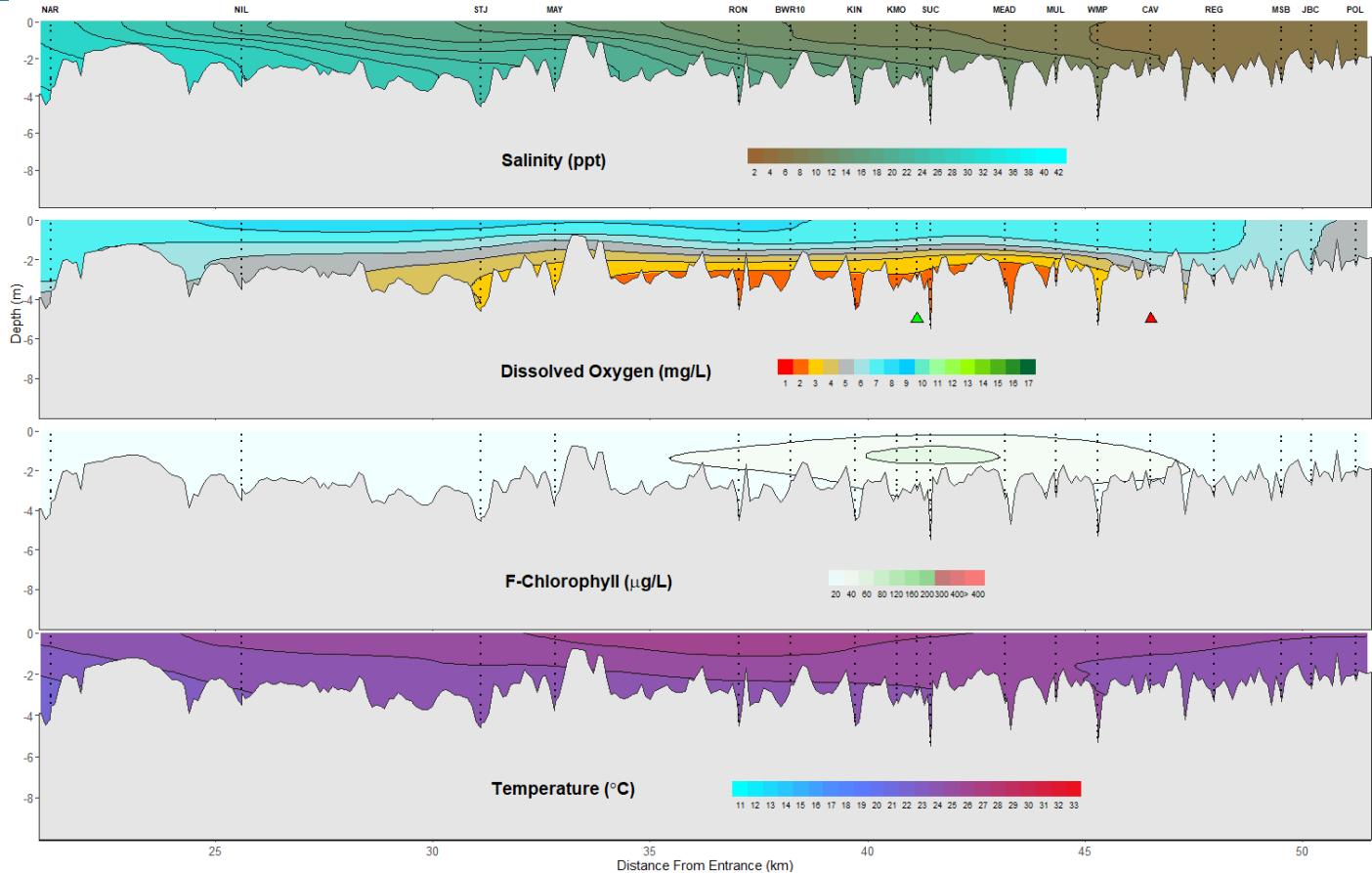
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Western Australia.

Swan Canning Estuary- Water Quality Profiles- 26th October 2020





Middle and Upper Swan Estuary- Water Quality Profiles- 26th October 2020





Date: 26th October 2020

Weather & tide conditions: Conditions were clear with a predominantly westerly breeze of up to 10 knots. The predicted tides at Barrack St were 0.81 m at 2:27 am (high tide), 0.60 m at 3:52 pm (low tide) and 0.80 m at 11:06 pm (second high 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 not operational during the 24 hours prior to sampling.

Lower Swan Canning Estuary (FPI 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 19.4 to 23.1 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish over saline at NIL and brackish from STJ to RON. Surface waters were well oxygenated and bottom waters were low in oxygen between STJ and MAY and hypoxic at RON. Chlorophyll fluorescence was highest at RON indicating higher microalgal activity in that area. Water temperature ranged from 23.1 to 25.6 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen at BWR10, VIT and WMP and hypoxic between KIN and KMO and from SUC to MULB FARM. Chlorophyll fluorescence was highest at VIT indicating higher microalgal activity in that area. Water temperature ranged from 23.1 to 25.4 °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 2020. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 26th October 2020. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)