



Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

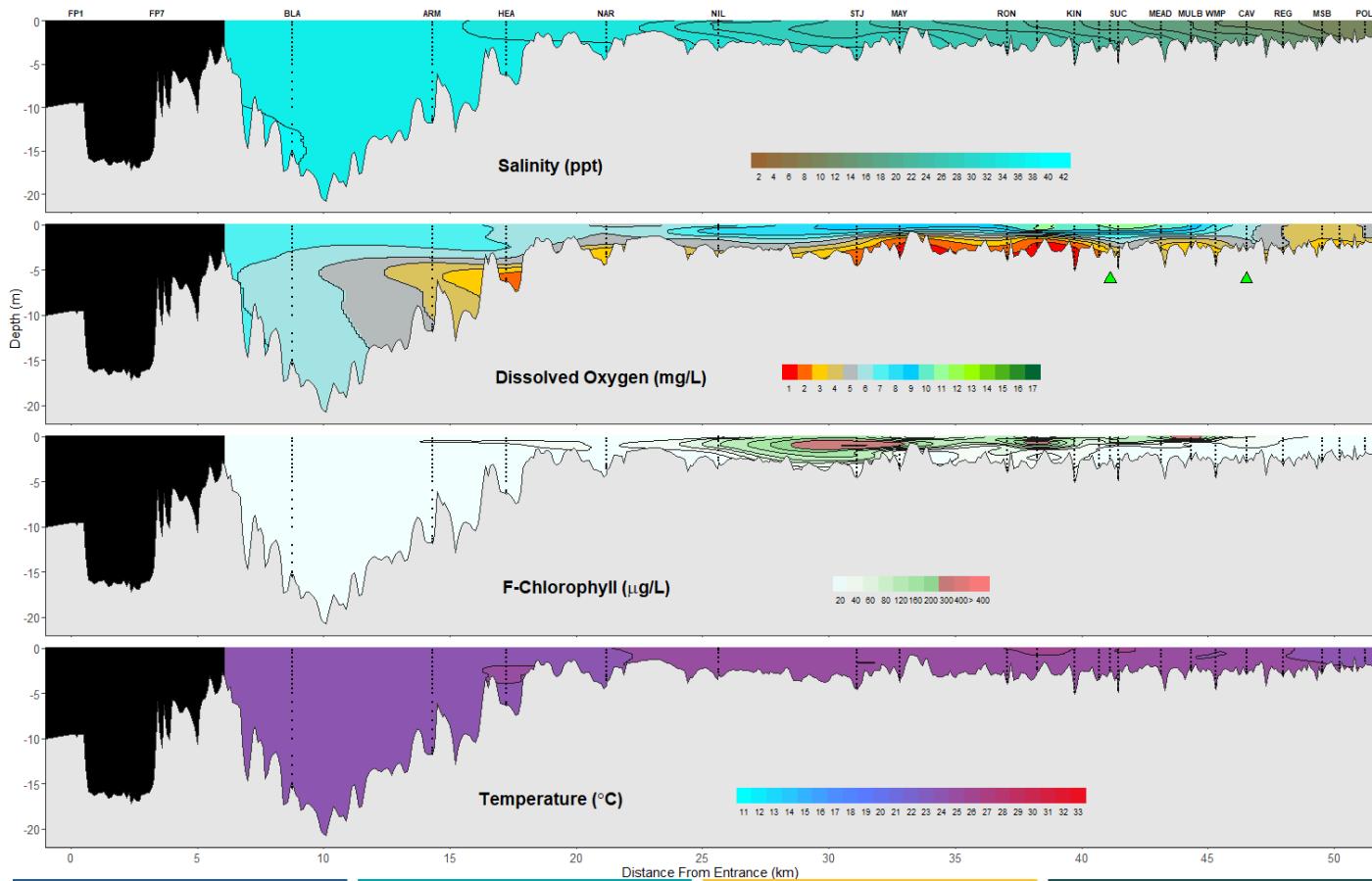
Lower Swan Canning Estuary to Upper Swan Estuary

6th April 2021

Prepared by

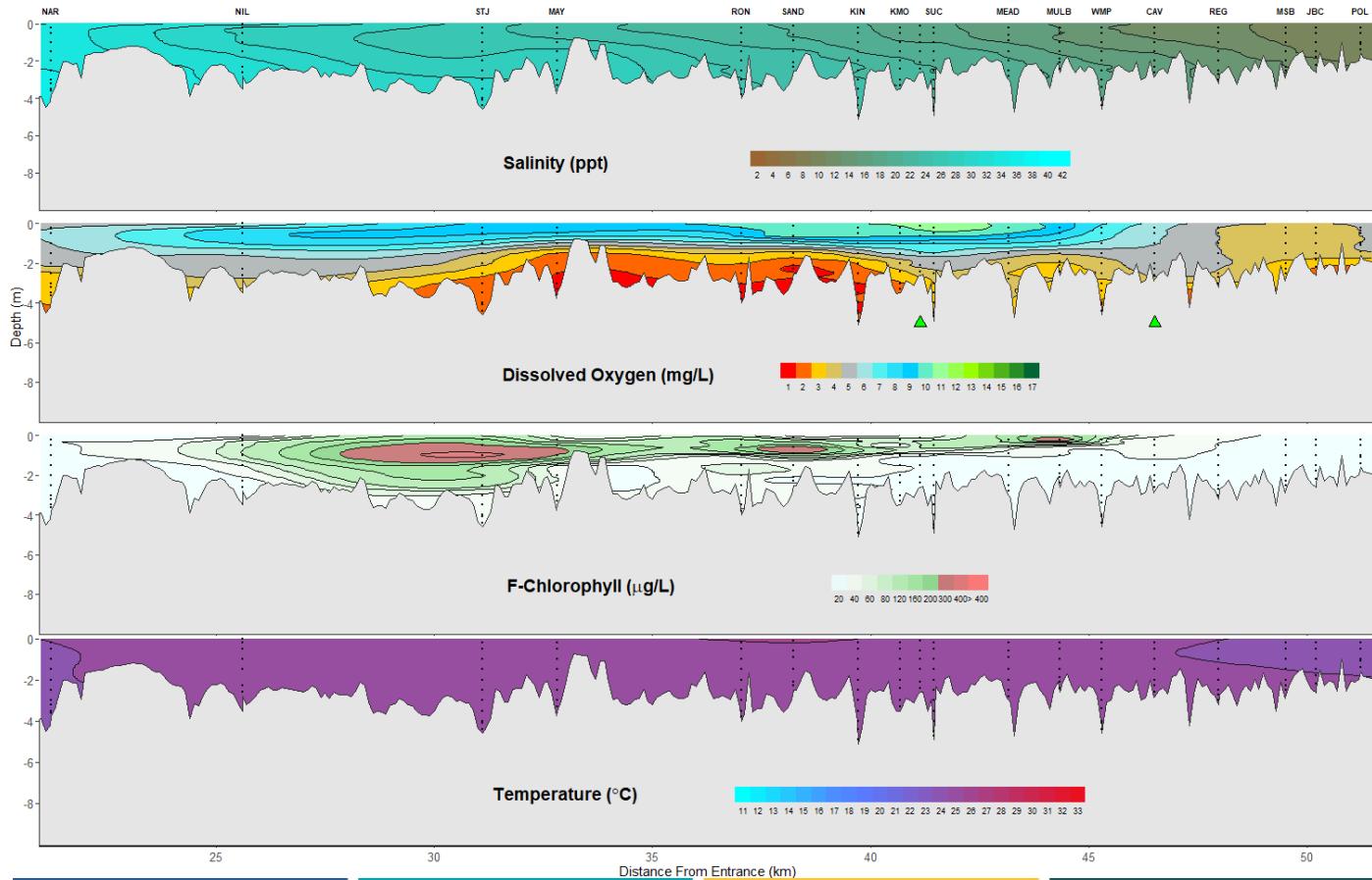
Rivers and Estuaries Science
Biodiversity and Conservation Science
Department of Biodiversity, Conservation and Attractions

Swan Canning Estuary- Water Quality Profiles- 6th April 2021





Middle and Upper Swan Estuary- Water Quality Profiles- 6th April 2021





Date: 6th April 2021

Weather & tide conditions: Conditions were clear with a light easterly breeze of up to 6 knots. The predicted tides at Barrack St were 0.62 m at 4:51 am (low tide) and 1.09 m at 6:26 pm (high tide). Perth recorded 3.6 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. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen at ARM and NAR and hypoxic at HEA. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 23.0 to 24.1 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline at NIL, brackish over saline between STJ and MAY and brackish at RON. Surface waters were oxygenated or well oxygenated and bottom waters were hypoxic between STJ and RON. Chlorophyll fluorescence was elevated between NIL and RON indicating higher microalgal activity in that area. Water temperature ranged from 24.1 to 25.0 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish. Surface waters were oxygenated or well oxygenated except between REG and JBC which was low in oxygen. Bottom waters were low in oxygen from SUC to MULB and between REG and JBC and were hypoxic from SAND to KMO and at WMP. Chlorophyll fluorescence was elevated between SAND and WMP indicating higher microalgal activity in that area. Water temperature ranged from 23.6 to 25.8 °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 6th April 2021. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)