



Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

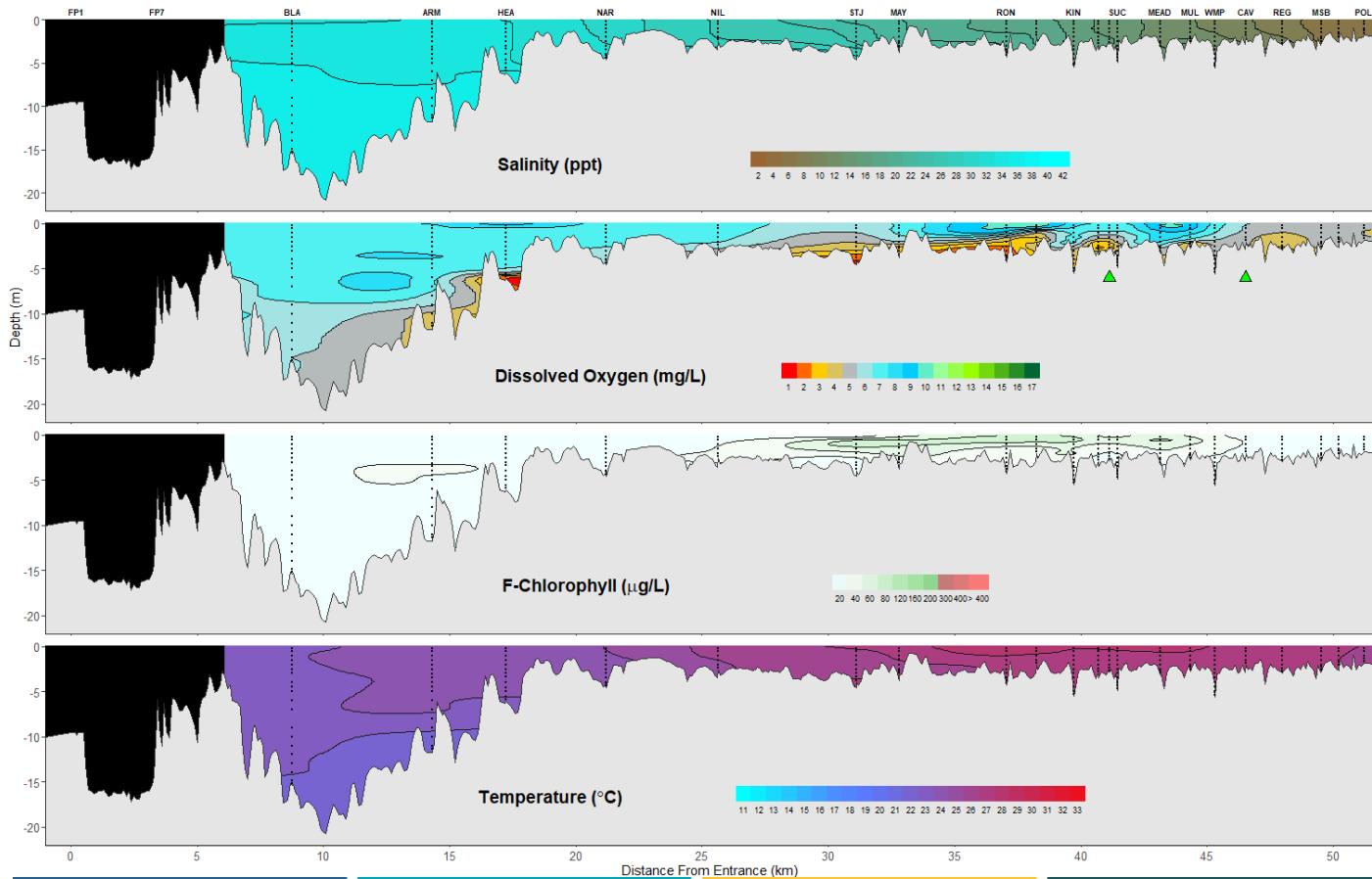
Lower Swan Canning Estuary to Upper Swan Estuary

14th December 2020

Prepared by

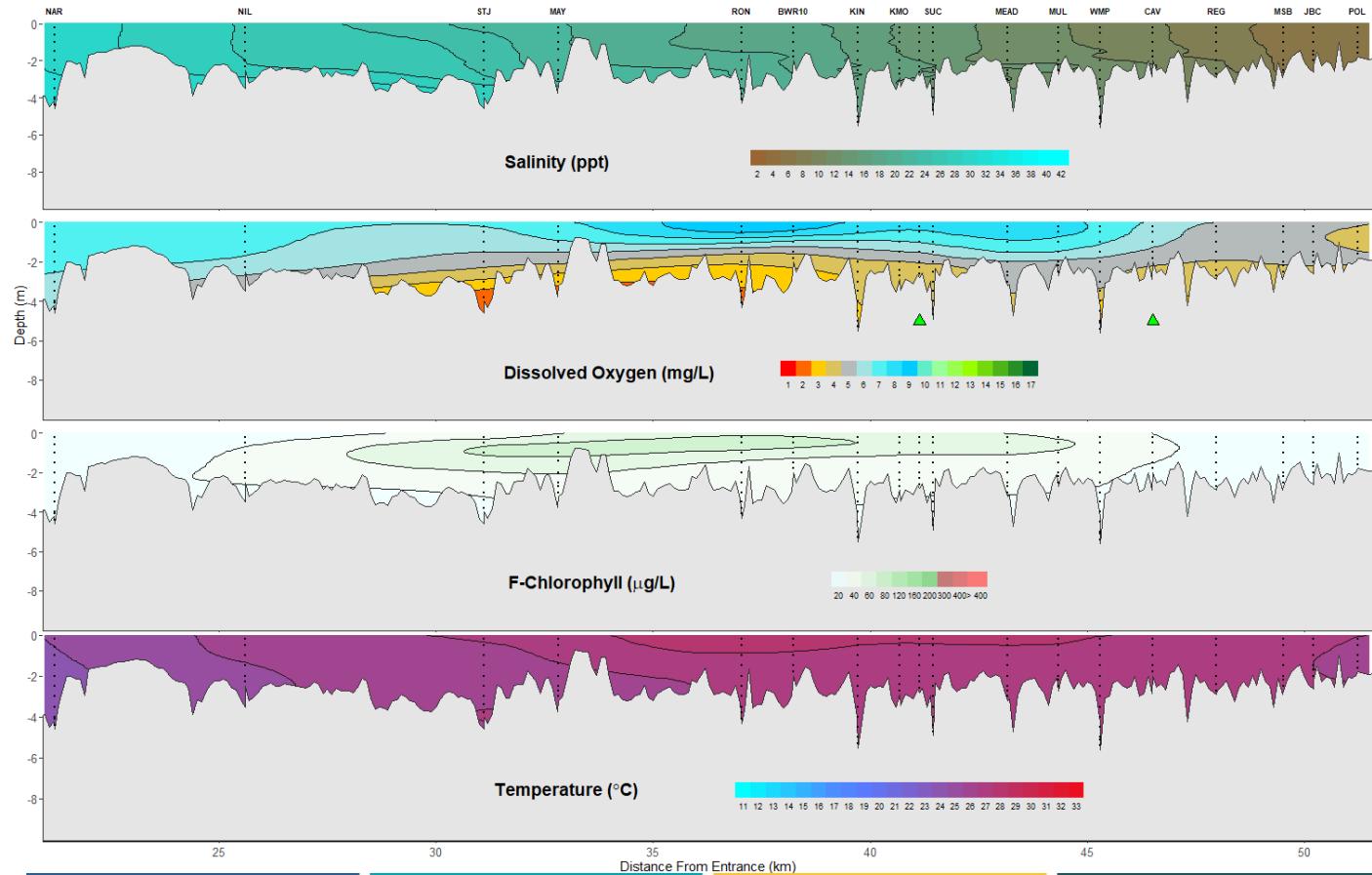
Rivers and Estuaries Science
Biodiversity and Conservation Science
Department of Biodiversity, Conservation and Attractions

Swan Canning Estuary- Water Quality Profiles- 14th December 2020





Middle and Upper Swan Estuary- Water Quality Profiles- 14th December 2020





Date: 14th December 2020

Weather & tide conditions: Conditions were clear with predominantly south westerly breeze of up to 10 knots. The predicted tides at Barrack St were 0.43 m at 8:37 am (low tide) and 1.13 m at 10:33 pm (high tide). Perth recorded 4.0 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 hypoxic at HEA. Chlorophyll fluorescence was highest at ARM indicating higher microalgal activity in that area. Water temperature ranged from 21.4 to 24.0 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline at NIL, brackish over saline at STJ and brackish from MAY to RON. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen at MAY and hypoxic at STJ and RON. Chlorophyll fluorescence was elevated between STJ and RON indicating higher microalgal activity in that area. Water temperature ranged from 24.9 to 27.6 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish between BWR10 and JBC and fresh at POL. Surface waters were oxygenated or well oxygenated and bottom waters were hypoxic at WMP, KMO and KIN. Chlorophyll fluorescence was highest at KIN indicating higher microalgal activity in that area. Water temperature ranged from 26.0 to 28.0 °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 14th December 2020. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)