

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

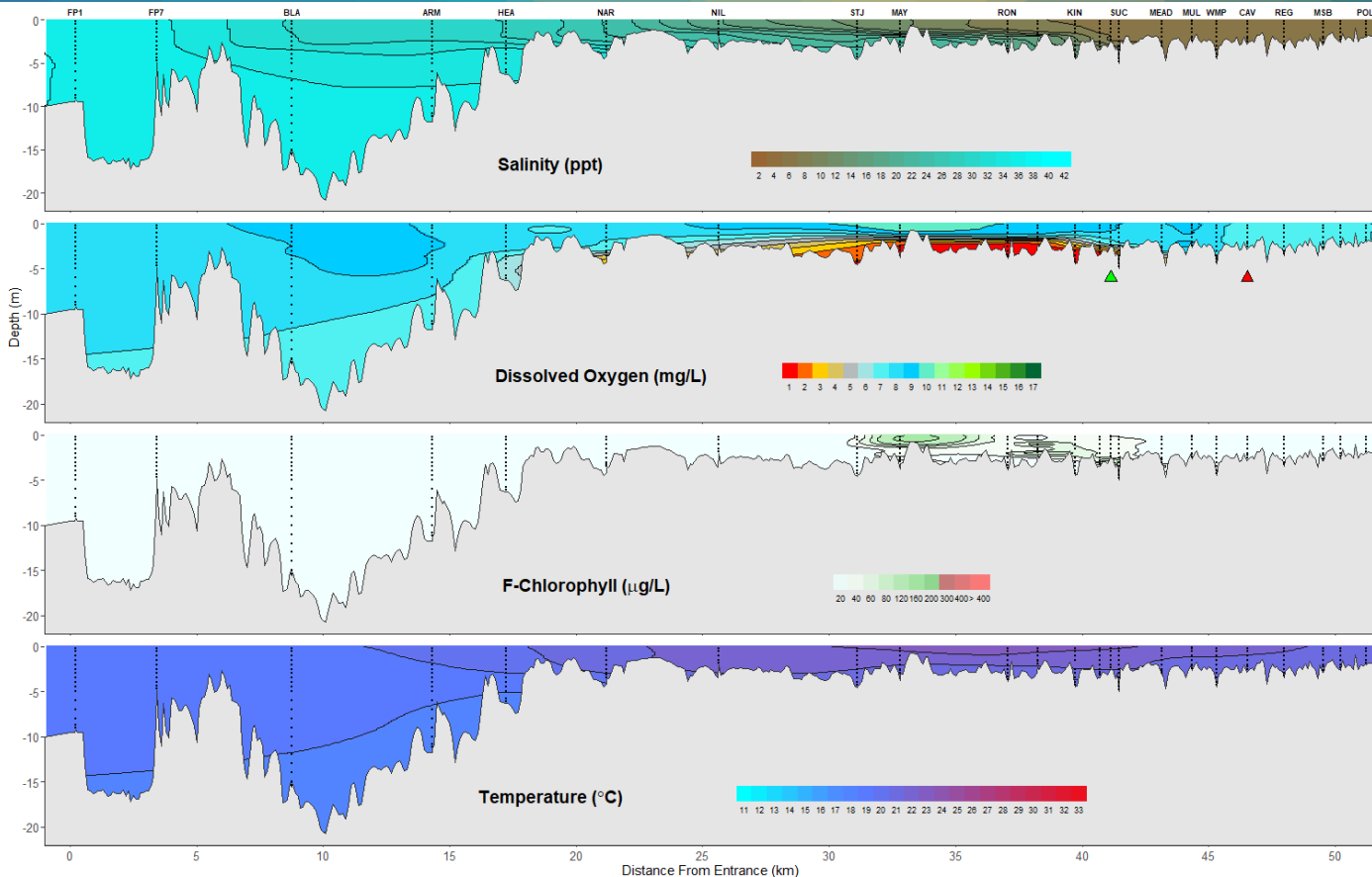
Lower Swan Canning Estuary to Upper Swan Estuary

12th October 2020

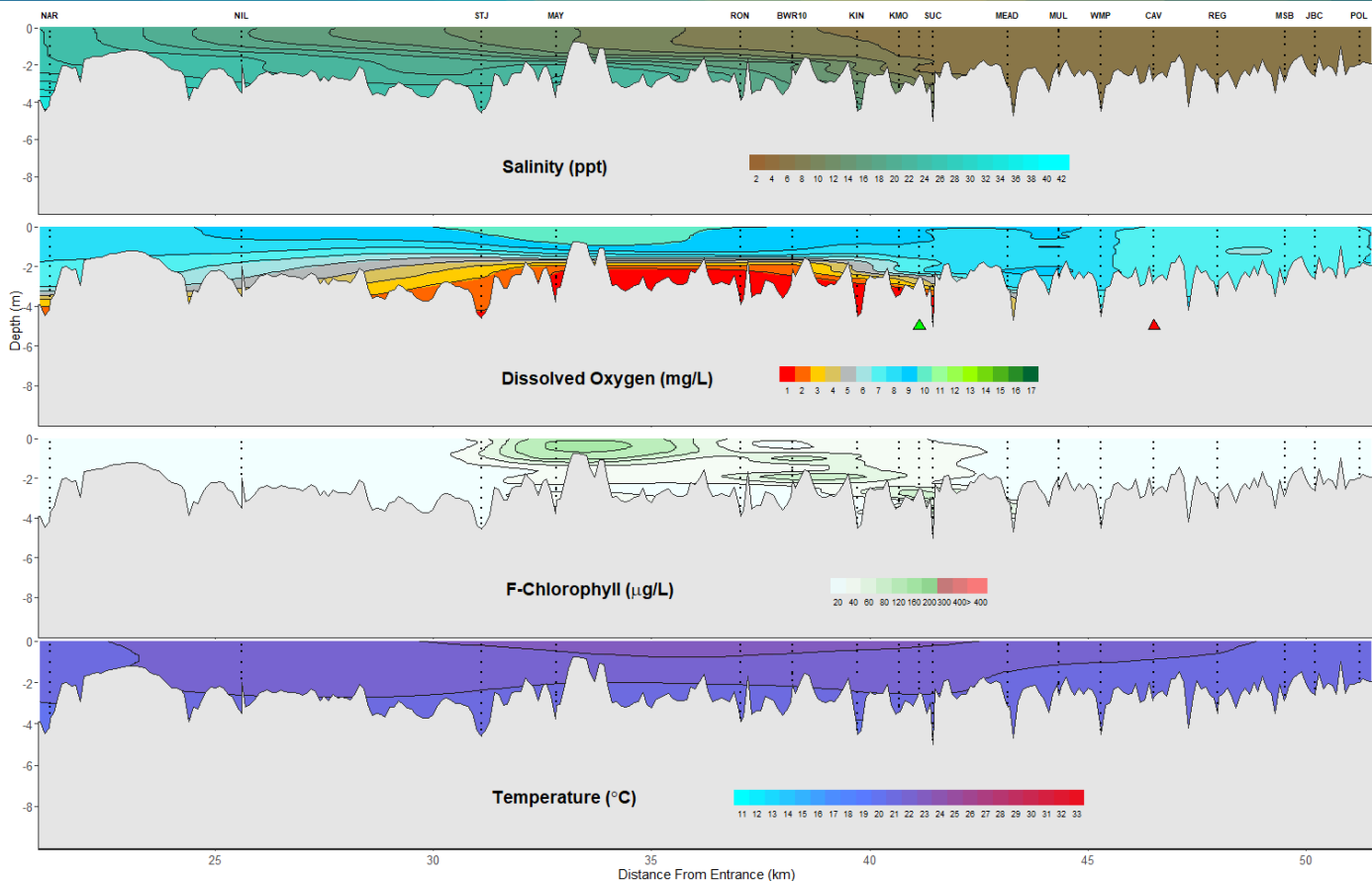
Prepared by

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

Swan Canning Estuary- Water Quality Profiles- 12th October 2020



Middle and Upper Swan Estuary- Water Quality Profiles- 12th October 2020



Date: 12th October 2020

Weather & tide conditions: Conditions were clear with a predominantly easterly breeze of up to 7 knots. The predicted tides at Barrack St were 0.92 m at 6:30 am (high tide) and 0.55 m at 4:33 pm (low tide). Perth recorded 7.4 mm of 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 from FPI to HEA and brackish over saline at NAR. Waters were oxygenated or well oxygenated, except at NAR where bottom waters were low in oxygen. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 17.6 to 20.6 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish from NIL to RON. Surface waters were well oxygenated and bottom waters were hypoxic between STJ and MAY and anoxic at RON. Chlorophyll fluorescence was highest at MAY indicating higher microalgal activity in this area. Water temperature ranged from 20.3 to 22.5 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish from BWR10 to POL. Surface waters were well oxygenated and bottom waters were hypoxic at BWR10 and anoxic at KIN, KMO and SUC. Chlorophyll fluorescence was highest at SUC indicating higher microalgal activity in this area. Water temperature ranged from 19.4 to 23.3 °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 12th October 2020*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)