

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

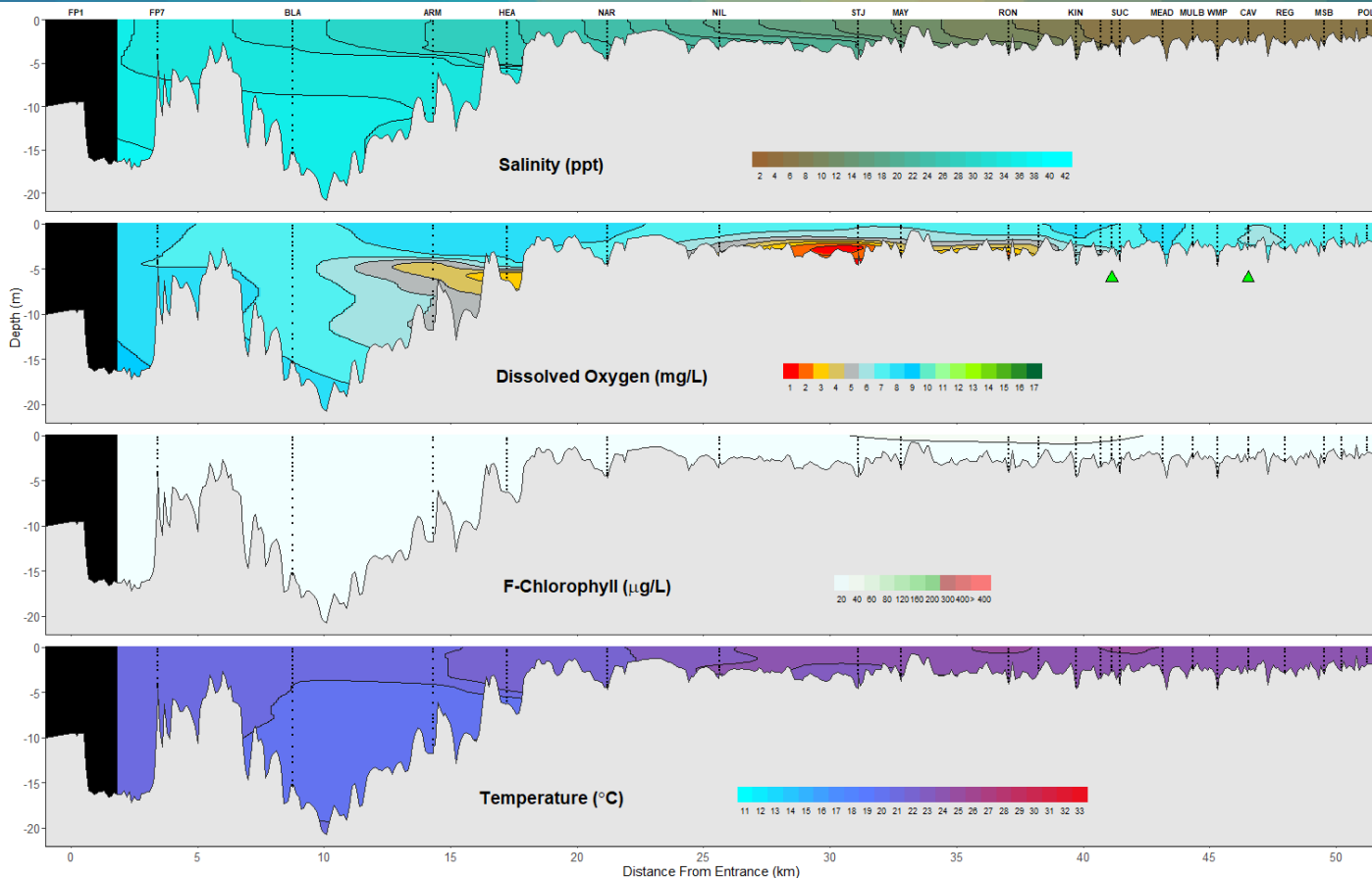
Lower Swan Canning Estuary to Upper Swan Estuary

22 November 2021

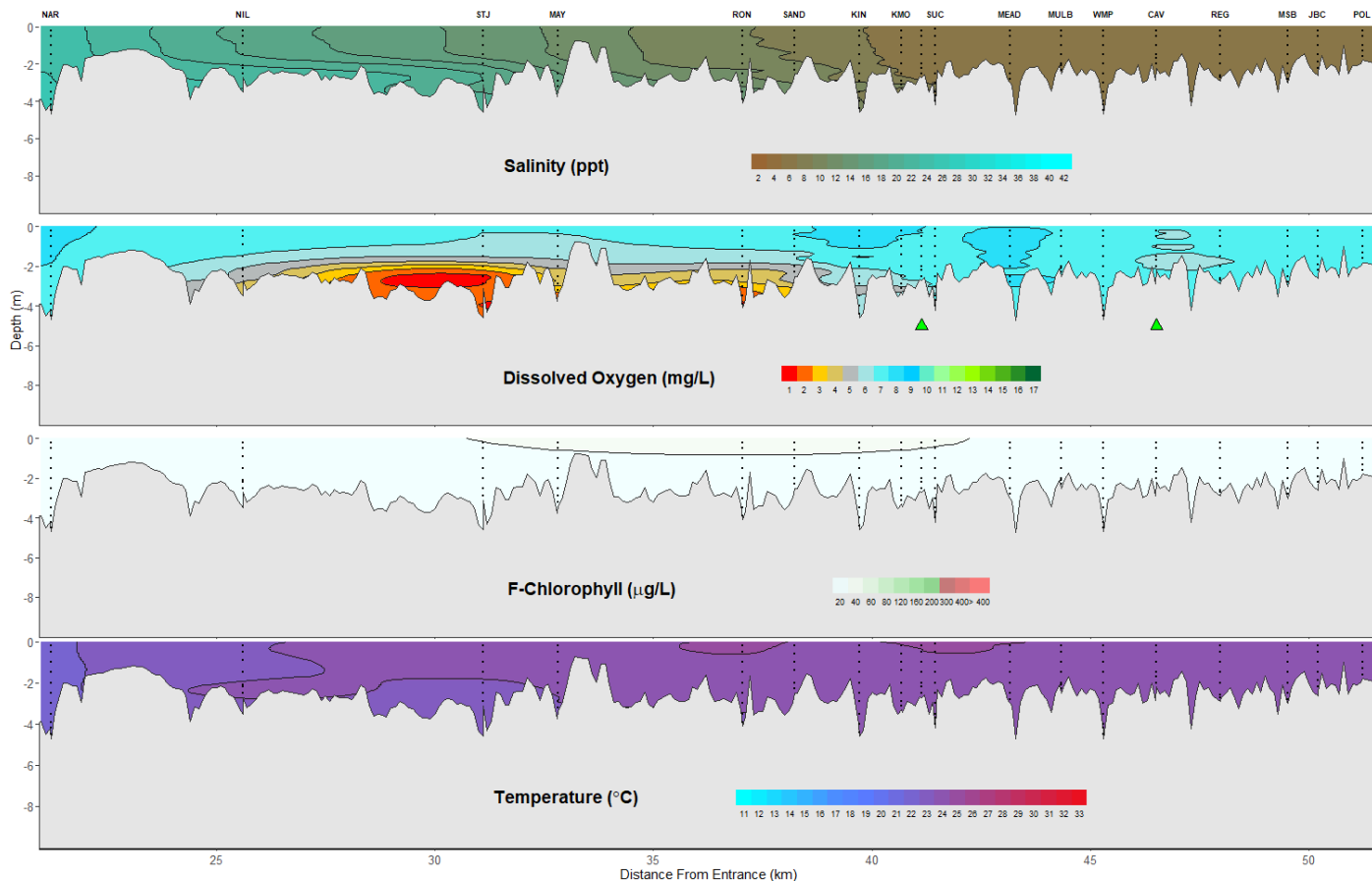
Prepared by

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

Swan Canning Estuary- Water Quality Profiles – 22 November 2021



Middle and Upper Swan Estuary- Water Quality Profiles – 22 November 2021



Date: 22 November 2021

Weather & tide conditions: Conditions were overcast with a moderate easterly breeze of up to 21 knots. The predicted tide at Barrack St was 0.55 m at 9:48 am (low tide). Perth recorded 6.8 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 (FP1 to NAR): The Lower Swan Canning Estuary was saline from FP7 to HEA and brackish at NAR. Waters were oxygenated or well oxygenated except bottom waters at ARM and HEA which were low in oxygen. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 19 to 21.8 °C.

NB: FP1 could not be sampled due to unfavourable weather conditions.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish, 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 low throughout this zone. Water temperature ranged from 22.6 to 24.1 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish, waters were oxygenated or well oxygenated and chlorophyll fluorescence was highest at KIN indicating higher microalgal activity in this area. Water temperature ranged from 23.2 to 24.2 °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 >6 mg/L, oxygenated >4-6 mg/L, low oxygen >2-4 mg/L, hypoxic 0.5-2 mg/L, anoxic <0.5 mg/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 22 November 2021*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)