

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

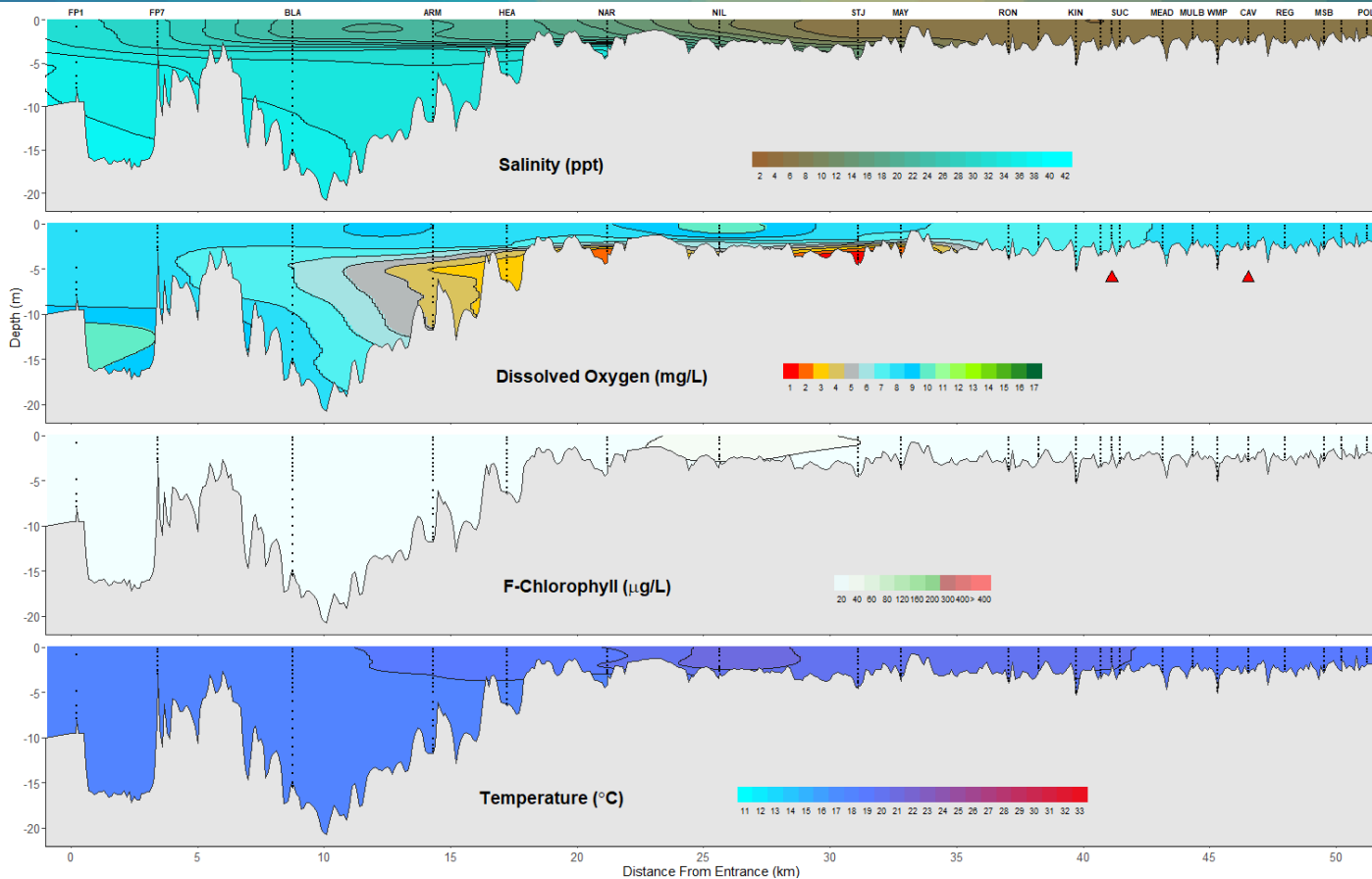
Lower Swan Canning Estuary to Upper Swan Estuary

11 October 2021

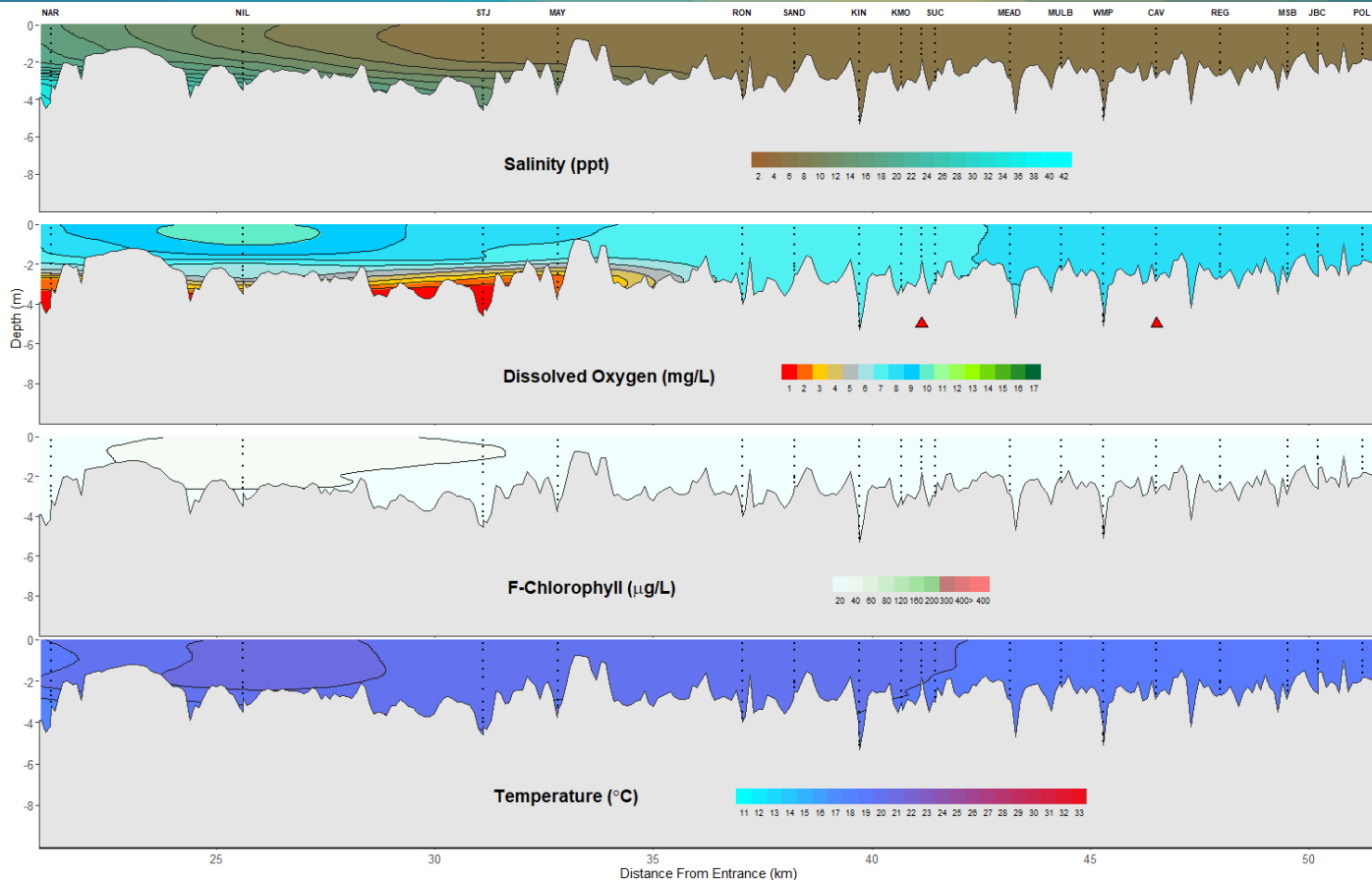
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Swan Canning Estuary- Water Quality Profiles – 11 October 2021



Middle and Upper Swan Estuary- Water Quality Profiles – 11 October 2021



Date: 11 October 2021

Weather & tide conditions: Conditions were overcast with a westerly breeze up to 10 knots. The predicted tides at Barrack St were 1.06 m at 1:19 am (high tide) and 0.53 m at 1:15 pm (low tide). Perth recorded 4.6 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were not operational during the 24 hours prior to sampling.

Lower Swan Canning Estuary (FP1 to NAR): The Lower Swan Canning Estuary was saline from FP1 to FP7 and brackish over saline between BLA to NAR. Surface waters were well oxygenated, and bottom waters were low in oxygen between ARM and HEA and hypoxic at NAR. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 17.5 to 19.1 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish between NIL and STJ, fresh over brackish at MAY and fresh at RON. Surface waters were well oxygenated and bottom waters were hypoxic at MAY and anoxic at STJ. Chlorophyll fluorescence was highest at NIL indicating higher microalgal activity in this area. Water temperature ranged from 18.9 to 20.4 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was fresh between SAND and VIT, fresh over brackish at SUC and brackish from MEAD to POL. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 17.9 to 19.6 °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 11 October 2021*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)