

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

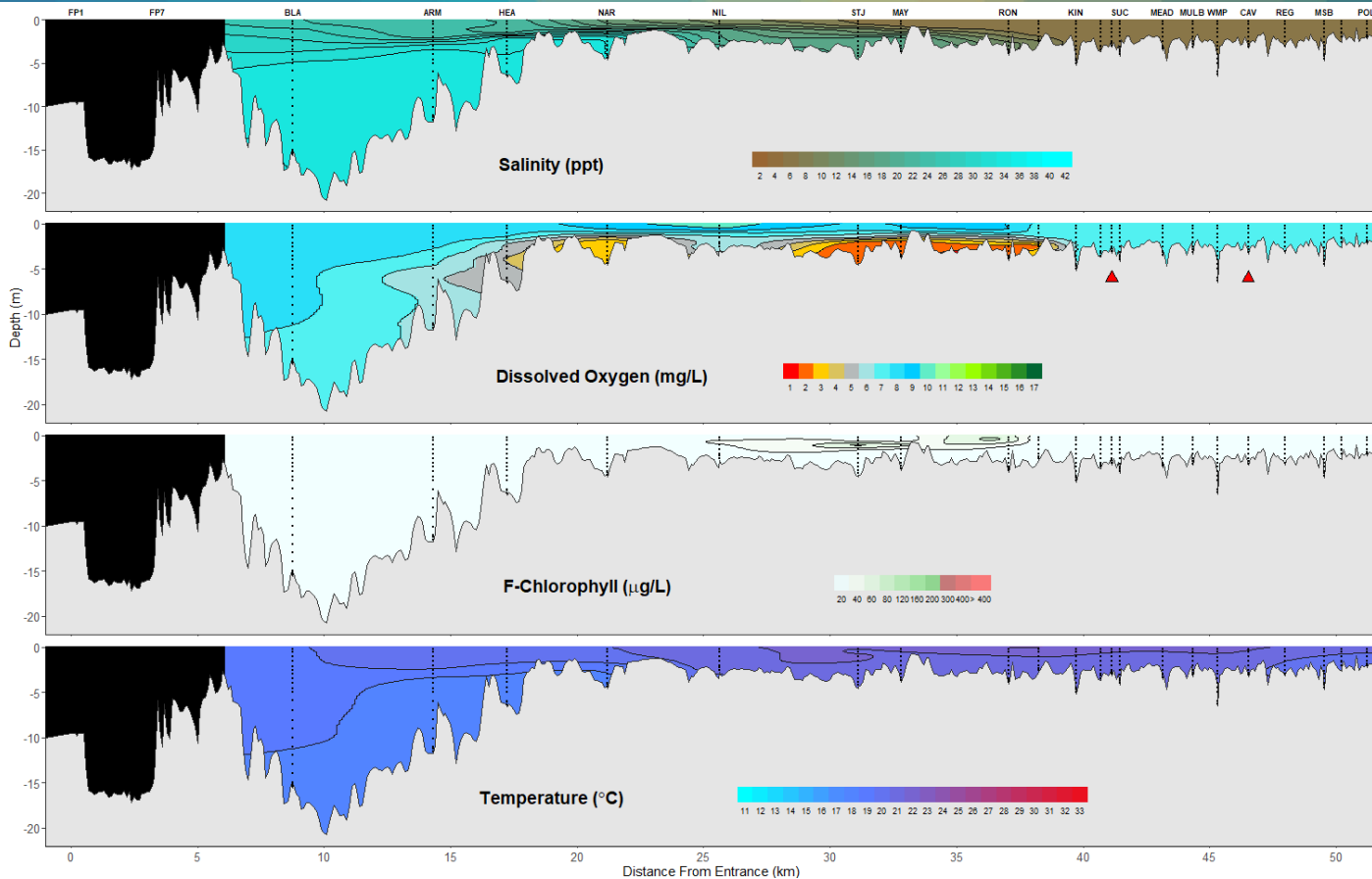
Lower Swan Canning Estuary to Upper Swan Estuary

18 October 2021

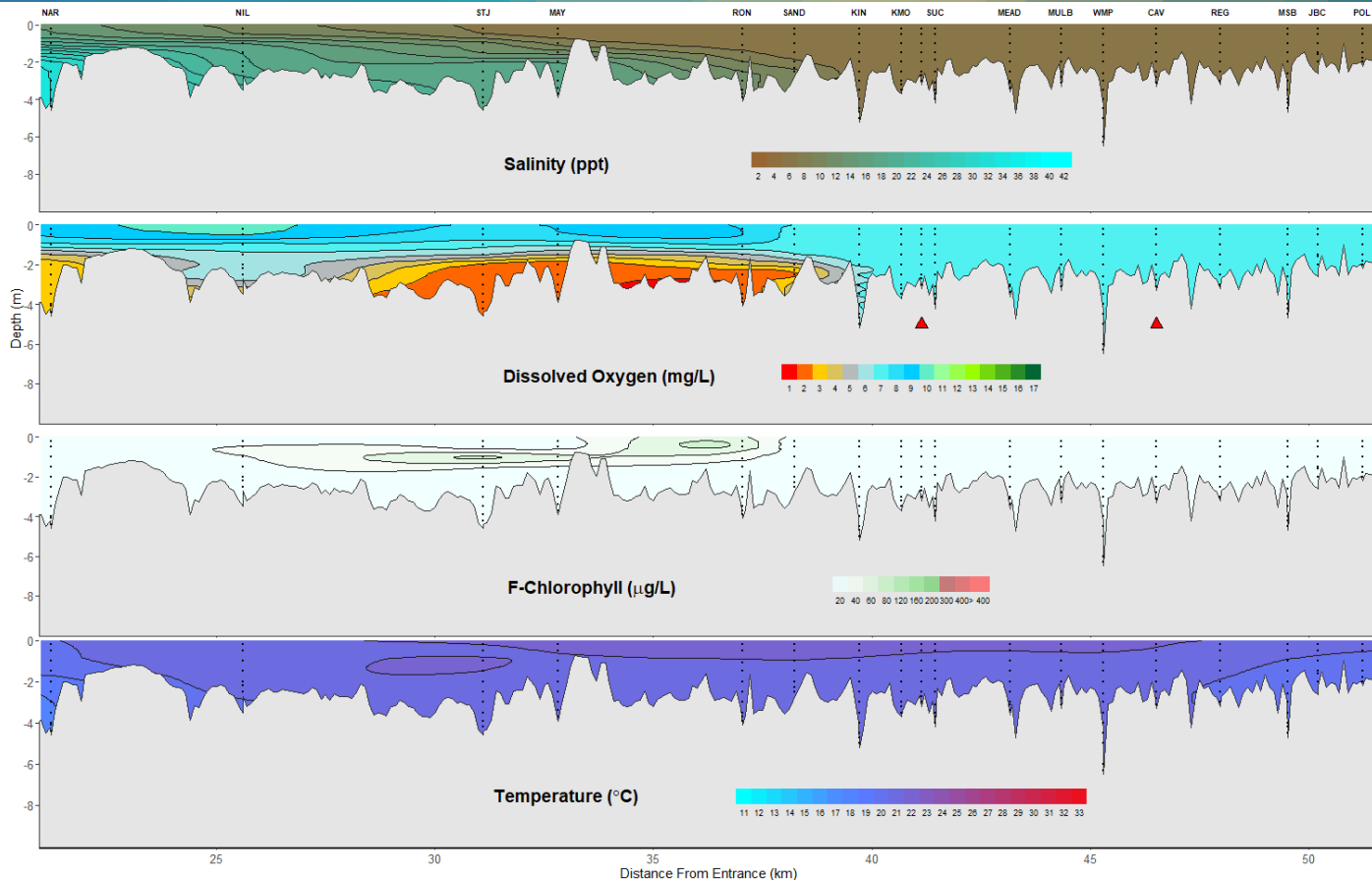
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Swan Canning Estuary- Water Quality Profiles – 18 October 2021



Middle and Upper Swan Estuary- Water Quality Profiles – 18 October 2021



Date: 18 October 2021

Weather & tide conditions: Conditions were clear with a northerly breeze up to 8 knots. The predicted tides at Barrack St were 0.73 m at 4:16 am (low tide), 0.86 m at 10:20 pm (high tide) and 0.70 m at 4:33 pm (second low tide). Perth recorded 6.2 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 (BLA to NAR): The Lower Swan Canning Estuary was brackish over saline. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen at NAR. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 17.5 to 19.9 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish between NIL and MAY, fresh over brackish at RON. Surface waters were well oxygenated throughout, bottom waters were hypoxic between STJ and RON. Chlorophyll fluorescence was highest at STJ indicating higher microalgal activity in this area. Water temperature ranged from 20.2 to 21.9 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was fresh over brackish from SAND to KIN and at SUC, MSB and JBC, fresh at VIT and was brackish at the remaining sites. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 19.6 to 22.1 °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 18 October 2021*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)