

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

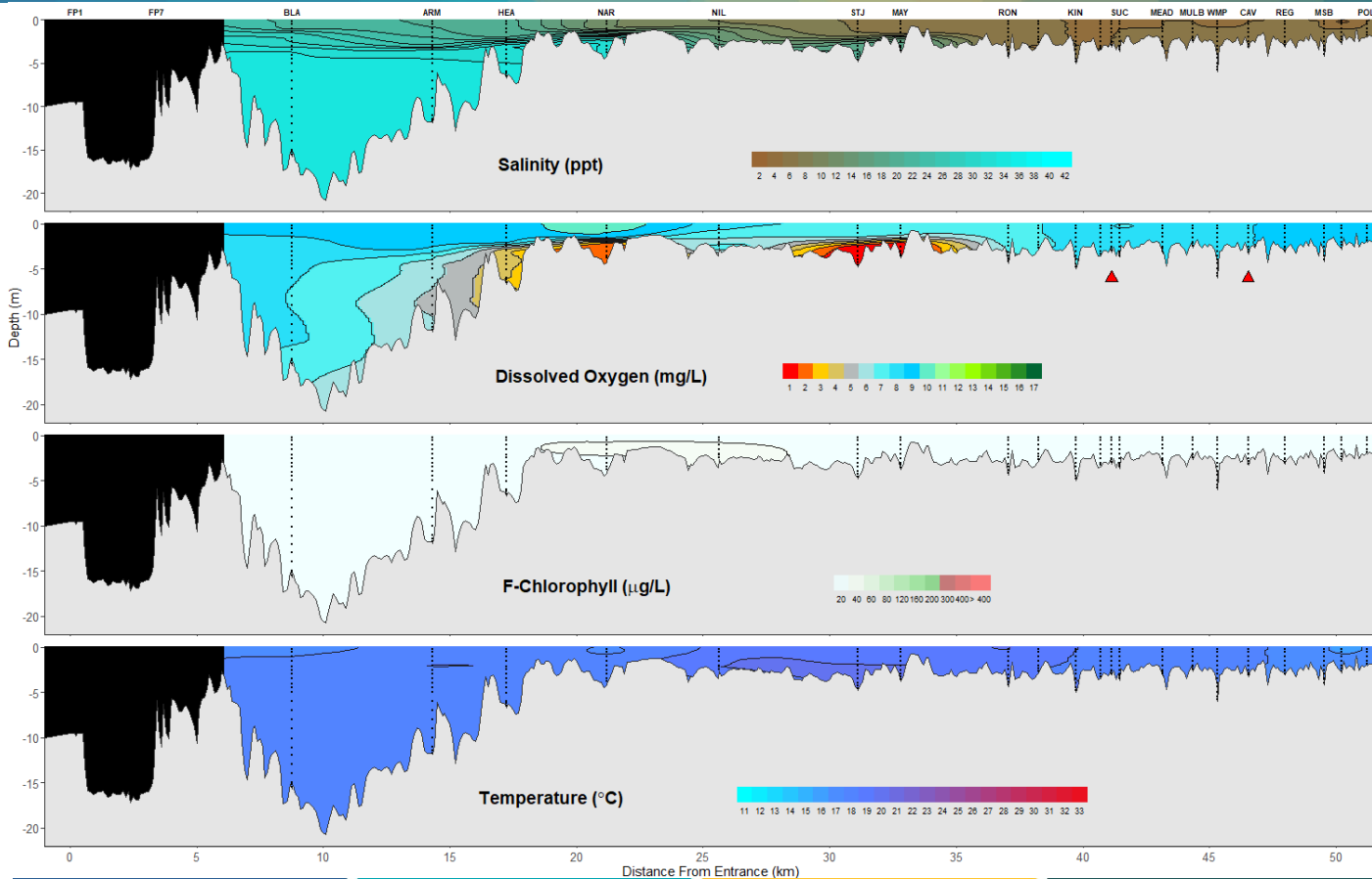
Lower Swan Canning Estuary to Upper Swan Estuary

4 October 2021

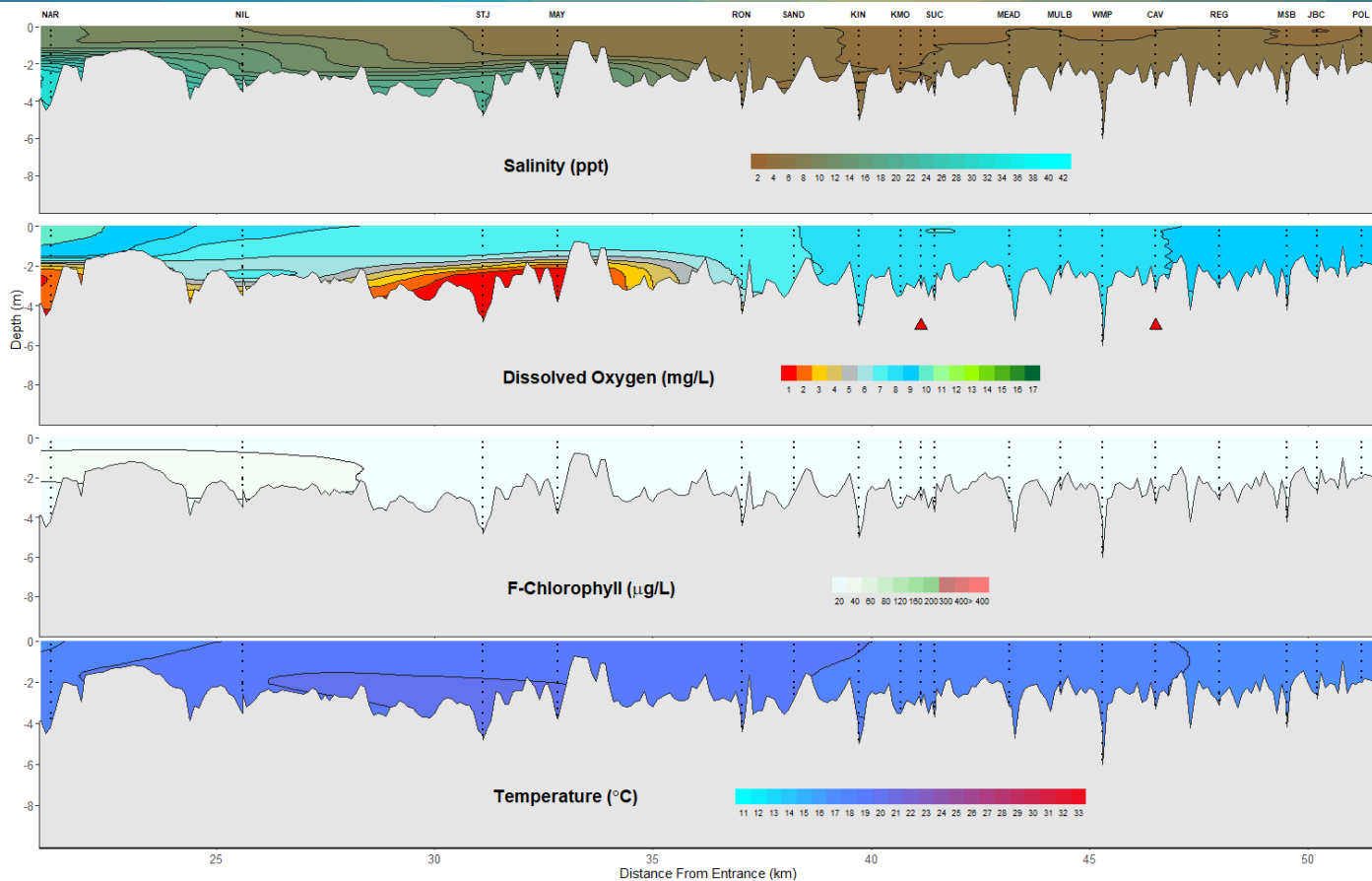
Prepared by

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

Swan Canning Estuary- Water Quality Profiles – 4 October 2021



Middle and Upper Swan Estuary- Water Quality Profiles – 4 October 2021



Date: 4 October 2021

Weather & tide conditions: Conditions were overcast with a moderate breeze up to 10 knots. The predicted tides at Barrack St were 0.98 m at 09:47 am (high tide) and 0.67 m at 17:42 pm (low tide). Perth recorded 36.2 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 from BLA to NAR. Surface waters were well oxygenated throughout, and bottom waters were low in oxygen at HEA and hypoxic at NAR. Chlorophyll fluorescence was highest at NAR indicating higher microalgal activity in this area. Water temperature ranged from 16.9 to 18.0 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish with the exception of RON which was fresh over brackish. Surface waters were well oxygenated and bottom waters were anoxic between STJ and MAY. Chlorophyll fluorescence was highest at NIL indicating higher microalgal activity in this area. Water temperature ranged from 18.2 to 19.2 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was fresh and waters were well oxygenated. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 15.1 to 18.7 °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 4 October 2021*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)