

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

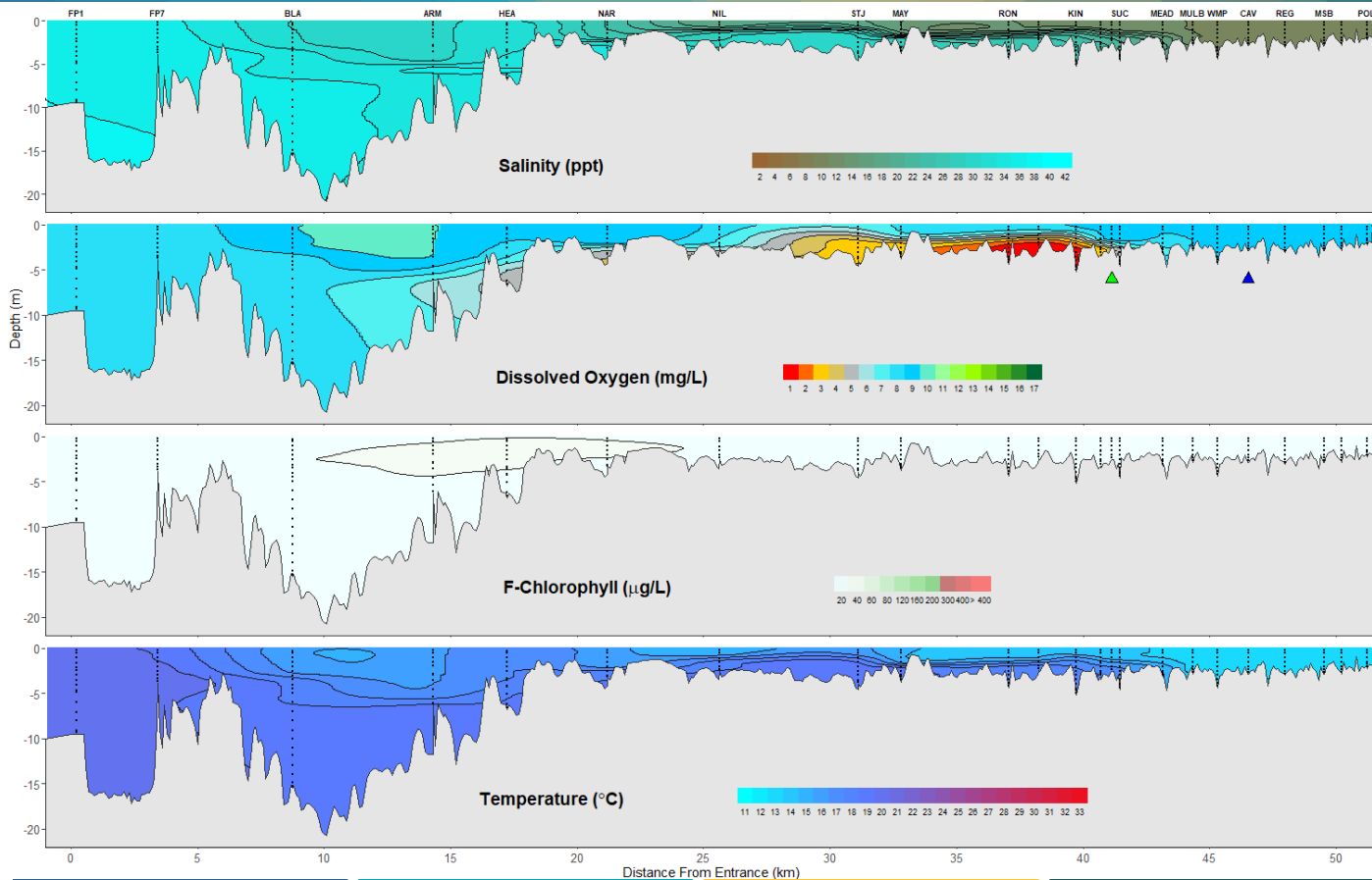
Lower Swan Canning Estuary to Upper Swan Estuary

8th June 2021

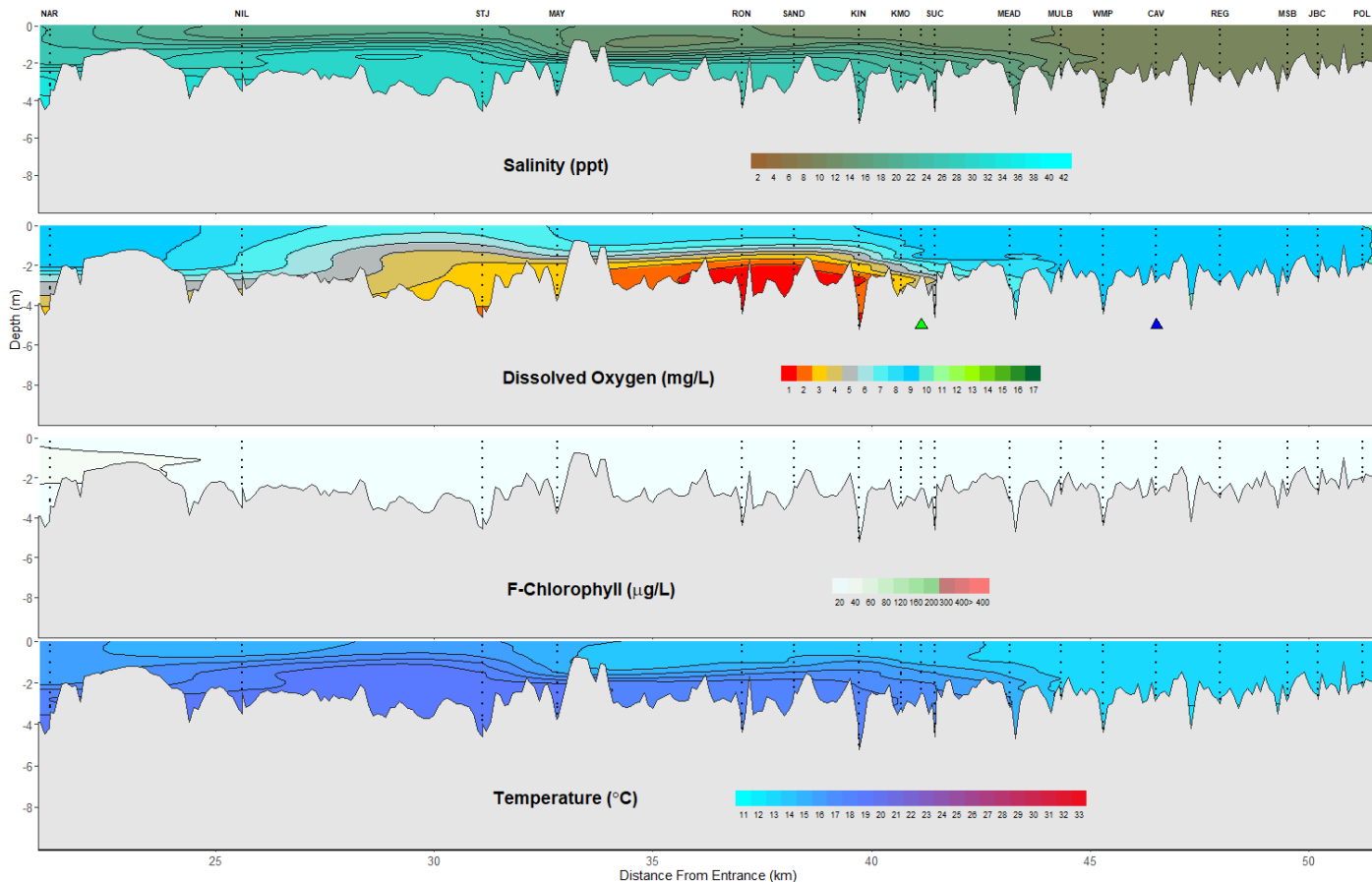
Prepared by

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

Swan Canning Estuary- Water Quality Profiles- 8th June 2021



Middle and Upper Swan Estuary- Water Quality Profiles- 8th June 2021



Date: 8th June 2021

Weather & tide conditions: Conditions were overcast with an easterly breeze of up to 15 knots. The predicted tides at Barrack St were 1.26 m at 9:45 am (high tide) and 0.82 m at 8:08 pm (low tide). Perth recorded 14.2 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 operational but not triggered to provide oxygen during the 24 hours prior to sampling.

Lower Swan Canning Estuary (FPI to NAR): The Lower Swan Canning Estuary was saline except at NAR which was brackish over saline. Waters were oxygenated or well oxygenated. Chlorophyll fluorescence was highest at NAR indicating higher microalgal activity in that area. Water temperature ranged from 15.2 to 19.8 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish over saline. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen from STJ to MAY and hypoxic at RON. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 13.8 to 18.2 °C.

Upper Swan Estuary (SANDBR to POL): The Upper Swan Estuary was brackish. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen at KMO and hypoxic between SANDBR and KIN. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 12.3 to 17.6 °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 8th June 2021*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)