

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

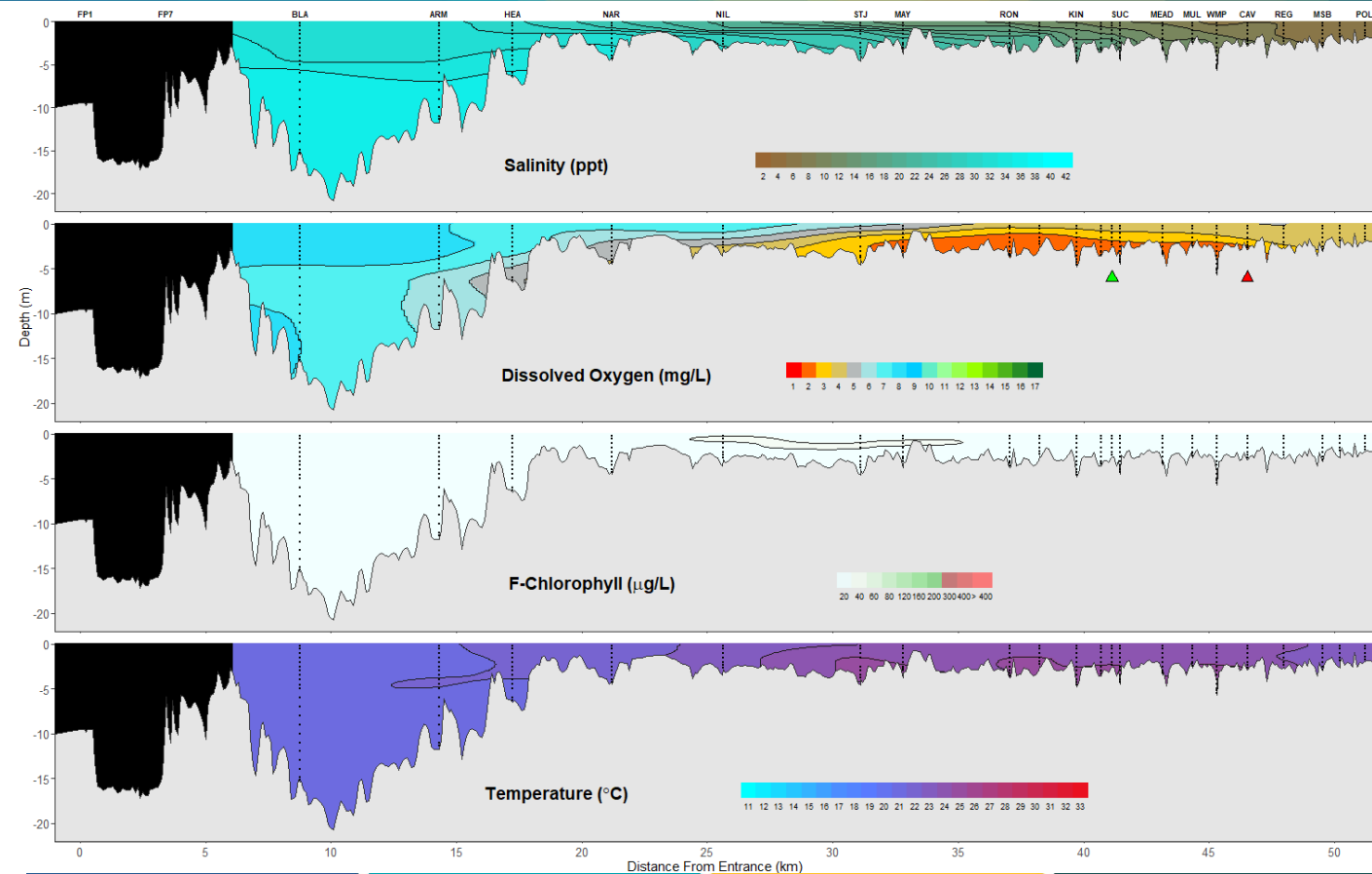
Lower Swan Canning Estuary to Upper Swan Estuary

2nd November 2020

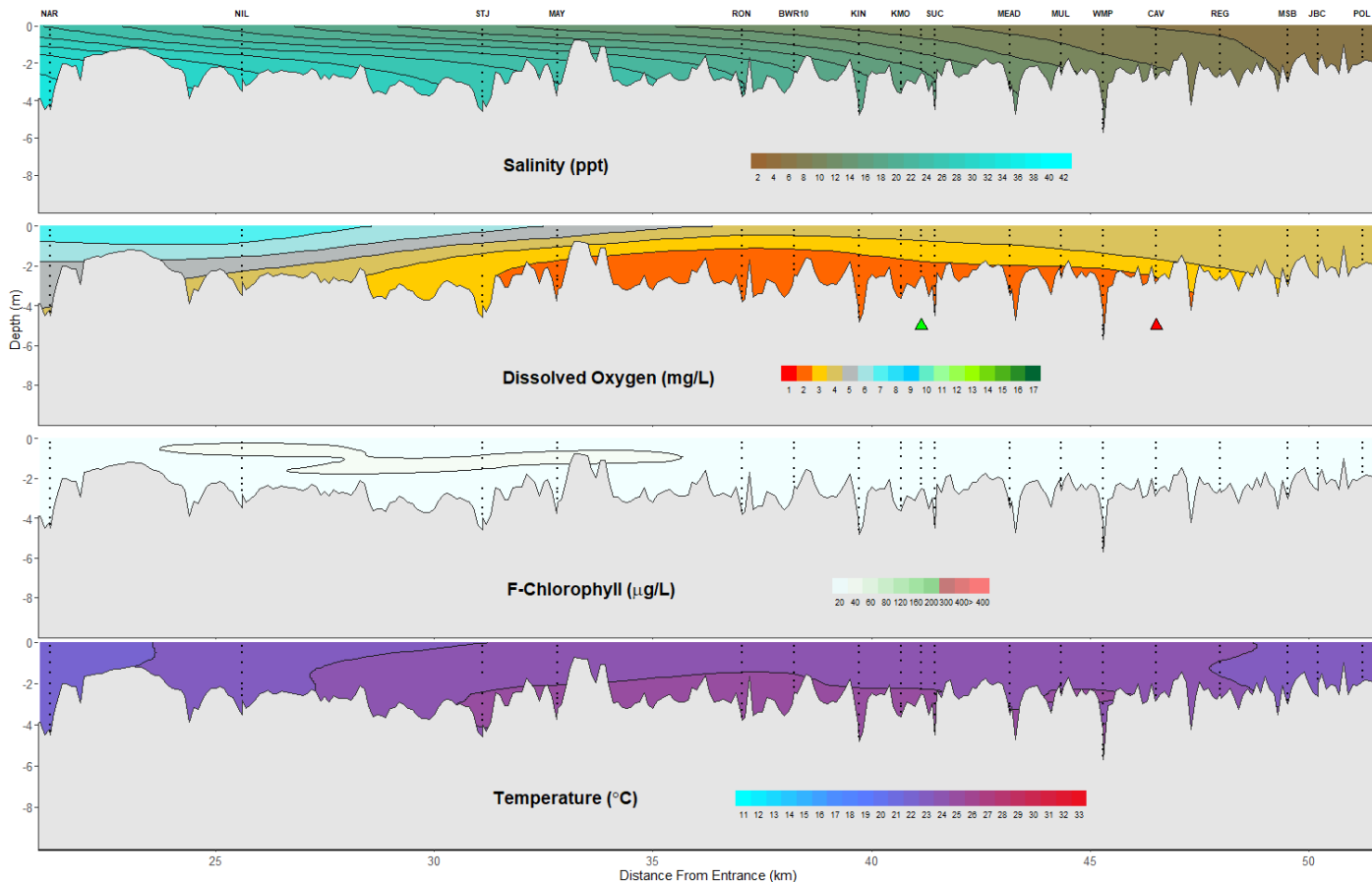
Prepared by

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

Swan Canning Estuary- Water Quality Profiles- 2nd November 2020



Middle and Upper Swan Estuary- Water Quality Profiles- 2nd November 2020



Date: 2nd November 2020

Weather & tide conditions: Conditions were overcast with a predominantly northerly breeze of up to 7 knots. The predicted tides at Barrack St were 0.52 m at 5:19 am (low tide), 0.68 m at 12:22 pm (high tide) and 0.67 m at 2:27 pm (second low tide). Perth recorded 20.6 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 not operational during the 24 hours prior to sampling.

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was saline, surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen between HEA and NAR. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 20.2 to 21.8 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish over saline between NIL and STJ and brackish from MAY to RON. Surface waters were well oxygenated between NIL and MAY and low in oxygen at RON. Bottom waters were low in oxygen between NIL and STJ and hypoxic from MAY to RON. Chlorophyll fluorescence was highest at MAY indicating higher microalgal activity in that area. Water temperature ranged from 22.3 to 24.1 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish. Surface waters were low in oxygen except at KMO and REG which were oxygenated and bottom waters were hypoxic between BWR10 and CAV. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 22.2 to 24.3 °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 2020. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 2nd November 2020*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)