



Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

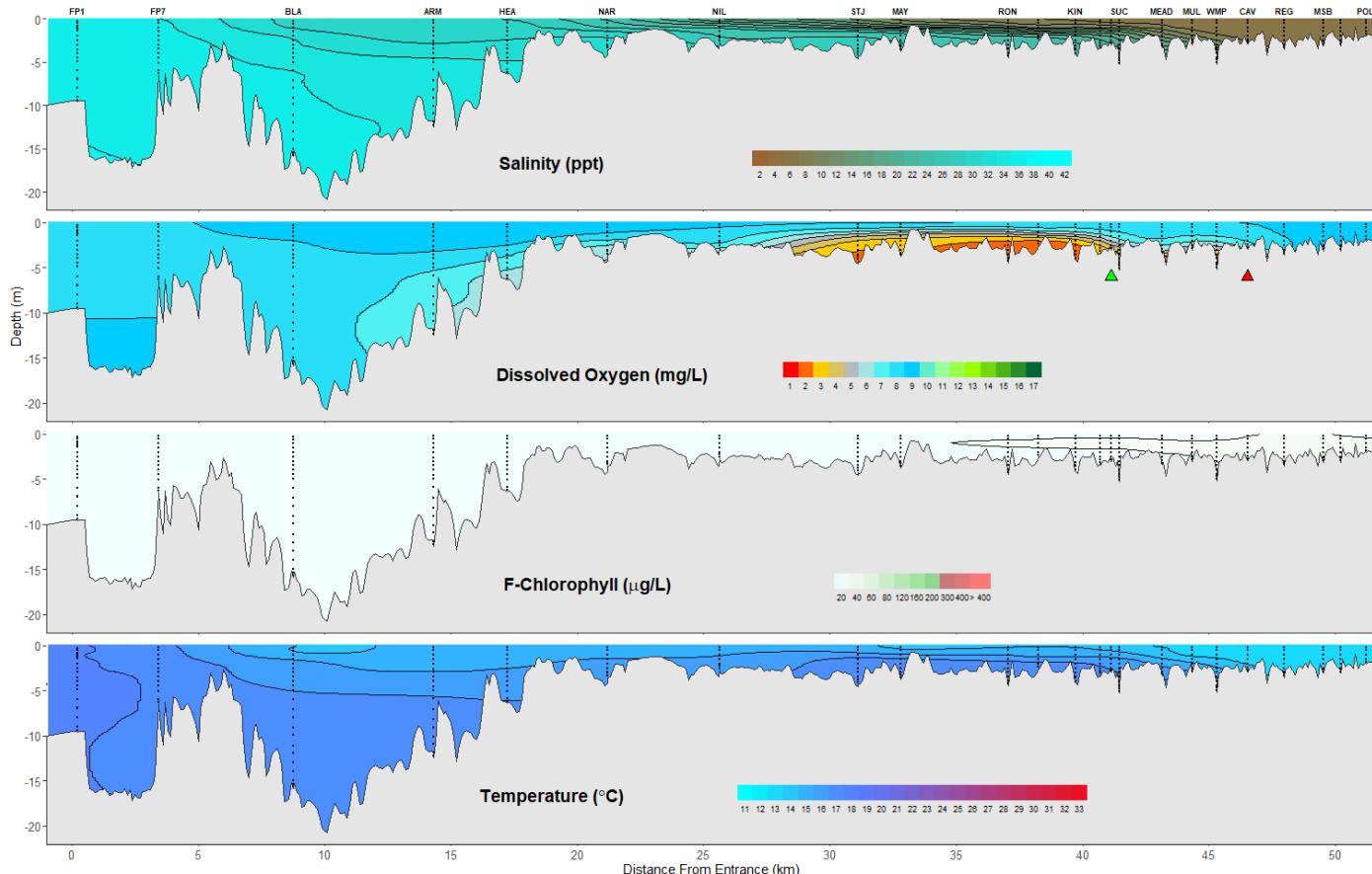
Lower Swan Canning Estuary to Upper Swan Estuary

20th July 2020

Prepared by

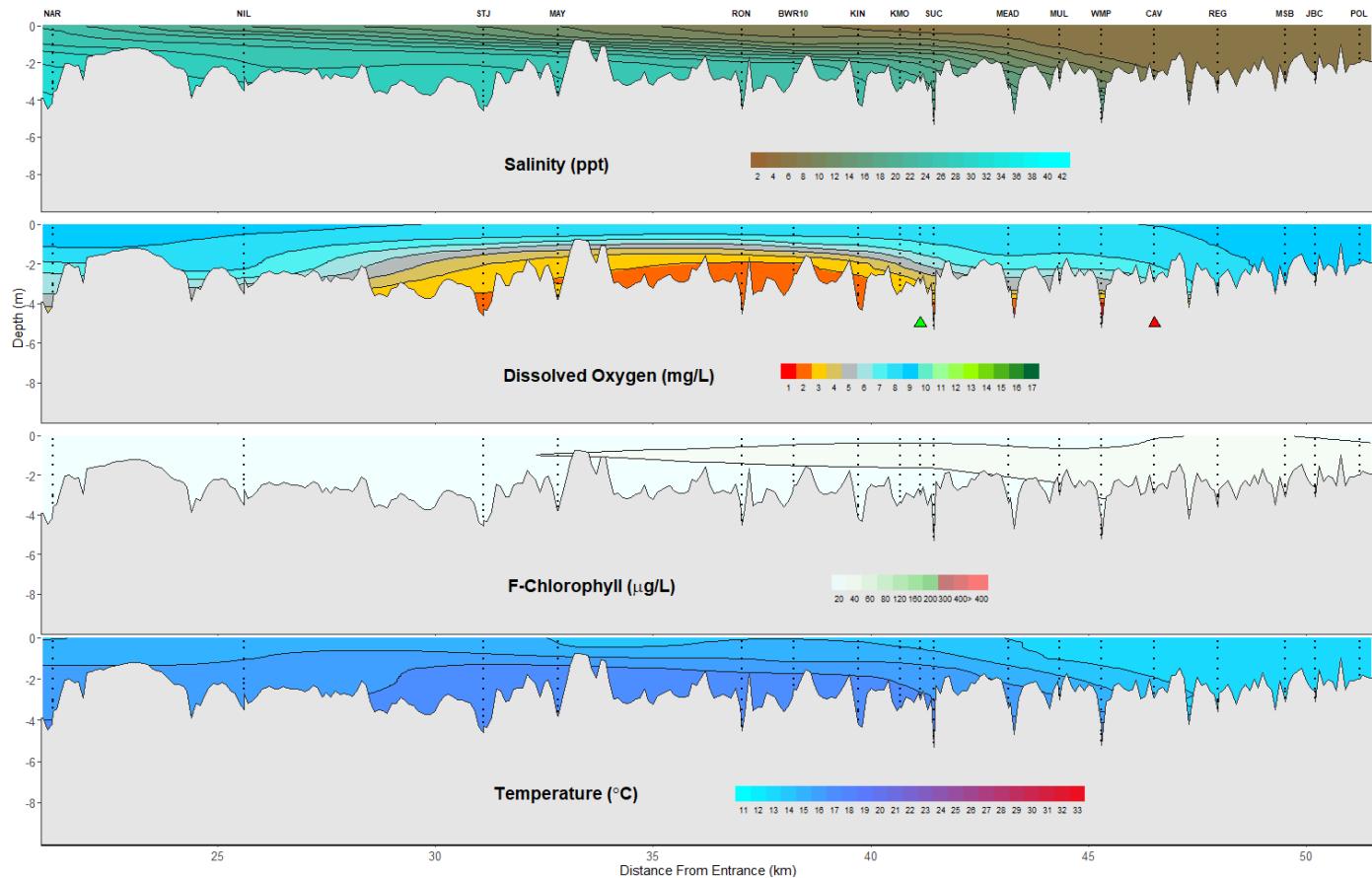
Rivers and Estuaries Science
Biodiversity and Conservation Science
Department of Biodiversity, Conservation and Attractions

Swan Canning Estuary- Water Quality Profiles- 20th July 2020





Middle and Upper Swan Estuary- Water Quality Profiles- 20th July 2020





Date: 20th July 2020

Weather & tide conditions: Conditions were overcast with a predominantly easterly breeze of up to 8 knots. The predicted tides at Barrack St were 1.24 m at 10:39 am (high tide) and 0.63 m at 9:16 pm (low tide). Perth recorded 42.8 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 except at NAR which was brackish over saline. Waters were well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 13.9 to 17.7 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish over saline between NIL and STJ and brackish at RON. Surface waters were oxygenated or well oxygenated and bottom waters were hypoxic at STJ and RON. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 13.9 to 16.5 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish except between VIT and SUC and from WMP to CAV were it was fresh over brackish. Surface waters well oxygenated and bottom waters were hypoxic from BWR10 to KIN and at SUC and anoxic at WMP. Chlorophyll fluorescence was highest at KMO indicating higher microalgal activity in this area. Water temperature ranged from 12.1 to 16.5 °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 20th July 2020. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)