



Department of Biodiversity,  
Conservation and Attractions



Biodiversity and  
Conservation Science

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# Swan Canning Estuary Water Quality Monitoring Project

## Weekly Water Quality Report

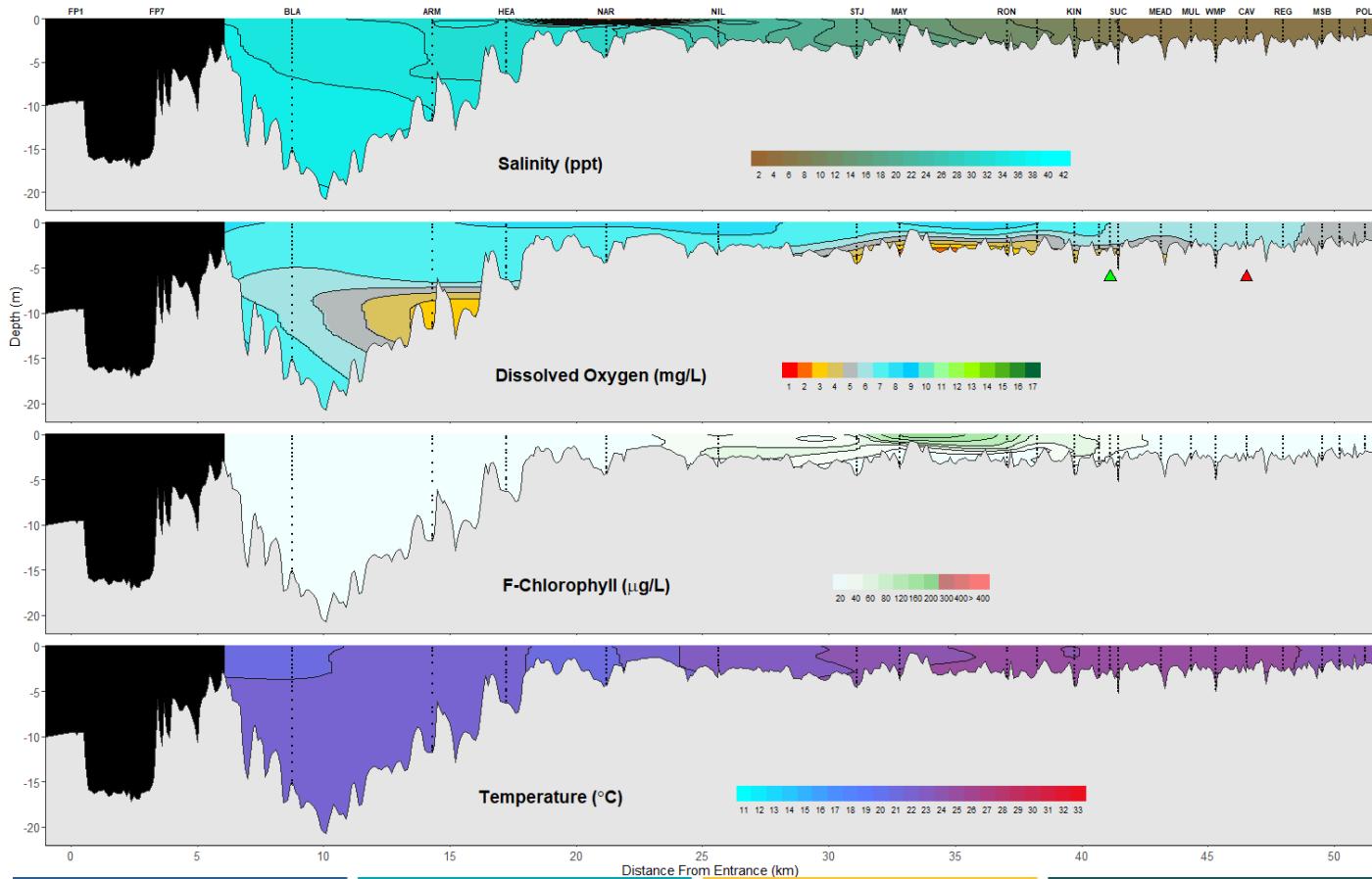
### Lower Swan Canning Estuary to Upper Swan Estuary

30<sup>th</sup> November 2020

Prepared by

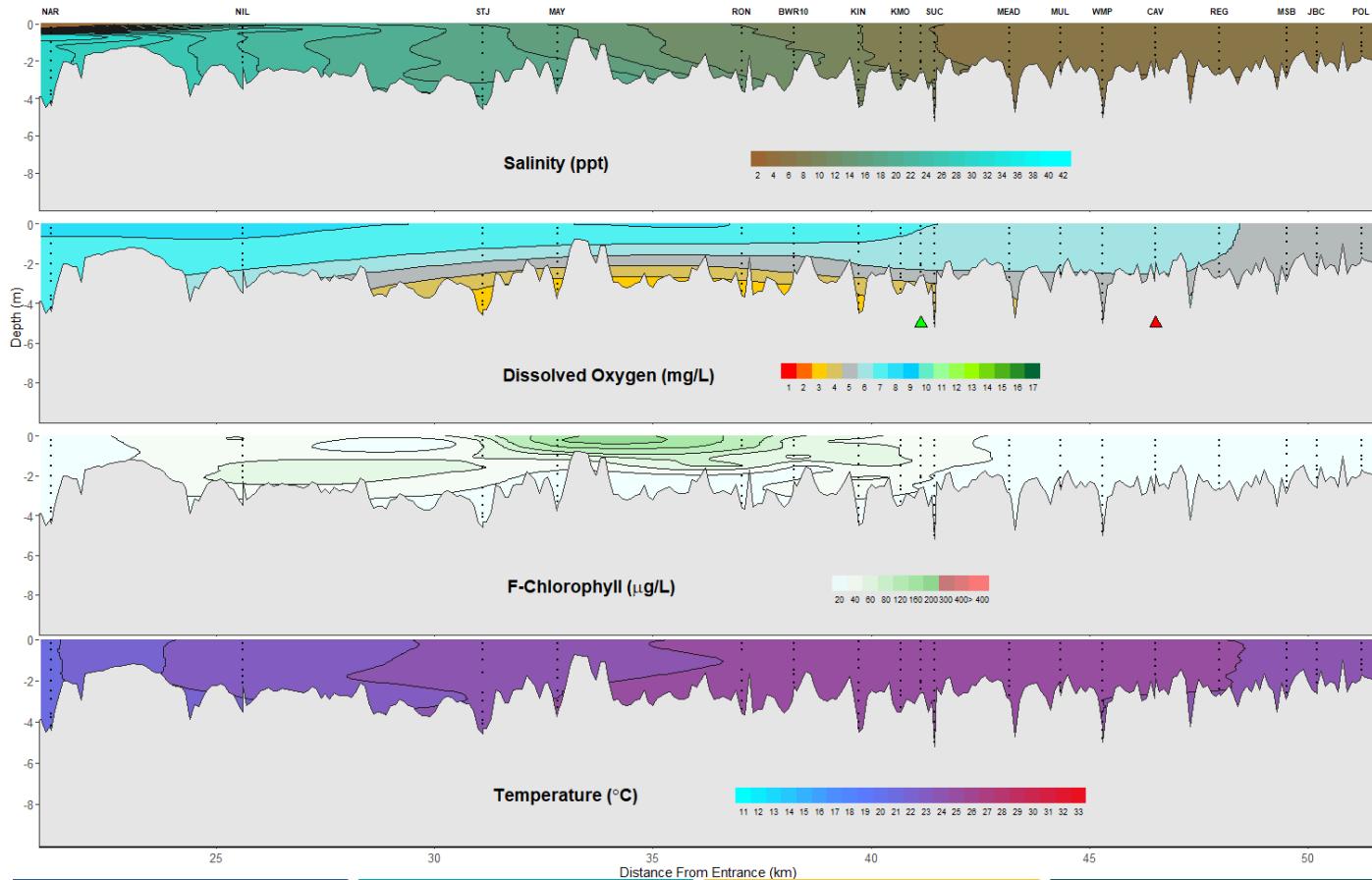
Rivers and Estuaries Science  
Biodiversity and Conservation Science  
Department of Biodiversity, Conservation and Attractions

## Swan Canning Estuary- Water Quality Profiles- 30<sup>th</sup> November 2020





## Middle and Upper Swan Estuary- Water Quality Profiles- 30<sup>th</sup> November 2020





Date: 30<sup>th</sup> November 2020

Weather & tide conditions: Conditions were overcast with predominantly westerly winds of up to 20 knots. The predicted tides at Barrack St were 0.53 m at 8:12 am (low tide) and 1.07 m at 10:40 pm (high tide). Perth recorded 8.4 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 from BLA to HEA and fresh over saline at NAR. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen at ARM. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 20.8 to 21.6 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen at STJ and hypoxic from MAY to RON. Chlorophyll fluorescence was elevated between NIL and RON indicating higher microalgal activity in that area. Water temperature ranged from 22.6 to 24.6 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish between BWR10 and SUC, fresh over brackish at MEAD and fresh from MULB to POL. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen from BWR10 to KIN and at SUC. Chlorophyll fluorescence was highest at KIN indicating higher microalgal activity in that area. Water temperature ranged from 23.4 to 24.9 °C.

**NB:** Profile plots are visual interpolations of measured parameters only. Detailed data are available at [wir.water.wa.gov.au](http://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 30<sup>th</sup> November 2020. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)