



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

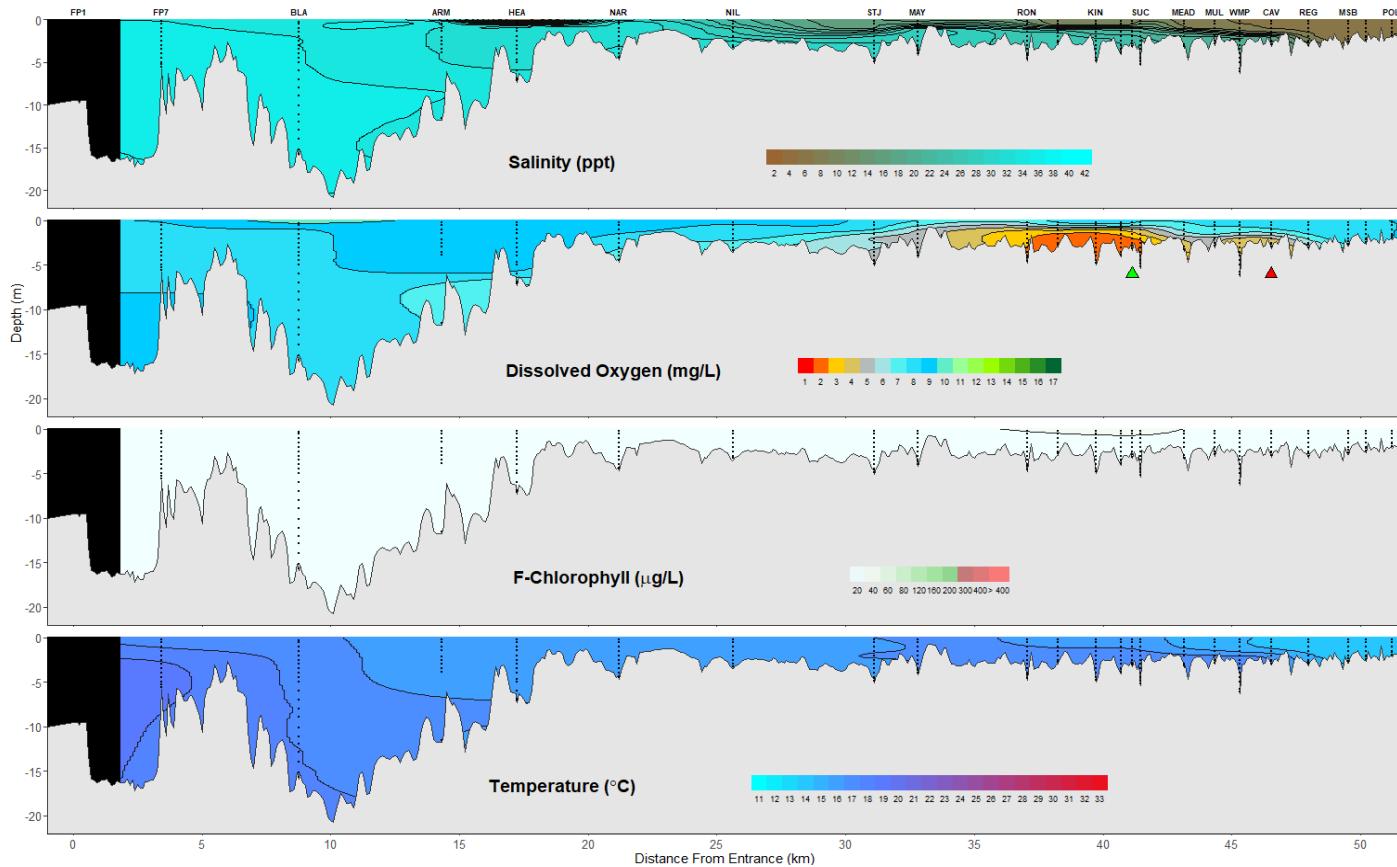
### Lower to Upper Swan Estuary

6<sup>th</sup> July 2020

Prepared by

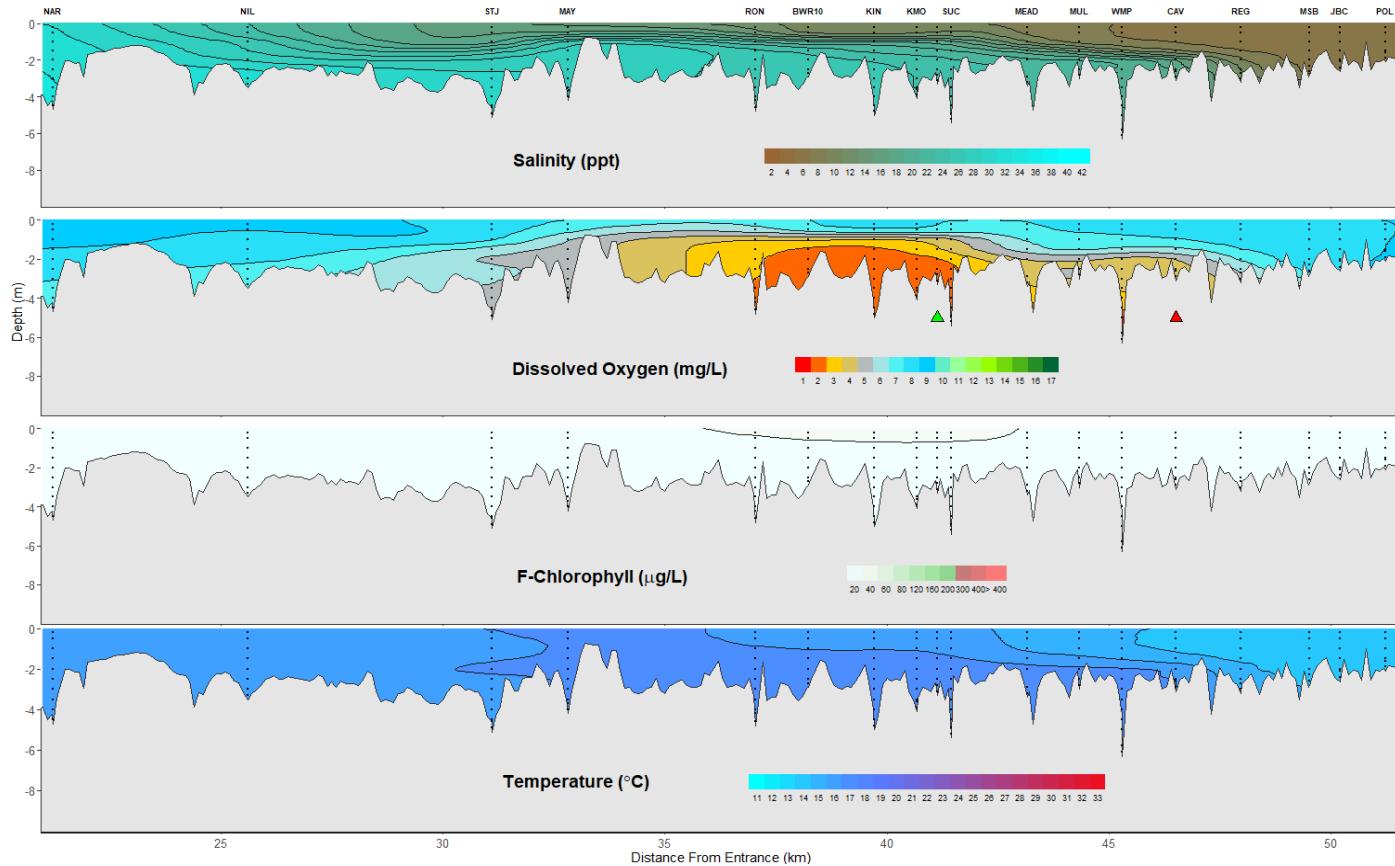
Rivers and Estuaries Science  
Biodiversity and Conservation Science  
Department of Biodiversity, Conservation and Attractions

## Swan Canning Estuary- Water Quality Profiles- 6<sup>th</sup> July 2020





## Middle and Upper Swan Estuary- Water Quality Profiles- 6<sup>th</sup> July 2020





Date: 6<sup>th</sup> July 2020

Weather & tide conditions: Conditions were overcast with a predominantly westerly breeze of up to 14 knots. The predicted tides at Barrack St were 1.24 m at 11:27 am (high tide) and 0.66 m at 10:21 pm (low tide). Perth recorded 10.8 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 HEA which was brackish over saline. Waters were well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 15.2 to 18.3 °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 at RON. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 15.5 to 16.4 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish over saline at BWR10 and brackish from KIN to POL. Surface waters were oxygenated or well oxygenated and bottom waters were hypoxic from BWR10 to SUC and anoxic at WMP. Chlorophyll fluorescence was highest at VIT indicating higher microalgal activity in that area. Water temperature ranged from 13.5 to 17.0 °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 to Upper Swan Estuary 6<sup>th</sup> July 2020. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)