



Department of Biodiversity,  
Conservation and Attractions



Biodiversity and  
Conservation Science

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Western Australia.

# Swan Canning Estuary Water Quality Monitoring Project

## Weekly Water Quality Report

### Lower Swan Canning Estuary to Upper Swan Estuary

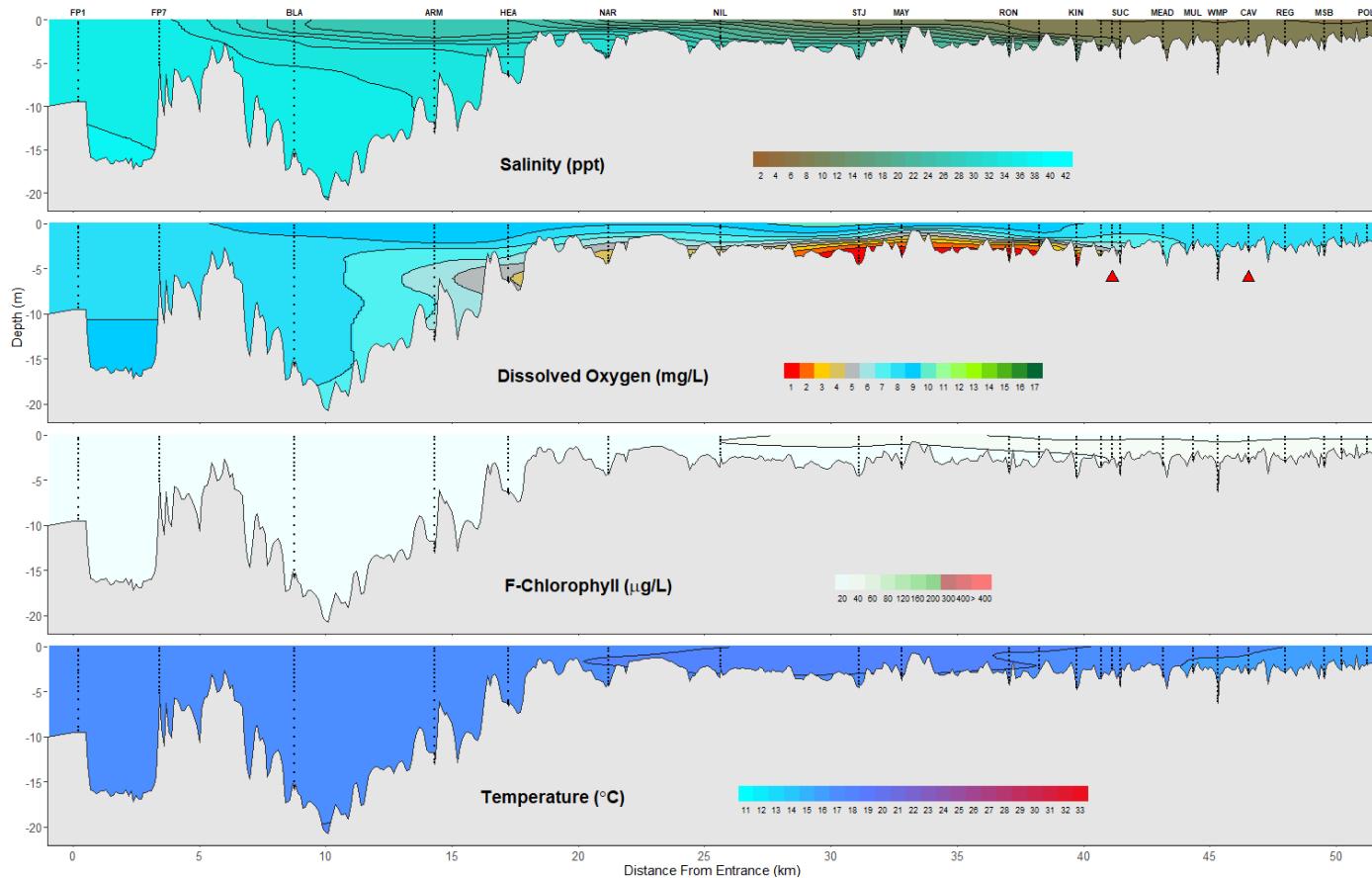
31<sup>st</sup> August 2020

Prepared by

Rivers and Estuaries Science  
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Department of Biodiversity, Conservation and Attractions

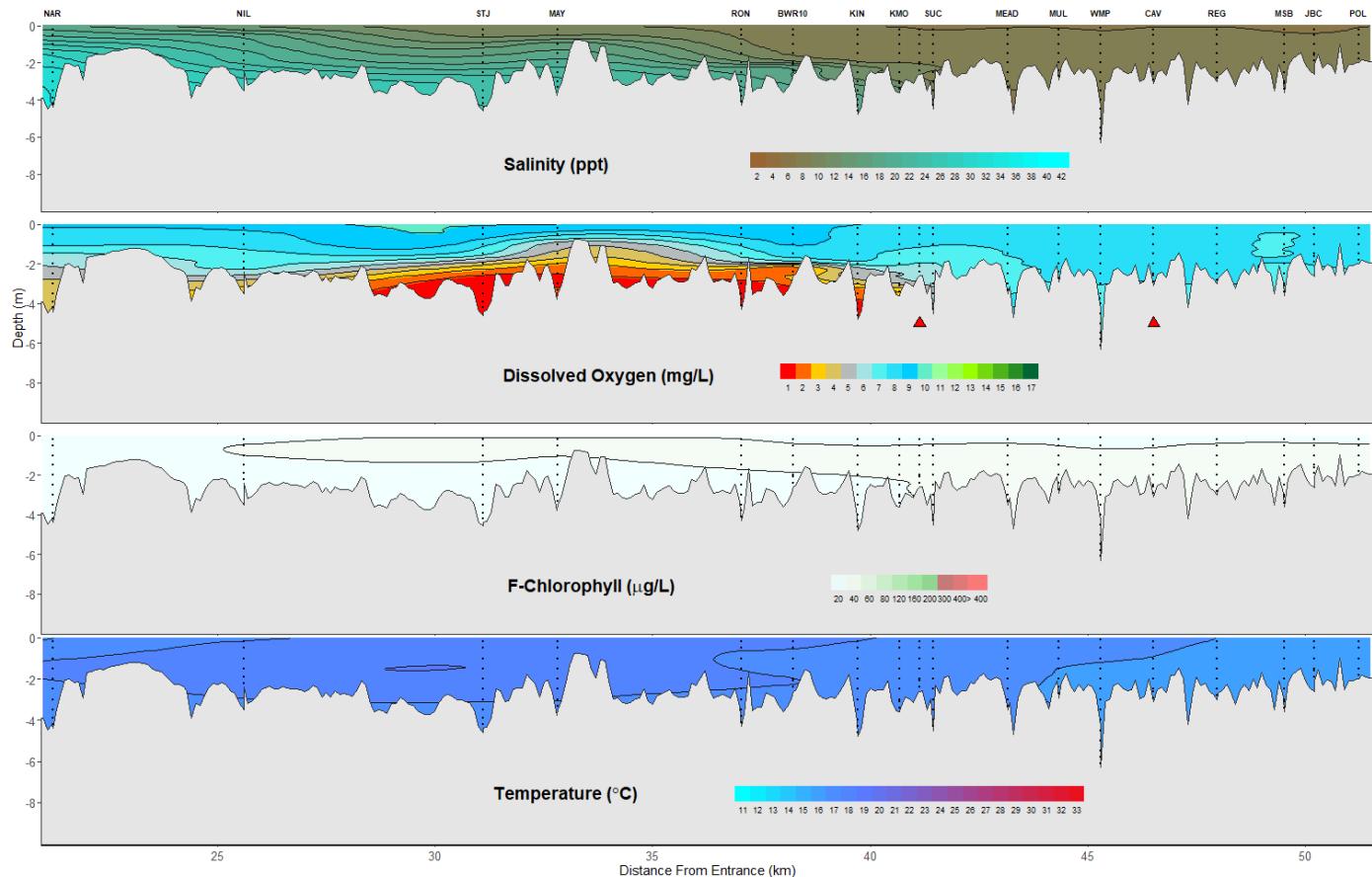


## Swan Canning Estuary- Water Quality Profiles- 31<sup>st</sup> August 2020





## Middle and Upper Swan Estuary- Water Quality Profiles- 31<sup>st</sup> August 2020





Date: 31<sup>st</sup> August 2020

Weather & tide conditions: Conditions were clear with a predominantly westerly breeze of up to 6 knots. The predicted tides at Barrack St were 1.04 m at 9:49 am (high tide) and 0.61 m at 7:45 pm (low tide). Perth recorded 2.8 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were not operational during the 24 hours prior to sampling.

Lower Swan Canning Estuary (FP1 to NAR): The Lower Swan Canning Estuary was saline from FP1 to ARM and brackish over saline between HEA and NAR. Waters were oxygenated or well oxygenated except for bottom waters at NAR being low in oxygen. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 16.0 to 17.3 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish from NIL to RON. Surface waters were well oxygenated and bottom waters were hypoxic at MAY, and anoxic at STJ and RON. Chlorophyll fluorescence was highest at RON indicating higher microalgal activity in this area. Water temperature ranged from 16.6 to 18.0 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish from BWR10 to POL. Surface waters were well oxygenated, bottom waters were hypoxic at BRW10, KMO and WMP and anoxic at KIN. Chlorophyll fluorescence was highest at MEAD, indicating higher microalgal activity in this area. Water temperature ranged from 15.3 to 17.4 °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 31<sup>st</sup> August 2020. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)