



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

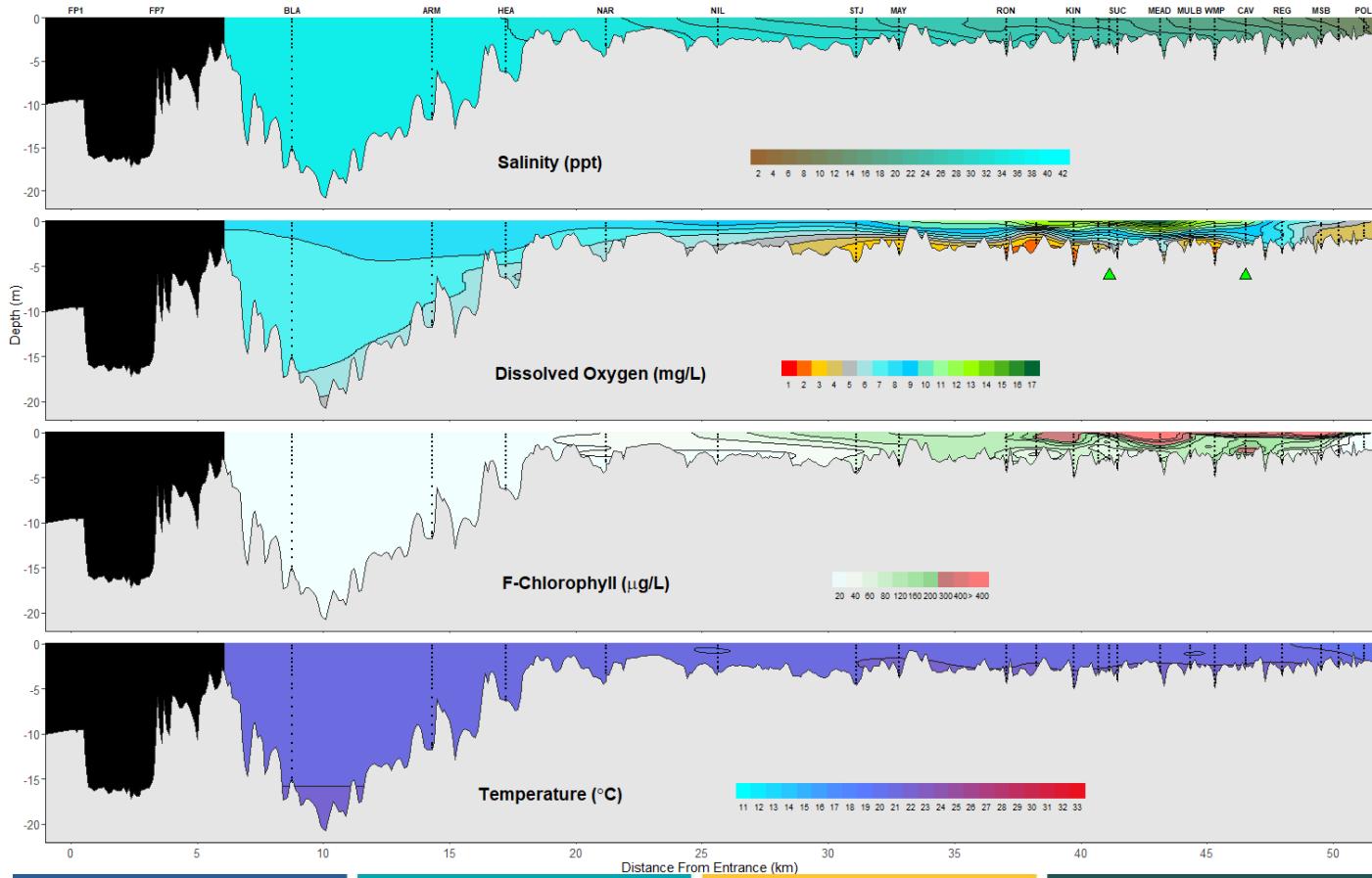
### Lower Swan Canning Estuary to Upper Swan Estuary

19<sup>th</sup> April 2021

Prepared by

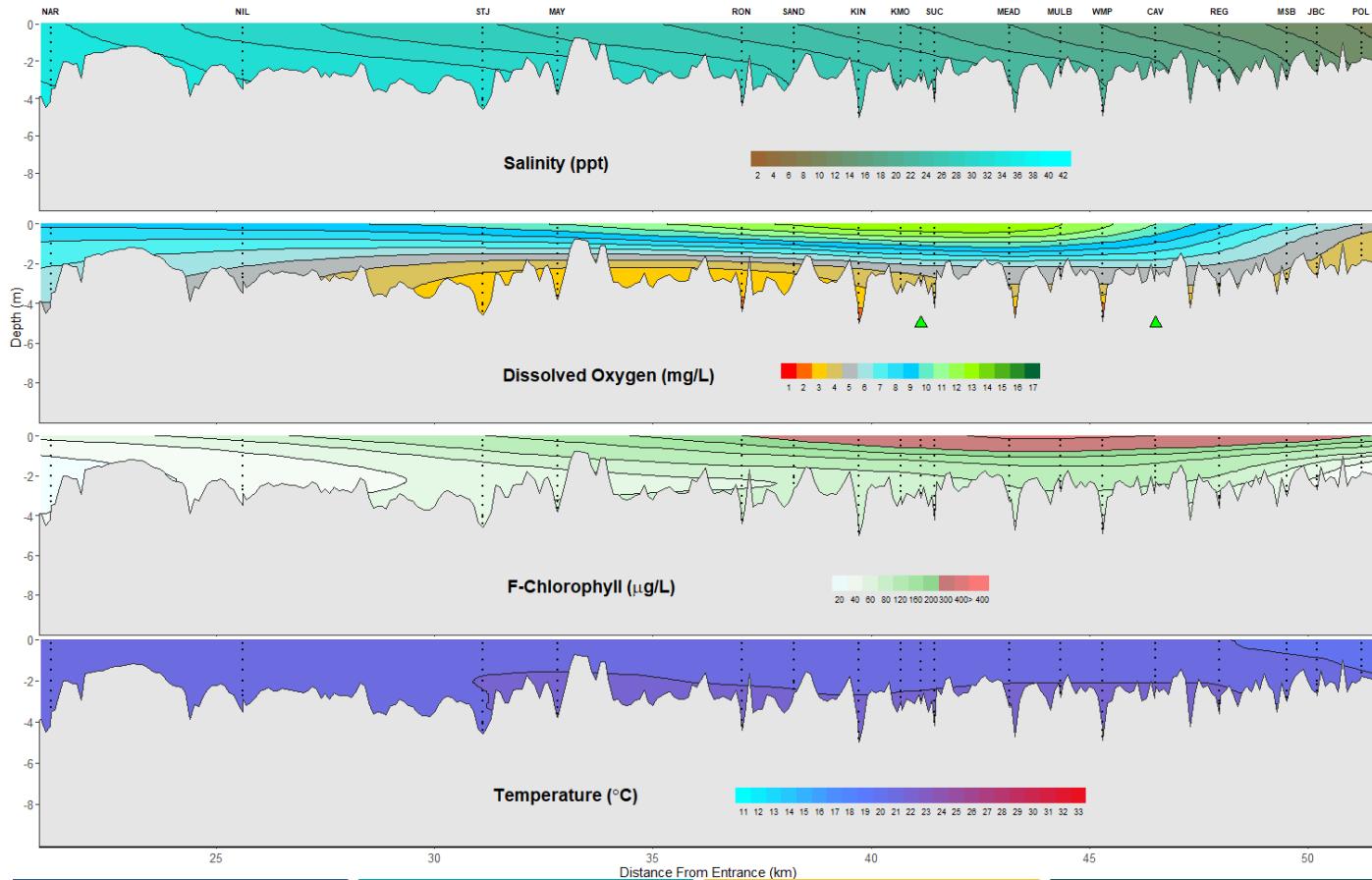
Rivers and Estuaries Science  
Biodiversity and Conservation Science  
Department of Biodiversity, Conservation and Attractions

## Swan Canning Estuary- Water Quality Profiles- 19th April 2021





## Middle and Upper Swan Estuary- Water Quality Profiles- 19<sup>th</sup> April 2021





Date: 19<sup>th</sup> April 2021

Weather & tide conditions: Conditions were overcast with a variable breeze of up to 8 knots. The predicted tides at Barrack St were 0.7 m at 2:31 am (low tide) and 1.17 m at 2:56 pm (high tide). Perth recorded 1.4 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were triggered to provide oxygen during the 24 hours prior to sampling.

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was saline, waters were oxygenated or well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 20.3 to 21.0 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline from NIL to MAY and brackish over saline at RON. Surface waters were oxygenated or well oxygenated. Bottom waters were low in oxygen from STJ to MAY and hypoxic at RON. Chlorophyll fluorescence was elevated between STJ and RON indicating higher microalgal activity in that area. Water temperature ranged from 19.8 to 21.4 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish over saline at SAND and brackish from KIN to POL. Surface waters were oxygenated or well oxygenated except at POL which was low in oxygen. Bottom waters were low in oxygen at KMO, MULB and from REG to POL and hypoxic from SAND to KIN and at WMP. Chlorophyll fluorescence was elevated throughout the Upper Swan Estuary (with maximum concentrations at MEAD) indicating higher microalgal activity in this zone. Water temperature ranged from 19.5 to 21.2 °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 2021. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 19<sup>th</sup> April 2021. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)