



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

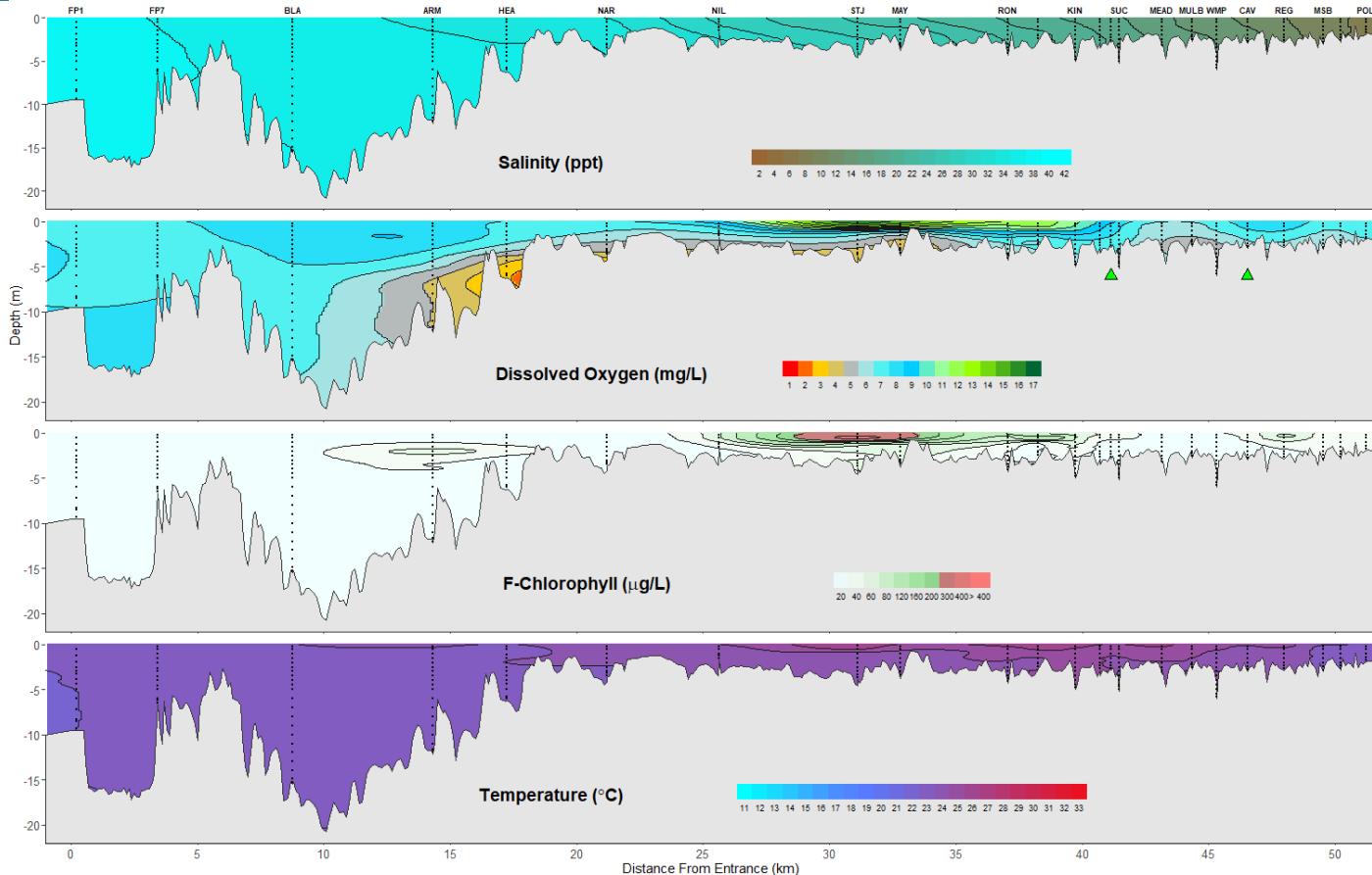
29<sup>th</sup> March 2021

Prepared by

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



## Swan Canning Estuary- Water Quality Profiles- 29<sup>th</sup> March 2021





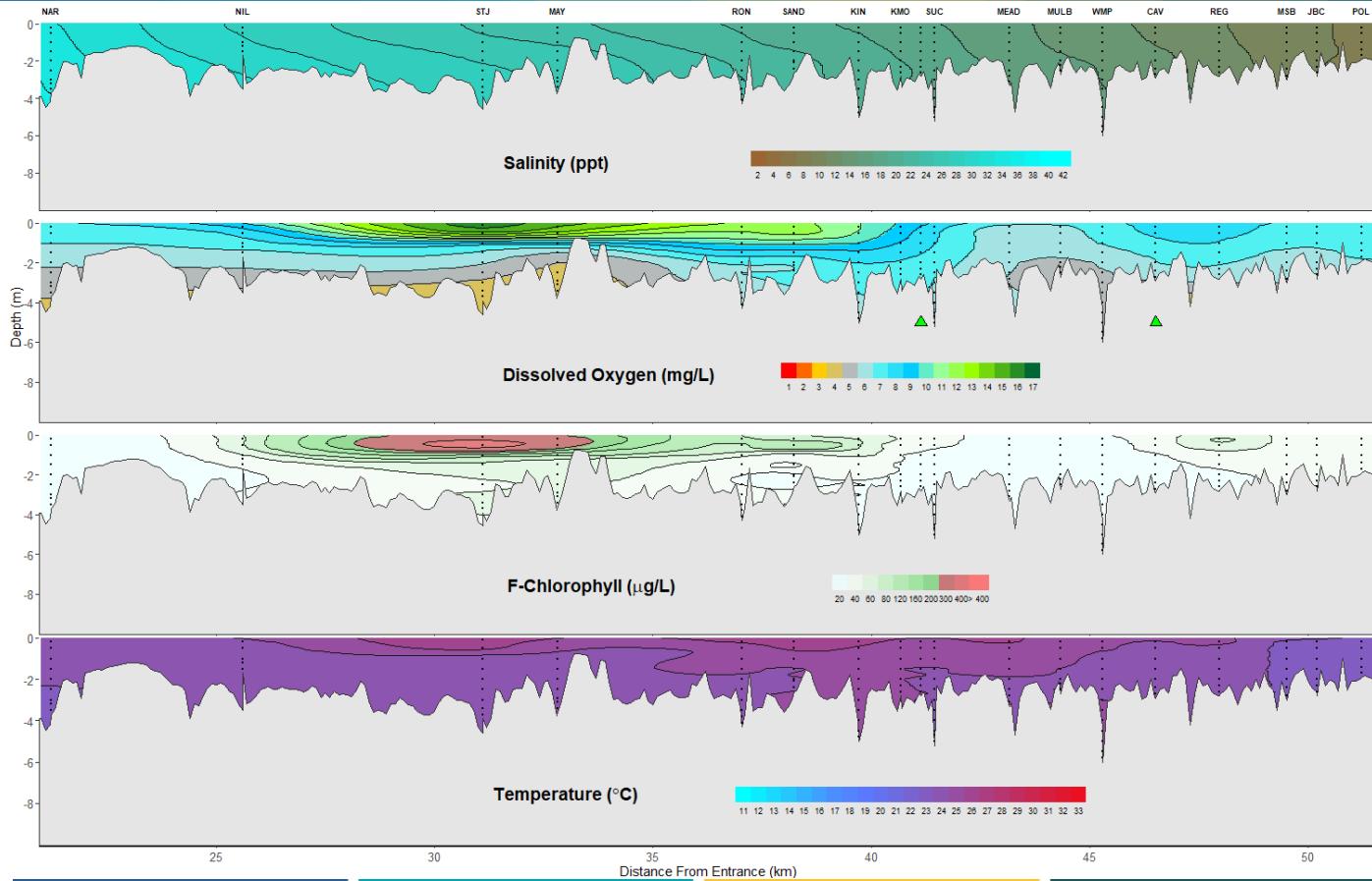
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## Middle and Upper Swan Estuary- Water Quality Profiles- 29<sup>th</sup> March 2021





Date: 29<sup>th</sup> March 2021

Weather & tide conditions: Conditions were clear with a variable breeze of up to 9 knots. The predicted tides at Barrack St were 0.76 m at 6:14 am (low tide), 0.97 m at 12:40 pm (high tide) and 0.8 m at 6:39pm (second low tide). Perth recorded no 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 (FPI to NAR): The Lower Swan Canning Estuary was saline. Surface waters were well oxygenated and bottom waters were low in oxygen at ARM and HEA. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 22.0 to 23.7°C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline at NIL, brackish over saline between STJ and MAY and brackish at RON. Surface waters were highly oxygenated and bottom waters were low in oxygen at STJ and MAY. Chlorophyll fluorescence was highly elevated at STJ and MAY indicating higher microalgal activity in that area. Water temperature ranged from 23.3 to 25.5 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish, waters were oxygenated or well oxygenated and chlorophyll fluorescence was highest at SAND indicating higher microalgal activity in that area. Water temperature ranged from 22.5 to 25.5°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 29<sup>th</sup> March 2021. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)