



Department of Biodiversity,  
Conservation and Attractions



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# Swan Canning Estuary Water Quality Monitoring Project

## Weekly Water Quality Report

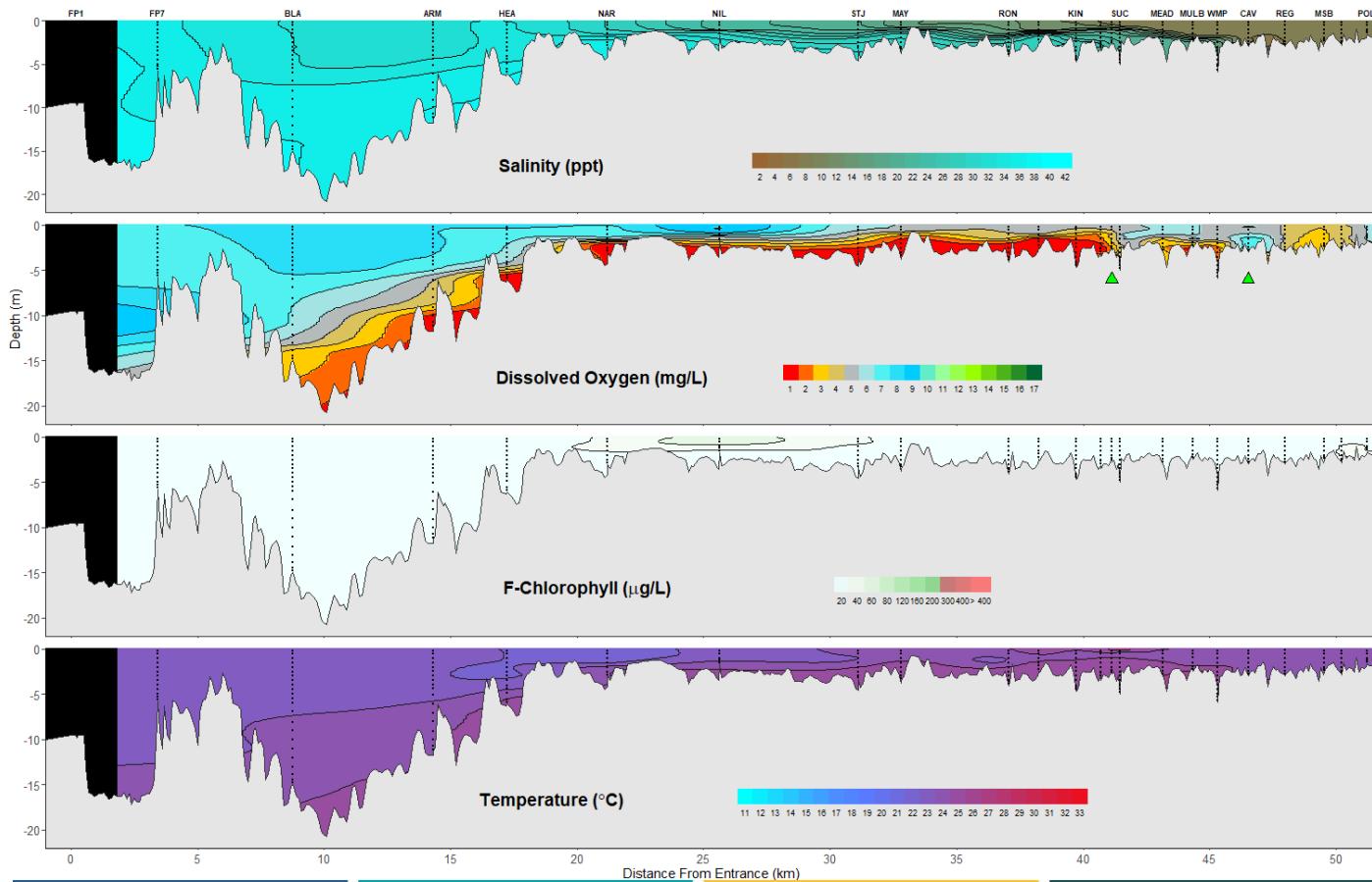
### Lower Swan Canning Estuary to Upper Swan Estuary

15<sup>th</sup> March 2021

Prepared by

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Department of Biodiversity, Conservation and Attractions

## Swan Canning Estuary- Water Quality Profiles- 15<sup>th</sup> March 2021





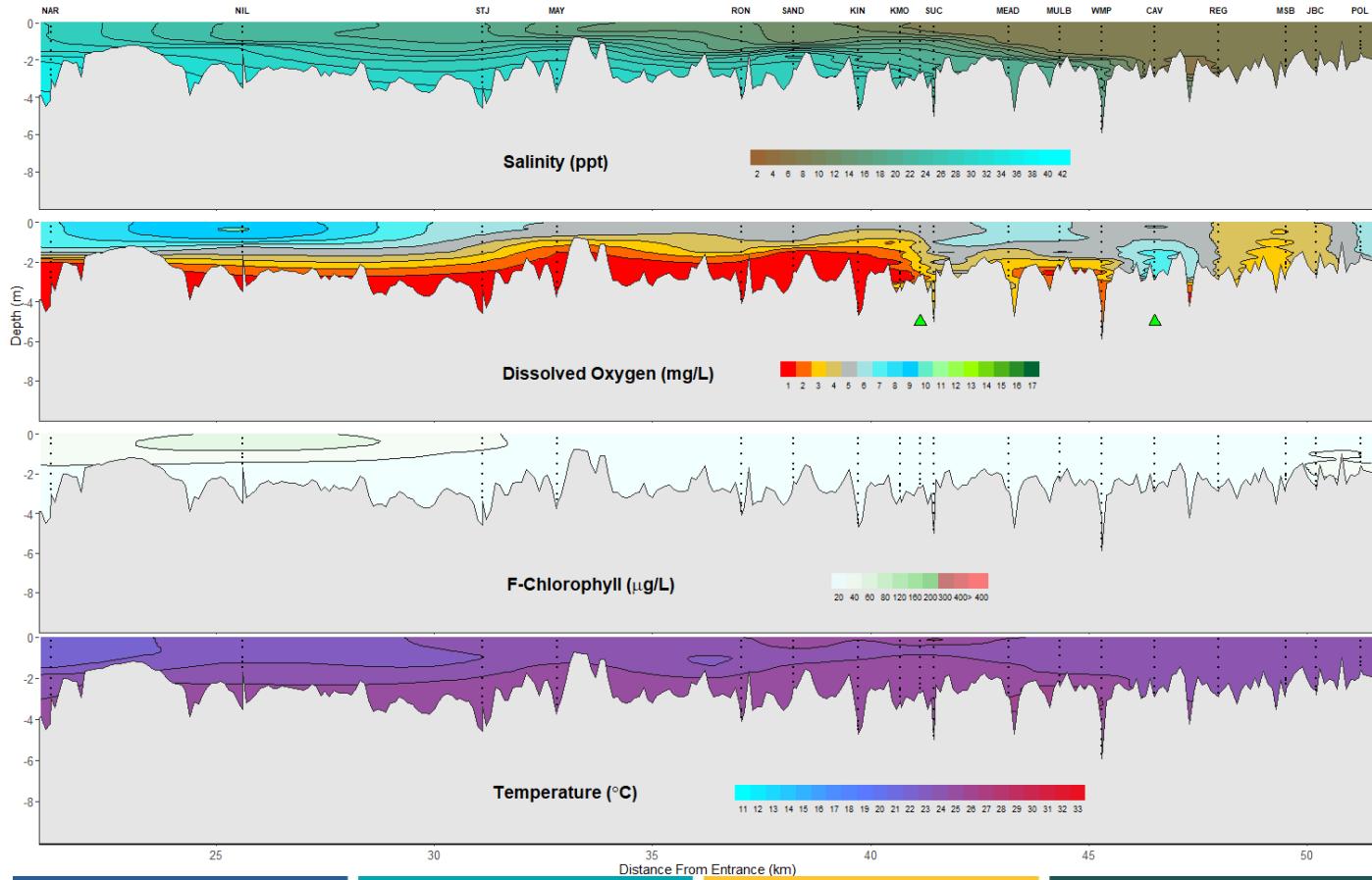
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## Middle and Upper Swan Estuary- Water Quality Profiles- 15<sup>th</sup> March 2021





Date: 15<sup>th</sup> March 2021

Weather & tide conditions: Conditions were clear with a predominantly easterly breeze of up to 8 knots. The predicted tides at Barrack St were 0.73m at 6:43 am (low tide), 0.93 m at 1:20 pm (high tide) and 0.82 at 4:19 pm (second low tide). Perth recorded 5.4 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 (FP7 to NAR): The Lower Swan Canning Estuary was saline. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen at BLA and anoxic from ARM to NAR. Chlorophyll fluorescence was highest at NAR indicating higher microalgal activity in that area. Water temperature ranged from 21.6 to 24.1°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 anoxic from STJ to RON. Chlorophyll fluorescence was highest at NIL indicating higher microalgal activity in that area. Water temperature ranged from 22.4 to 24.7 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish over saline from SAND to KIN and brackish from KMO to POL. Surface waters were oxygenated except between REG and JBC which were low in oxygen. Bottom waters were hypoxic at SUC and WMP and were anoxic between SAND and KMO. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 23.1 to 25.0°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 2021. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 15<sup>th</sup> March 2021. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)