



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**

**16 May 2022**

**Prepared by**

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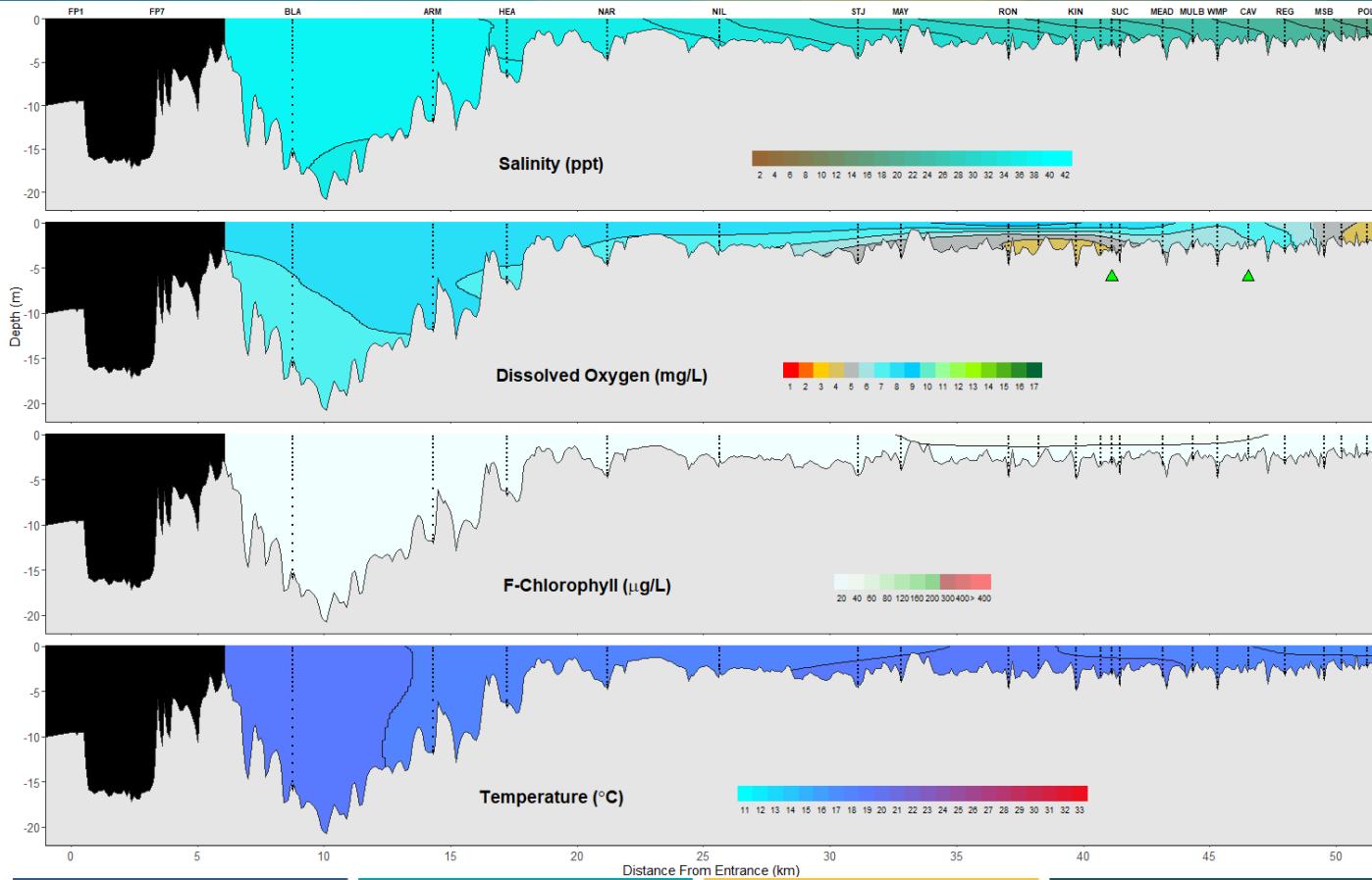
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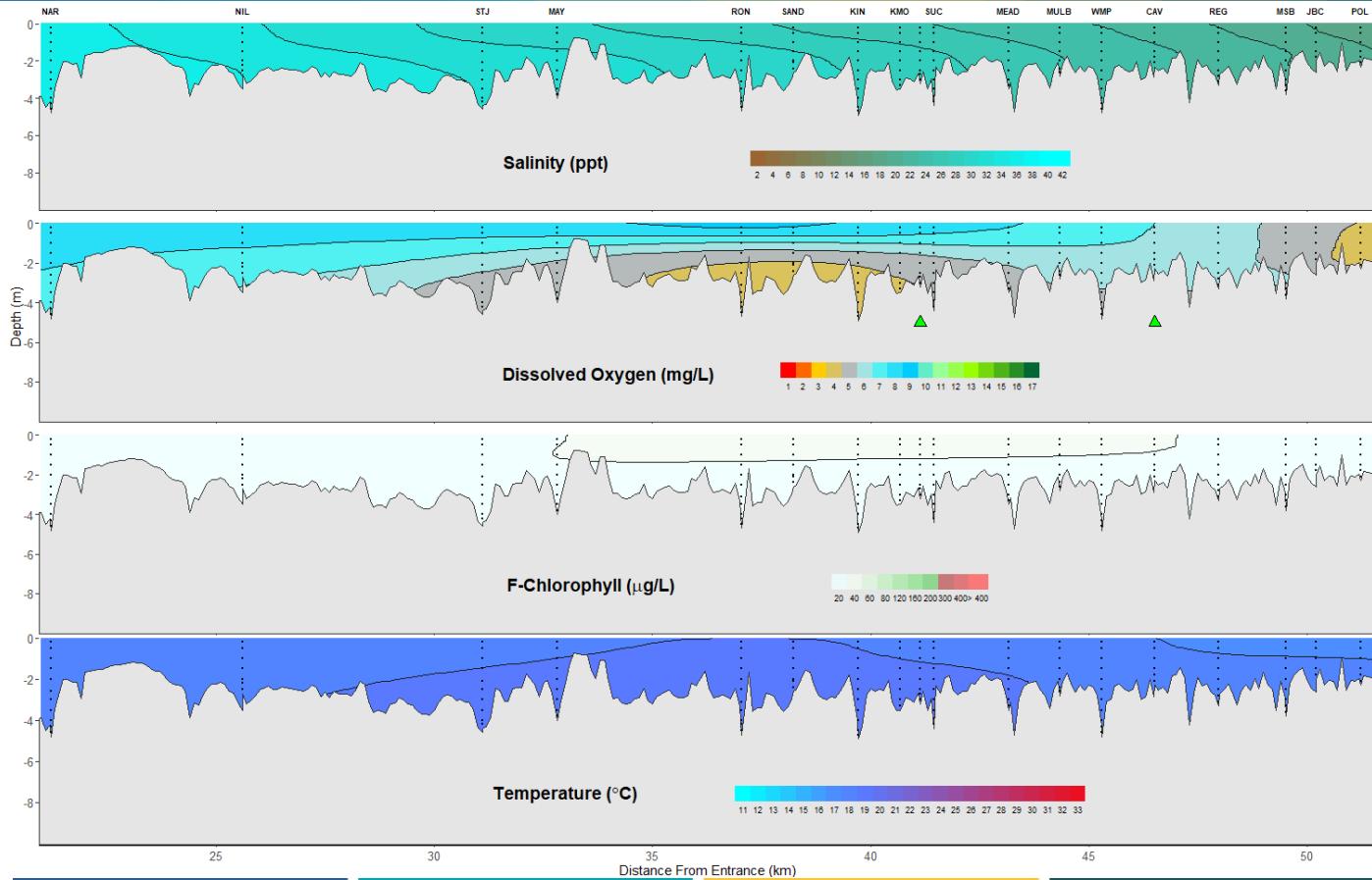
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## Swan Canning Estuary- Water Quality Profiles – 16 May 2022





## Middle and Upper Swan Estuary- Water Quality Profiles – 16 May 2022





Date: 16 May 2022

Weather & tide conditions: Conditions were clear with a predominately easterly breeze of up to 7 knots. The predicted tides at Barrack St were 1.28 m at 11:10 am (high tide) and 0.71 m at 9:06 pm (low tide). Perth recorded 19 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

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

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was hypersaline from BLA to HEA and saline over hypersaline at NAR. Waters were well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 17 to 18.4 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline and waters were oxygenated or well oxygenated. Chlorophyll fluorescence was low throughout this zone and water temperature ranged from 17.1 to 18.5 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was saline between SAND and KIN, brackish over saline from KMO to MEAD, and brackish from MULB to POL. Surface waters were oxygenated or well oxygenated except for POL which was low in oxygen, and bottom waters were low in oxygen from SAND to KMO and JBC. Chlorophyll fluorescence was moderate in surface waters at SUC indicating higher microalgal activity in that area. Water temperature ranged from 16.2 to 18.5 °C at the time of sampling.

**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 >6 mg L<sup>-1</sup>, oxygenated >4-6 mg L<sup>-1</sup>, low oxygen >2-4 mg L<sup>-1</sup>, hypoxic 0.5-2 mg L<sup>-1</sup>, anoxic <0.5 mg L<sup>-1</sup>

**Chlorophyll fluorescence (summer):** low < 50 µg L<sup>-1</sup>, moderate 50-150 µg L<sup>-1</sup>, high 150-400 µg L<sup>-1</sup>, extreme > 400 µg L<sup>-1</sup>

**Recommended reference:** Department of Biodiversity, Conservation and Attractions, 2022. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 16 May 2022*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)