



Department of Biodiversity,  
Conservation and Attractions



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# Swan Canning Estuary Water Quality Monitoring Project

## Weekly Water Quality Report

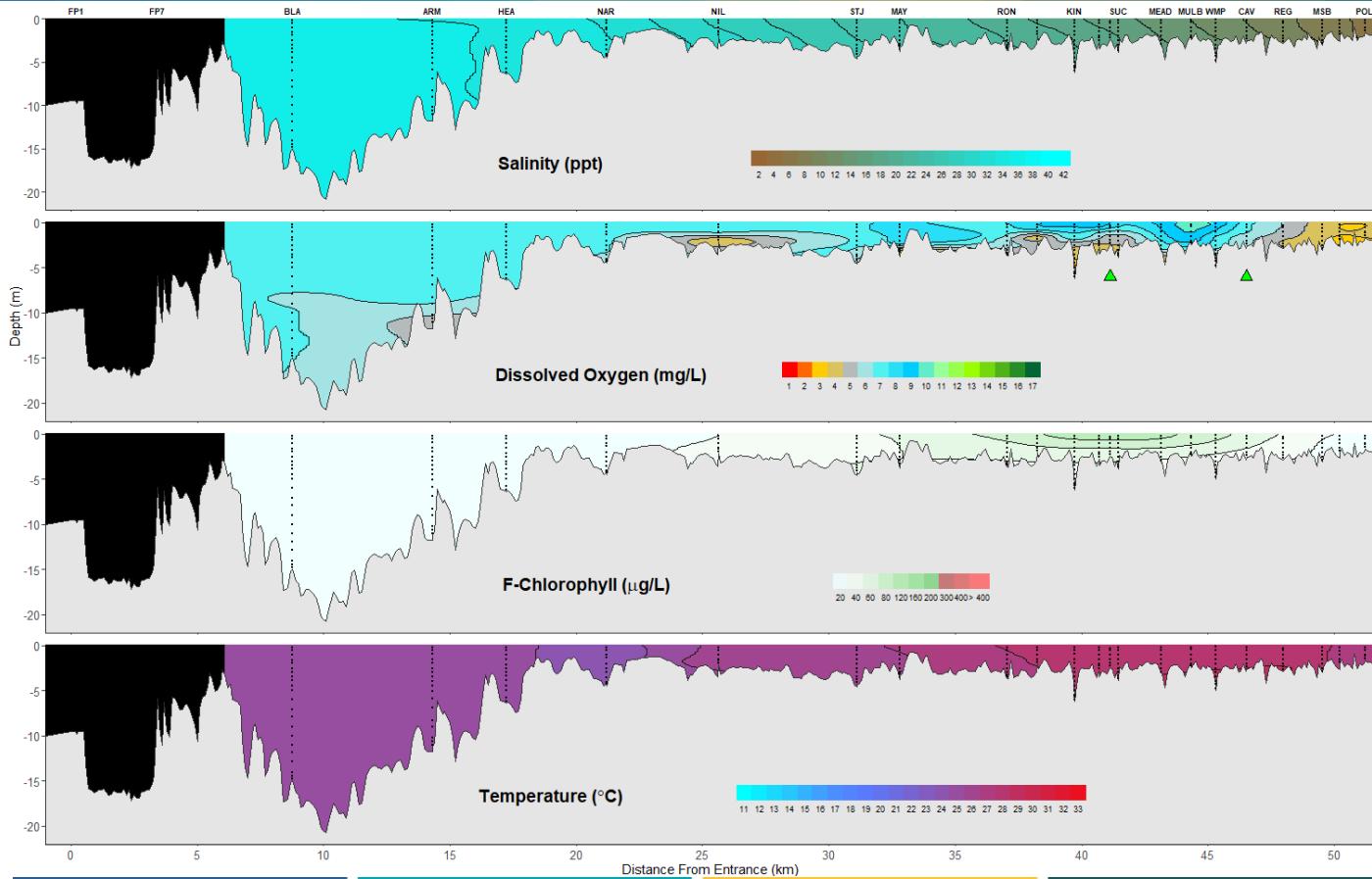
### Lower Swan Canning Estuary to Upper Swan Estuary

10 January 2022

Prepared by

Rivers and Estuaries Science  
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Department of Biodiversity, Conservation and Attractions

## Swan Canning Estuary- Water Quality Profiles – 10 January 2022





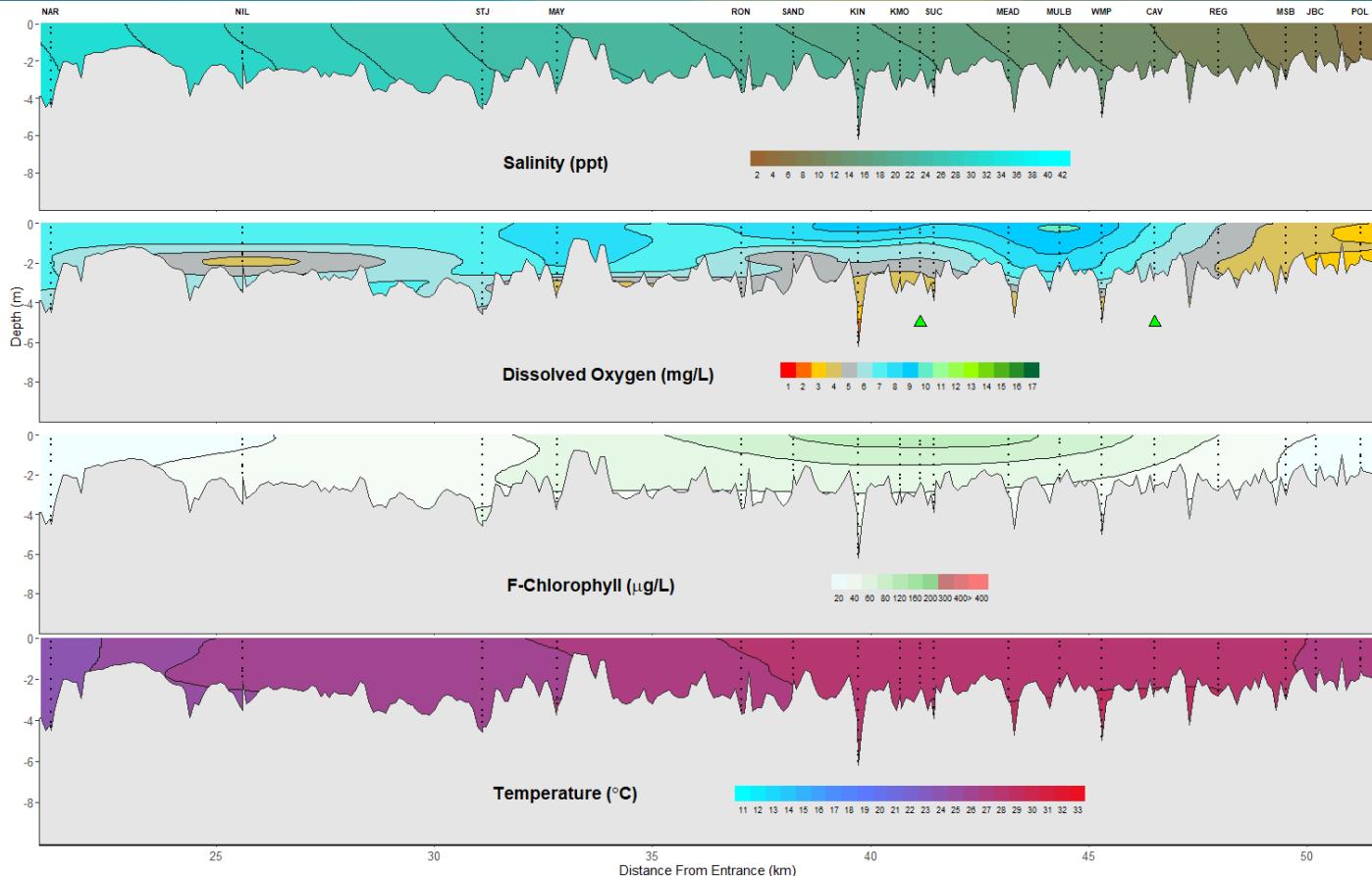
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## Middle and Upper Swan Estuary- Water Quality Profiles – 10 January 2022





Date: 10 January 2022

Weather & tide conditions: Conditions were characterised by dispersed cloud cover and an easterly breeze of up to 10 knots. The predicted tides at Barrack St were 0.63 m at 8:15 am (low tide) and 0.96 m at 7:03 pm (high tide). Perth recorded no rainfall during 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 saline, waters were oxygenated or well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 23.4 to 24.6 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline at NIL, brackish over saline at STJ and brackish from MAY to RON. Surface waters were well oxygenated and bottom waters were low in oxygen at NIL and MAY. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 25.2 to 26.9 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish. Surface waters were oxygenated or well oxygenated between SAND and REG and low in oxygen from MSB to POL. Bottom waters were low in oxygen at SAND, KMO, SUC, WMP and from REG to POL and were hypoxic at KIN. Chlorophyll fluorescence was moderate between SAND and REG and high at KMO indicating higher microalgal activity in those areas. Water temperature ranged from 26.4 to 29.1 °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 >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 2021. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 10 January 2022. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)