



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

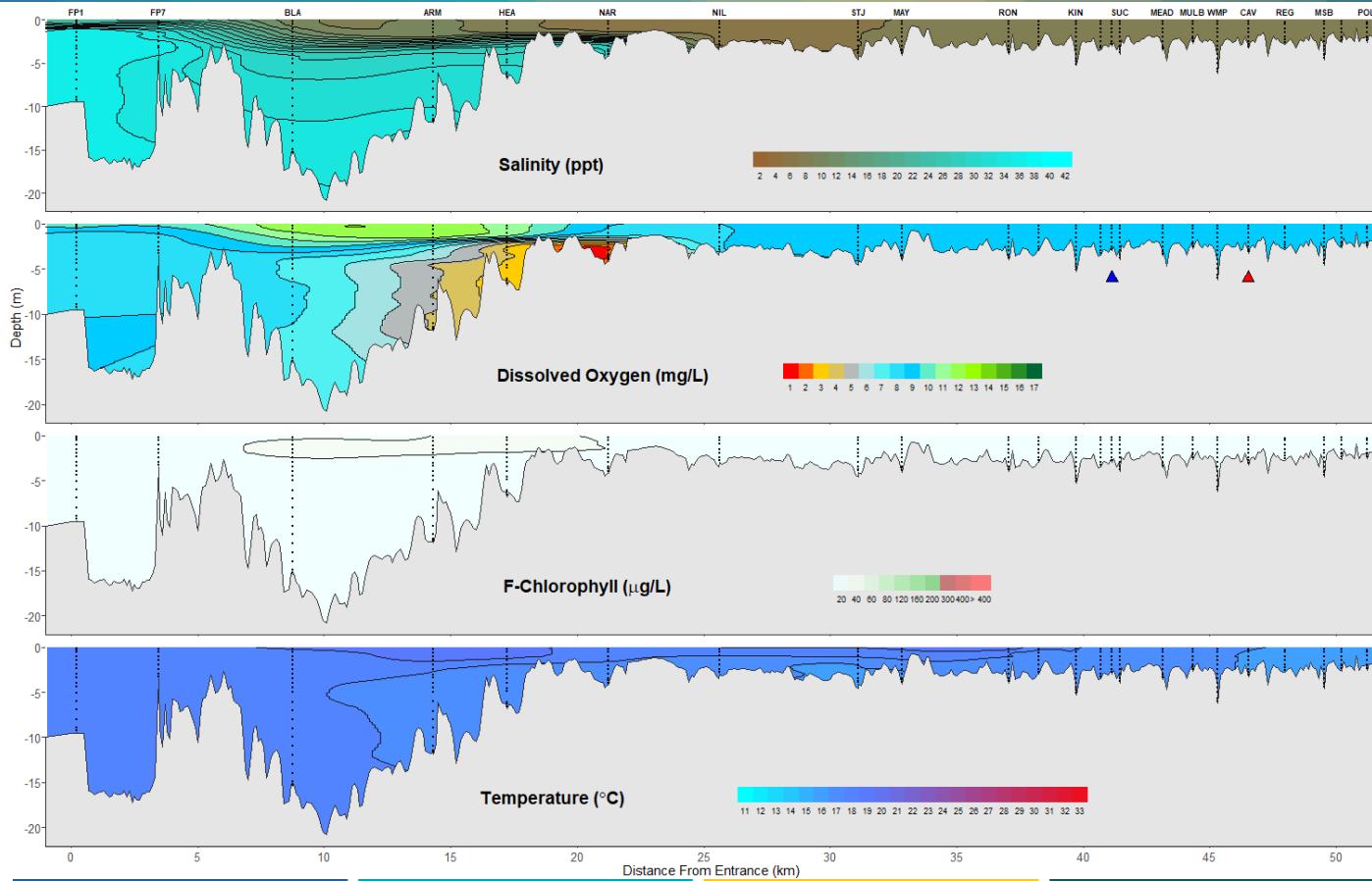
12 September 2022

Prepared by

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



## Swan Canning Estuary- Water Quality Profiles – 12 September 2022





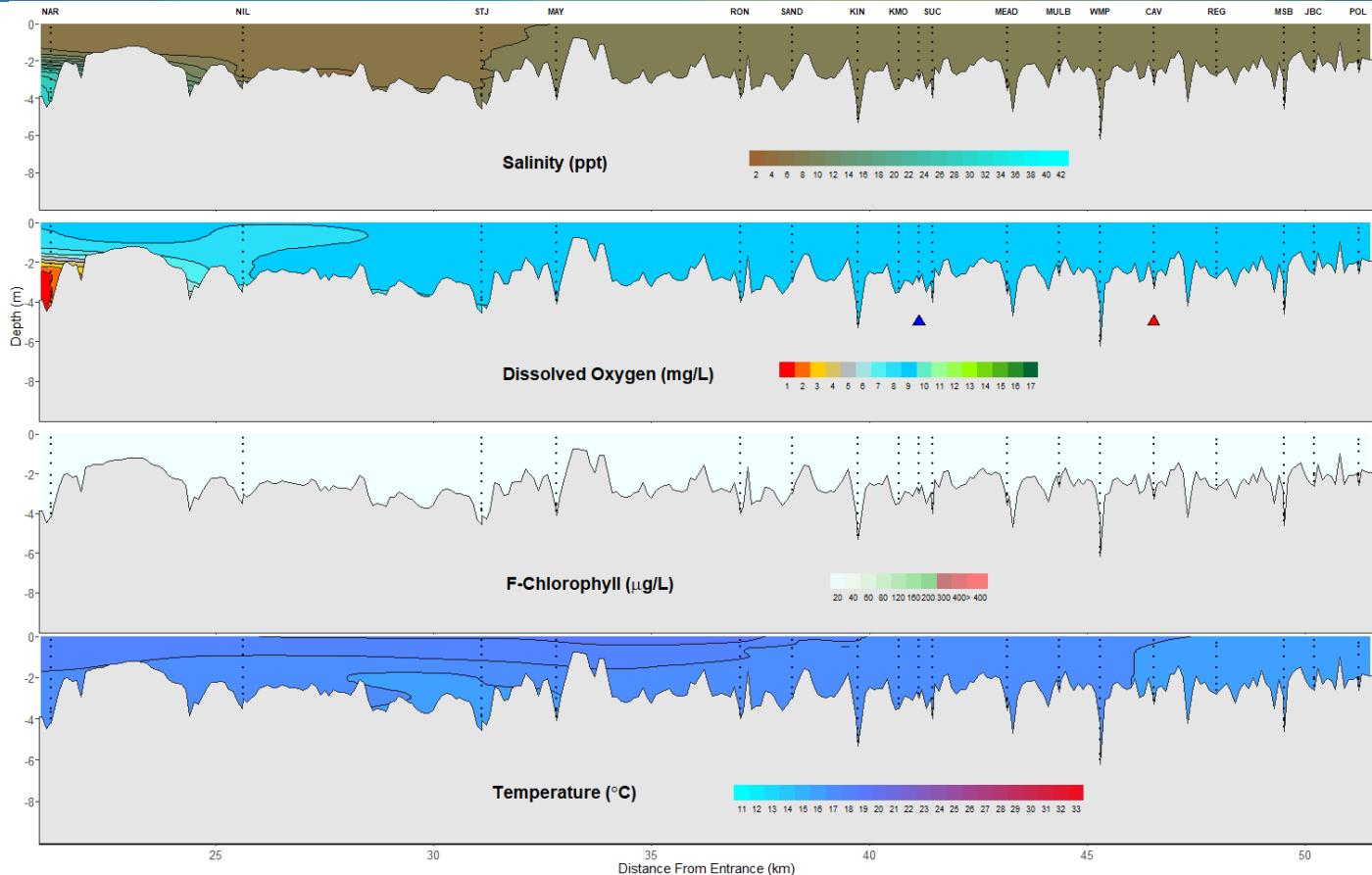
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## Middle and Upper Swan Estuary- Water Quality Profiles – 12 September 2022





Date: 12 September 2022

Weather & tide conditions: Conditions were predominately clear with a variable breeze of up to 10 knots. The predicted tides at Barrack St were 0.73 m at 5:54 am (first low tide), 0.9 m at 12:45 pm (high tide) and 0.76 m at 6:33 pm (second low tide). Perth recorded 23.8 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford oxygenation plant was operable but not triggered to provide oxygen and the Caversham oxygenation plant was inoperable during the 24 hours prior to sampling as equipment has been removed to avoid damage from flooding.

Lower Swan Canning Estuary (FP1 to NAR): The Lower Swan Canning Estuary was brackish over hypersaline from FP1 to FP7, and brackish over saline from BLA to NAR. Waters were oxygenated or well oxygenated throughout except for bottom waters between ARM and HEA, which were low in oxygen, and bottom waters at NAR which were hypoxic. Chlorophyll fluorescence was low throughout and water temperature ranged from 16.3 to 18.4 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish and waters were well oxygenated throughout. Chlorophyll fluorescence was low and water temperature ranged from 15.8 to 18.3 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish and waters were well oxygenated throughout. Chlorophyll fluorescence was low and temperature ranged from 15.7 to 17.1 °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 (mod/high flow):** low < 60 µg L<sup>-1</sup>, moderate 60-160 µg L<sup>-1</sup>, high 160-400 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 12 September 2022. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)