



# Swan Canning Estuary Water Quality Monitoring Project

## Weekly Water Quality Report

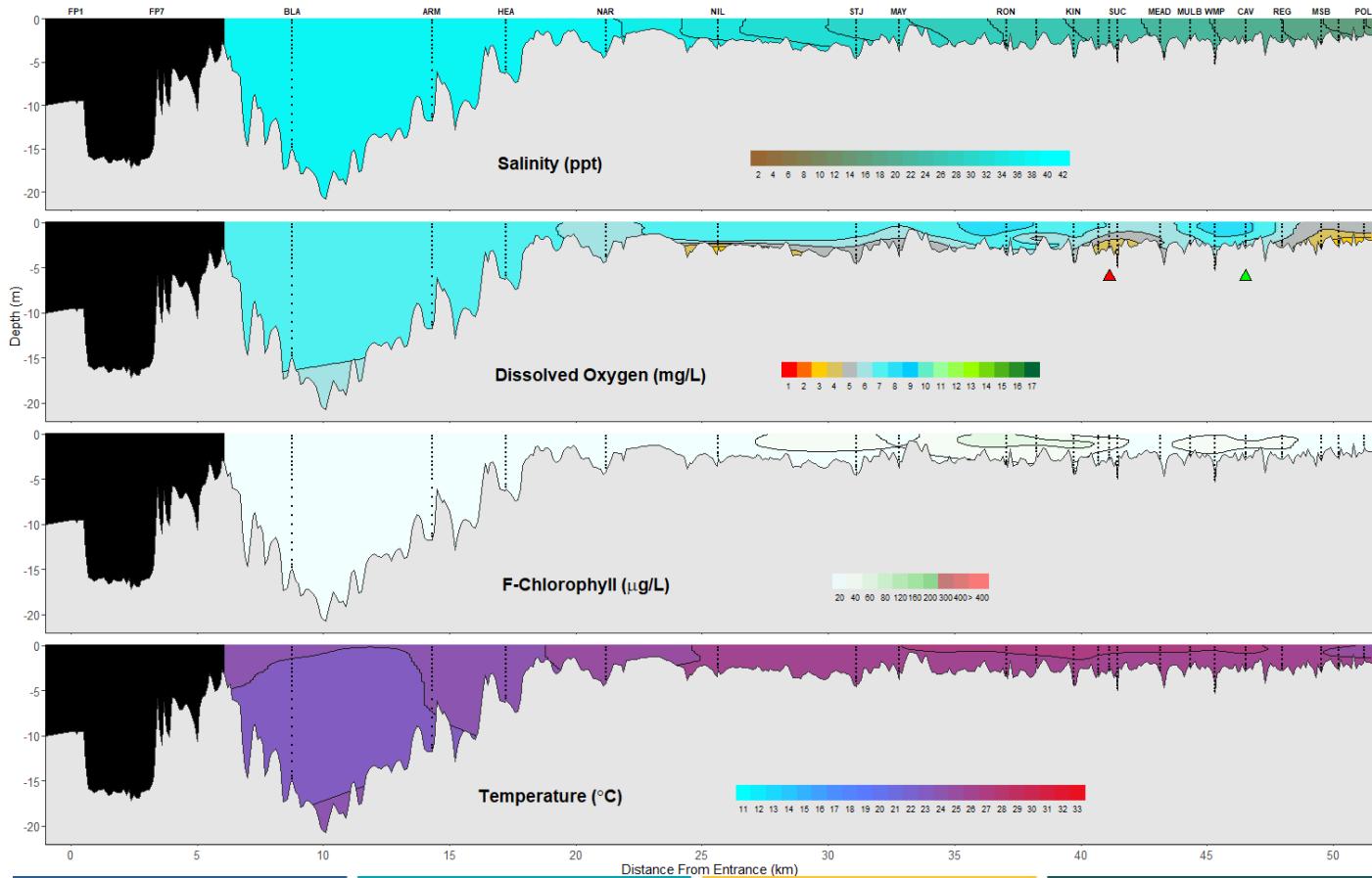
### Lower Swan Canning Estuary to Upper Swan Estuary

22<sup>nd</sup> February 2021

Prepared by

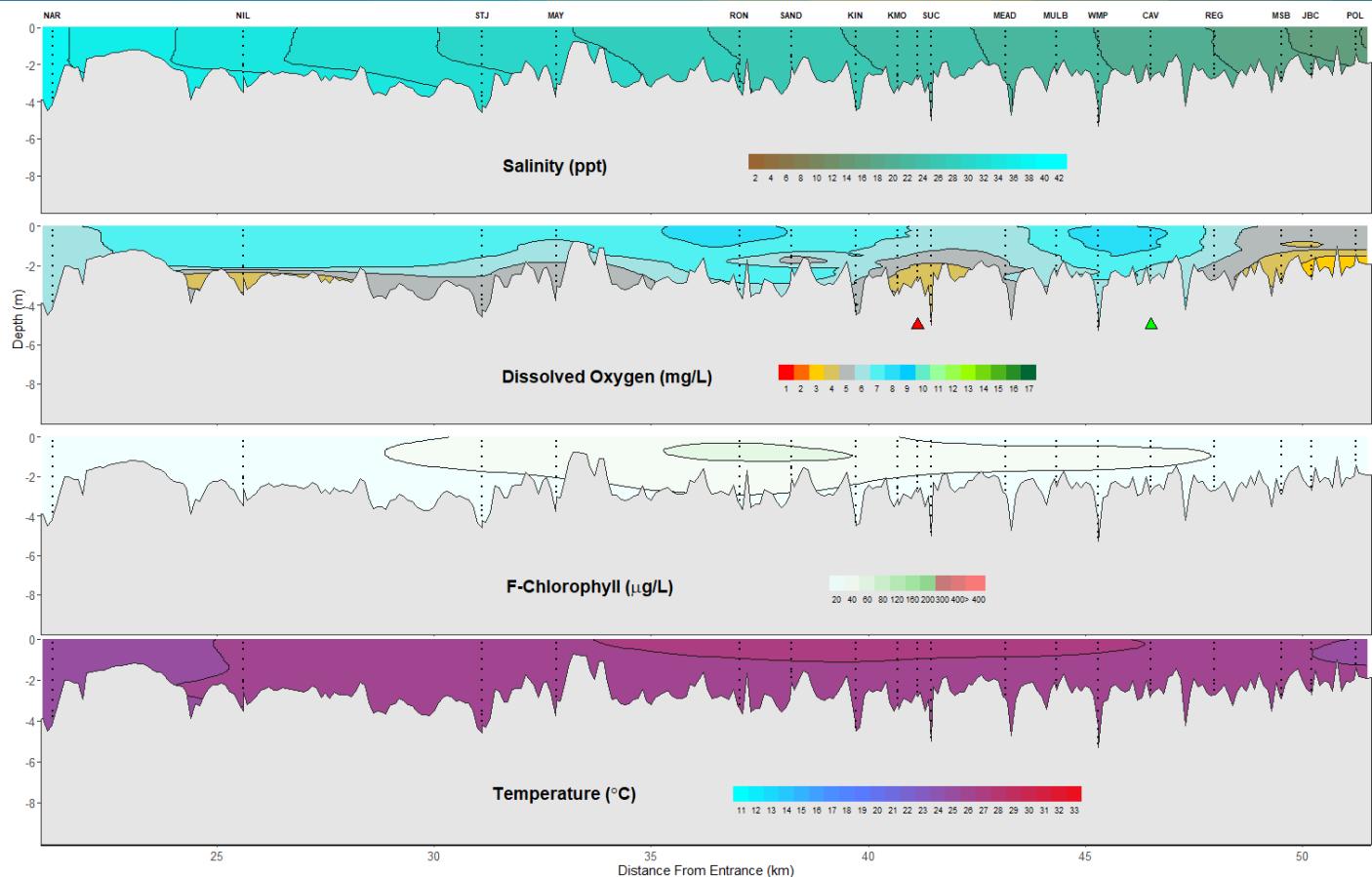
Rivers and Estuaries Science  
Biodiversity and Conservation Science  
Department of Biodiversity, Conservation and Attractions

## Swan Canning Estuary- Water Quality Profiles- 22<sup>nd</sup> February 2021





## Middle and Upper Swan Estuary- Water Quality Profiles- 22<sup>nd</sup> February 2021





Date: 22<sup>nd</sup> February 2021

Weather & tide conditions: Conditions were clear with a predominantly easterly breeze of up to 8 knots. The predicted tides at Barrack St were 0.59 m at 6:21 am (low tide) and 1.1 m at 7:27 pm (high tide). Perth recorded 1.6 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford oxygenation plant was not operational, but the Caversham oxygenation plant was 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 22.8 to 24.3 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen at NIL and STJ. Chlorophyll fluorescence was highest at RON indicating higher microalgal activity in that area. Water temperature ranged from 25.1 to 26.1 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish over saline at SAND and brackish from KIN to POL. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen from KMO to SUC, at WMP and between MSB and JBC. Chlorophyll fluorescence was highest at SAND indicating higher microalgal activity in that area. Water temperature ranged from 24.8 to 26.8°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 22<sup>nd</sup> February 2021. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)