



Department of Biodiversity,
Conservation and Attractions



Biodiversity and
Conservation Science

*We're working for
Western Australia.*

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

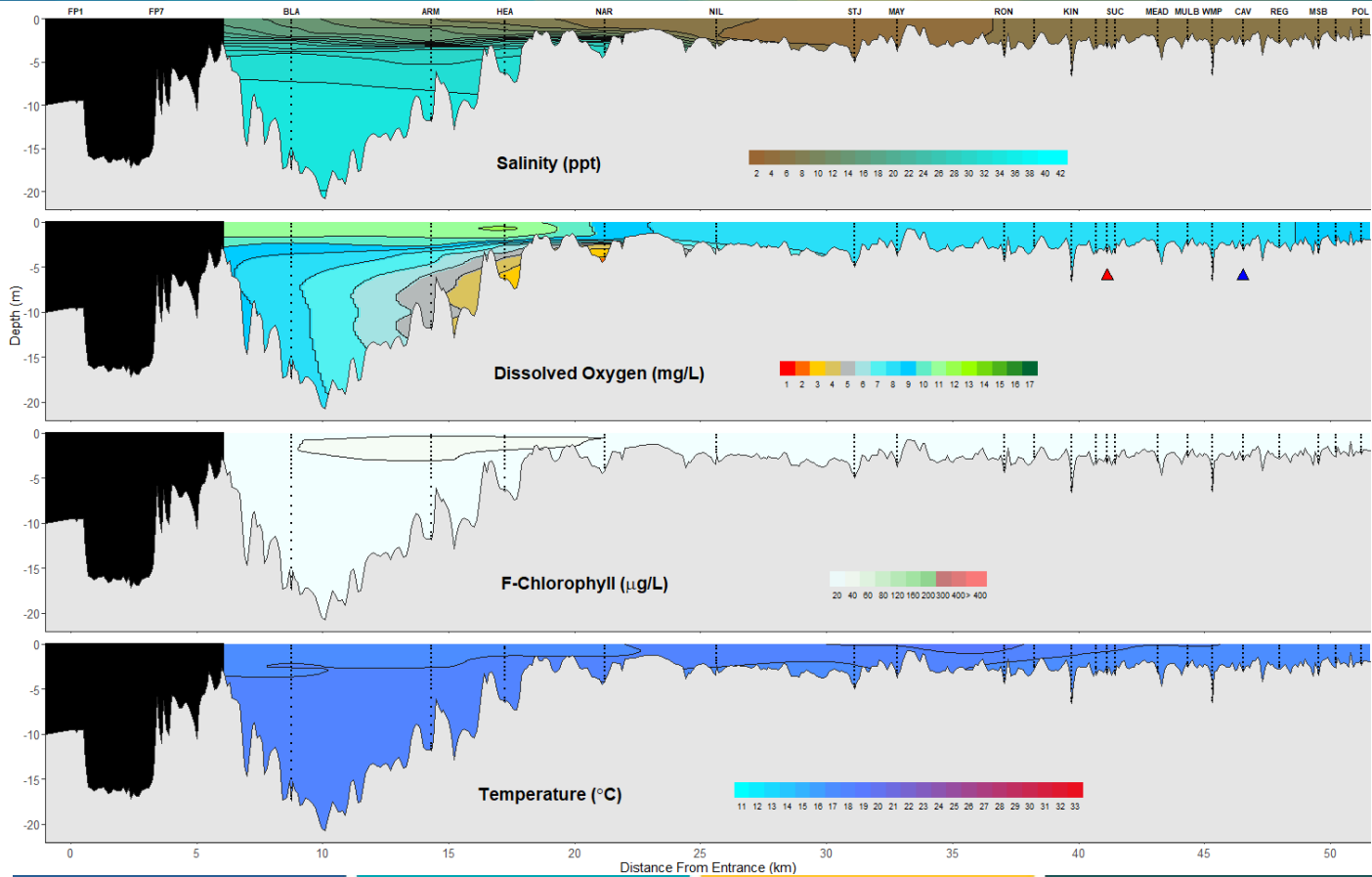
Lower Swan Canning Estuary to Upper Swan Estuary

2nd September 2024

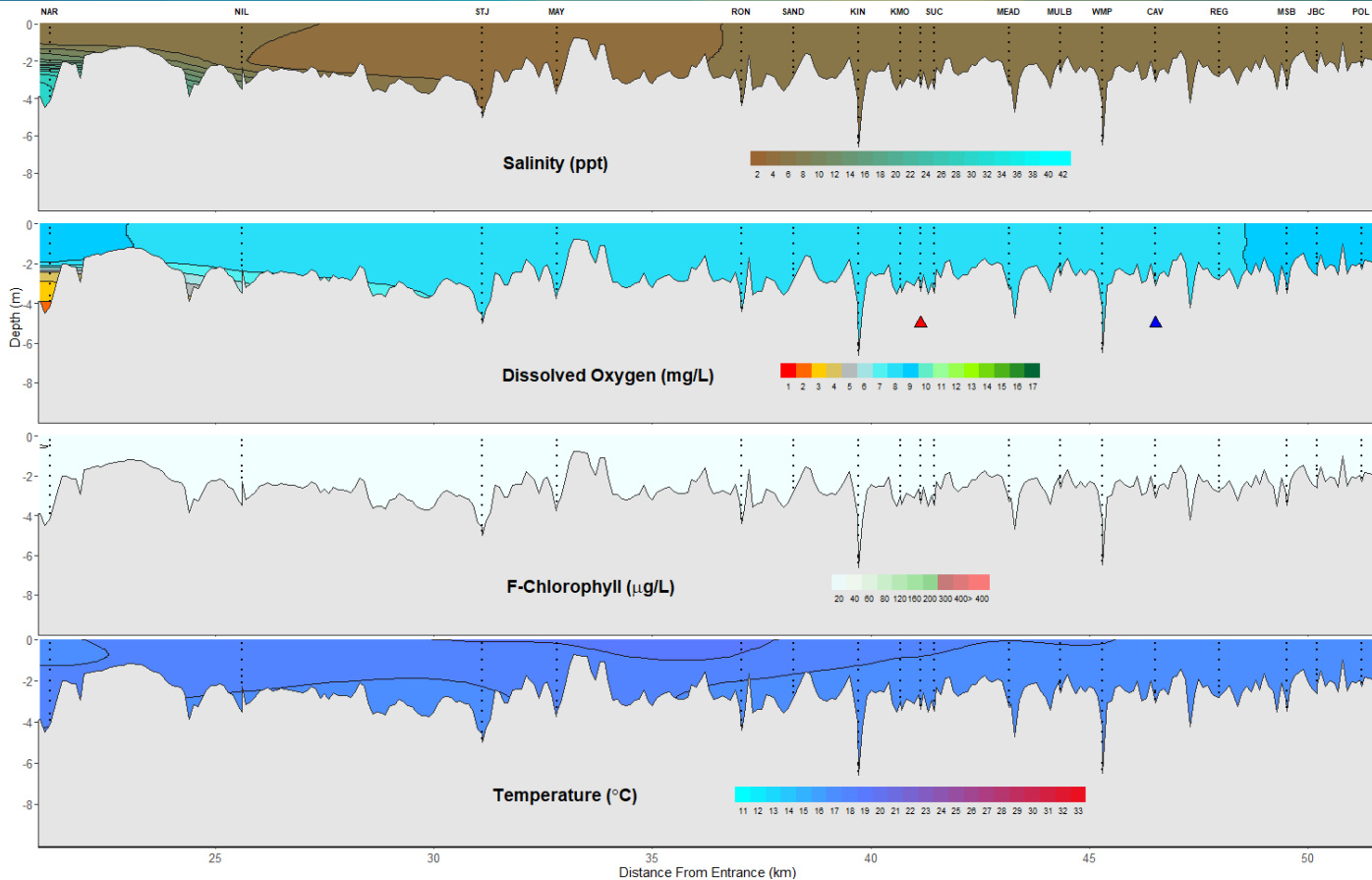
Prepared by

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

Swan Canning Estuary - Water Quality Profiles – 2nd September 2024



Swan Canning Estuary - Water Quality Profiles – 2nd September 2024



Date: 2nd September 2024

Weather & tide conditions: Conditions were clear with a predominately north easterly breeze of up to 10.3 knots. The predicted tides at Barrack St were 0.79 m at 12:48 am (high tide), 0.79 m at 2:48 am (low tide), 1.07 m at 10:45 am (2nd high tide) and 0.71 m at 7:30 pm (2nd low tide). Perth recorded 16.0 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford oxygenation plant was inoperable and the Caversham oxygenation plant was operable, but not triggered to provide oxygen in the 24 hours prior to sampling

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was brackish over saline. Waters were oxygenated or well oxygenated, except for bottom waters at HEA and NAR which were low in oxygen. Chlorophyll fluorescence was low and water temperatures ranged from 16.5 to 17.3 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was fresh, waters were well oxygenated and chlorophyll fluorescence was low. Water temperatures ranged from 16.5 to 18.5 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was fresh, except bottom waters at KIN which were brackish. Waters were oxygenated or well oxygenated and chlorophyll fluorescence was low. Water temperatures ranged from 16.1 to 17.7 °C.

NB: Profile plots are visual interpolations of measured parameters only. Detailed data are available at 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⁻¹, oxygenated >4-6 mg L⁻¹, low oxygen >2-4 mg L⁻¹, hypoxic 0.5-2 mg L⁻¹, anoxic <0.5 mg L⁻¹
Chlorophyll fluorescence (mod/high flow): low < 60 µg L⁻¹, moderate 60-160 µg L⁻¹, high 160-400 µg L⁻¹, extreme > 400 µg L⁻¹

Recommended reference: Department of Biodiversity, Conservation and Attractions, 2024. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 2nd September 2024*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)