



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

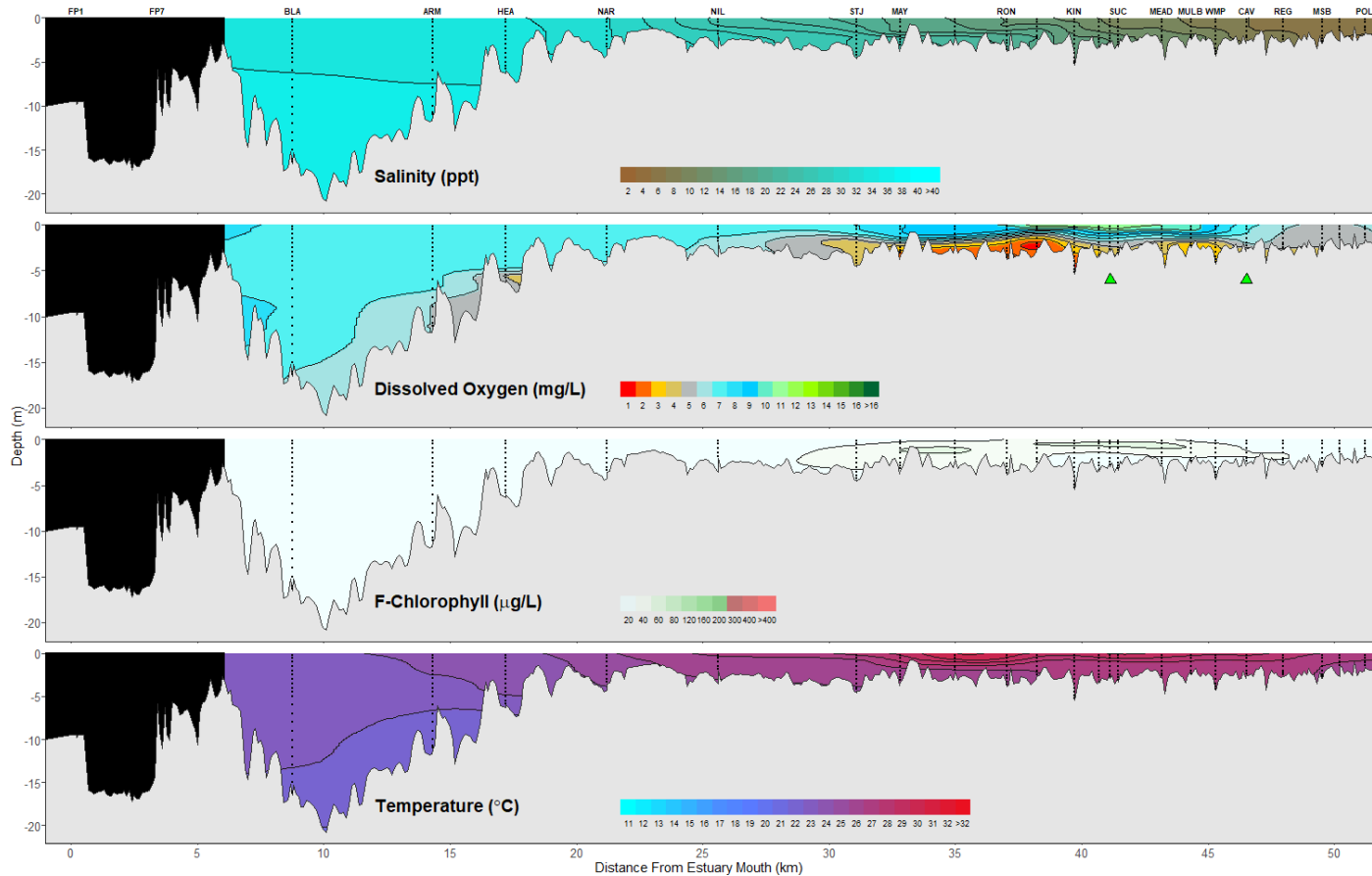
Lower Swan Canning Estuary to Upper Swan Estuary

9 December 2024

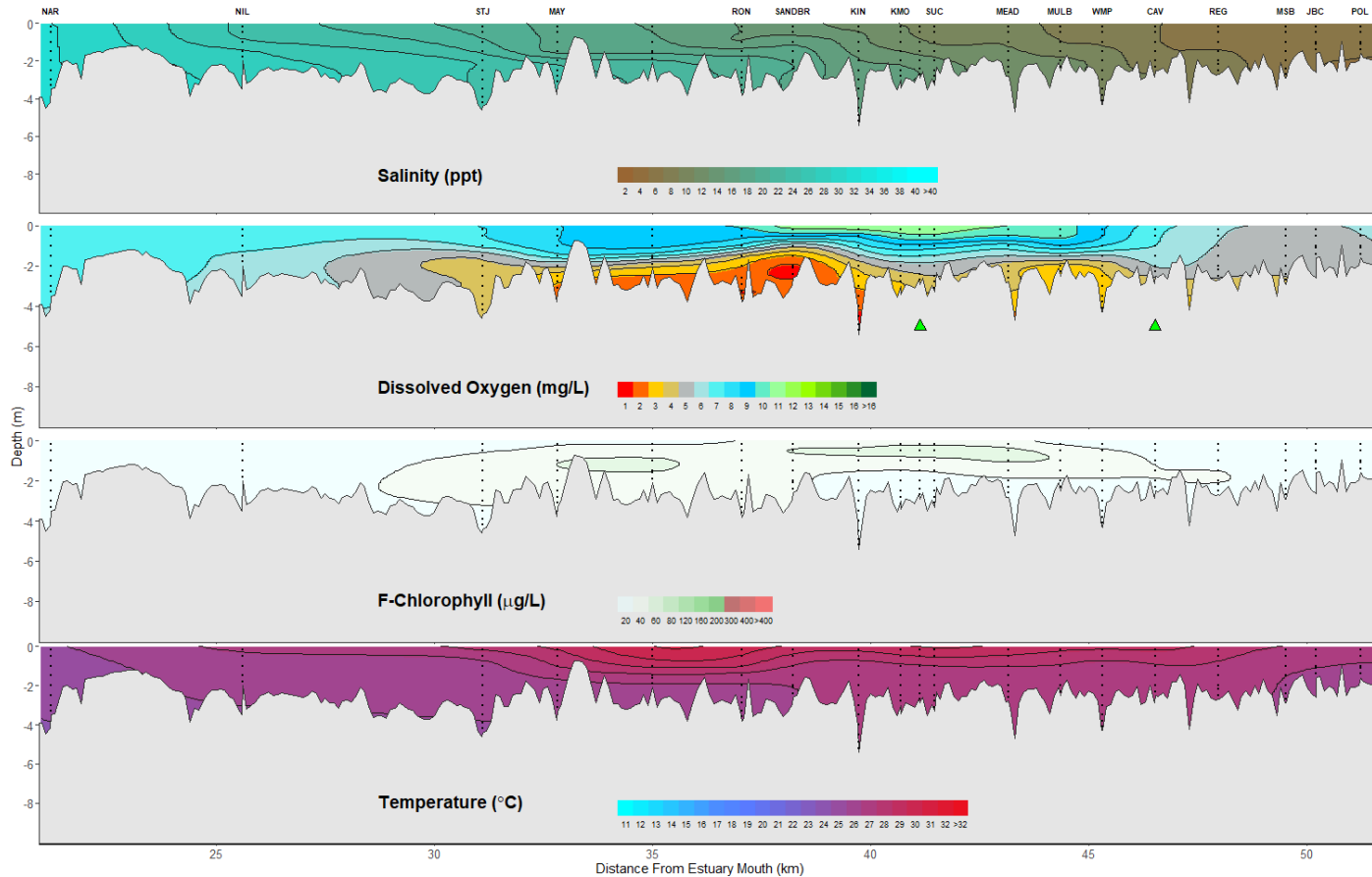
Prepared by

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

Swan Canning Estuary - Water Quality Profiles – 9 December 2024



Swan Canning Estuary - Water Quality Profiles – 9 December 2024



Date: 9 December 2024

Weather & tide conditions: Conditions were clear with a south easterly breeze of up to 10 knots. The predicted tides at Barrack St were 0.68 m at 11:32 am (low tide) and 0.92 m at 8:32 pm (high tide). Perth recorded 0.2 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were triggered to provide oxygen in 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, except for bottom waters of HEA which were low in oxygen. Chlorophyll fluorescence was low and water temperatures ranged from 21.7 to 24.8 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish over saline at NIL and brackish from STJ and RON. Waters were oxygenated or well oxygenated, except bottom waters at STJ which were low in oxygen and MAY and RON which were hypoxic. Chlorophyll fluorescence was low and water temperatures ranged from 24.9 to 29.4 °C at the time of sampling.

Upper Swan Estuary (SANDBR to POL): The Upper Swan Estuary was brackish from SAND to REG and fresh from MSB to POL. Waters were oxygenated or well oxygenated, except for bottom waters of SANDBR which were hypoxic, KIN which were anoxic and KMO to WMP and MSB which were low in oxygen. Chlorophyll fluorescence was moderate in surface waters of VIT and MEAD. Water temperatures ranged from 25.6 to 29.4 °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.

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 (low flow): low < 50 µg L⁻¹, moderate 50-150 µg L⁻¹, high 150-400 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 9 December 2024*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)