



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

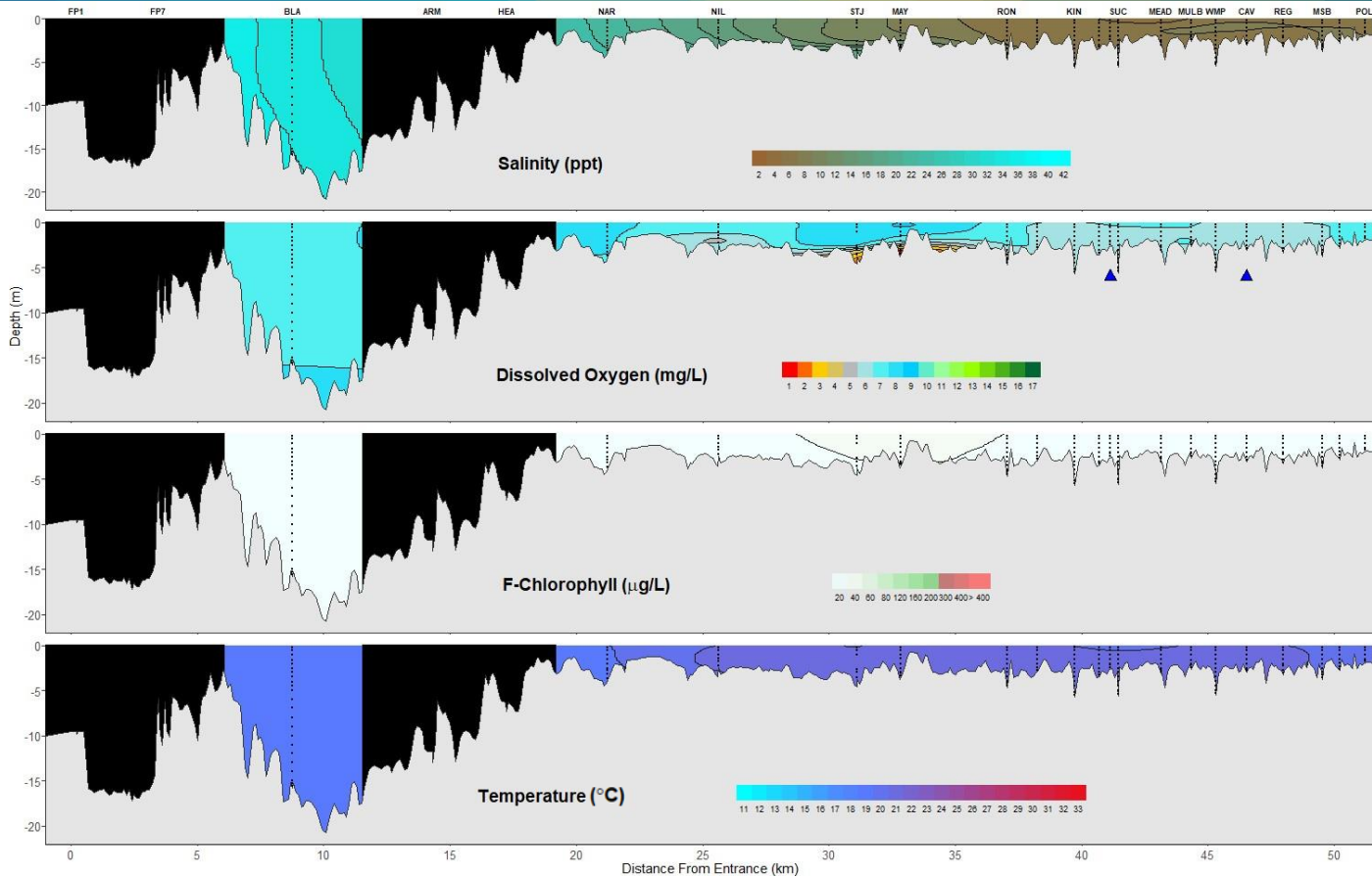
Lower Swan Canning Estuary to Upper Swan Estuary

2nd October 2023

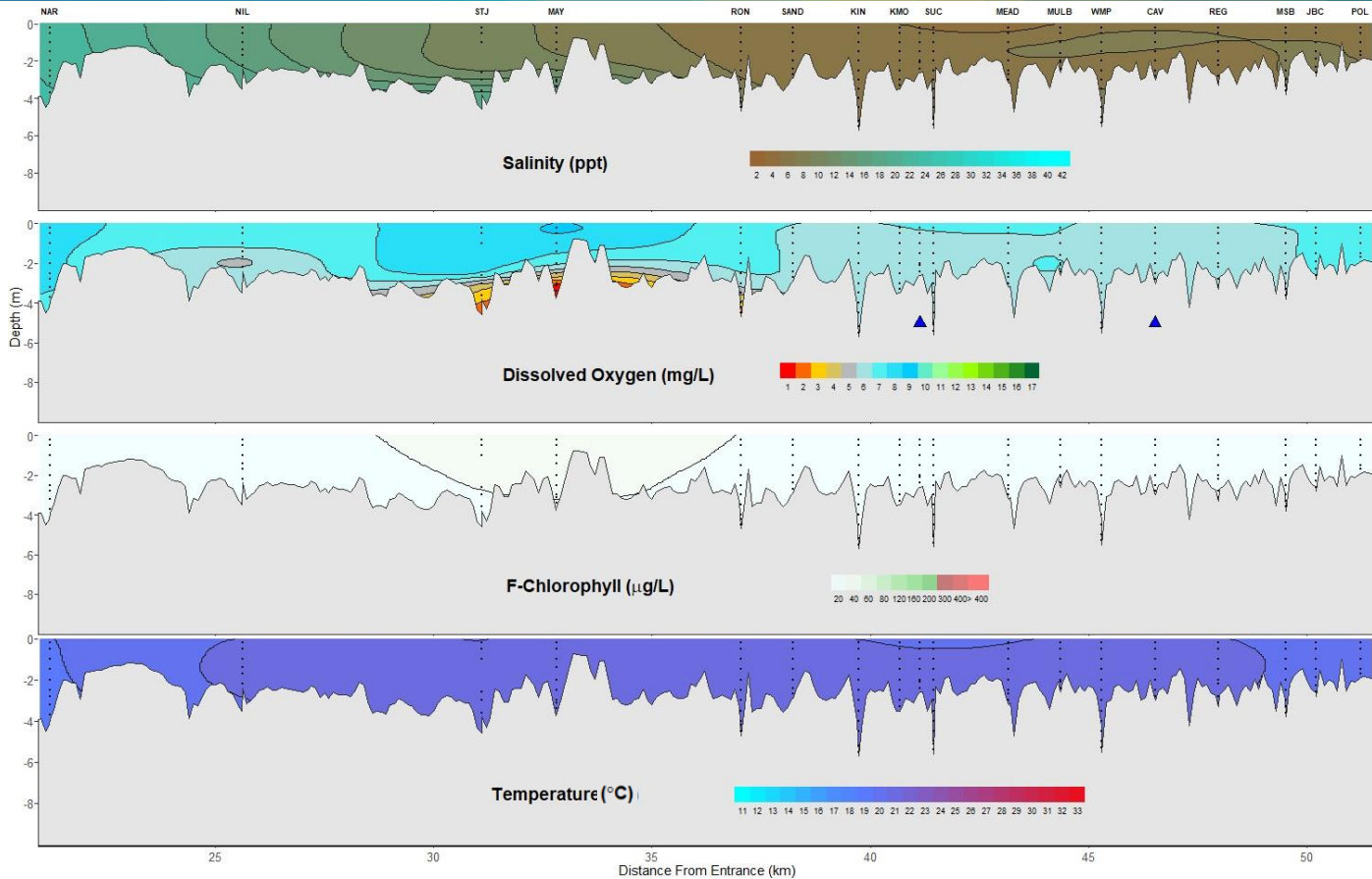
Prepared by

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

Swan Canning Estuary - Water Quality Profiles – 2nd October 2023



Swan Canning Estuary - Water Quality Profiles – 2nd October 2023



Date: 2nd October 2023

Weather & tide conditions: Conditions were overcast with scattered rains and a predominantly south westerly fresh breeze of up to 21.0 knots. The predicted tides at Barrack St were 1.01 m at 12:24 am (high tide) and 0.64 m at 10:00 am (low tide). Perth recorded 6.4 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

NB: ARM and HEA could not be profiled due to prevailing conditions.

Oxygenation: The Guildford and Caversham oxygenation plants were not triggered to provide oxygen in the 24 hours prior to sampling.

Lower Swan Canning Estuary (BLA and NAR): The Lower Swan Canning Estuary was saline at BLA and brackish at NAR. Waters were well oxygenated, chlorophyll fluorescence was low and water temperatures ranged from 18.2 °C to 18.9 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish. Waters were oxygenated or well oxygenated, except for bottom waters between STJ and RON which were hypoxic or anoxic. Chlorophyll fluorescence was low and water temperatures ranged from 19.8 °C to 21.0 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish, except for SUC, MEAD and JBC which were fresh over brackish. Waters were oxygenated or well oxygenated. Chlorophyll fluorescence was low and water temperatures ranged from 17.2 °C to 20.6 °C.

NB: Profile plots are visual interpolations of measured parameters only. Detailed data are available at wir.water.wa.gov.au.
ARM and HEA profile information were unable to be collected due to rough conditions.

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 < 50 µg L⁻¹, moderate 50-150 µg L⁻¹, high 150-400 µg L⁻¹, extreme > 400 µg L⁻¹