Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

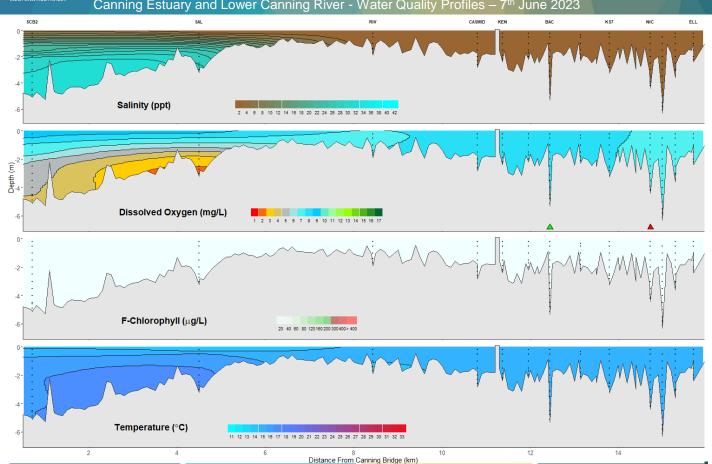
Canning Estuary and Lower Canning River

13th June 2023

Prepared by

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Canning Estuary and Lower Canning River - Water Quality Profiles - 7th June 2023



Date: 13th June 2023

<u>Weather & tide conditions</u>: Conditions were cloudy with occasional showers and a light variable breeze of up to 4.6 knots. The predicted tides at Barrack St were 1.14 m (high tide) at 8:38 am, and 0.86 m (low tide) at 7:14 pm. Perth recorded 68.2 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

<u>Oxygenation</u>: The Bacon St oxygenation plant was providing oxygen in the 24 hours prior to sampling whereas the Nicholson Rd plant was not operable during this period.

<u>Canning Estuary (SCB2 to CASMID)</u>: Waters were fresh over saline between SCB2 and SAL, and fresh from RIV to CASMID. Waters were oxygenated to well oxygenated, except for bottom waters of SCB2 and SAL which were low in oxygen and hypoxic, respectively. Chlorophyll fluorescence was low throughout, and water temperatures ranged from 13.7 °C to 16.4 °C at the time of sampling.

<u>Lower Canning River (KEN to ELL)</u>: The Lower Canning River was fresh, and waters were oxygenated to well oxygenated throughout. Chlorophyll fluorescence was low and water temperatures ranged from 14.5 °C to 14.8 °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

<u>Dissolved oxygen</u> – 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}

 $\label{eq:chorophyll fluorescence (mod/high flow): low < 60 µg L¹, moderate 60-160 µg L¹, high 160-400 µg L¹, extreme > 400 µg L¹$

Recommended reference: Department of Biodiversity, Conservation and Attractions 2023. Swan Canning Estuary water quality profile report, Canning Estuary and Lower Canning River 13th June 2023. Rivers and Estuaries Science (https://www.dpaw.wa.gov.au/management/swan-canning-riverpark)