

Department of **Biodiversity**, **Conservation and Attractions** Biodiversity and Conservation Science We're working for Western Anstralia.

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

Canning Estuary and Lower Canning River

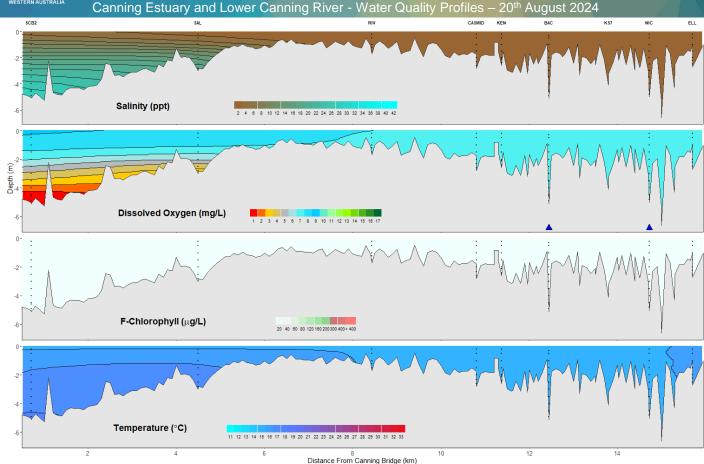
20th August 2024

Prepared by

Rivers and Estuaries Science Biodiversity and Conservation Science Department of Biodiversity, Conservation and Attractions GOVERNMENT OF WESTERN AUSTRALIA

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Date: 20th August 2024

<u>Weather & tide conditions</u>: Conditions were partly cloudy with a variable breeze of up to 7.9 knots. The predicted tides at Barrack St were 1.18 m at 11:36 am (high tide) and 0.69 m at 8:53 pm (low tide). Perth recorded 46.0 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

<u>Oxygenation</u>: The Bacon St and Nicholson Rd oxygenation plants were operable, but not triggered to provide oxygen in the 24 hours prior to sampling.

<u>Canning Estuary (SCB2 to CASMID)</u>: The Canning Estuary was fresh over saline at SCB2, fresh over brackish at SAL and fresh from RIV to CASMID. Waters were oxygenated or well oxygenated, except bottom waters at SCB2 which were anoxic and SAL which were low in oxygen. Chlorophyll fluorescence was low and water temperatures ranged from 14.9 to 17.0 °C at the time of sampling.

Lower Canning River (KEN to ELL): The Lower Canning River was fresh, waters were well oxygenated and chlorophyll fluorescence was low. Water temperatures ranged from 14.9 to 15.0 °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:

 $\begin{array}{l} \underline{Salinity} - fresh < 5, \ brackish 5-25, \ saline 25-35, \ hypersaline >35 \\ \underline{Dissolved \ oxygen} - \ well \ oxygenated >6 \ mg \ L^1, \ oxygenated >4-6 \ mg \ L^1, \ low \ oxygen >2-4 \ mg \ L^1, \ hypoxic \ 0.5-2 \ mg \ L^1, \ anoxic < 0.5 \ mg \ L^1 \\ \underline{Chlorophyll \ fluorescence} (low \ flow): \ low < 50 \ \mug \ L^1, \ moderate \ 50-150 \ \mug \ L^1, \ high \ 150-400 \ \mug \ L^1, \ extreme > 400 \ \mug \ L^1 \end{array}$

Recommended reference: Department of Biodiversity, Conservation and Attractions 2024. *Swan Canning Estuary water quality profile report, Canning Estuary and Lower Canning River 20th August 2024.* Rivers and Estuaries Science (<u>https://www.dpaw.wa.gov.au/management/swan-canning-riverpark</u>)