

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

17th September 2024

Prepared by

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

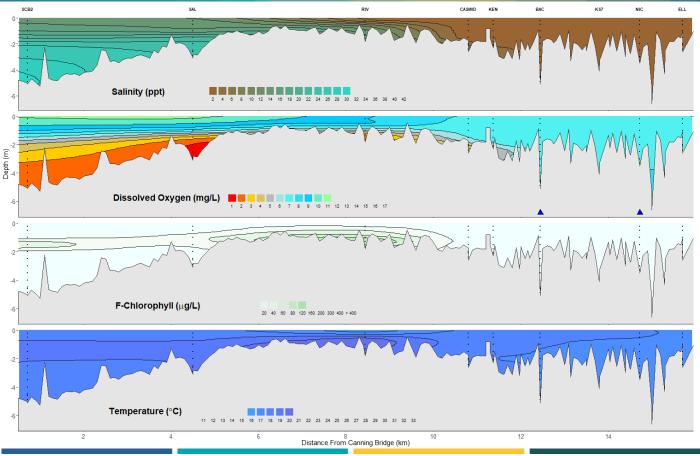


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<u>Weather & tide conditions</u>: Conditions were clear with a variable breeze of up to 3.8 knots. The predicted tides at Barrack St were 0.78 m at 12:23 am (high tide), 0.75 m at 3:24 am (low tide), 1.07 m at 10:51 am (second high tide) and 0.69 m at 6:53 pm (second low tide). Perth recorded no 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 brackish over saline at SCB2, brackish at SAL and fresh over brackish from RIV to CASMID. Surface waters were well oxygenated and bottom water hypoxic from SCB2 to CASMID. Chlorophyll fluorescence was moderate in subsurface at SCB2 and subsurface and bottom waters at RIV. Water temperatures ranged from 16.4 to 19.5 °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 16.7 to 17.9 °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:

 $\begin{array}{l} \underline{Salinity} - fresh < 5, \ brackish 5-25, \ saline 25-35, \ hypersaline >35 \\ \underline{Dissolved \ oxygen} - \ well \ oxygenated >6 \ mg \ L^1, \ oxygenated >4-6 \ mg \ L^1, \ low \ oxygen >2-4 \ mg \ L^1, \ hypoxic \ 0.5-2 \ mg \ L^1, \ anoxic <0.5 \ mg \ L^1 \\ \underline{Chlorophyll \ fluorescence \ (mod/high \ flow): \ low < 60 \ \mug \ L^1, \ moderate \ 60-160 \ \mug \ L^1, \ high \ 160-400 \ high \ L^1, \ high \ 160-400 \ hight \ L^1, \ high \ 160-400 \ hight \ L^1, \ hight \ 160-400 \ hight$

Recommended reference: Department of Biodiversity, Conservation and Attractions 2024. *Swan Canning Estuary water quality profile report, Canning Estuary and Lower Canning River 17th September 2024.* Rivers and Estuaries Science (<u>https://www.dpaw.wa.gov.au/management/swan-canning-riverpark</u>)