

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** 

8 October 2024

Prepared by

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

We're working for Western Australia. Department of Biodiversity, **Biodiversity** and **Conservation and Attractions Conservation Science** WESTERN AUSTRALIA Canning Estuary and Lower Canning River - Water Quality Profiles - 8 October 2024 KS7 SCB2 SAL RIV CASMID KEN BAC NIC ELL -2-Salinity (ppt) 8 10 12 14 16 18 20 22 24 26 28 30 32 34 38 38 40 42 Dissolved Oxygen (mg/L) 4 5 6 7 8 9 10 11 12 13 14 15 16 17 F-Chlorophyll (µg/L) 20 40 60 80 120 160 200 300 400> 400

Depth (m)

-6-2 4 6 8 Distance From Canning Bridge (km)



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Date: 8 October 2024

<u>Weather & tide conditions</u>: Conditions were clear before turning cloudy, with a variable breeze of up to 5.5 knots. The predicted tides at Barrack St were 1.06 m at 12:59 am (high tide) and 0.60 m at 12:07 pm (low tide). Perth recorded 31.2 mm 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 at RIV and CASMID. Waters were oxygenated or well oxygenated, except for subsurface waters at SCB2 which were low in oxygen and bottom waters of SAL which were hypoxic. Chlorophyll fluorescence was moderate in bottom waters of SCB2. Water temperatures ranged from 18.8 to 20.2 °C at the time of sampling.

*Lower Canning River (KEN to ELL)*: The Lower Canning River was fresh, waters were oxygenated or well oxygenated and chlorophyll fluorescence was low. Water temperatures ranged from 18.8 to 20.2 °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:

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

Recommended reference: Department of Biodiversity, Conservation and Attractions 2024. Swan Canning Estuary water quality profile report, Canning Estuary and Lower Canning River 8 October 2024. Rivers and Estuaries Science (<u>https://www.dpaw.wa.gov.au/management/swan-canning-riverpark</u>)