

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

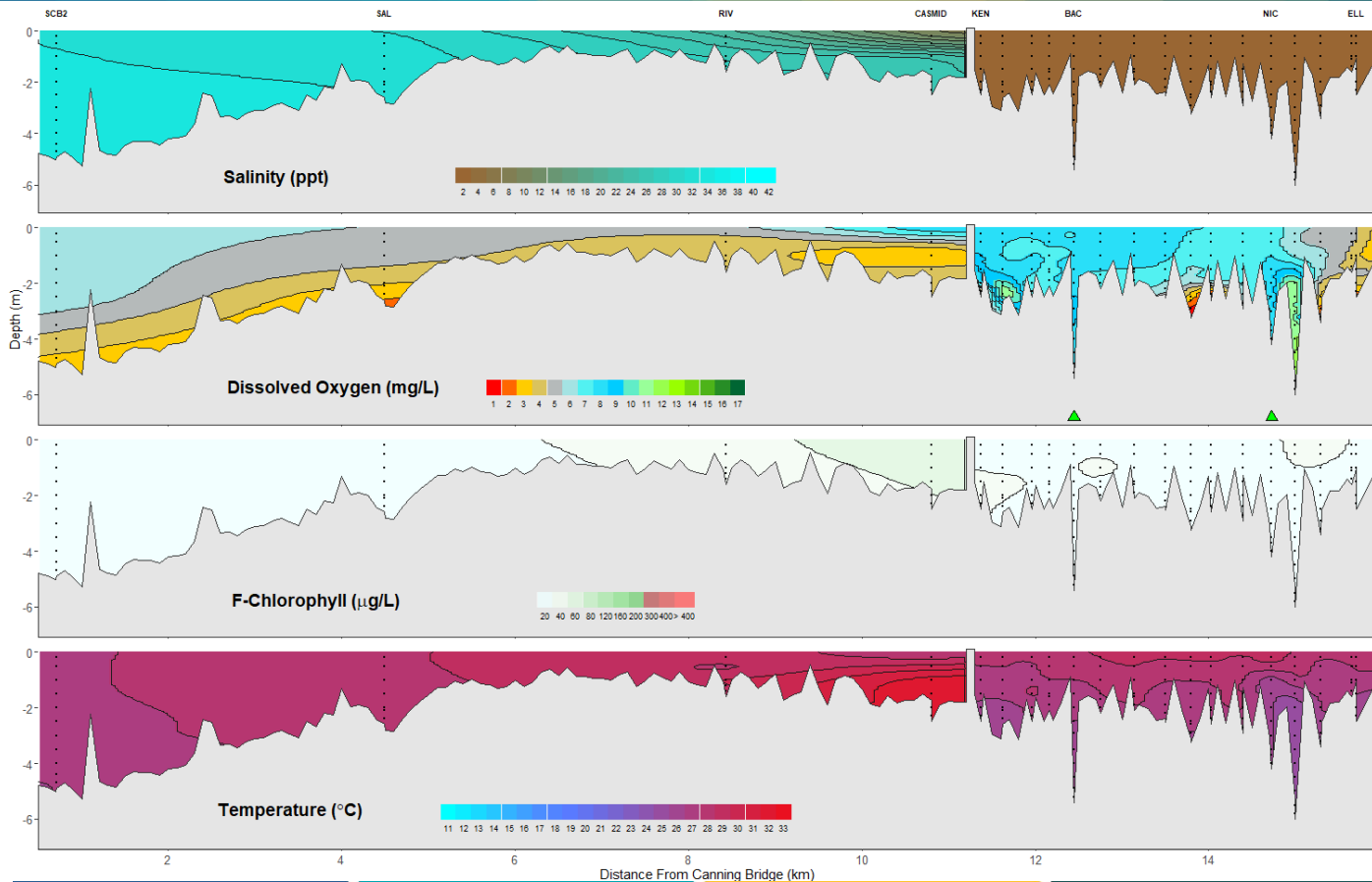
Canning Estuary and Lower Canning River

30 December 2021

Prepared by

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

Canning Estuary and Lower Canning River - Water Quality Profiles – 30 December 2021



Date: 30 December 2021 (NB: Monitoring delayed due to public holidays on 27-28 December 2021)

Weather & tide conditions: Conditions were clear with a southerly breeze of up to 4 knots. The predicted tides at Barrack St were 0.59 m at 6:44 am (low tide) and 1.12 m at 8:30 pm (high tide). Perth recorded no rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Bacon St and Nicholson Rd oxygenation plants were both triggered to provide oxygen in the 24 hours prior to sampling.

Canning Estuary (SCB2 to CASMID): The Canning Estuary was saline at SCB2 and SAL and brackish over saline at RIV and CASMID. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen throughout this zone. Chlorophyll fluorescence was low from SCB2 to RIV and moderate at CASMID indicating higher microalgal activity in that area. Water temperature ranged from 26.0 to 31.2 °C.

Lower Canning River (KEN to ELL): The Lower Canning River was fresh. Surface waters were oxygenated or well oxygenated and bottom waters were low at KEN, MACD50 and ELL and hypoxic between KS7 and MASD50 and at PAC. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 24.4 to 28.5 °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

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 (summer): low < 50 µg L⁻¹, moderate 50-150 µg L⁻¹, high 150-400 µg L⁻¹, extreme > 400 µg L⁻¹