



Department of Biodiversity,
Conservation and Attractions



Biodiversity and
Conservation Science

*We're working for
Western Australia.*

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

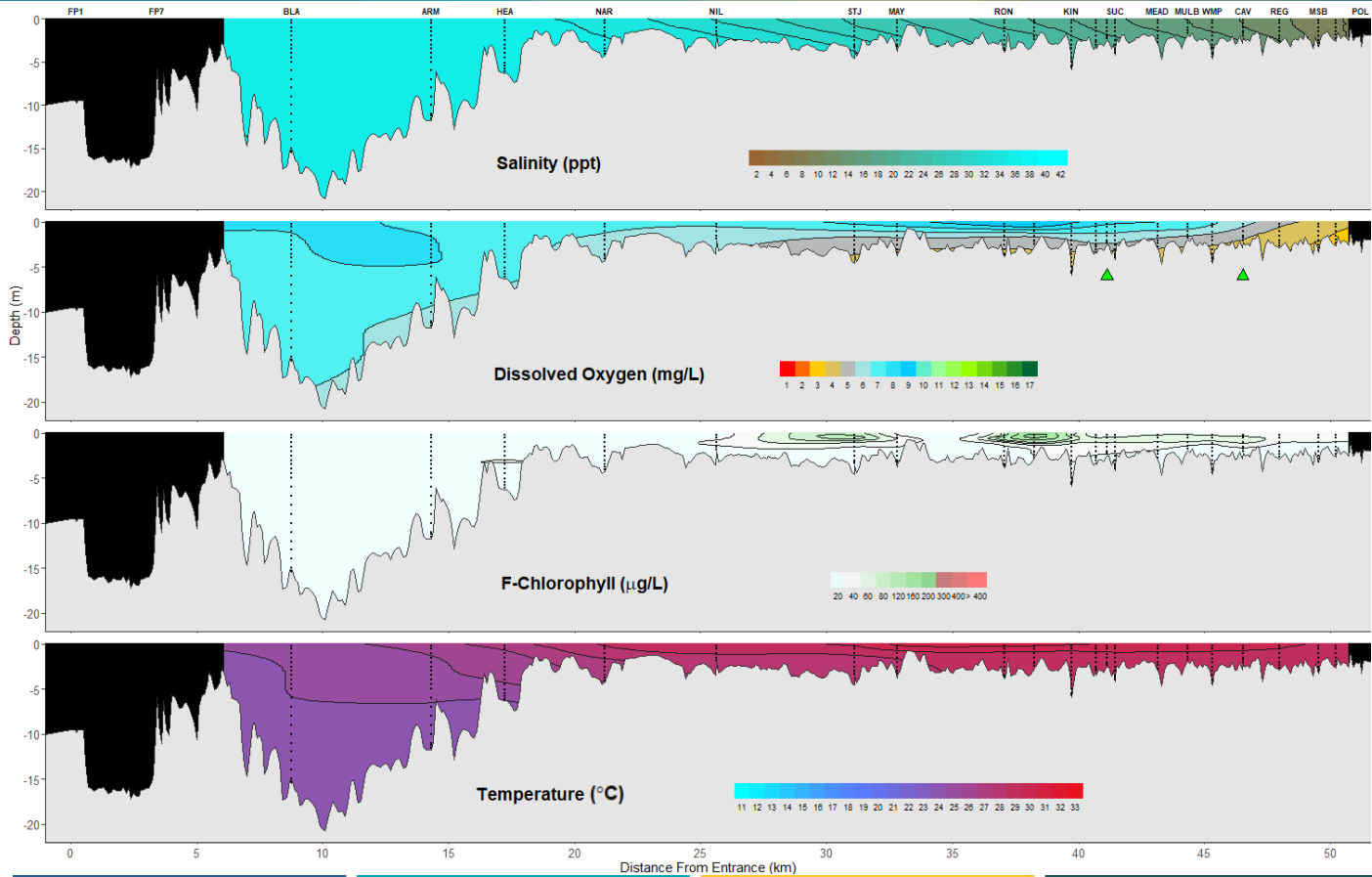
Lower Swan Canning Estuary to Upper Swan Estuary

23rd January 2023

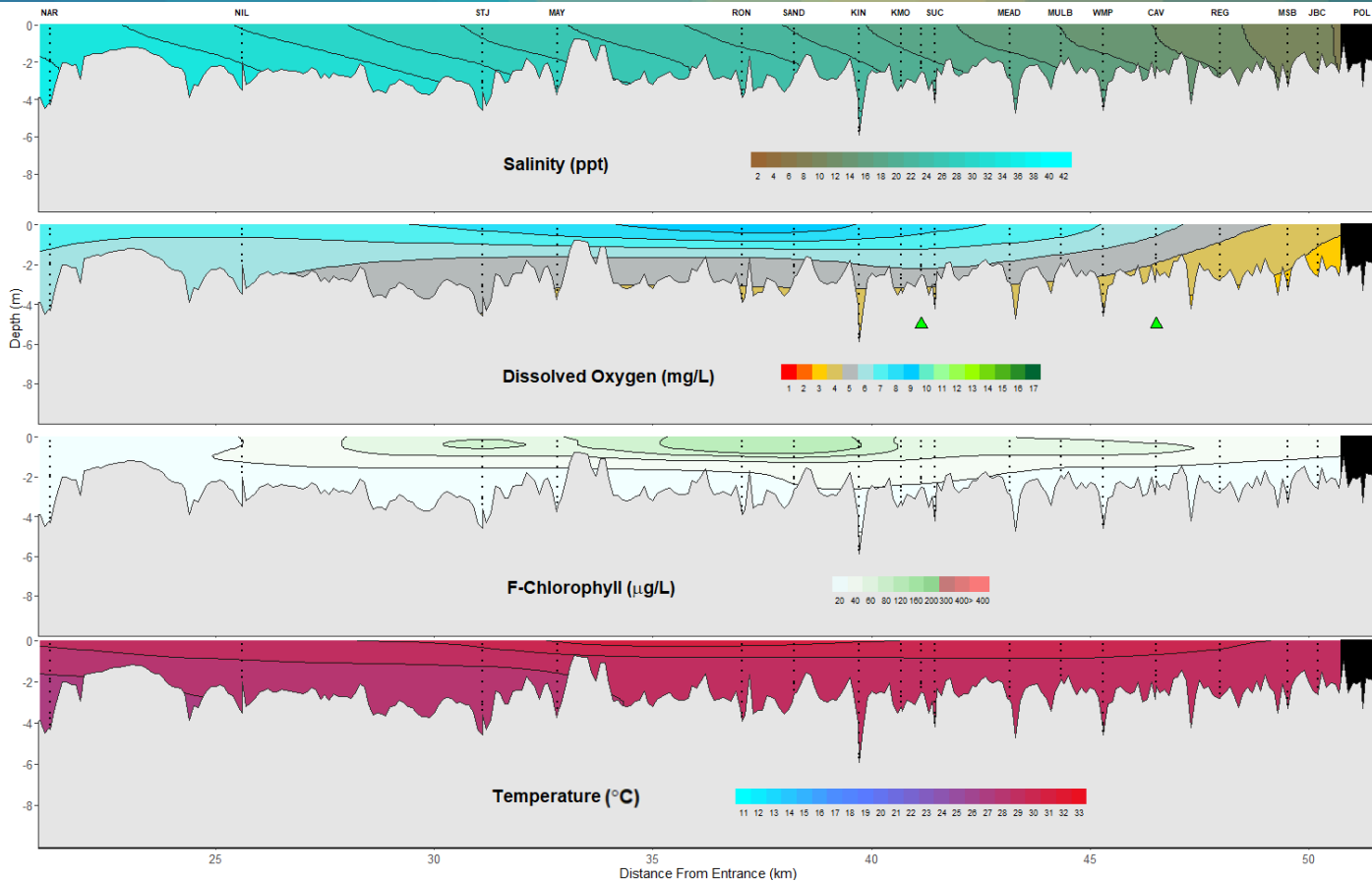
Prepared by

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

Swan Canning Estuary - Water Quality Profiles - 23rd January 2023



Middle and Upper Swan Estuary - Water Quality Profiles – 23rd January 2023



Date: 23rd January 2023

Weather & tide conditions: Conditions were sunny with a predominantly north easterly breeze of up to 6.9 knots. The predicted tides at Barrack St was a low of 0.47 at 10:00 am. Perth recorded no rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were both operable and providing oxygen in the 24 hours prior to sampling.

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was saline, and waters were oxygenated or well oxygenated throughout. Chlorophyll fluorescence was low throughout, and water temperature ranged from 23.1 to 28.1 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline at NIL and STJ, brackish over saline at MAY, and brackish at RON. Waters were oxygenated or well oxygenated throughout, except for the bottom waters between MAY and RON, which were low in oxygen. Chlorophyll fluorescence was low throughout, except for the surface waters of STJ and RON where signals were moderate. Water temperature ranged from 27.7 to 30.6 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish throughout. Between SAND to CAV bottom waters were low in oxygen and surface waters were oxygenated to well oxygenated. Between REG and POL, the water column was low in oxygen. Chlorophyll fluorescence was low throughout, except at the surface waters of KIN, MEAD, and CAV where signals were moderate, and moderate to high at SAND. Water temperature ranged from 28 to 30.2 °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. POL was sampled this week, however chlorophyll fluorescence was unable to be measured and caused all parameters to be removed from plotting.

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