

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

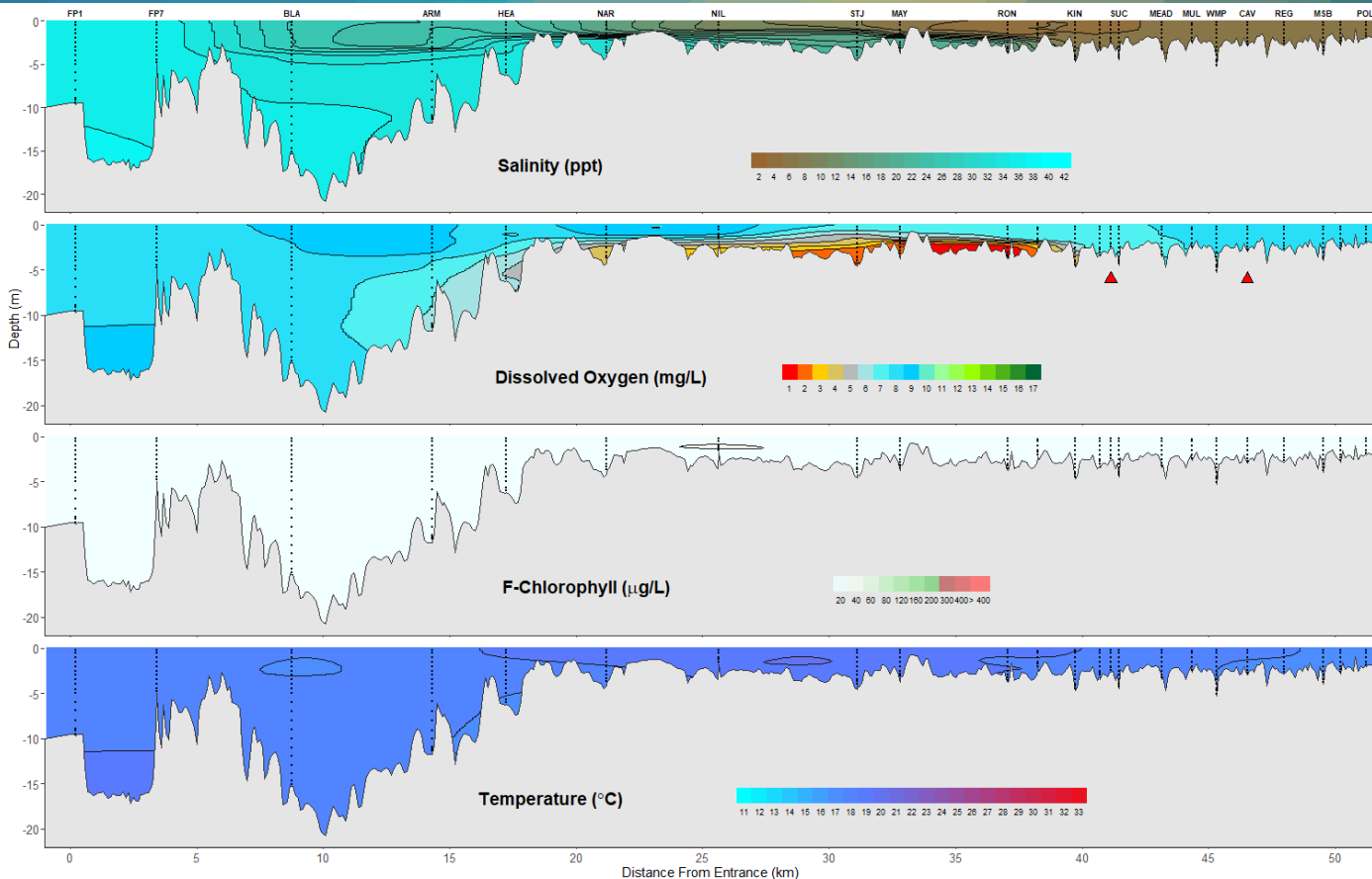
Lower Swan Canning Estuary to Upper Swan Estuary

14th September 2020

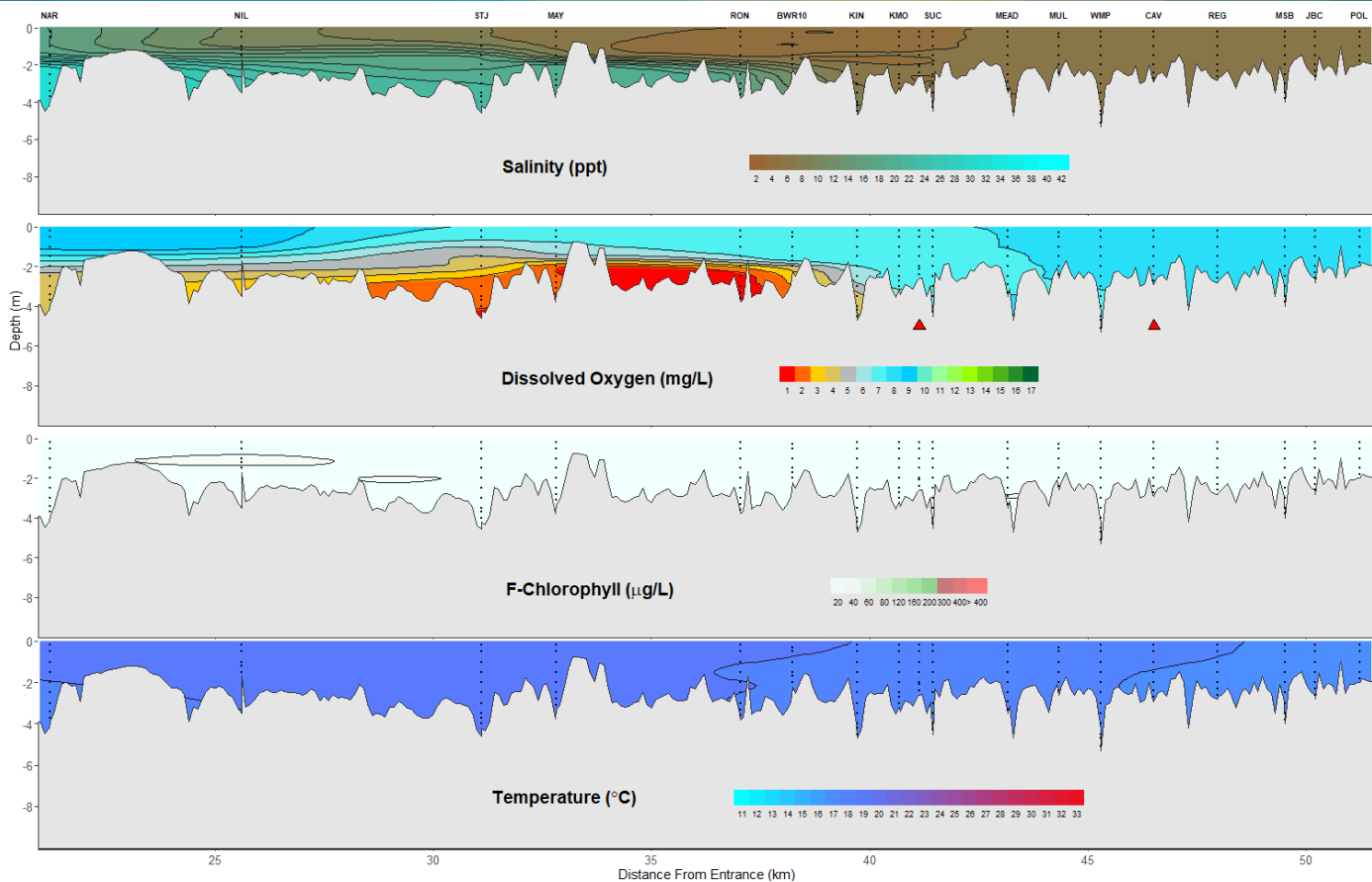
Prepared by

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

Swan Canning Estuary- Water Quality Profiles- 14th September 2020



Middle and Upper Swan Estuary- Water Quality Profiles- 14th September 2020



Date: 14th September 2020

Weather & tide conditions: Conditions were partially cloudy with a predominantly easterly breeze of up to 12 knots. The predicted tides at Barrack St were 1.02 m at 8:31 am (high tide) and 0.56 m at 6:32 pm (low tide). Perth recorded 5.4 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were not operational during the 24 hours prior to sampling.

Lower Swan Canning Estuary (FP1 to NAR): The Lower Swan Canning Estuary was saline from FP1 to BLA, brackish over saline from ARM to NAR. Waters were oxygenated or well oxygenated, except the bottom waters at NAR that were low in oxygen. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 16.8 to 18.4 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish from NIL to STJ and fresh over brackish from MAY to RON. Surface waters were well oxygenated and bottom waters were hypoxic from STJ to RON. Chlorophyll fluorescence was highest at NIL indicating higher microalgal activity in this area. Water temperature ranged from 17.9 to 19.0 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish at MSB and POL, fresh over brackish at KIN and JBC, and fresh at BWR10 and between KMO and REG. Surface waters were well oxygenated and bottom waters were low in oxygen at BWR10 and KIN. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 16.3 to 18.4 °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 >6mg/L, oxygenated >4-6mg/L, low oxygen >2-4mg/L, hypoxic 0.5-2mg/L, anoxic <0.5mg/L

Recommended reference: Department of Biodiversity, Conservation and Attractions 2020. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 14th September 2020*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)