Environmental Monitoring and Reporting
Swan River Estuary ~ Weekly profile

by
Water Science Branch, Department of Water

Date: Monday 1st May 2017

Weather & tide conditions: Conditions were fine with up to 30% cloud cover and an easterly breeze of up to 8 knots. The predicted tides at Guildford were 0.64 m (low tide) at 01:43 and 1.14 m (high tide) at 14:55. Perth recorded 0 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Caversham oxygenation plant was operational the week prior to sampling, while the Guildford oxygenation plant was operational up to 30/4/16.

Lower Swan/Canning Estuary (FP1 to NAR):   The Lower Swan Estuary was saline to hyper saline throughout. Water was mostly well oxygenated with oxygenated bottom water at ARM, low oxygen at and NAR and hypoxic at HEA. Water temperature ranged from 20.0 to 21.1 °C.

Middle Swan Estuary (NIL to RON):   The Middle Swan Estuary was mostly brackish with the exception of saline bottom water at NIL and STJ. Surface water was well oxygenated over hypoxic bottom water at STJ, MAY and RON. There was low oxygen water at NIL. Water temperature ranged from 19.9 to 21.1 °C.

Upper Swan Estuary (BWR10 to POL):   The Upper Swan Estuary was brackish throughout. Water was well oxygenated to oxygenated at all sites from BWR10 to MSB and at POL with the exception of hypoxic bottom water at BWR10, SUC and low oxygen bottom water at KIN, KMO VIT, MEA, MSB and POL. There was low oxygen water at JBC. Water temperature ranged from 18.1 to 20.7 °C.


Definitions:

Salinity – fresh <5ppt, brackish 5-25ppt, saline 25-35ppt, hypersaline >35ppt

Dissolved oxygen – well oxygenated >6 mg/L oxygenated >4 to 6 mg/L, low oxygen >2 to 4 mg/L, hypoxic >0.5 to 2.0 mg/L, near anoxic <0.5 mg/L

Swan River Estuary - Physical-chemical Profile - 1st May 2017

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Salinity (ppt)

Dissolved Oxygen (mg/L)

Dissolved Oxygen (%Sat'n)

Temperature (°C)

Depth (m)

Distance from entrance (km)
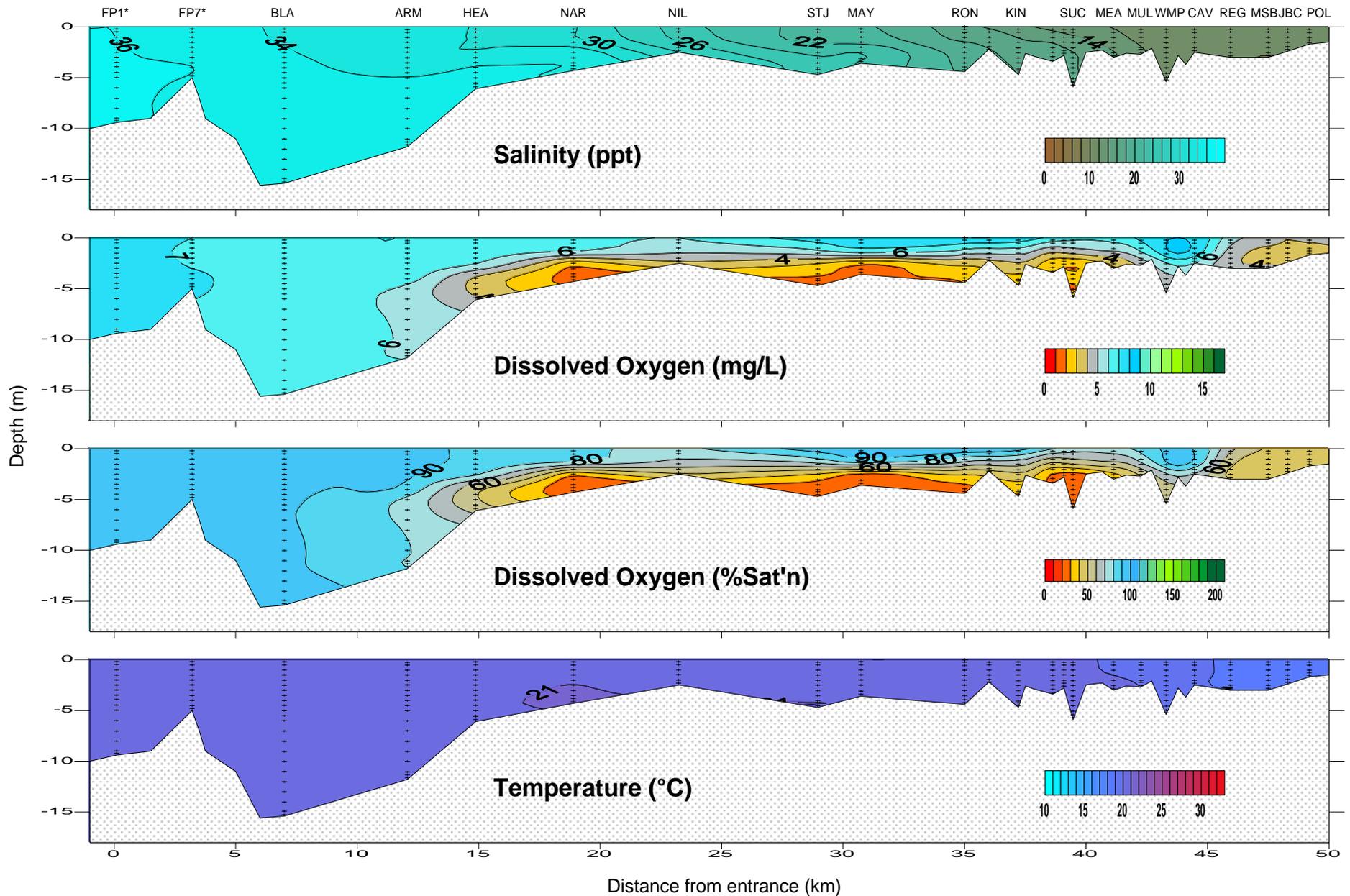
Data for sites FP1 (Harbour entrance) and FP7 (Fremantle Bridge) are supplied courtesy of the Fremantle Port Authority