Environmental Monitoring and Reporting
Swan River Estuary ~ Weekly profile

by
Water Science Branch, Department of Water

Date: Monday 4th April 2016

Weather & tide conditions: Conditions were fine with up to 100% cloud cover and a predominantly south westerly breeze of up to 10 knots. The predicted tides at Guildford were 0.67 m (low tide) at 05:36 and 1.02 m (high tide) at 21:55. Perth recorded 0 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford oxygenation plant was operational the week prior to sampling, while the Caversham oxygenation plant was not operational the week prior to sampling.

Lower Swan/Canning Estuary (FP1 to NAR):   The Lower Swan Estuary was hyper saline throughout, with the exception of saline surface water at NAR. Water was well oxygenated to oxygenated at all sites except for low oxygen bottom water at HEA. Water temperature ranged from 22.5 to 23.9 °C.

Middle Swan Estuary (NIL to RON):   The Middle Swan Estuary had brackish surface water over saline bottom water throughout all sites. Surface water was well oxygenated to oxygenated at all sites. Bottom water a near anoxic from STJ to RON and oxygenated at NIL. Water temperature ranged from 23.2 to 24.5 °C.

Upper Swan Estuary (BWR10 to POL):   The Upper Swan Estuary was brackish throughout, with the exception of saline bottom water at KIN. Water was oxygenated to low oxygenated with the exception of near anoxic bottom water at BWR10 and at KIN and hypoxic bottom water at KMO and MEA. Water temperature ranged from 22.1 to 23.9 °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 - 4th April 2016
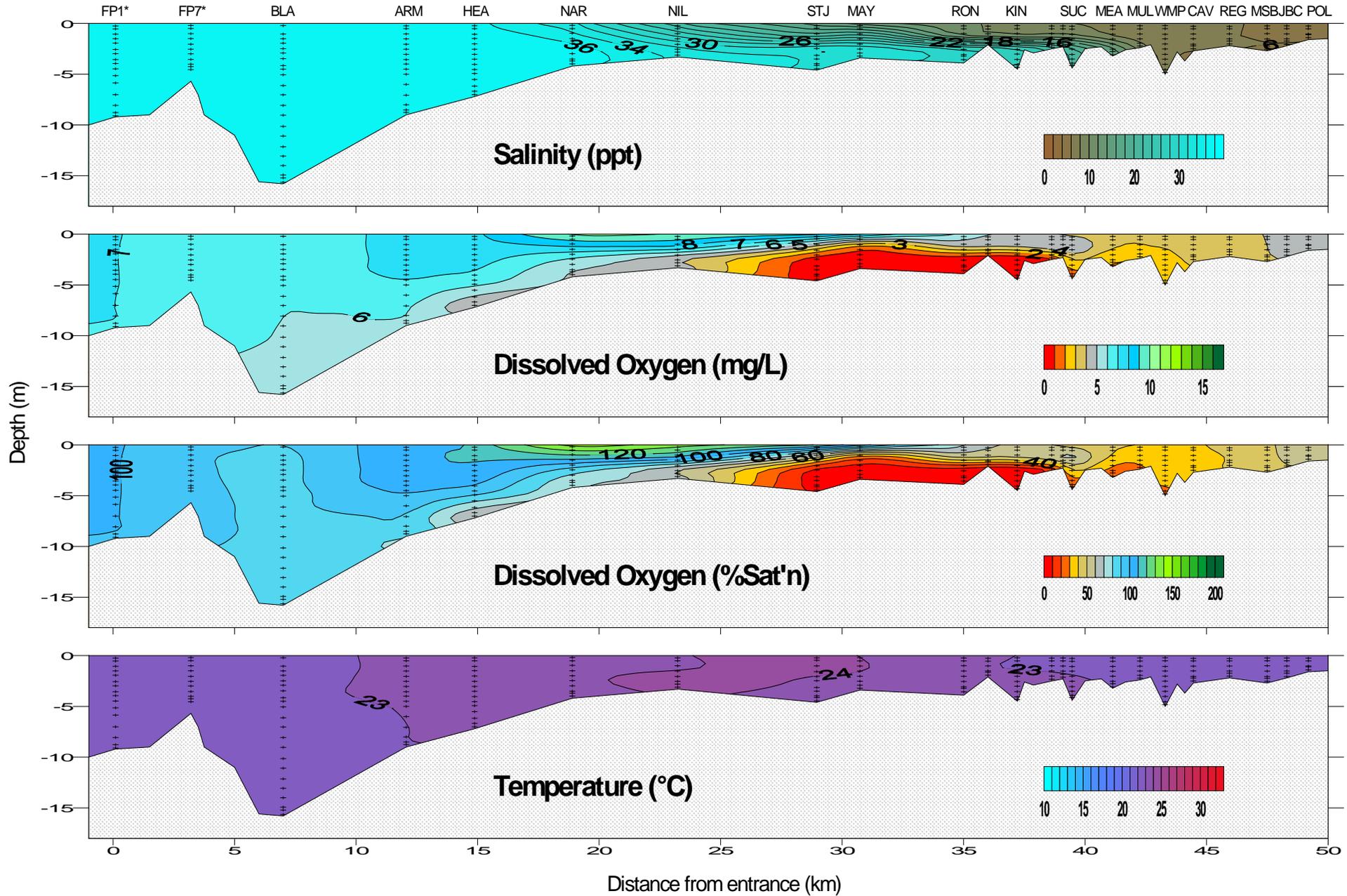
Data for sites FP1 (Harbour entrance) and FP7 (Fremantle Bridge) are supplied courtesy of the Fremantle Port Authority