



**Environmental Monitoring and Reporting  
Swan River Estuary ~ Weekly profile**

by  
Water Science Branch, Department of Water

Date: Monday 6<sup>th</sup> February 2017

Swan run: FP1 (08:32) upstream to MAY (12:09) on the Kwilana. Crew of Amanda Page, Craig Stott, Digby Veling and Rainer Kellen. The YSI 6600 V2 #1 was used and there were no problems with the equipment.

Upperswan run: POL (09:33) downstream to RON (12:11) on the Marli. Crew of Rebecca Firth and Vaughan Smith. The YSI 6600 V2 #3 was used and there were no problems with the equipment. POL was only profiled at 0.2 m as the flow was too strong to profile deeper.

Weather & tide conditions: Conditions were fine with up to 0% cloud cover and a predominantly easterly breeze of up to 13 knots. The predicted tides at Guildford were 0.53 m (low tide) at 07:06 and 1.04 m (high tide) at 20:16. Perth recorded 34.6 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Additional samples: Three sites in the lower estuary were sampled as part of the Fremantle Port Marine Monitoring Program. One site in the lower estuary was sampled as part of the Swan Compliance Monitoring program.

Oxygenation: The Caversham oxygenation plant was operational the week prior to sampling, while the Guildford oxygenation plant was operational up to 03/02/2017.

Lower Swan/Canning Estuary (FPI to NAR): The Lower Swan Estuary was saline to hypersaline throughout with the exception of brackish surface water from ARM to NAR. Water was well oxygenated to oxygenated throughout with the exception of low oxygen bottom water at NAR. Water temperature ranged from 22.9 to 25.3 °C.

Middle Swan Estuary (NIL to MAY): The Middle Swan Estuary was fresh throughout with the exception of brackish bottom water at NIL. Water was low in oxygen throughout with the exception of oxygenated surface water at STJ and MAY. Water temperature ranged from 24.3 to 27.2 °C.

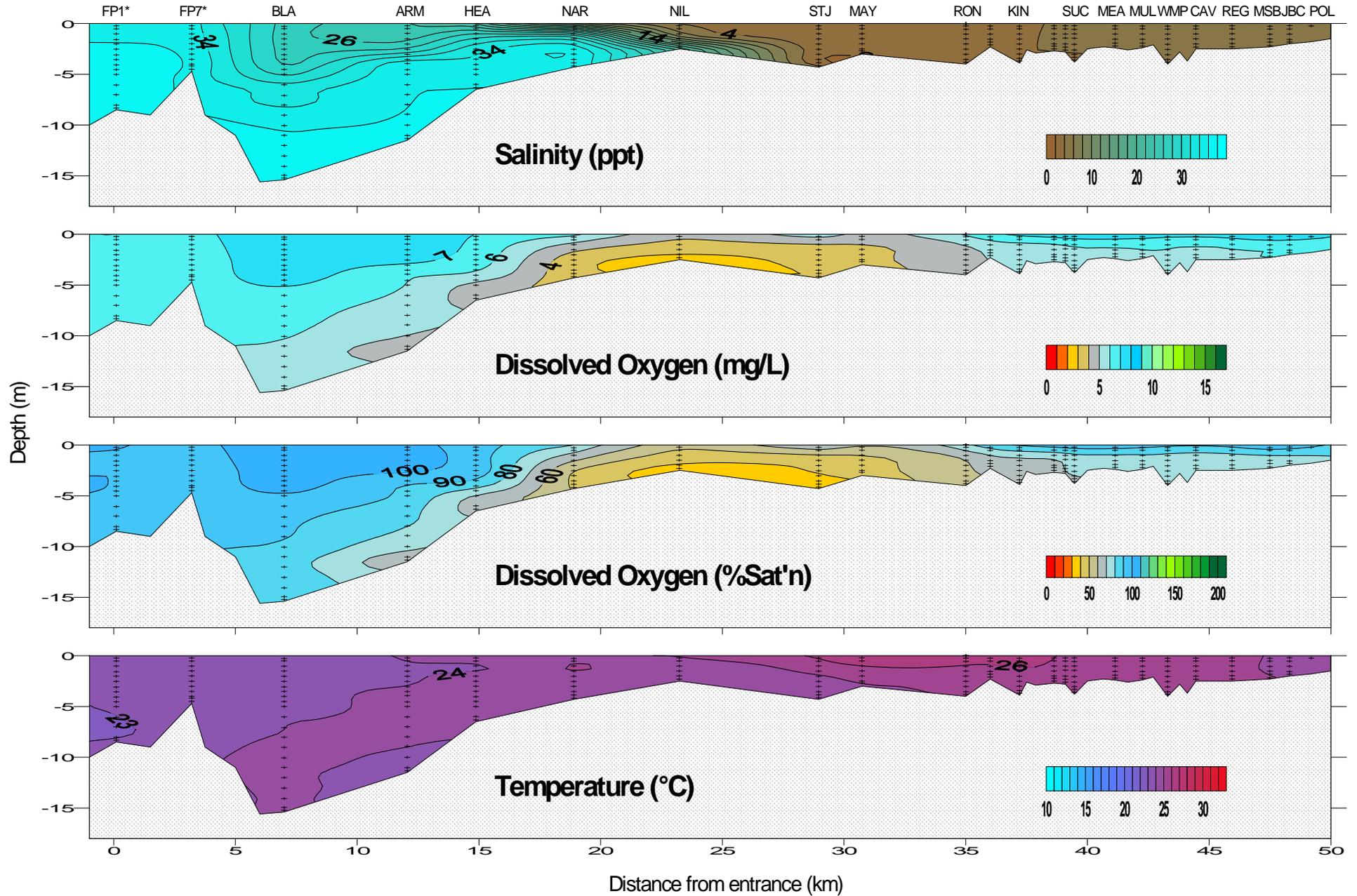
Upper Swan Estuary (RON to POL): The Upper Swan Estuary was fresh and well oxygenated to oxygenated throughout all sites. Water temperature ranged from 24.8 to 26.5 °C.

**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 - 6th February 2017



\*Data for sites FP1 (Harbour entrance) and FP7 (Fremantle Bridge) are supplied courtesy of the Fremantle Port Authority