



Environmental Monitoring and Reporting
Swan River Estuary ~ Weekly profile

by
Water Science Branch, Department of Water

Date: Monday 30th January 2017

Swan run: BLA (08:52) upstream to MAY (11:41) on the Kwilana. Crew of Amanda Page, Mark Bretnall, John Snowden, Vaughan Smith and Veronica Wilson. The YSI 6600 V2 #1 was used and there were no problems with the equipment. ARM was only profiled to 5m as the current was too strong to profile deeper.

Upperswan run: POL (09:38) downstream to RON (11:59) on the Marli. Crew of Rebecca Firth and Rainer Kellen. The YSI 6600 V2 #3 was used and there were no problems with the equipment

Weather & tide conditions: Conditions were overcast with up to 100% cloud cover and a south west to south easterly breeze of up to 16 knots. The predicted tides at Guildford were 0.97 m (high tide) at 00:54 and 0.58 m (low tide) at 09:40. Perth recorded 13.2 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Additional samples: One site in the lower estuary was sampled as part of the Swan Compliance Monitoring Program.

Oxygenation: The Guildford and Caversham oxygenation plants were operational during the week prior to sampling.

Lower Swan/Canning Estuary (BLA to NAR): The Lower Swan Estuary was saline to hypersaline and well oxygenated to oxygenated throughout all sites. Water temperature ranged from 23.9 to 24.8 °C.

Middle Swan Estuary (NIL to MAY): The Middle Swan Estuary was saline throughout NIL and brackish over saline at STJ and MAY. Water was well oxygenated to oxygenated, with the exception of low oxygen bottom water at STJ and MAY. Water temperature ranged from 25.1 to 27.6 °C.

Upper Swan Estuary (RON to POL): The Upper Swan Estuary was brackish throughout, with the exception of saline bottom water at RON and BWR10. Surface water was well oxygenated to oxygenated from RON to CAV and POL, and low in oxygen from REG to JBC. Bottom water was low in oxygen at all sites, with the exception of well oxygenated to oxygenated bottom water at KMO to MULB FARM, CAV and REG. Water temperature ranged from 26.2 to 28.6 °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 - 30 January 2017

