



Environmental Monitoring and Reporting
Swan River Estuary ~ Weekly profile report

Written by
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Date: Monday 10th April 2017

Swan run: BLA (08:15) upstream to MAY (10:54) on the Kwilana. Crew of Rebecca Firth, Julian Madaschi, Vaughan Smith and Sam Cain. The EXO 2 #2 was used and there were no problems with the equipment.

Upper Swan run: POL (09:18) downstream to RON (11:41) on the Kepa. Crew of Amanda Page and Rainer Kellen. The EXO 2 #1 was used and there were no problems with the equipment

Weather & tide conditions: Conditions were fine with up to 5% cloud cover and a predominantly south easterly breeze of up to 3 knots. The predicted tides at Guildford were 0.75 m (low tide) at 04:56 and 0.96 m (high tide) at 12:20. Perth recorded 0 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 the week prior to sampling.

Lower Swan/Canning Estuary (BLA to NAR): The Lower Swan Estuary was saline throughout at BLA, NAR and HEA. Surface water was brackish over saline bottom water at NAR. Surface water was well oxygenated at all sites. Bottom water was well oxygenated at BLA, low oxygen at ARM and NAR and hypoxic at HEA. Water temperature ranged from 19.3 to 21.3 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish throughout with the exception of saline bottom water at NIL. Surface water was well oxygenated at all sites. Bottom water was oxygenated at NIL, hypoxic at STJ and MAY and near anoxic at RON. Water temperature ranged from 20.6 to 21.8 °C. The black area on the dissolved oxygen plots around MAY is due to stratification resulting in close contour lines.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish throughout. Surface water at BWR10 to SUC was well oxygenated over near anoxic bottom water at BWR10 and KIN, hypoxic bottom water at KMO and low oxygen bottom water at VIT and SUC. Surface water was oxygenated over low oxygen bottom water at MEA. Water was well oxygenated throughout at sites MULB FARM to REG. Water was oxygenated throughout at sites MSB to POL. Water temperature ranged from 19.3 to 21.8 °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 - 10th April 2017

