



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

by
Water Science Branch, Department of Water

Date: Monday 16th January 2017

Swan run: BLA (08:54) upstream to MAY (11:24) on the Kwilana. Crew of Craig Stott, Rebecca Firth, Vaughan Smith and Rainer Kellen. The YSI 6600 V2 #1 was used and there were no problems with the equipment.

Upperswan run: POL (09:19) downstream to RON (12:26) on the Marli. Crew of Katherine Bennett and Digby Veling. The YSI 6600 V2 #3 was used and there were no problems with the equipment

Weather & tide conditions: Conditions were fine with up to 45% cloud cover and a south to south westerly breeze of up to 12 knots. The predicted tides at Guildford were 0.95 m (high tide) at 00:55 and 0.58 m (low tide) at 10:28. Perth recorded 0.4 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 to hypersaline throughout. Water was well oxygenated throughout BLA and well oxygenated on the surface over oxygenated bottom water from ARM to NAR. Water temperature ranged from 23.4 to 24.7 °C.

Middle Swan Estuary (NIL to MAY): The Middle Swan Estuary was saline throughout NIL, brackish over saline at STJ and brackish throughout MAY. Water was well oxygenated to oxygenated at all sites, with the exception of low oxygen bottom water at MAY. Water temperature ranged from 26.1 to 27.4 °C.

Upper Swan Estuary (RON to POL): The Upper Swan Estuary was brackish throughout all sites. Water was well oxygenated on the surface of all sites, with the exception of low oxygen surface water at MSB to POL. Bottom water was hypoxic at RON, low in oxygen at BWR10, KIN, SUC and at WMP to POL, and well oxygenated to oxygenated at KMO, VIT, MEA, MULB FARM and KMO. Water temperature ranged from 26.9 to 28.3 °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

