



Environmental Monitoring and Reporting Swan River Estuary ~ Weekly profile

by
Water Science Branch, Department of Water and Environmental Regulation

Date: Monday 9th April 2018

Swan run: BLA (08:12) upstream to NIL (10:09) on the Kwilana. Crew of Rebecca Firth, Mark Bretnall, Rainer Kellen and Mitch Borgogno. STJ (11:02) upstream to MAY (11:26) on the Trekker. Crew of Rebecca Firth and Mark Bretnall. The EXO2 #2 was used and there were no problems with the equipment.

Upper Swan run: POL (09:31) downstream to RON (12:30) on the Kepa. Crew of Nick Raymond and Riley Carter. The EXO2 #1 was used and there were no problems with the equipment.

Weather & tide conditions: Conditions were fine with up to 95% cloud cover and a predominantly south-westerly breeze of up to 12 knots. The predicted tides at Guildford were 0.66 m (low tide) at 04:27 and 1.03 m (high tide) at 16:49. 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 hyper-saline to saline throughout. Water was well oxygenated to oxygenated throughout all sites. Water temperature ranged from 22.3 to 22.9 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline throughout NIL to MAY and brackish over saline at RON. Water was well oxygenated to oxygenated at all sites with the exception of bottom water low in oxygen at STJ and hypoxic at MAY and RON. Water temperature ranged from 22.8 to 24.4 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish over saline from BWR10 to KIN and brackish from KMO to POL. Water was well oxygenated to oxygenated from BWR10 to MSB, with the exception of hypoxic bottom water from BWR10 to VIT, and low oxygen bottom water from SUC to WMP and at MSB. Water was low in oxygen throughout from JBC to POL. Water temperature ranged from 21.7 to 24.5 °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 - 9th April 2018

Prepared by Water Science Branch, Department of Water and Environmental Regulation

