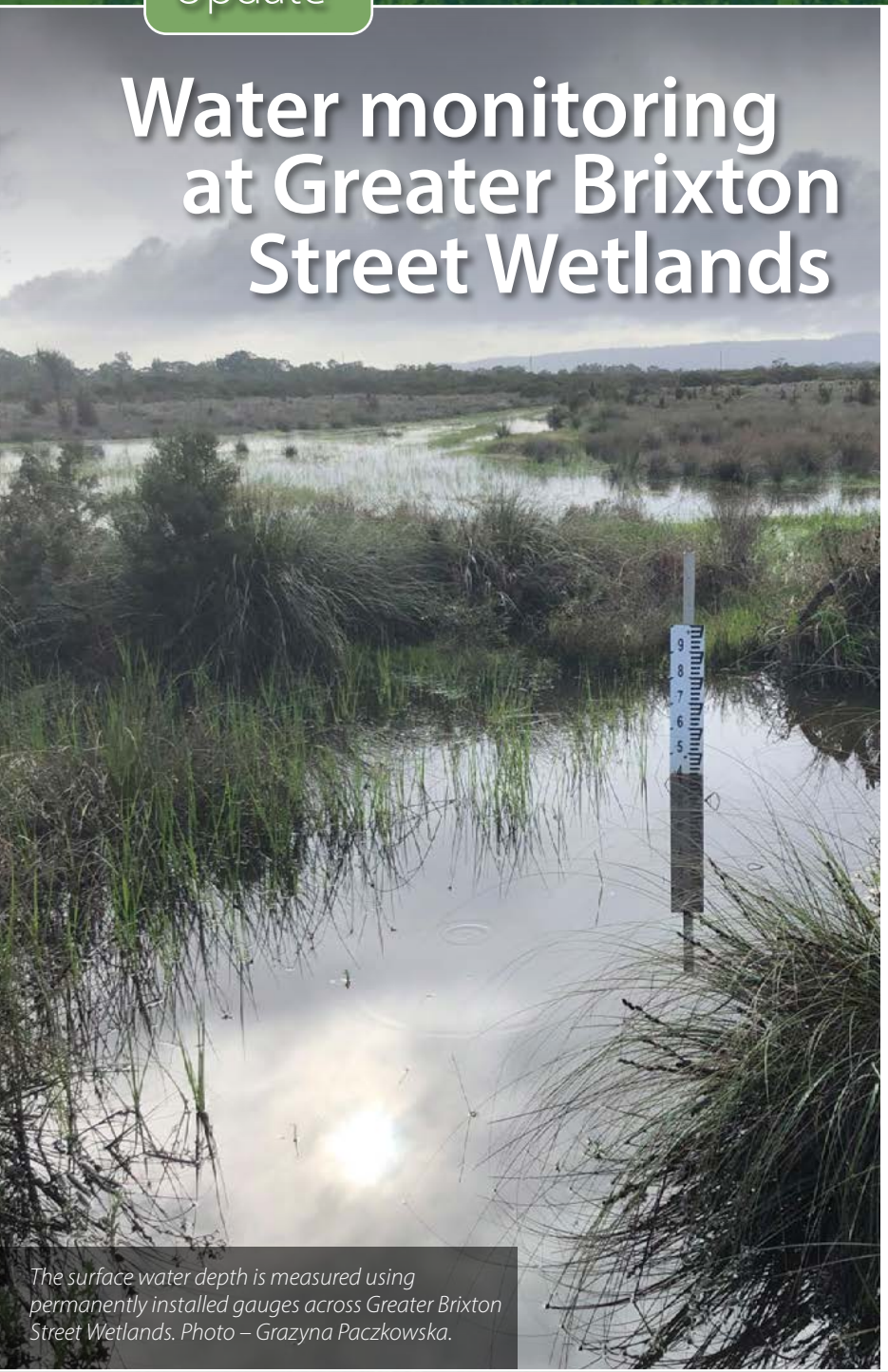
Water monitoring at Greater Brixton Street Wetlands



The surface water depth is measured using permanently installed gauges across Greater Brixton Street Wetlands. Photo – Grazyna Paczkowska.

By Jasmine Rutherford and Grazyna Paczkowska

The Greater Brixton Street Wetlands comprise a complex series of seasonally inundated areas including claypans, waterlogged flats and damplands. The wetland vegetation has adapted to require seasonal flooding for its long-term survival. Wetlands develop in soils that often contain naturally high concentrations of salt (sodium chloride), metals and nutrients. Understanding the hydrological processes and functions of the wetlands provides information on water quality tolerances for flora and fauna, which is important under the current drying climate.

DBCA is conducting a water monitoring study to improve understanding of the hydrological function of the wetlands.

This winter, Urban Nature assisted DBCA Senior Research Scientist Dr Jasmine Rutherford in the field for one of the routine water monitoring activities, including physico-chemical measurements of groundwater and surface water. The Friends of Brixton Street Wetlands are also helping out with the study by monitoring the water depth gauges.

The research is looking at how quickly water in aquifers and claypans rise and fall following winter rainfall and the start of spring. This helps us assess if an elevated water table is a threat or a benefit to wetlands storing water for longer periods of time. It also increases our knowledge of how the current and future changes in rainfall patterns may affect soil texture and chemistry. Answering these questions is vital for the development of actions and plans for future management of this important reserve.

Left: Sampling one of the three groundwater bores at Greater Brixton Street Wetlands. The red coloured groundwater in the bailer shows the presence of dissolved metals such as iron. Right: Sampling surface water using a water quality meter that measures parameters including dissolved oxygen, salinity and pH. Photos – Grazyna Paczkowska.