

Management of Wetlands and Constructed Lakes

Webinar 1: Thursday, 23 July 2020 10:00am – 11:00am
Webinar 2: Thursday, 30 July 2020 1:00pm – 2:00pm

WEBINAR 1: DESIGNING A WATER QUALITY MONITORING PROGRAM

- 10:00am** **Welcome and Introduction**
Melanie Davies, Biodiversity and Sustainability Project Officer, WALGA
- 10:05am** **Designing a Water Quality Monitoring Program**
Halinka Lamparski, Senior Environmental Engineer, Urbaqua
- 11:00am** **Close of webinar**

WEBINAR 2: FLOATING ISLANDS, DRAINAGE SOCKS AND WILDLIFE

- 1:00pm** **Welcome and Introduction**
WALGA Biodiversity and Sustainability Project Officer, Melanie Davies
- 1:05pm** **Management of Aquatic Bird Diseases and Introduced Fish**
Jo Taylor, Conservation Officer, City of Stirling
- 1:25pm** **Performance of Gross Pollutant Traps**
Giorgia De Bellis, CEED Masters Student, Water Corporation
- 1:45pm** **Emu Lake: Installation of a Wetland Embayment with Floating Vegetated Panels**
Monika Bell, Natural Areas Conservation Ecologist, City of Swan
- 2:00pm** **Close of Webinar**

Halinka Lamparski, Senior Environmental Engineer, Urbaqua will outline considerations for the design of water quality monitoring programs to ensure the right data is collected to diagnose water quality issues and identify effective solutions. Halinka will discuss considerations such as selecting the right parameters (physical, nutrients and heavy metals), frequency of monitoring, reactive versus scheduled, groundwater or surface water, and the influence of water level and flow. Halinka will highlight how the right water quality monitoring data can be used to inform management actions and assess the effectiveness of interventions. Project examples from wetlands and constructed lakes across the Perth metropolitan region will be provided.

Jo Taylor, Conservation Officer, City of Stirling, will outline the management of wildlife issues that have emerged as an increasing issue for the City over recent years, including the introduction of feral carp and koi in wetlands by members of the public, and the appearance of an increased range of zoonosis diseases in aquatic birds. Jo will discuss the associated issues of recreational fishing and decline in health and abundance of wildlife, and implications for human health. Jo will outline the City's management approach to address the issues, including collaboration with the Department of Primary Industries and Regional Development (DPIRD), development of a wildlife management database, the adoption of internal Standard Operation Procedures, trials of electrofishing, and community education.

Giorgia De Bellis, CEED Masters Student Drainage and Liveable Communities, Water Corporation, will provide information on the performance of different types of Gross Pollutant Traps (GPTs) following a literature review and consultation with Local Governments across Australia. The GPTs of interest are designed to capture plastic and other gross pollutants and include drainage socks, floating litter booms and floating litter traps. Giorgia will provide information on the operational and maintenance requirements of GPTs, such as maintenance method and frequency. The project is part of Water Corporation's broader plan for the installation and monitoring of GPTs in Herdsman Lake. Giorgia will also outline a newly initiated project with the City of Kwinana, which will develop a process for catchment selection, monitoring and maintenance of drainage socks.

Monika Bell, Natural Areas Conservation Ecologist, City of Swan will discuss how Emu Lake, a constructed lake in Ballajura, has excessive nutrient levels that have led to ongoing issues with blue-green algae blooms. In October 2019, the City of Swan completed the construction of a wetland embayment in the lake, which uses floating vegetated panels to strip nutrients from the water via the beneficial bacteria on the plant roots. Monika will discuss the installation and maintenance of the vegetated panels, and the embayment water circulation system. The City of Swan will also discuss learnings from trials of other floating vegetated islands designs over the past 10 years.