

Climate-smart stormwater

Harnessing technology to develop resilient solutions for Adelaide

Venue:	Online
Date:	Thursday 4 April 2024
Registration:	8:50am ACST
Time:	9:00-10:30ACST

Overview

Our urban stormwater systems and infrastructure are under increasing pressure. New communities and infill development with larger roofs, and more hard paved, impermeable areas and roads, paths and surfaces are generating higher rates of runoff – and demand on the drainage system continues to rise.

We are noticing our drainage systems' capacity to deliver the same flood protection to homes and business is not as it has always been.

A changing climate will further exacerbate rainfall intensity, alter seasonal patterns and cause prolonged drought, creating uncertainty and challenging traditional approaches to stormwater network design.

How can we make the stormwater system work smarter, not harder?

Harnessing new technologies, looking at the problem from a fresh perspective and using machine learning is helping to develop optimised and resilient solutions for Adelaide suburbs.

Program

Time ACST	Topic	Who
08:50am	<i>Seminar open (Zoom)</i>	
9:00am	Introduction	Belinda Dohring Water Sensitive SA
9:10am	Rainfall projections for Adelaide in a changed climate What we might expect with hotter, drier and more intense rainfall conditions in Adelaide	Darren Ray Department for Environment & Water
9:30am	Smart stormwater storage Optimising existing stormwater networks using smart technology	Professor Holger Maier & Dr Mark Thyer University of Adelaide
9:55am	Opportunities to deploy smarter stormwater management in the City of Mitcham Practical application of smart stormwater systems to improve network efficiencies, capacity management, infiltration and reuse.	Rachel Murchland, City of Mitcham
10:15am	Panel discussion Science, research and practical applications for a smarter stormwater system	
10:30am	<i>Close</i>	

For more information, contact Kathryn Bothe, Communication & Events Manager, Water Sensitive SA – kathryn@watersensitivesa.com, 0438 114 994.



Presenters



Darren Ray, Principal Climate Change Analyst, Department for Environment and Water

Darren is the Principal Climate Change Analyst at the South Australian Department for Environment and Water, and is often a guest lecturer on climate influences, climate change and climate projection modelling at The University of Adelaide. Beginning his weather and climate career in 2002 with the Bureau of Meteorology, he is well known in South Australia for his work in bridging the gap between weather and climate science, and evidence-based decision making.

He enjoys communicating climate science to a broad range of audiences, dispelling climate myths and supporting the need for urgent action to reduce greenhouse gas emissions.



Prof. Holger Maier, Professor of Environmental Engineering, University of Adelaide

Holger's research is focused on developing improved techniques for the sustainable management of infrastructure and natural resources in an uncertain environment. He is particularly interested in the water-energy nexus and natural hazards.

At the University of Adelaide, Holger lectures in climate and environmental impact modelling, harnessing machine learning and data driven models, with his contribution to the Smart Detention Tank Project earning a commendation for Excellence in Research & Innovation at the 2020 Stormwater South Australia Excellence Awards.



Dr Mark Thyer, Associate Professor, Civil and Environmental Engineering, University of Adelaide

Mark's research experience, spanning 17 years, in developing physical-statistical models to enhance predictions for hydrological, environmental and water resources models is underpinned by a keen interest in long-term climate variability and behavioural water use modelling for integrated urban water management.

He is an internationally recognised expert on approaches to quantify uncertainty in hydrological predictions, a member of the Water Research Centre, where he works with a range of allies to solve water-related problems easily and collaborates with local, national and international institutions on specialist water supply projects.



Rachel Murchland, Principal Project Manager, City of Mitcham

Rachel is the Principal Project Manager at the City of Mitcham, and a Civil and Environmental Engineer with over 17 years of involvement in the stormwater industry working primarily on Kurna country across consulting, state and local government areas. Rachel is passionate about supporting the engineering industry, working together with first nations, to enhance the integration between the natural and the built environments, and returning water to country through infiltration and passive reuse.