Public Works Foundations Program

Course Outline

Stormwater Management Foundations

What is the Stormwater Management Foundations course?

This course is one of a series of **Public Works Foundations Program** courses curated by IPWEA Victoria to develop the skills of public works professionals in key responsibility areas. Each course comprises four 4-hour sessions presented over consecutive weeks.

Course Overview

This course will introduce industry-leading best practice stormwater management solutions and focus on bridging the knowledge gap between traditional stormwater engineering solutions and alternative solutions achieving multiple benefits.

Modules

Session 1: **Drainage Principles and Planning**
Session 2: **Integrated Water Management**
Session 3: **Stormwater Harvesting for Irrigation**
Session 4: **Urban Flood Management**

Learning Objectives

By the end of this course participants will have an increased understanding of the complexities, challenges and opportunities in stormwater management.

Drainage Principles and Planning

- Fundamental drainage principles and network management for stormwater
- Roles and responsibilities in stormwater management, planning requirements
- Introducing alternative mitigation and adaptation options for engineers (e.g. WSUD)
- Including examples from Victoria and interstate

Integrated Water Management

- What is IWM and why does it matter?
- IWM in the context of strategic local government planning
- IWM and urban (re)development in Victoria – challenges, opportunities, achieving multiple outcomes
- Including stormwater-related examples from Victoria and interstate

Stormwater Harvesting for Irrigation

- Focusing on the challenges engineers need to address and related opportunities
- Including examples from Victoria and interstate
- Is there a use beyond irrigation? Case study: Proven application of urban stormwater to potable supply

Urban Flood Management

- Flooding issues to include: minor and major flooding (in Melbourne typically managed by councils and Melbourne Water)
- Underlying challenges (e.g. urbanisation, climate change, infrastructure)
- Planning system, regulatory environment
- Modelling, mapping, standards – developing critical thinking: what is the latest science?
- Focusing on Melbourne, but including some interstate examples

Delivery

The course is presented online to maximise accessibility for regional & interstate participants.

Facilitators

Dr Sara Lloyd – Director, Environmental Science

Sara is a highly experienced practitioner in integrated water management, stormwater management and water sensitive urban design, having led the development of keystone projects in Victoria over the last 25 years. She is widely recognised for her contribution to driving change across industry through applying latest research into transitioning organisations to embed IWM into practice, policy change and strategy. She regularly delivers training through Clearwater, PLANET and local government forums.

Dylan Cain – Associate, Water Resource Engineer

Dylan is a Registered Professional Engineer of Queensland (RPEQ 7684), with extensive experience in urban and environmental civil engineering. He specialises in stormwater management and believes an integrated approach is required to address future challenges. By combining his knowledge of civil engineering, ecology, and economics, Dylan effectively defines and communicates solutions.

Aaron Dowling – Associate, Civil Engineer

Aaron is a Civil Engineer with 12 years' experience in WSUD design, integrated water management and strategy development. His strong technical background and strategic mindset has been developed and refined through design of over 40 new Developer Services Schemes and many stormwater management strategies for new developments throughout Victoria.

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Caroline Chandler – Associate, IWM policy and planning
Caroline has over 19 years' experience in the water and sustainability sectors in Australia and Peru, with extensive experience in water policy development and implementation, the integration of water, climate adaptation and open space strategies, and project evaluation in the context of competing council interests. Her strong understanding of planning systems in local government and her experience as a key collaborator on numerous regional sustainability initiatives further support her ability to deliver to multiple stakeholder strategic objectives.

Sally Boer – Director, Ecology
Sally is an experienced urban water management practitioner well-versed in WSUD, aquatic ecosystem remediation and stormwater management harvesting schemes. Sally applies scientific rigor and practical know-how to develop tailored solutions which respond to local conditions.

Dr Dale Browne – Associate Director, Environmental Engineer
Dale is an Environmental Engineer with specialist experience in WSUD modelling, development of industry tools and models (such as MUSIC & STORM) and has authored of key industry guidelines for stormwater management, and WSUD design and maintenance.

Who should enrol?

This course has been developed for engineers, technical officers, coordinators and supervisors engaged with the design and construction of community infrastructure.

CPD and Badge

The course provides 16-hours of structured professional development. A digital badge for social media application is provided on successful completion and Public Works Foundations Program graduates will be awarded a **Certificate of Public Works Engineering**.

Course Partners

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