

CONFERENCE PROGRAM

# STORMWATER 2021

## NATIONAL CONFERENCE

NEW FRONTIERS FOR  
STORMWATER: INTO  
THE NEXT DECADE



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13-16 APRIL 2021



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## Pre-Conference Program: Monday 12 April 2021

8:45 am	Delegate Networking and Workshop Access		
	Online Via OnAIR	Online Via OnAIR	Online Via OnAIR
9:00 am	<b>Full Day Workshop</b> <b>Stormwater NSW Guidelines for Maintenance of Stormwater Treatment Measures Workshop</b> Presenter: Murray Powell, Optimal Stormwater	<b>Half Day Morning Workshop</b> <b>Developing Stormwater User Fee and Incentive Programs Workshop</b> Presenter: Dr Victoria Kramkowski, Toronto and Region Conservation Authority	<b>Half Day Morning Workshop</b> <b>Urban Stormwater Design Workshop</b> Presenters: Sophia Buchanan, Senior Storm & Flood Engineer, Innovyze Steve Hughes, Senior Engineer, Storm Water Consulting Jack Hu, Senior Engineer, Storm Water Consulting
<b>10:30 am</b>	<b>15 Minute Coffee Break</b>		
10:45 am	Stormwater NSW Guidelines for Maintenance of Stormwater Treatment Measures Workshop continued	Developing Stormwater User Fee and Incentive Programs Workshop concludes at lunch	Urban Stormwater Design Workshop concludes at lunch
<b>12:30 pm</b>	<b>30 Minute Lunch Break</b>		
12:45 pm	Full Day Workshop continued		
<b>2:15 pm</b>	<b>15 Minute Coffee Break</b>		
2:30 pm	Full Day Workshop Continued		
<b>4:00 pm</b>	<b>Conclusion of Workshops</b>		





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## Conference Program: Tuesday 13 April 2021

8:15 am	<b>Delegate Registration – Virtual Networking</b>	
9:00 am	<b>Welcome to STORMWATER 2021 and Acknowledgement of Country</b> Sarah Watkins, Stormwater Victoria and Conference Emcee	
9:10 am	<b>Conference Opening</b> Lord Mayor Sally Capp, The City of Melbourne	
9:25 am	<b>Conference Opening Address</b> Alan Hoban, National President, Stormwater Australia	
9:40 am	<b>Keynote Presentation: ‘Leaky Buckets’: Perils, Pitfalls and Pathways of Water Planning in the Murray-Darling Basin</b> Prof Quentin Grafton, UNESCO Chair, Water Economics and Transboundary Water Governance	Keynote Speaker sponsored by 
10:25 am	<b>Sponsor Address</b> SPEL Stormwater	
10:30 am	<b>Morning Tea, Trade Exhibition and Supplier Marketplace Pitches</b>	

10:45 am	<b>Move to Next Concurrent Session</b>				
10:50 am	<b>Allotment Scale Design &amp; Practice</b>	<b>AR&amp;R2019 Uptake</b>	<b>Co-Design &amp; Place Making</b>	<b>Community, Society &amp; Leadership</b>	
	<b>Session Chair: Jacqueline Woodlock</b>	<b>Session Chair: Sarah Watkins</b>	<b>Session Chair: Jamie Tainton</b>	<b>Session Chair: Nausheen Obaid</b>	
10:50 am	<b>Creating Cooler, Greener, Leafier Streets for Melbourne's West Through Large Scale Implementation of Passive Street Tree Irrigation</b>  <u>Marshall Kelaher</u> , Melton City Council, Dr Harry Virahsawmy, Alluvium Consulting, Dr Chris Szota, University of Melbourne, Voltaire David, Holly Dillabough, Matthew Hutchinson, Melton City Council	<b>Using and Abusing the New Design Rainfalls</b>  <u>Janice Green</u> , Catherine Jolly, Bureau of Meteorology	<b>From Drains to Creeks: Three Styles of Natural Channel Design</b>  <u>Alan Hoban</u> , Bligh Tanner	<b>Measuring the Transition Progress of Councils Embedding Integrated Water Management as Mainstream Practice.</b>  <u>Dr Sara Lloyd</u> , E2Design, <u>Rachelle Adamowicz</u> , Bronwen Hutchinson, Micah Pendergast, Melbourne Water, Dr Briony Rogers, CRC for Water Sensitive Cities/School of Social Sciences at Monash University, Ross Allen, Ross Allen Consulting	
11:10 am	<b>Move to Next Concurrent Session</b>				
11:15 am	<b>Community Engagement</b>	<b>AR&amp;R2019 Uptake</b>	<b>Co-Design &amp; Place Making</b>	<b>International Trends in Water Management</b>	<b>Community, Society &amp; Leadership</b>
	<b>Session Chair: Jacqueline Woodlock</b>	<b>Session Chair: Jamie Tainton</b>	<b>Session Chair: Jamie Tainton</b>	<b>Session Chair: Sarah Watkins</b>	<b>Session Chair: Nausheen Obaid</b>
11:15 am	<b>Erosion and Sediment Control and Urban Stormwater Capacity Building Project for the Great Barrier Reef and South East Queensland Observations and Outcomes</b>  <u>Adrian Crocetti</u> , Healthy Land and Water	<b>Adopting Next Best Practice. A Melbourne Case Study in the Application of ARR2019 in Council Managed Catchments</b>  <u>Andrew Allan</u> , Afflux	<b>Sustainable Drainage as a Key Element in Urban Greening</b>  <u>Stephen Borovac</u> , <u>Andrew Harrison</u> , Golder Associates	<b>Emerging Guidelines in Europe - What Can We Learn?</b>  <u>Dr Lars Hengren</u> , H&H Consulting Engineers	<b>An Australian IWM Transect - Observations on IWM Practices</b>  <u>Bertrand Salmi</u> , Water Technology, <u>Rianda Mills</u> , Rain Consulting
11:35 am	<b>Move to Next Concurrent Session</b>				

11:40 am	<b>Community Engagement</b>	<b>AR&amp;R2019 Uptake and Big Data</b>	<b>Co-Design &amp; Place Making</b>	<b>Systems Thinking</b>
	<b>Session Chair: Jacqueline Woodlock</b>	<b>Session Chair: Sarah Watkins</b>	<b>Session Chair: Jamie Tainton</b>	<b>Session Chair: Nausheen Obaid</b>
11:40 am	<b>Checking In – Is WSD for Single Dwellings Achieving Outcomes?</b>  <u>April McKay</u> , Midcoast Council	<b>The Impact of Reduced IFD Totals – A Case Study on The Lara Flood Study</b>  <u>Lachlan Inglis</u> , Water Technology, <u>Fei Tim Yong</u> , City of Greater Geelong, <u>Johanna Theliemann</u> , Water Technology	<b>'No Worsening' is Not a Thing.</b>  <u>Tony Loveday</u> , RMA Engineers	<b>The Value of Legacy and Future Stormwater and Demand Management Options for Sydney and Melbourne</b>  <u>Prof Peter Coombes</u> , Southern Cross University
12:00 pm	<b>Move to Next Concurrent Session</b>			
12:05 pm	<b>Community Engagement</b>	<b>AR&amp;R2019 Uptake &amp; Big Data</b>	<b>Co-Design &amp; Place Making</b>	<b>Systems Thinking</b>
	<b>Session Chair: Jacqueline Woodlock</b>	<b>Session Chair: Petra Katona</b>	<b>Session Chair: Jamie Tainton</b>	<b>Session Chair: Nausheen Obaid</b>
12:05 pm	<b>Community Led Integrated Water Management, The How, What, Lessons Learnt and What's Next</b>  <u>Michael Yule</u> , Spiire	<b>East Gippsland Livestock Exchange, Bairnsdale City Oval and Magees Gully Integrated Water Management Study</b>  <u>Dr Gayani Chandrasena</u> , Simon Hof, Water Technology, Megan Dennett, East Gippsland Shire Council	<b>Embedding Successful WSUD Asset Management Practices</b>  <u>Jamie Comley</u> Environmental Consulting, <u>Stuart Joyce</u> , Dean Watts, Morphum Environmental	<b>Our Stormwater Treatment Systems are the Product of Our Policies. Did We Get It Right or Wrong and Where to From Here?</b>  <u>Mark Liebman</u> , Sustainability Workshop
12:25 pm	<b>Lunch, Trade Exhibition and Supplier Marketplace Pitches</b>			
12:55 pm	<b>Community Engagement</b>	<b>Modelling and Design</b>	<b>Co-Design &amp; Place Making</b>	<b>Systems Thinking</b>
	<b>Session Chair: Rachele Adamowicz</b>	<b>Session Chair: Ruby Ardren</b>	<b>Session Chair: Jamie Tainton</b>	<b>Session Chair: Nausheen Obaid</b>
12:55 pm	<b>Regional Stormwater Service Planning</b>  <u>Matt Mulqueeny</u> City of Greater Geelong	<b>Jigsawing - The Often Forgotten Final Piece to the ARR2019 Puzzle</b>  <u>Peter Woodman</u> , Gavin Hay, Greg Eaton, Rushiru Kanakaratne, Mick Turnley, Mardi Medwell-Squier, GHD	<b>Communities Working Together to Build Resilience in Their Place</b>  <u>Rachael Naspelzes</u> , Healthy Land and Water	<b>Muddy Waters. Managing Dispersive Soils in the Melbourne Growth Corridors</b>  <u>Declan McDonald</u> , Regen Soils
1:15 pm	<b>Move to Next Concurrent Session</b>			

1:20 pm	Community Engagement	Modelling and Design	Systems Thinking
	Session Chair: Rachele Adamowicz	Session Chair: Ruby Ardren	Session Chair: Nausheen Obaid
1:20pm	<p><b>Do the Numbers Stack Up? The Role of the Stormwater Sector in Supporting Cool and Thriving Communities</b></p> <p><u>Celeste Morgan</u>, E2designlab</p>	<p><b>Early Flood Modelling Considerations for Railway Duplication and Level Crossing Removals</b></p> <p><u>Alice Lisitsa</u>, Roozbeh Hasanzadeh Nafari, ARUP</p>	<p><b>Let's Clean Up Our Act - How to Design A Successful ESC Compliance Program</b></p> <p><u>Adrian Crocetti</u>, <u>Glenn Browning</u>, <u>Karen Toms</u>, <u>Sarah Choudhury</u>, Healthy Land and Water</p>
1:40 pm	<b>Wrap Up and Close of Day 1</b>		



### Conference Program: Wednesday 14 April 2021

8:30 am	<b>Delegate Registration and Virtual Networking</b>
9:00 am	<b>Welcome, Housekeeping and Acknowledgement of Country</b> Jocelyn Ellero, Stormwater NSW and Conference Emcee
9:05 am	<b>Keynote Presentation: Water management for urban sustainability – Integrated Systems Analyses framework for liveable cities</b> Prof Ana Mijic, Imperial College London, UK
9:50 am	<b>SQIDEP Forum - Towards a Laboratory Validation Protocol for SQID's</b> Presented By: Ben Modra, Andrew Swindells and Alan Hoban Session Overview: <ul style="list-style-type: none"> <li>- Governance</li> <li>- Technical Review timeline and outcome/s</li> <li>- Industry voice/concerns</li> </ul>
10:40 am	<b>Morning Tea, Trade Exhibition and Supplier Marketplace Pitches</b>

10:55 am	<b>Move to Next Concurrent Session</b>			
11:00 am	<b>Community, Society &amp; Leadership</b>	<b>Modelling &amp; Design</b>	<b>Co-Design &amp; Place Making</b>	<b>Technology in Practice</b>
	<b>Session Chair: Beth Salt</b>	<b>Session Chair: Nerida Taylor</b>	<b>Session Chair: Murray Powell</b>	<b>Session Chair: Darren Drapper</b>
11:00 am	<b>Industry Health Card – A Biased Opinion</b>  <u>Valerie Mag</u> , Stormy Water Solutions,	<b>Industry Tools Developed by the CRC for Water Sensitive Cities</b>  <u>Malcolm Eadie</u> , CRCWSC	<b>Stormwater Harvesting Vs Sewer Mining - Review of Decentralised Water Reuse Technology</b>  <u>Phil Li</u> , Optimal Stormwater	<b>How Hazardous are Your Bioretention Basins?</b>  <u>Nausheen Obaid</u> , <u>Aidan Stephens</u> , City of Casey
11:20 pm	<b>Move to Next Concurrent Session</b>			
11:25 am	<b>Economics &amp; Community Engagement</b>	<b>Modelling &amp; Design Case Studies</b>	<b>Co-Design &amp; Planning Case Studies</b>	<b>Technology in Practice</b>
	<b>Session Chair: Beth Salt</b>	<b>Session Chair: Nerida Taylor</b>	<b>Session Chair: Murray Powell</b>	<b>Session Chair: Darren Drapper</b>
11:25 am	<b>Plastic Pollution Mitigation and Classification Before Environmental Release from Established Stormwater Drainage Systems</b>  <u>Blair Jedras</u> , Darren Drapper, Drapper Environmental Consultants	<b>Flood Modelling for a Retrofit Urban Transport Project - A Case Study from the Level Crossing Removal Project</b>  <u>Zaki Matar</u> , WSP, <u>Brett Disley</u> , <u>Natasha Webb</u> , Beca	<b>The Growing Grass Frog Masterplan in Action</b>  <u>Ross Carnegie</u> , Spiire, <u>James Walsh</u> , DELWP	<b>Experience with Pervious Paving</b>  <u>Dr Tim Johnson</u> , University of South Australia, City of Mitcham, <u>Russell King</u> , Sprutt
11:55 am	<b>Move to Next Concurrent Session</b>			
12:00 pm	<b>Flooding Management</b>	<b>Modelling &amp; Design Case Studies</b>	<b>IWM &amp; CP Policy</b>	<b>Technology in Practice</b>
	<b>Session Chair: Beth Salt</b>	<b>Session Chair: Nerida Taylor</b>	<b>Session Chair: Murray Powell</b>	<b>Session Chair: Darren Drapper</b>
12:00 pm	<b>Designation of Shallow Flood Depths - Why is it Important</b>  <u>Stephen D'Agata</u> , Golder Associates	<b>The Real Benefits of Creating a Digital Twin for Storm Water Management Decision Making</b>  <u>Mardi Medwell-Squier</u> , GHD, <u>Mark Thompson</u> , Lachlan Johnson, City of Port Phillip	<b>WSUD Reset - Moving Beyond 85/65/45</b>  <u>Alexa McAuley</u> , David Knights, Cville, Dr Peter Davies, Macquarie University, Nerida Taylor, Sydney Water,	<b>Treatment and Cure of a Terminally Ill GPT Suffering from Severe Backwater</b>  <u>Guy Amos</u> , Optimal Stormwater, Yaras de Silva, Woollahra Municipal Council
12:20 pm	<b>Lunch, Trade Exhibition and Supplier Marketplace Pitches</b>			



12:40 pm	<b>Move to Next Concurrent Session</b>			
12:45 pm	<b>Flooding Management</b>	<b>Planning &amp; Adapting for the Future</b>	<b>IWM &amp; CP Policy</b>	<b>Technology in Practice</b>
	<b>Session Chair: Beth Salt</b>	<b>Session Chair: Nerida Taylor</b>	<b>Session Chair: Murray Powell</b>	<b>Session Chair: Darren Drapper</b>
12:45 pm	<b>Designing WSUD soils for the Melbourne Metro Rail Tunnel project</b>  <u>Declan McDonald</u> , Regen Soils	<b>Urban Typologies for Western Sydney: Delivering Cool Green Suburbs Through Progressive Water Sensitive Urban Design Approaches</b>  <u>Alan Hoban</u> , Himanthi Mendis, Blight Tanner, Erin Saunders, Phil Birtles, Sydney Water, Jane Freeman, Architectus, Peter Gillam, AECOM, Phillip Graus, Greater Sydney Commission, Simeon King, ASPECT Studio	<b>A Blueprint for Improving State Water Quality Policy</b>  <u>Glenn Browning</u> , Healthy Land and Water	<b>Permeable Pavements as an Innovative, Sustainable, Storm Water Management System.</b>  <u>Keanu Andrews</u> , Concrete Masonry Association of Australia
1:05 pm	<b>Move to Next Concurrent Session</b>			
1:10 pm	<b>Research</b>	<b>IWM &amp; CP Policy</b>	<b>Urban Density vs Liveability</b>	
	<b>Session Chair: Beth Salt</b>	<b>Session Chair: Murray Powell</b>	<b>Session Chair: Darren Drapper</b>	
1:10 pm	<b>Size Matters – Why Policy and Planning for Stormwater Treatment Must Consider Property Title and Size</b>  <u>Ruby Ardren</u> , Northern Beaches Council, Macquarie University, <u>A/A/ Prof Peter Davies</u> , Macquarie University	<b>Big Guesses for Little Flows, A Review of WSUD Design Flow Determination</b>  <u>Michael Mag</u> , Stormy Water Solutions	<b>Sydney Park - A New Benchmark for WSUD</b>  <u>David Knights</u> , Mr Andrew McMillan, Cville	
1:30 pm	<b>Wrap Up and Close of Day 2</b>			
6:00 pm – 7:30 pm	<b>Presentation of the National Aw1700ards for Excellence</b>			



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## Conference Program: Thursday 15 April 2021

8:30 am	<b>Delegate Registration and Virtual Networking</b>			
9:00 am	<b>Welcome, Housekeeping and Acknowledgement of Country</b> Rick Dennis, Stormwater Queensland and Conference Emcee			
9:05 am	<b>International perspective on developing and validating pathogen performance targets for urban stormwater systems</b> Prof Nick Ashbolt, Southern Cross University			
9:50 am	<b>Move to Next Concurrent Session</b>			
9:55 am	<b>Flooding Management</b>	<b>IWM &amp; CP Case Studies</b>	<b>IWM &amp; CP Policy</b>	<b>Maintenance &amp; Ops</b>
	<b>Session Chair: Stephen D'Agata</b>	<b>Session Chair: Jamie Tainton</b>	<b>Session Chair: Bill Johnson</b>	<b>Session Chair: Michael Mag</b>
9:55 am	<b>Yarra Flood Levels- Testing Assumptions About Flow Frequency</b>  <u>Andrew Allan</u> , Afflux	<b>Implementation and Application of Meaningful Planning Controls to Support Effective Water and Catchment Management in the Ku-ring-gai Local Government Area, NSW</b>  <u>Sophia Findlay</u> , Penny Hemsworth, Russell Cadman, Ku-ring-gai Council	<b>Municipal Infrastructure Standards and Specifications for WSUD Infrastructure in the ACT</b>  <u>Dr Brett Phillips</u> , Cardno, Darwin Zeta, ACT Government	<b>A Year of Maintaining Inner City Streetscape WSUD Assets</b>  <u>Ralf Pfleiderer</u> , <u>Rob Catchlove</u> , Wave Maintenance Australia, <u>Jane Spence</u> , City of Stonnington
10:15 am	<b>Move to Next Concurrent Session</b>			

10:20 am	<b>Flooding Management</b>	<b>IWM &amp; CP Case Studies</b>	<b>IWM &amp; CP Policy</b>	<b>Maintenance &amp; Ops</b>
	<b>Session Chair: Stephen D'Agata</b>	<b>Session Chair: Jamie Tainton</b>	<b>Session Chair: Bill Johnson</b>	<b>Session Chair: Michael Mag</b>
10:20 am	<b>AI Flash Flood Alert System</b>  <u>Timothy Kallady</u> , Piccard AI, <u>Paul Rasmussen</u> , Melbourne Water	<b>Grid Size and Roughness Sensitivity Analysis of Rainfall on Grid Approach for Urban Flood Modelling</b>  <u>Charles Lee</u> , Water Technology, University of Melbourne	<b>Rethinking Water Quality Policy to Improve Catchment-Wide Treatment Efficiency: Replacing Percentage Reduction Based Targets with Pollutant Load Limits</b>  <u>Stephanie Noble</u> , Jack Grinsell, Northrop	<b>57 Reasons Why Local Governments Struggle to Maintain their Stormwater Control Measures</b>  <u>Dr Andrew Thomas</u> , Blacktown City Council Prof Tim Fletcher, Dr Darren Bos, Dr Stephanie Lavau, The University of Melbourne, Dr Peter Morison, VicWater
<b>10:40 am</b>	<b>Morning Tea, Trade Exhibition and Supplier Marketplace Pitches</b>			
10:55 am	<b>Move to Next Concurrent Session</b>			
11:00 am	<b>IWM &amp; CP Case Studies</b>	<b>IWM &amp; CP Policy</b>	<b>Resilience and Climate Change</b>	<b>Modelling &amp; Design Case Studies</b>
	<b>Session Chair: Stephen D'Agata</b>	<b>Session Chair: Jamie Tainton</b>	<b>Session Chair: Bill Johnson</b>	<b>Session Chair: Michael Mag</b>
11:00 am	<b>Cooling, Greening, Watering - The Infrastructure Trend Sweeping the Nation</b>  <u>Stephanie Brown</u> , E2DesignLab	<b>Zero Impact Development. The Journey Towards Protecting Wild Rivers in South West Sydney</b>  <u>Rob Catchlove</u> , Ralf Pfeleiderer, Wave Consulting Australia, Ibrahim Muharrem, Wollondilly Shire Council, Prof Stuart Khan, UNSW	<b>Natural Systems Approach – for Green Infrastructure</b>  <u>Dr Judy van Gelderen</u> , Ki Studio	<b>Rainwater Harvesting. Important Developments in Integrated Urban Water Cycle Management</b>  <u>Michael Smit</u> , Kingspan Water and Energy, <u>Prof Peter Coombes</u> , Southern Cross University
11:35 am	<b>Move to Next Concurrent Session</b>			

11:40 am	<b>IWM &amp; CP Case Studies</b>	<b>IWM &amp; CP Policy</b>	<b>Sewage, Water and Stormwater</b>	<b>Modelling &amp; Design Case Studies</b>
	<b>Session Chair: Stephen D'Agata</b>	<b>Session Chair: Jamie Tainton</b>	<b>Session Chair: Bill Johnson</b>	<b>Session Chair: Michael Mag</b>
11:40 am	<b>Smart Detention Tank Storage - The Cost Effective Solution to Catchment Scale Flooding</b>  <u>Russell King</u> , Sproutt, Aaron Wood, City of Unley, Rujie Liang, Mark Thyer, Holger Maier, University of Adelaide	<b>Policy to Implementation – Providing Guidance to Improve Stormwater Strategies</b>  April McKay, <u>Prue Tucker</u> , Midcoast Council, Mark Wainwright, Alluvium Consulting	<b>An Integrated Water, Biodiversity, Heat, Wind and Urban Forest Approach for Fishermans Bend</b>  <u>Dr Casey Furlong</u> , GHD, Todd Berry, Fishermans Bend Taskforce, <u>Anissa Webb</u> , GHD, Holly Kirk, Centre for Urban Research, RMIT University, David Howard, GHD, Tony Wong, CRC for Water Sensitive Cities	<b>Planes, Trains and Automalls – A Dutch Innovation for Climate Change in Brisbane</b>  <u>David Cox</u> , Ian Varley, SMEC
12:00 pm	<b>Move to Next Concurrent Session</b>			
12:05 pm	<b>IWM &amp; CP Case Studies</b>	<b>IWM &amp; CP Policy</b>	<b>Sewage, Water and Stormwater</b>	<b>Modelling &amp; Design Case Studies</b>
	<b>Session Chair: Stephen D'Agata</b>	<b>Session Chair: TBC</b>	<b>Session Chair: Bill Johnson</b>	<b>Session Chair: Michael Mag</b>
12:05 pm	<b>Subcatchment Planning to Improve Ecological Sustainability in the Inner West</b>  <u>Sarah Kamarudin</u> , Lana Frost, Urban Ecology	<b>Development Planning the Right Way Around: Casey Green Wedge Western Port Integrated Water Management Strategy</b>  <u>Glenn Ottrey</u> , Engeny Water Management, <u>Daniel Fokkens</u> , City of Casey	<b>Guidelines for MUSIC Modelling - The next evolution</b>  <u>Dr Dale Browne</u> , E2designLab	<b>Sustainable Solution for Designing Stormwater Channels</b>  <u>Amir Shahkolahi</u> , Global Synthetics, Drew Loizeaux, Propex GeoSolutions
12:25 pm	<b>Lunch, Trade Exhibition and Supplier Marketplace Pitches</b>			
12:45 pm	<b>Move to Next Concurrent Session</b>			
1:00 pm	<b>Planning &amp; Adapting for the Future</b>	<b>IWM &amp; CP Case Studies</b>	<b>Resilience &amp; Adaptation for Climate Change</b>	<b>Urban Density vs Liveability</b>
	<b>Session Chair: Stephen D'Agata</b>	<b>Session Chair: Ruby Ardren</b>	<b>Session Chair: Bill Johnson</b>	<b>Session Chair: Rachele Adamowicz</b>



1:00 pm	<b>Improving Future Urban Stormwater Management Through Use of Planning Support Tools</b>  Peter Ryan, Georges Riverkeeper, <a href="#">Veljko Prodanovic</a> , UNSW	<b>How Many People Does it take to Plan A Waterway?</b>  <a href="#">Kim Markwell</a> , Sally Boer, E2Designlab	<b>Tools for Blue Green Streetscapes – Opportunities Map and Design Standards</b>  <a href="#">Penny Ball</a> , Dr Cintia Dotto, City of Melbourne	<b>Emerging Passive Irrigation Tool for Kerb Side Trees: TREENET Inlets</b>  <a href="#">Harsha Sapdhare</a> , David Lawry, Space Down Under, Dr Timothy Johnson, City of Mitcham
1:20 pm	<b>Move to Next Concurrent Session</b>			
1:25 pm	<b>Planning &amp; Adapting for the Future</b>	<b>Stormwater Offsets</b>	<b>Stormwater &amp; Road infrastructure</b>	<b>Urban Streams &amp; Indigenous Insights</b>
	<b>Session Chair: Stephen D'Agata</b>	<b>Session Chair: Ruby Ardren</b>	<b>Session Chair: Bill Johnson</b>	<b>Session Chair: Rachelle Adamowicz</b>
1:25 pm	<b>Creating a Bird Airport –A New Stormwater Wetland Ecosystem for Migratory Shorebirds Under Threat from Habitat Loss</b>  <a href="#">David Knights</a> , <i>Civille</i>	<b>Can my Stormwater Project Help Save the Planet</b>  <a href="#">Martin O'Dea</a> , Clouston Associates	<b>Infiltration Rates of Recycled Tyre-Based Permeable Asphalt Pavements and Future Maintenance</b>  Ramin Raeesi, Amin Soltani, Dr Mahdi <a href="#">Disfani</a> , The University of Melbourne, School of Engineering, Russell King, Sprutt	<b>Small-Scale Interventions and Indigenous Water Knowledge – Moving Storm Water into the Next Decade</b>  <a href="#">Kate Harriden</a> , Australian National University
1:45 pm	<b>Wrap Up and Close of Day 3</b>			



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## Conference Program: Friday 16 April 2021

8:30 am	<b>Delegate Registration and Virtual Networking</b>		
8:55 am	<b>Welcome, Housekeeping and Acknowledgement of Country</b> Stormwater South Australia Representative and Conference Emcee		
9:00 am	<b>Keynote Presentation: Paying for Rain: The Evolution of Stormwater Fees in the United States, 1964 to 2020</b> Dr Brian Alexander Chalfant, Pennsylvania Department of Environmental Protection	<b>Keynote Speaker sponsored by</b>	 spelstormwater iovinwater
9:45 am	<b>Keynote Presentation: 2020 Vision for Stormwater Financing</b> Prof Warren Campbell, Western Kentucky University	<b>Keynote Speaker sponsored by</b>	 spelstormwater iovinwater
10:30 am	<b>Morning Tea, Trade Exhibition and Supplier Marketplace Pitches</b>		
10:45 am	<b>Modelling &amp; Design Case Studies</b>	<b>Technology in Practice</b>	<b>Co-Design &amp; Planning Case Studies</b>
	<b>Session Chair: Nerida Taylor</b>	<b>Session Chair: Alice Lisitsa</b>	<b>Session Chair: Nausheen Obaid</b>
10:45 am	<b>Next Generation Urban Surface Water Modelling Capabilities</b>  <u>Chris Huxley</u> , Tuflow (BMT)	<b>Time for Real-Time Asset Monitoring</b>  <u>Jarrod Gaut</u> , water_insites, <u>Natalie Barron</u> , City of Greater Geelong	<b>Can I Swim Here? An activation Framework to Bring Back Swimming to Parramatta River</b>  <u>David Knights</u> , Cville
11:05 am	<b>Move to Next Concurrent Session</b>		

11:10 am	<b>Modelling &amp; Design Case Studies</b>	<b>Technologies Case Studies</b>	<b>Technology in Practice</b>	
	<b>Session Chair: Nerida Taylor</b>	<b>Session Chair: Alice Lisitsa</b>	<b>Session Chair: Celine Marchenay</b>	
11:10 am	<b>Wollert Waterways Realignment – Overcoming the Challenge of Enhancing Habitats and Environmental Sustainability While Optimising Commercial Needs</b>  <u>Emilie Wilson</u> , Golder	<b>Event Simulation: Treatment Efficiency Evaluation of a Constructed Floating Wetland in an Urban Residential Precinct Saline Canal</b>  <u>Jane-Louise Lampard</u> , University of Sunshine Coast, Dr Darren Drapper, Drapper Environmental Consultants, Andy Hornbuckle, SPEL Stormwater, Phil Tyrer, Jonathan Baxter, Hamish Pressland, Pelican Waters Developments, Travis Hivon, Georgia Kelly, Halls Contracting, Kevin Covey, Charles Cook, Covey Associates, Assoc Prof Neil Tindale, University of The Sunshine Coast	<b>Combined Circular and Slot Outlet (CS Outlet) for Reducing the Volume of Flow Detention Measures Including Underground Detention Tanks, Rainwater Tanks and Detention Ponds</b>  <u>Parham Ghasemzadeh</u> , Ardill Payne And Partners	
11:30 am	<b>Move to Next Concurrent Session</b>			
11:35 am	<b>Maintenance &amp; Operations</b>	<b>Technologies Case Studies</b>	<b>Rain/Stormwater Harvesting</b>	<b>IWM &amp; CP Case Studies</b>
	<b>Session Chair: Nerida Taylor</b>	<b>Session Chair: Alice Lisitsa</b>	<b>Session Chair: TBC</b>	<b>Session Chair: Nausheen Obaid</b>
11:35 am	<b>H2Oak – From Flood to Foliage, Smart Water Design at Mitcham</b>  <u>Russell King</u> , Sprutt, Dr Tim Johnson, City of Mitcham	<b>New K and C* Values Verified from Mesocosm Testing of Floating Wetlands in South East Queensland</b>  Rachael Biggins, <u>Darren Drapper</u> , <i>Drapper Environmental Consultants</i>	<b>Tapping the Urban Catchment – 10 Years on Enabling Urban Expansion Without Requiring Extra Water</b>  <u>Peter Wilson</u> , <u>Jackie Bowe</u> , Wannon Water	<b>The Journey Towards a Water Sensitive City</b>  <u>Maria Mccrann</u> , City of Greater Bendigo
11:55 am	<b>Move to Next Concurrent Session</b>			
12:00 pm	<b>Maintenance &amp; Operations</b>	<b>Technologies Case Studies</b>	<b>Rain/Stormwater Harvesting</b>	<b>Stormwater Quality Management</b>
	<b>Session Chair: Nerida Taylor</b>	<b>Session Chair: Alice Lisitsa</b>	<b>Session Chair: TBC</b>	<b>Session Chair: Nausheen Obaid</b>

12:00 pm	<b>Flood Management in Mexico City – Vicente Guerrero StormWater Pumping Station</b>  <u>Mariaelena Rodriguez Hernandez, Indar</u>	<b>How do Bioretention Systems Really Perform?</b>  Alan Hoban, Carlos Gambirazio, Himanthi Mendis, <i>Bligh Tanner</i>	<b>Review of Stormwater Harvesting Schemes in the City of Melbourne</b>  <u>Cintia Dotto</u> , Penny Ball, Mohammad Kharouf, <i>City of Melbourne</i>	<b>Stormwater Pollution: Problems, Challenges and Opportunities in Industrial Catchments</b>  <u>Dr Claudette Kellar</u> , Dr Ana Miranda, Dr Kathryn Hassell, A3P, RMIT University, Alison Rickard, Birgit Jordan, Heath Baker, Michael Godfrey, Trish Grant, Dr Rhys Coleman, Prof. Vincent Pettigrove, Melbourne Water
12:20 pm	<b>Move to Next Concurrent Session</b>			
12:25 pm	<b>Maintenance &amp; Operations</b>	<b>Economics and Community Engagement</b>	<b>Rain/Stormwater Harvesting</b>	
	<b>Session Chair: Nerida Taylor</b>	<b>Session Chair: Alice Lisitsa</b>	<b>Session Chair: Nausheen Obaid</b>	
12:25 pm	<b>Storm Water Harvesting at Melbourne &amp; Olympic Parks Precinct. Seven Years of Operation. What has Been Achieved and Lessons Learnt</b>  <u>Iouri Vaisman, IVWater</u>	<b>Exclusion Bar Ramifications for All Councils, Based on the Wollongong Tragedy Coroners Report</b>  <u>Murray Powell</u> , Optimal Stormwater, <u>Prof Peter Coombes</u> , Southern Cross University	<b>Delivering High Value Urban Tree and Green Space Services: Stormwater Scheme Design Advice Framework</b>  <u>Geoff Connellan</u> , <i>G&amp;M Connellan Consultants</i>	
12:45 pm	<b>Move to Closing Session</b>			
12:50 pm	<b>Closing Remarks</b> <i>Alan Hoban, National President, Stormwater Australia</i>			
1:00 pm	<b>Thank You, Exhibitor Passport Prize Draw, Conclusion of Stormwater 2021</b> Conference MC			
<b>1:15 pm</b>	<b>Conclusion of Stormwater 2021</b>			