

An underwater photograph showing various pieces of plastic waste floating in clear blue water. A clear plastic bottle is the most prominent object, with other smaller pieces of debris scattered around it.

CONFERENCE PROGRAM

A large circular frame containing an underwater photograph of a green sea turtle swimming towards the left. The turtle's head and front flippers are visible. The background is a deep blue ocean.

**FAILURE TO
THRIVE**

ARE SUSTAINABLE
STORMWATER PRACTICES
REALLY CATCHING ON?



2019
Stormwater NSW Conference

Tuesday, 27th to Friday, 30th August, 2019 Pacific Bay Resort, Coffs Harbour, NSW



ARE SUSTAINABLE
STORMWATER
PRACTICES REALLY
CATCHING ON?

STORMWATER
NEW SOUTH WALES
**2019 Stormwater
NSW Conference**



Conference Program: Tuesday, 27th August 2019

12:00 pm – 5:00 pm	Trade Exhibition Bump In
5:30 pm – 7:00 pm	Welcome BBQ Venue: <i>Betting Tee Lawns, Pacific Bay Resort</i> Dress Code: <i>Wear your tackiest Hawaiian shirt!</i>

Conference Program: Wednesday, 28th August 2019

7:30 am – 8:30 am	Stormwater NSW Annual General Meeting All current members of Stormwater NSW are welcome to join
8:00 am	Conference Registration – Tea and Coffee on Arrival
	Reef Room
8:45 am – 8:55 am	Welcome and Housekeeping Beth Salt, Convenor, 2019 Stormwater NSW Conference
8:55 am – 9:00 am	Welcome to Country Uncle Mark, Gumbaynggirr Elder
9:00 am – 9:05 am	Official Conference Opening Cr Denise Knight, Mayor, Coffs Harbour City Council
9:05 am – 9:50 am	Keynote Address: Wither NSW Sustainable Stormwater Practices – Rural NSW Experiences <i>Greg Mashiah</i> , Clarence Valley Council
9:50 am – 10:35 am	Keynote Address: How Successful Are Local Government Waste Abatement Strategies at Reducing Plastic Waste into The Coastal Environment? <i>Kathy Willis</i> , University of Tasmania and CSIRO
10:35 am – 11:10 am	Morning Tea and Trade Exhibition



ARE SUSTAINABLE
STORMWATER
PRACTICES REALLY
CATCHING ON?

STORMWATER
NEW SOUTH WALES
**2019 Stormwater
NSW Conference**



	Marina Room	Harbour Room	Jetty Room
	Technical Marvel	Failure to Thrive	Urban Waterway Syndrome
11:10 am – 11:20 am	<p>What Comes Before The MUSIC? Considering Landscape Restrictions as a Prelude to Implementing/Conceptually Modelling WSUD</p> <p><i>Georgina Dawson, Jocelyn Dela-Cruz, Mark Young, Rob Muller, John Young and Brian Jenkins, NSW Department of Planning, Industry and Environment</i></p>	<p>Impact of Procurement Processes on Sustainable Water Cycle Management Outcomes for Greenfield Development</p> <p><i>David Stone, Cardno</i></p>	<p>The Advantage of Detention Basins with Outflow Rate Above Existing Condition: Case Study Western Sydney Aerotropolis</p> <p><i>Sophie Afraz and Stephen Yu, Cardno</i></p>
11:20 am – 11:30 am	<p>Providing Supplemental Irrigation Bioretention and Vegetated Stormwater Treatment Systems</p> <p><i>Jim Lenhart and Mindy Hills, Contech Engineered Solutions</i></p>	<p>Bonnyrigg Town Centre Park: Now and Then</p> <p><i>Nona Ruddell, Fairfield City Council</i></p>	<p>Your WSUDs Don't Understand Ecosystems, and It Shows</p> <p><i>Phillip Birtles, Sydney Water, Carl Tippler, CTEEnvironmental, Tony Weber, Alluvium</i></p>
11:30 am – 11:40 am	<p>Blackmore Oval Wetland Improvement and Stormwater Harvesting Project</p> <p><i>Phil Li, Optimal Stormwater</i></p>	<p>Water Sensitive Urban Dismay</p> <p><i>Daniel Rhodes, Henry and Hymas Consulting Engineers</i></p>	<p>The Sydney Harbour Coastal Management Program - Ensuring a Liveable Sydney</p> <p><i>Sarah Joyce, Sydney Coastal Councils Group</i></p>
11:40 am – 11:50 am	<p>Hydrologic and Hydraulic Impacts of Solar Farms</p> <p><i>Daniel Niven, May-Le Ng and Yan Yan, Premise Australia</i></p>	<p>Using MUSIC in Sydney drinking water catchment – Revision 2019</p> <p><i>Girja Sharma, WaterNSW</i></p>	<p>Dubbo Council Stormwater Quality Devices for Pollution Hot Spots to Protect the Macquarie River</p> <p><i>Hugh Williamson, Optimal Stormwater, Stephen Howlett, Dubbo Regional Council</i></p>



ARE SUSTAINABLE
STORMWATER
PRACTICES REALLY
CATCHING ON?

STORMWATER
NEW SOUTH WALES
**2019 Stormwater
NSW Conference**



11:50 am – 12:10 pm	Rapid Fire Panel Discussion <u>Jim Lenhart</u> , Contech Engineered Solutions <u>Georgina Dawson</u> , NSW Department of Planning, Industry and Environment <u>Phil Li</u> , Optimal Stormwater <u>Daniel Niven</u> , Premise Australia	Rapid Fire Panel Discussion <u>David Stone</u> , Cardno <u>Nona Ruddell</u> , Fairfield City Council <u>Daniel Rhodes</u> , Henry and Hymas Consulting Engineers <u>Girja Sharma</u> , WaterNSW	Rapid Fire Panel Discussion <u>Sophie Afraz</u> , Cardno <u>Phillip Birtles</u> , Sydney Water <u>Sarah Joyce</u> , Sydney Coastal Councils Group <u>Hugh Williamson</u> , Optimal Stormwater
12:10 pm – 1:00 pm	Lunch and Trade Exhibition		
	Marina Room	Harbour Room	Jetty Room
	Policy & Planning	Handover, Operation & Maintenance of Stormwater Assets	Landscape Design & Stormwater Systems
1:00 pm – 1:30 pm	Who Does What Across NSW Councils? A Review of All Water Policies, Strategies & Plans <u>Rob Catchlove</u> , Wave Consulting Australia and <u>Nerida Taylor</u> , Blacktown City Council	Adaptive Asset Management: A Pathway to Better Stormwater Management <u>Ben Penhallurick</u> and <u>James Coathup</u> , Renew Solutions, <u>Dr Wade Hadwen</u> , Griffith University	Computer Performance Modeling – Climate Adapted Green Roof Design for Optimal Storm-Water Retention and Detention <u>Robert Griffith</u> , Evolvment and <u>Jure Sumi</u> , Knauf
5-minute room change			
1:35 pm – 2:05 pm	Commentary on Greater Sydney Stormwater Governance Arrangements <u>Michael Smit</u> , Kingspan Water and Energy	Private On-Lot WSUD & OSD - Success or Failure? <u>Russell Cadman</u> and <u>Aditi Verma</u> , Blacktown City Council	The Application of High Flow Rate Biofiltration Systems in Australia <u>Brad Dalrymple</u> and <u>Michael Wicks</u> , Ocean Protect
5-minute room change			
2:10 pm – 2:40 pm	To Transform Urban Waterways, We Also Need to Transform the Way We Plan for Them <u>Alexa McAuley</u> , Civille	Proactive Stormwater Network Monitoring to Alarm for High Levels/Blockages to Prevent Overland Flow and Flooding <u>Paul Hart</u> , Metasphere	Synthetic Turf Sports Fields – Impacts on Stormwater Runoff Quantity <u>Tim Michel</u> , Royal HaskoningDHV



ARE SUSTAINABLE
STORMWATER
PRACTICES REALLY
CATCHING ON?

STORMWATER
NEW SOUTH WALES
**2019 Stormwater
NSW Conference**



5-minute room change			
2:45 pm – 3:15 pm	Blacktown Councils Catchment Planning and Prioritisation Process <i>Craig Bush, Blacktown City Council</i>	TBC	TBC
3:15 pm – 3:35 pm	Afternoon Tea and Trade Exhibition		
	Marina Room	Harbour Room	Jetty Room
	Water Health	Handover, Operation & Maintenance of Stormwater Assets	Landscape Design & Stormwater Systems
3:35 pm – 4:05 pm	Out with the Old Waterway Health Report Card, In with the New and Improved <i>Tahina Ahmed and Amanda Or, Blacktown City Council</i>	Don't Downgrade Your GPT To Fit Your Reality, Upgrade Your GPT To Match Your Dreams <i>Murray Powell, Optimal Stormwater</i>	Are Vertical Greening Systems the Future of Urban Water Management? Towards Designing Sustainable Green Walls <i>Dr Veljko Prodanovic and Prof Ana Deletic, The University of New South Wales</i>
5-minute room change			
4:10 pm – 4:40 pm	Ocean Plastic – The Pressures and Solutions That (Almost) No-One Is Talking About <i>Brad Dalrymple, Ocean Protect</i>	The Private Experience of Managing and Maintaining Stormwater Quality Improvement Devices <i>Ruby Ardren and A/Prof Peter Davies, Macquarie University</i>	From Nobody to Everybody - Wetland Re-Habitat in An Urban Catchment and Stormwater Harvesting Solution <i>Phil Li, Hugh Williamson, Ben Wolfgramm, Murray Powell and Omid Sayar, Optimal Stormwater, Rick Jarvis, Natalie Pelleri and James Ogg, Inner West Council</i>
5-minute room change			



ARE SUSTAINABLE
STORMWATER
PRACTICES REALLY
CATCHING ON?



4:45 pm – 5:15 pm	City of Sydney – Stormwater Highlights <i>Peter Garland and Chris Miller, City of Sydney, Murray Powell, Optimal Stormwater</i>	The Highs and Lows of Asset Maintenance – Which Councils Are Leading the Way? <i>Fotos Melaisis, Ocean Protect</i>	Using WSUD Practice to Maintain Groundwater Processes in a Sensitive Coastal Environment <i>Katrina Curran and Damian McCann, Australian Wetlands Consulting</i>
6:30 pm – 10:30 pm	2019 Conference Gala Dinner		
10:30 pm – 12:00 am	After Party		

Conference Program: Thursday, 29th August 2019

8:00 am	Conference Registration – Tea and Coffee on Arrival		
	Reef Room		
8:40 am – 8:45 am	Welcome to Day 2 Beth Salt, Convenor, 2019 Stormwater NSW Conference		
8:45 am – 8:50 am	Opening Address <i>Alan Benson, President, Stormwater NSW</i>		
8:50 am – 9:35 am	Keynote Address: Modelling to support the planning of sustainable urban water systems <i>Professor Ana Deletic, University of New South Wales, Sydney</i>		
9:35 am – 9:55 am	Keynote Address: NSW Marine Estate Management Strategy - Water Quality Initiatives <i>Tim Pritchard, DPIE (formerly OEH Science)</i>		
9:55 am – 10:40 am	Keynote Address: Responsible Behaviour in a Changing Climate - A Leadership Issue <i>Ian R. Cumming, CSC</i>		
10:40 am – 11:10 am	Morning Tea and Trade Exhibition		
	Marina Room	Harbour Room	Jetty Room
	Stormwater Management Service Charge	Stakeholder & Community Engagement	Stormwater NSW Awards – Where Are They Now?



ARE SUSTAINABLE
STORMWATER
PRACTICES REALLY
CATCHING ON?

STORMWATER
NEW SOUTH WALES
2019 Stormwater
NSW Conference



11:10 am – 11:20 am	<p>Stormwater Management Service Charge – Where Are We Now, 13 Years Later</p> <p><u>Beth Salt</u>, Georges Riverkeeper and Lucie Bright, Alluvium</p>	<p>Expand, Increase, Encourage - Stormwater Education in Blacktown</p> <p><u>Amanda Or</u>, Blacktown City Council</p>	<p>The Flow of Blackmans Swamp Creek Stormwater Harvesting Scheme - Beyond the Awards</p> <p><u>Nicole Reid</u>, Orange City Council</p>
11:20 am – 11:30 am	<p>10 Years of The Stormwater Management Charge in Fairfield City Council</p> <p><u>Nona Ruddell</u>, Fairfield City Council</p>	<p>Making the Parramatta River Swimmable Again: Engaging the Community to Reduce Stormwater and Source Pollution</p> <p><u>Nadia Young</u> and Joanne Taranto, Parramatta River Catchment Group</p>	<p>Sydney University, Blacktown Showground and Sydney Park: Lessons for Integrating WSUD and Landscape Design</p> <p><u>Andrew McMillan</u>, Alexa McAuley and David Knights, Civille</p>
11:30 am – 11:40 am	<p>Empirical Evidence for the Insufficient Maintenance of Stormwater Control Measures</p> <p><u>Andrew Thomas</u>, University of Melbourne</p>	<p>Community and Stakeholder Engagement – The Singleton Case Study</p> <p><u>Shefali Chakrabarty</u>, Cardno and Rabiul Awal, Singleton Council</p>	<p>A Green Roof, A Water-Sensitive Park and a Whole-Catchment Retrofit: Reflections on an Evolving Practice</p> <p><u>Alexa McAuley</u>, Civille</p>
11:40 am – 11:50 pm	<p>Rapid Fire Panel Discussion</p> <p><u>Beth Salt</u>, Georges Riverkeeper</p> <p><u>Nona Ruddell</u>, Fairfield City Council</p> <p><u>Andrew Thomas</u>, University of Melbourne</p>	<p>"Embedding Community Environmental Values and Uses in Stormwater and Strategic Local Planning Instruments"</p> <p><u>Jocelyn Dela-Cruz</u>, Department of Planning, Industry and Environment</p>	TBC
11:50 am – 12:10 pm		<p>Rapid Fire Panel Discussion</p> <p><u>Amanda Or</u>, Blacktown City Council</p> <p><u>Nadia Young</u>, Parramatta River Catchment Group</p> <p><u>Shefali Chakrabarty</u>, Cardno</p> <p><u>Jocelyn Dela-Cruz</u>, Department of Planning, Industry and Environment</p>	<p>Rapid Fire Panel Discussion</p> <p><u>Nicole Reid</u>, Orange City Council</p> <p><u>Alexa McAuley</u>, Civille</p> <p><u>Andrew McMillan</u>, Civille</p>
12:10 pm – 1:10 pm	Lunch and Trade Exhibition		
	Marina Room	Harbour Room	Jetty Room



ARE SUSTAINABLE
STORMWATER
PRACTICES REALLY
CATCHING ON?

STORMWATER
NEW SOUTH WALES
2019 Stormwater
NSW Conference



	Urban Renewal and Green Infrastructure	Research, Innovation and Technology	Flood & Coastal Inundation
1:10 pm – 1:40 pm	<p>Mainstreaming The Risk Based Framework</p> <p><u>Peter Gillam</u>, AECOM</p>	<p>Nutrients Are Not What They Seem: Dissolved Nutrient Composition of Urban Stormwater; Implications for Treatment and Ecological Health of Receiving Waterways</p> <p><u>Aaron Wright</u>, NSW Office of Environment and Heritage</p>	<p>Dynamic Consequence Mapping in Flash Flood Warning</p> <p><u>Jason Cooper</u>, Wollongong City Council</p>
5-minute room change			
1:45 pm – 2:15 pm	<p>Pulling Product - Repurposing Stormwater Material into Road Construction</p> <p><u>Pat Capaan</u> and Jim Appleby, Downer Reconomy</p>	<p>Strategies for Monitoring of Stormwater Quality and WSUD Performance</p> <p><u>Dr Kefeng Zhang</u> and Prof Ana Deletic, The University of New South Wales, Dr David McCarthy, Monash University</p>	<p>Identifying Critical Design Storm Bursts in the Kangaroo Bay Rivulet Catchment, Tasmania</p> <p>Dr Brett Phillips and <u>David Stone</u>, Cardno, Hannah Atkins, Clarence City Council</p>
5-minute room change			
2:20 pm – 2:50 pm	<p>SSANTO: A spatial tool to aid WSUD placement</p> <p><u>Dr Martijn Kuller</u> and Prof Ana Deletic, The University of New South Wales, Dr Peter Bach, ETH Zurich and Monash University</p>	<p>Self-Cleaning Detention Basins - A Wicked Modern Problem Falls Victim to a Most Ancient Way of Doing Design</p> <p><u>Jason Cooper</u>, Wollongong City Council</p>	<p>CA-ffé – a Cellular Automata Fast Flood Evaluation Model</p> <p><u>Dr Behzad Jamali</u> and Prof Ana Deletic, The University of New South Wales, Dr Peter M. Bach, Monash University</p>
2:50 pm – 3:20 pm	<p>Afternoon Tea and Trade Exhibition</p>		
	Marina Room	Harbour Room	Jetty Room
	Case Studies	Research, Innovation and Technology	Construction Challenges & Opportunities



ARE SUSTAINABLE
STORMWATER
PRACTICES REALLY
CATCHING ON?

STORMWATER
NEW SOUTH WALES
2019 Stormwater
NSW Conference



3:20 pm – 3:50 pm	<p>A Comprehensive Water Infrastructure Asset Management and Optimisation Project for Georges River Council's Largest SWHS</p> <p><u>Omid Sayar</u>, Dr Lars Hengren and Hamid Mehrazmay, <i>Innaco</i>, Stephen Owen and Alison Hanlon, <i>Georges River Council</i></p>	<p>Is Rainfall Data Too Intense, or Not Intense Enough?</p> <p><u>Stephen Gribble</u>, <i>Cardno</i></p>	<p>Third Time Lucky! - Montgomery Reserve/Little Salt Pan Creek GPT</p> <p><u>Phil Li</u>, Ben Wolfgramm and Murray Powell, <i>Optimal Stormwater</i>, Peter Anderson, <i>City of Canterbury and Bankstown Council</i></p>
5-minute room change			
3:55 pm – 4:25 pm	<p>Testing the Living Waterways Framework on an Ecologically Sensitive Existing Residential Development in Manly</p> <p><u>Jake Faranda</u>, <i>McGregor Coxall</i></p>	<p>Failing to Thrive by Not Using the New Design Rainfalls</p> <p><u>Janice Green</u> and Catherine Jolly, <i>Bureau of Meteorology</i></p>	<p>Water Sensitive Urban Dismay</p> <p><u>Daniel Rhodes</u>, <i>Henry and Hymas Consulting Engineers</i></p>
5-minute room change			
4:30 pm – 5:00 pm	<p>Rethinking Water Quality Targets: Replacing Pollutant Reduction Targets with Pollutant Load Rates per Site Area</p> <p><u>Stephanie Noble</u>, <i>Northrop Consulting Engineers</i></p>	<p>MARV and FERV: Stormwater Retention and Detention for Water Sensitive Urban Design</p> <p><u>Ray Parsell</u>, <i>Sydney Water</i>, <u>Dr Dale Browne</u> and Jane McArthur, <i>E2DesignLab</i></p>	<p>Dubbo Council Stormwater Quality Devices for Pollution Hot Spots to Protect the Macquarie River</p> <p><u>Hugh Williamson</u> and Murray Powell, <i>Optimal Stormwater</i>, Stephen Howlett, <i>Dubbo Regional Council</i></p>
Reef Room			
5:00 pm – 5:15 pm	<p>Conference Wrap Up, Thanks and Exhibitor Prize Draw</p> <p>Beth Salt, Convenor, 2019 Stormwater NSW Conference</p>		
5:15 pm	Conference Closes		

Disclaimers

- All conference activities and schedules are subject to change without notice.
- For any questions about the conference schedule please see the Registration Desk throughout the Conference.
- Session attendance is on a first come, first served basis, except for the Technical Tour which is subject to pre-registration.