# IWA World Water Congress & Exhibition





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# Creating possibilities to untap water's full potential



Possibility in every drop



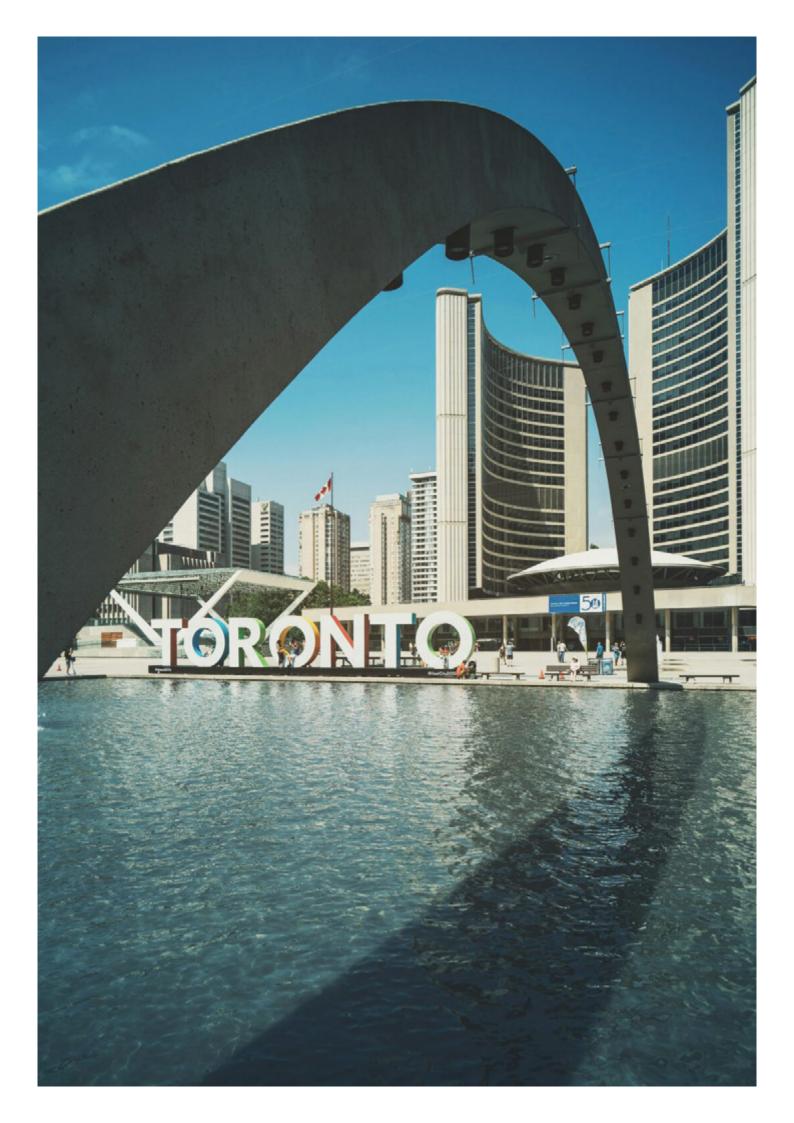
# Let's build a more water-secure world, together

Whether you're moving, treating, measuring, maintaining or optimizing water – technology, innovation, and collaboration offer bold new ways to protect and optimize water even further. We're committed to advancing sustainable impact and partnering with you and your communities to tackle the challenges that matter most.

We look forward to welcoming you at our booth 800

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# Welcome

#### from the IWA President



On behalf of the International Water Association, I welcome you to the beautiful and vibrant city of Toronto for the 2024 IWA World Water Congress & Exhibition.

As President I have the great privilege of seeing this edition of IWA's biennial event build on the success of the previous one, continuing our work sharing advances and connecting the people behind them. It represents the latest stage in the life of an event that celebrates excellence, gives voice to innovation, and provides a pinnacle of global discourse within the water sector.

The Congress provides a space for leading experts to gather to forge solutions to global challenges, to advance decisionmaking based on evidence-based science, to share scientific breakthroughs and game changing technologies, and inspire progressive thought leadership through its keynote plenaries delivered by expert speakers of the highest calibre.

As President I have an amazing opportunity to share in the magic of Congress. In Toronto, I will once again present awards to people who have undertaken outstanding work with courage and conviction; meet young water professionals who give me faith that the future of the water sector will be led by the brightest and the best, who are armed with an incredible depth of knowledge, outstanding communication skills, and a breathtaking determination to tackle the global water crisis despite the myriad of challenges; and more widely, to celebrate the energy and diversity that is core to all of IWA's activities.

Moreover, my position gives me insight into the vast work that goes into making this Congress the success that it is – work undertaken by people striving to present the best of the best, volunteering time selflessly with great dedication. Without this, Congress would not be the exceptional event that it is.

As the world grapples with the challenges of climate change, water and food insecurity, poverty, health inequality, natural disasters and conflict, our Congress provides an environment where complex problems can be unravelled and solutions explored and championed. The event stands as a beacon, drawing great minds to work together to find the best solutions to the hardest of questions.

Welcome to IWA's World Water Congress & Exhibition 2024. I hope that you will be inspired, share your knowledge, learn from that of others, make lasting connections, and enjoy the spectacle of all that the event has to offer.

#### Welcome to Canada



Canada is proud to host IWA's World Water Congress & Exhibition 2024. Following the resounding success of the previous edition in Copenhagen, Denmark in 2022, we are honoured to take up the baton and continue to support the progress that water

professionals are making across the world.

Canada's expansive and rich environment makes it especially suited to host an international event dedicated to the vital resource, water, drawing together people from across the globe who are driven to find solutions to the world's most pressing water challenges.

The second-largest country in the world by total area (including its waters), Canada has around two million lakes – containing much of the world's freshwater – as well as freshwater glaciers in the Canadian Rockies, the Coast Mountains, and the Arctic Cordillera. We also have the world's longest coastline, stretching over 240,000 kilometres. So, water and its protection are subjects of great significance to Canadians.

In addition to witnessing our abundant natural resources, we hope you will make time to explore our rich culture while you are here. Canada has been home to indigenous peoples for thousands of years and is one of the world's most ethnically diverse and multicultural nations.

Our host city, Toronto, is home to people from around 150 different countries. It also has much to share from a water perspective and is advancing actions to make it more sustainable, green, and beautiful.

Canada is one of the world's largest trading nations, and investment in research and development has created a climate that nurtures progress, particularly in science and technology. This has all established Canada as a great place for knowledge sharing, which will be a key element of this Congress.

My hope is that IWA's World Water Congress & Exhibition 2024 will inspire each and every attendee who passes through our doors. From students entering the sector, to the most esteemed and experienced beacons of their profession, individuals with a water background, and those from other sectors eager to learn, my ambition is for you all to leave this Congress fired with the energy required to make lasting positive change. Our time is now, let's make it count.

Peter Vanrolleghem, Congress President

Tom Mollenkopf, IWA President

# Welcome

#### from the IWA



As IWA's Executive Director, I am honoured to welcome you to Toronto for the 2024 World Water Congress & Exhibition. I would like to take this opportunity to thank all the many people involved with the preparations for this event, especially the

organising and programme committees, and the supporting partners and sponsors.

The event provides an important opportunity for us to gather, where seasoned Congress attendees can meet up and share the work they have been engaged with since they last met, and those new to the event can network, meet potential collaborators, and forge friendships based on shared interests.

As we seek solutions for the world's water challenges, people will be the key to the sector's success. This success will be dependent on commitment on a number of fronts: delivering equitable and safe water and sanitation solutions that serve all and the planet; engaging with communities to deliver solutions that are specific to local needs and cultures; and creating living spaces where people thrive in a nurturing, clean environment.

This commitment will need to be backed by inquisitiveness that advances innovative options, and by understanding of the transformation that safe water, sanitation and hygiene has on everyday lives.

The theme of this Congress is 'Shaping our water future', a title that is both empowering and challenging. Our water future is something that we as professionals must mould. There is opportunity for lasting implications for future generations. I am optimistic that this Congress will facilitate conversations that put people at the heart of water management, encourage collaboration, and align technology's potential with human needs.

The future is ripe with opportunity. Our Congress provides the ideal environment to debate the many possibilities, shape the road ahead, and embark upon game-changing approaches to transform the world's water future. I wish you a successful event.

Kala Vairavamoorthy, IWA Executive Director

### Welcome to Toronto



Welcome to Toronto – the most populous city in Canada, the capital of the Canadian province of Ontario, and proud host of the 2024 IWA World Water Congress & Exhibition.

Famously referred to as "the world in one city", for

its fantastic diversity and vibrancy, Toronto provides incredible opportunities for participants to explore the great things that are happening in the world of water, and also experience the many touristic events all across Toronto – and more widely Canada.

Toronto can fulfil the expectations of any visitor. With its great culture and cuisines from all around the globe, it offers something for everyone. At its heart is the dynamic downtown area, where the shoreline of Lake Ontario and the iconic CN Tower create an unforgettable skyline that will live on in your memories.

The city is served by what is one of the largest municipal water, wastewater and stormwater utilities in North America. Our city's dedicated water professionals proudly provide for over 3.6 million residents and businesses, ensuring they have access to safe drinking water, safely treated wastewater and proactive stormwater management. We manage over \$90 billion worth of assets, including eight treatment plants, pumping stations, water and sewer mains, and laboratories.

Delegates attending the technical tours will have the chance to see the many progressive initiatives we are advancing in the city. From our water and wastewater treatment facilities, energy recovery projects, green streets, and Wet Weather Flow Master Plan, there's lots to learn. It is a huge pleasure to be able to share these advancements with visitors from around the world.

As chair of the event's Joint Organising Committee, I have seen at first hand the huge amount of work that has gone into preparing for this week in Toronto. Now that the event is here, I am confident it will provide a rich and rewarding experience.

I wish you a successful event and encourage you to explore and enjoy all that this great city has to offer.

William Fernandes, Joint Organising Committee chair

#### Welcome from CWWA & CAWQ



With participants arriving in Toronto for IWA's World Water Congress & Exhibition 2024, we are pleased to extend a very warm welcome from Canada's water sector professionals to

fellow professionals from around the world. Canada has a proud water history and we are delighted that you are able to join us here to add to that history with this seminal event.

The Canadian Water and Wastewater Association (CWWA) was founded by Canadian municipal water and wastewater leaders in 1986. CWWA represents the shared interests of Canada's municipal water and wastewater systems to the federal government and all national agencies with regards to policies, programmes, standards and legislation, providing a national voice for this public sector service.

Focusing our activities and communications on national issues and trends, we work closely with other organisations to further the water sector's interests and create public awareness and support for this vital service that is founded on the expertise of dedicated professionals.

Meanwhile, the Canadian Association on Water Quality (CAWQ) is a non-governmental, non-profit organisation for scientists, engineers, technologists, administrators, practitioners and students engaged in or interested in research on water quality or the control or treatment of water pollution.

With a mission to broaden knowledge and understanding of water issues, our membership embraces industry, academia, governmental and non-governmental organisations, public servants, community groups, professional societies, private firms and the public.

The combined breadth of this engagement is critical for the sector to rise to the challenges that it faces. This breadth reflects the range of fellow professionals joining us here from across IWA's network. We look forward to exchanging knowledge and insights through the great opportunity that the World Water Congress & Exhibition 2024 provides.

Jesse Hulsman, President, Canadian Water and Wastewater Association

**Elsayed Elbeshbishy**, President, Canadian Association on Water Quality

# Toronto Welcomes the World Water Conference & Exhibition



# toronto.ca/business toronto.ca/water

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Join us at www.xylem.com and let's solve water.

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Toronto is home to more than three million people whose diversity and experiences make this great city Canada's leading economic engine and one of the world's most diverse and liveable cities. As the fourth largest city in North America, Toronto is a global leader in technology, finance, film, music, culture, innovation, and climate action, and is consistently placed at the top of international rankings due to investments championed by its government, residents and businesses.

Located on Lake Ontario's northwestern shore, the city of Toronto is the capital of the province of Ontario (one of 10 provinces in Canada), and its municipal boundaries extend across a 640 km<sup>2</sup> area, spanning six watersheds, where all but one of the watersheds extend beyond the city's municipal boundaries. The city has 10 waterfront beaches, eight of which have been granted the international Blue Flag designation and meet the strict provincially regulated water quality standard for swimming beaches through most of the summer. Toronto is a global hub seamlessly uniting cultural diversity, economic strength, and scenic beauty. As Canada's largest city and financial epicentre, its strategic position on the Great Lakes marks it as a crucial economic gateway, luring businesses seeking stability and international access.

Toronto's vibrant, multicultural population fosters innovation and inclusivity, providing residents with an exceptional quality of life, robust healthcare, and diverse cultural experiences in dynamic neighbourhoods across the entire city. The Greater Toronto Area (GTA) welcomes more than 100,000 new immigrants annually and is home to a diverse population with 50% foreign-born and over 190 languages and major dialects spoken. The GTA is also Canada's largest education, research, and innovation centre, with 18 worldrenowned universities and internationally recognised colleges.

Safe travels, and have a great time in Toronto!

Learn more at www.toronto.ca



At Black & Veatch, we believe access to clean water is a basic human right. So to ensure that communities of the future have more resilient water supply, we're committed to helping industries and municipalities become more effective stewards of the water we depend on. Black & Veatch is a 100-percent employee-owned global engineering, procurement, consulting and construction company with a more than 100-year track record of innovation in sustainable infrastructure. Since 1915, we have helped our clients improve the lives of people around the world by addressing the resilience and reliability of our most important infrastructure assets.

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Enwave Energy Corporation (Enwave) is the leading low-carbon district energy owner-operator in Canada, providing heating and cooling to over 400 buildings in Toronto, Windsor, London, Markham, and Charlottetown. With over thirty years of experience operating one of North America's largest district energy systems, Enwave has developed the capabilities to deliver a broad array of energy services, such as designing, operating, and/or managing a variety of low-carbon, efficient thermal and electrical technologies including deep lake water cooling, geoexchange, energy from waste, clean biomass, energy from sewage, thermal ice batteries, ambient loops, and combined heat and power.

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Ramboll is a global engineering, architecture, and consultancy company with more than 18,000 experts that create sustainable solutions for governments and companies all over the world. We combine insights with the power to drive positive change to our clients, in the form of ideas that can be realised and implemented.

Our water practice, Ramboll Water, covers the entire water cycle and offers a wide range of services related to water supply, simple or advanced treatment, water resources management, wastewater treatment and resource recovery, water and wastewater infrastructure, urban climate resiliency, nature-based solutions, storm-surge protection, and coastline development.

#### Jacobs

At Jacobs, we're challenging today to reinvent tomorrow by solving the world's most critical problems for thriving cities, resilient environments, mission critical outcomes, operational advancement, scientific discovery and cutting-edge manufacturing, turning abstract ideas into realities that transform the world for good. With approximately \$16 billion in annual revenue and a talent force of more than 60,000, Jacobs provides a full spectrum of professional services including consulting, technical, scientific and project delivery for the government and private sector.

Visit www. jacobs.com and connect with Jacobs on Facebook, Instagram, LinkedIn and X.

Drawing on our experiences designing, developing, and maintaining water-related infrastructure around the world, we work to understand and influence local water cycles to address wider community issues like economic development, food and agriculture, and energy consumption.

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Comcore is at the forefront of the water supply industry, leading the way in sustainable water metering solutions. With ultrasonic water meters as the cornerstone, Comcore provides comprehensive software and hardware solutions to water supply enterprises, enabling smart water management.

Comcore's approach is grounded in industry expertise, leveraging advanced methodologies and AI algorithms to deliver innovative solutions. By focusing on intelligent production, pipeline network optimisation, streamlined business operations, and enhanced customer service, Comcore empowers its clients to achieve sustainable water management practices.

Through a strategic product mix and tailored solutions, Comcore supports customers in realising the optimal balance between output and input, driving efficiency and fostering digital transformation across the water supply chain, from source to faucet.



Many of the world's most innovative engineers and scientists have come together in Stantec's Water business because they view a community's interaction with water a bit differently – as a single holistic system rather than as unconnected networks divided by jurisdictional boundaries. Our team provides a new path towards water sustainability with innovative solutions that allow for the reuse and conservation of this precious resource.

Working throughout the hydrologic cycle, we use innovative solutions to make sure the appropriate quality and quantity of water is where it should be and available when it's needed. Our experts lead their fields and guide our work with scientific rigour, an innovative spirit, and a vision for growth. Every day, we help communities improve their water efficiency and protect their water resources for future generations.

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American Water Works Association

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CSD Water Service is a leading provider of comprehensive environmental innovation services, focusing on delivering advanced technological solutions for future-oriented wastewater treatment plants, industrial park wastewater treatment, and integrated organic waste treatment. Committed to creating a safe, comfortable, and sustainable environment, CSD adheres to the principles of technological advancement, customer needs, and partnership.

One of CSD's major businesses is the development of future-oriented

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In partnership with China Three Gorges Corporation's Yangtze Ecology and Environment, CSD is transforming into a leading green development technology company.

www.zchb-water.net

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www.iwa-network.org



Canadian Association on Water Quality

www.cawq.ca



Canadian Water and Wastewater Association,

www.cwwa.ca



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#### Scientific and technical paper reviewers

Reviewers make a substantial contribution to the development of the Congress programme. At least two experts from around the world reviewed and scored all submissions. This is critical to ensure high standards, and IWA is grateful for the reviewers' commitment.

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# Comcore

#### SAVING LEAKAGE MANAGEMENT SOLUTION BASED ON COGNITIVE AI

Comcore's AI Leak Loss Control Solution provides an integrated hardware and software service. Utilizing dual-optimized artificial intelligence algorithms, it embeds domain expertise and relies on human-like reasoning to clean and analyze water supply network data. It offers an optimized placement strategy for flow and pressure sensors, precisely locating leak points while minimizing the number of sensors used. This establishes an intelligent leak monitoring system that can autonomously learn from changes in pipeline data over time, continuously proposing optimization recommendations to save water and enhance efficiency.

#### Application of cognitive AI algorithm in leakage management

#### leakage management scenarios

- Support the digital transformation of water department
- The quantitative analysis results can assist utilities to further optimize network, such as the dynamic balance of pressure, diameter pressure matching, etc

Using EPANET to generate millions of simulation scenarios of random leaks to learn the optimal sampling strategy

Scene algorithm iteration

Algorithm update

#### Zero-Coding ML System

#### **Cognitive AI algorithm services**

• Provide algorithm suggestions

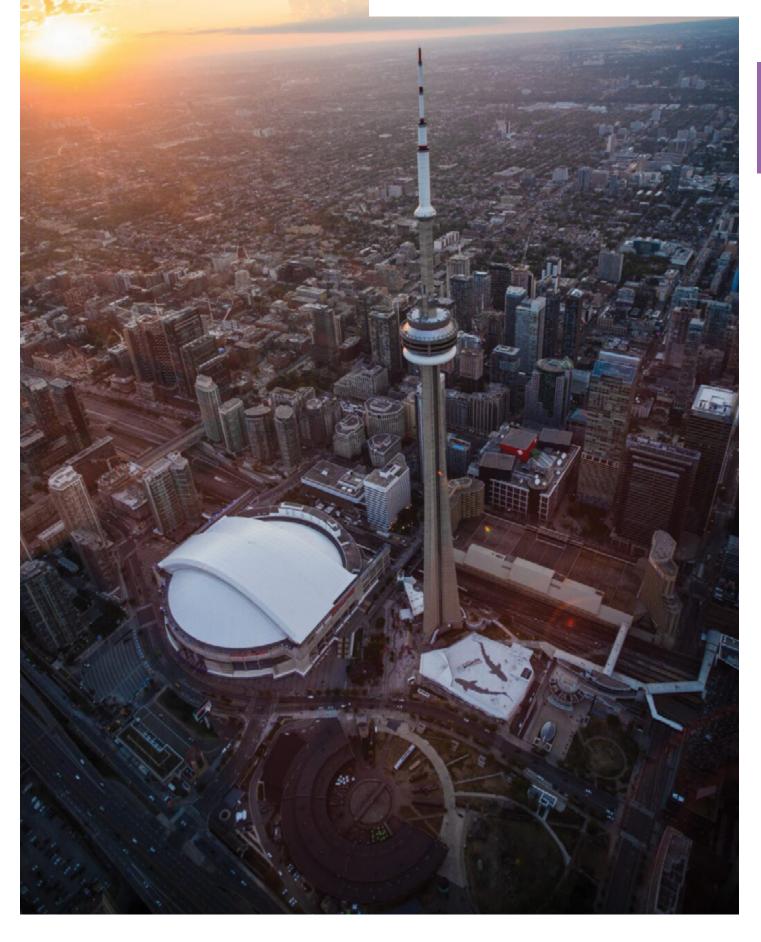
 Minimum and optimal sensor placement locations are recommended to reconstruct the flow characteristics of each node in the network to detect leaks

Deep learning based on real-time data Synchronous optimization algorithm, learn to reconstruct external flow + detect leaks + dangers, defects, etc

#### \*powered by Beyond Limits

Comcore Technology Pte. Ltd. Address: 12 Woodlands Square, Tower 1, #13-68/69 Woods Square, 737715 website: https://www.comcore.com.sg

## **Event Overview**



# **Programme Thematic Tracks**

#### Shaping the future of water management

#### Track 1

#### Water Utility Management

The water sector needs to improve utility management to guarantee efficient operations. This covers a wide range of actions, from infrastructure development for water supply to improvement in public-private sector cooperation, up to the management of the full urban water cycle. The need to maintain high performance while implementing environmentally sustainable models for water management will affect future developments in water utilities' strategies.

#### Track 4

# City-scale Planning and Operations

Cities all over the world are facing challenges in terms of climate change, increased urbanisation, pressure on resources and rising demand for liveable cities. Addressing these challenges requires an adaptation of current city planning to include a more resilient design. Smart, resilient, and liveable cities must thus be created through collaboration between various sectors of society (for example, water management, infrastructure, operations, and city planning). Within this context, digital solutions can also enable the transformation towards sustainability, liveability, and, therefore, the SDGs.

#### Track 2

#### Wastewater Treatment & Resource Recovery

Wastewater management and resource recovery face many challenges and opportunities. Before returning to the water cycle (rivers, lakes, estuaries, oceans), wastewater needs to be treated via biological or physicochemical treatments, or a combination of these, to be safely discharged with an acceptable impact on the environment. In this process, wastewater is recognised as a valuable source of renewable resources. It is therefore crucial to adapt wastewater facilities to ensure the recovery of energy and valuable compounds, including water itself. For this purpose, it is also critical to emphasise the significance of digital technology, which may be utilised in daily operations to increase efficiency.

#### Track 5

# Communities, Communication & Partnerships

The people that comprise society are at the heart of the transition to a more sustainable and resilient future. The water sector, like every other sector, must guarantee that societal demands are addressed, and that the well-being of society is the primary focus and motivator of decision-making. To do this, it is critical to examine cross-sectoral planning as well as ensure that incentives are spread evenly throughout communities. This track will look at how local and regional governments, utilities, professional groups, the community, and private-sector partners may effectively collaborate to enhance effectiveness and produce better overall outcomes for their communities.

#### Track 3

#### **Drinking Water & Potable Reuse**

Potable water reuse refers to the process of using treated wastewater for drinking water. This represents a practical source of drinking water in response to growing pressures on available water resources. The optimisation of potable water reuse practises necessitates effective drinking water production technologies as well as efficient distribution systems. To ensure this, as well as high water quality standards, an in-depth investigation of water management and sociopolitical aspects is needed. These can also be facilitated by the use of digital tools and technologies.

#### Track 6

#### Water Resources & Large-Scale Water Management

Exploiting the potential of water resources (e.g., groundwater and surface water) necessitates proper management of such resources. Water management, in particular, needs to involve water quality and quantity monitoring, as well as treatment strategies for contaminated water resources, in order to assure their availability in an environmentally sustainable way.

# **Programme Framework**

Track 1 WATER UTILITY MANAGEMENT	Track 2 WASTEWATER TREATMENT AND RESOURCE RECOVERY	Track 3 DRINKING W POTABLE REU		Track 4 CITY-SCALE PL AND OPERATI		Track 5 COMMUNITIES, COMMUNICATION AND PARTNERSHIPS	Track 6 WATER RESOURCES AND LARGE- S SCALE WATER MANAGEMENT
Sunday 11 August	Monday 12 Aug	gust	Tuesday 1	3 August	Wedne	esday 14 August	Thursday 15 August
	<b>KEYNOTE PLENARY</b> 09:00 — 09:45						
	<b>BREAK</b> 09:45 — 10:30						
	<b>SESSION 1</b> 10:30 — 12:00						
	<b>LUNCH</b> 12:00 — 13:30						
	<b>SESSION 2</b> 13:30 — 15:00						
	<b>BREAK</b> 15:00 — 15:30						CLOSING CEREMONY
<b>OPENING CEREMONY</b> 16:00 — 18:00	<b>SESSION 3</b> 15:30 — 17:00						15:15 — 16:45
Main Hall, Level 800, MTCC	<b>ВREAK</b> 17:00 — 17:15						
EXHIBITION OPENING & WELCOME RECEPTION	<b>KEYNOTE PLENARY</b> 17:15 — 18:00						
18:00 — 20:00 Exhibition area, Level 800, M	тсс	AW	OJECT INNO /ARDS ening, Arcadiar				GALA DINNER Evening MTCC North Building

					Monday 12 August								
SCHEDULE	ROOM 801A	ROOM 801B	ROOM 803A	ROOM 803B	ROOM 701A	ROOM 701B	ROOM 703	ROOM 705	ROOM 707	ROOM 709			
09:00 - 09:45	KEYNOTE PLENARY												
<b>BREAK</b> 09:45 - 10:30			GROUNDW		GROUNDWATER		WORKSHOP 5.1 Progress of gender-inclusive	TECHNICAL 2.33 PFAS In wastewater	TECHNICAL 1.17 Utility-wide transformations	TECHNICAL 1.9 Leveraging Public Private Partnerships	WORKSHOP 1.13 Evaluating communities for water	TECHNICAL 2.5 Anaerobi augumentati	ic process
<b>SESSION 1</b> 10:30 - 12:00					leadership in the water and sanitation sector			to improve utility efficiency	infrastructure projects through sustainable livelihoods approach methodology				
LUNCH 12:00 - 13:30		SO.6 Water 2050 Charting a course to	GROUNDWATER FORUM	<b>WORKSHOP</b> 4.5 Holistic and	WORKSHOP 5.2 Moving towards	<b>WORKSHOP</b> 2.3 Navigating the	TECHNICAL 1.6 Global	WORKSHOP 1.6 Key success of any	TECHNICAL 4.1 Decision support	TECHNICAL 2.6 Pretreatr			
SESSION 2 13:30 - 15:00		the future of water - AWWA		interoperable digital twins for water fit-for- purpose applications	equitable citizen- focused regulation	ever-changing PFAS landscape: Latest developments and best practices	perspectives on water utility service delivery	asset management journey across the globe – triple bottom line – digitisation, decarbonisation and	tools in urban water management	anaerobic pr			
15:00 - 15:30	Women's Leadership	SO.6 Water 2050	GROUNDWATER		WORKSHOP	WORKSHOP	WORKSHOP	diversity WORKSHOP	TECHNICAL	TECHNICAL			
<b>SESSION 3</b> 15:30 - 17:00	Network – Setting the Agenda	Charting a course to the future of water - AWWA	FORUM		5.4 Scaling-up and making waves: Unpacking finance	1.12 Translating what we know about PFAS into action: What	1.8 Vancouver's One Water journey	1.9 Responsible Industrial water management in a	4.6 Decision support tools in wastewater management	2.7 Microbio anaerobic pr	ology in		
<b>BREAK</b> 17:00 - 17:15					accessibility for WASH startups	water practitioners want to know		changing climate – Breakthroughs and innovations					
17:15 - 18:00	KEYNOTE PLENARY												
Schedule continuation													
ROOM 711	ROOM 713	ROOM 714	ROOM 715A	ROOM 715B	ROOM 716A	ROOM 716B	ROOM 717A	ROOM 718A	ROOM 718B	EXHIBITION	N		
KEYNOTE PLENARY													
TECHNICAL 2.1 Anammox / denitrification	TECHNICAL 6.3 Surface water monitoring systems and models	TECHNICAL 3.2 Groundwater based drinking water treatment	<b>TECHNICAL</b> 3.1 Unit operations (coagulation, (bio) filtration, membrane processes, ozonation)	TECHNICAL 2.34 Wastewater- based epidemiology	TECHNICAL 1.13 New perspectives on net zero utilities	TECHNICAL 2.8 Activated sludge processes – Session 1	TECHNICAL 5.2 Digital transformation	TECHNICAL 4.7 Nature-based solutions	WORKSHOP 1.22 Advancements In Great Lakes science from Canada's largest water research program		BUSINESS FORUM		
TECHNICAL 2.2 Phosphorus removal	TECHNICAL 6.1 Advanced techniques for groundwater management	TECHNICAL 3.16 Water and energy economics in local & global contexts	TECHNICAL 5.3 Policy and regulation	TECHNICAL 2.35 Contaminants of emerging concern in sewers	TECHNICAL 1.15 Circular economy initiatives on utility level	TECHNICAL 2.9 Activated sludge processes – Session 2	TECHNICAL 2.36 Digital water & modelling – Session 1	WORKSHOP 5.11 The workforce of tomorrow – Sustainability in attracting and retaining talent	WORKSHOP 3.1 Gravity driven membrane filtration (GDMF) – Application to small, remote and/or marginalized communities		BUSINESS FORUM		
TECHNICAL 2.3 Partial nitrification	TECHNICAL 6.4 Protection of surface water quality and quantity	WORKSHOP 1.19 Reuse and recycle waterworks sludge	TECHNICAL 6.2 Decades of evolving water governance – what have we learnt	TECHNICAL 5.4 Cross-sectoral governance	WORKSHOP 1.27 Construction to production in the water industry	<b>TECHNICAL</b> 2.26 Treatment and recovery of industrial wastewater	TECHNICAL 2.37 Digital water & modelling – Session 2	WORKSHOP 4.7 Practical application of nature- based solutions for water utilities	WORKSHOP 3.2 Use of genetic methods for microbial water quality testing: A global, water industry-wide survey		BUSINESS FORUM		
KEYNOTE PLENARY													

					Tuesday 13 August					
SCHEDULE	ROOM 801A	ROOM 801B	ROOM 803A	ROOM 803B	ROOM 701A	ROOM 701B	ROOM 703	ROOM 705	ROOM 707	ROOM 709
09:00 - 09:45	KEYNOTE PLENARY									
<b>BREAK</b> 09:45 - 10:30	INDUSTRIAL WATER FORUM – SESSION 1	<b>WORKSHOP</b> 2.11 Cross-sector collaboration on	INTERNATIONAL WATER REGULATORS	WORKSHOP 4.15 Asset management of urban	WORKSHOP 6.3 What the water industry can learn	<b>TECHNICAL</b> 1.14 Becoming a net zero utility	<b>TECHNICAL</b> 2.21 Advanced oxidation processes –	<b>TECHNICAL</b> 1.16 Utility responses and adaptation	<b>TECHNICAL</b> 1.2 Real world digital twin applications	TECHNICAL 1.8 Innovations in pollutant
<b>SESSION 1</b> 10:30 - 12:00		the circular water economy: Lessons from North America	FORUM	drainage systems	from the Indigenous perspective		Session 1	to climate change impacts		management
<b>LUNCH</b> 12:00 - 13:30	INDUSTRIAL WATER FORUM –	UTILITY LEADERS	INTERNATIONAL WATER	SO.1 The Technology Roadmap for Net-Zero	WORKSHOP 5.3 Water is a	<b>TECHNICAL</b> 1.18 Sustainable	TECHNICAL 2.22 Advanced	WORKSHOP 1.21 Towards	<b>TECHNICAL</b> 1.1 How to go digital	<b>TECHNICAL</b> 1.20 Sewer overflow
<b>SESSION 2</b> 13:30 - 15:00	SESSION 2		REGULATORS	Urban Wastewater – Session 1	human right: Labour movements role in addressing the	approaches to asset management	oxidation processes – Session 2	increased resilience and better governance for urban	as a water utility – Session 1	management
<b>BREAK</b> 15:00 - 15:30					indigenous water crisis			water		
<b>SESSION 3</b> 15:30 - 17:00	INDUSTRIAL WATER FORUM – SESSION 3	UTILITY LEADERS FORUM	INTERNATIONAL WATER REGULATORS FORUM	SO.2 The Technology Roadmap for Net-Zero Urban Wastewater – Session 2	WORKSHOP 5.9 Wastewater surveillance to ensure sustainable, inclusive and equal access to	WORKSHOP 1.10 Developing the markets for a circular economy: A box sprint	TECHNICAL 2.23 Advanced oxidation processes – Session 3	WORKSHOP 2.1 Contaminants of emerging concern in a changing climate:	WORKSHOP 1.1 Meta-data collection and organisation: What,	WORKSHOP 1.20 Toronto Sponge City workshop
<b>BREAK</b> 17:00 - 17:15					public health and resource recovery: small pieces, big picture.			Innovative strategies for sustainable management	when, and why?	
17:15 - 18:00	KEYNOTE PLENARY									
Schedule continuation										

ROOM 711	ROOM 713	ROOM 714	ROOM 715A	ROOM 715B	ROOM 716A	ROOM 716B	ROOM 717A	ROOM 718A	ROOM 718B	EXHIBITION
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**KEYNOTE PLENARY** 

TECHNICAL 2.31 Contaminants of emerging concern in wastewater	TECHNICAL 3.3 Potable reuse technologies	TECHNICAL 3.14 Emerging contaminants/ pathogens and antibiotic resistant bacteria/resistance genes	TECHNICAL 2.11 Membrane reactors	<b>TECHNICAL</b> 2.38 Decentralised treatment and non- sewered sanitation	WORKSHOP 6.6 Establishing successful markets to close the circular economy loop for products from water resource recovery facilities	TECHNICAL 2.4 Greenhouse gas emissions and mitigation	TECHNICAL 4.3 Response to flood and sea level rise	WORKSHOP 4.1 Inclusive research – The role of science to accelerate water action in the Global South	WORKSHOP 5.6 Mission- driven innovation for systemic transformation of water managment	BUSINESS FORUM	BUSINESS FORUM
TECHNICAL 3.4 Occurrence and removal of emerging contaminants – Session 1	TECHNICAL 3.7 In-premises water quality (house/ building plumbing, microbial water quality)	TECHNICAL 2.12 Microbial ecology	TECHNICAL 2.14 Water reclamation for non-potable reuse (planning)	TECHNICAL 5.5 WASH and community-scale water management – Session 1	WORKSHOP 6.4 How can Laurentian Great Lakes youth- inclusive watershed governance improve collaboration?	TECHNICAL 2.27 Food waste biosolids management & reuse – Session 1	TECHNICAL 4.8 Water sensitive urban design	WORKSHOP 4.4 Water security for future generations	WORKSHOP 3.3 UV light: Protecting public health around the world	BUSINESS FORUM	BUSINESS FORUM
WORKSHOP 2.5 Unlocking the Power of Anaerobic Digestion: Innovations and Best Practices	TECHNICAL 3.15 Water quality standards, regulations and economics	TECHNICAL 6.10 Circular economy initiatives and approaches	TECHNICAL 2.13 Water reclamation for non-potable reuse (technology)	TECHNICAL 5.7 WASH and community-scale water management – Session 2	WORKSHOP 6.1 Sustainable use of groundwater resources: storytelling with National Geographic	TECHNICAL 2.32 Pharmaceuticals in wastewater	TECHNICAL 4.4 Advances in rainfall and stormwater management	WORKSHOP 5.8 Redesigning mentorship for cross-generational (#crossgen) collaborations	WORKSHOP 3.4 Positioning water scarcity at centre of climate change	BUSINESS FORUM	BUSINESS FORUM

KEYNOTE PLENARY

					Wednesday 14 August						
SCHEDULE	ROOM 801A	ROOM 801B	ROOM 803A	ROOM 803B	ROOM 701A	ROOM 701B	ROOM 703	ROOM 705	ROOM 707	ROOM 709	)
09:00 - 09:45	KEYNOTE PLENARY										
<b>BREAK</b> 09:45 - 10:30	EMERGING WATER LEADERS FORUM	WORKSHOP 4.9 Transforming Southern California:	SO.7 Governance models addressing indigenous	TECHNICAL 1.3 Digital leak detection	TECHNICAL 6.8 Water resources management	TECHNICAL 2.29 Microplastics in wastewater treatment	TECHNICAL 1.19 Experience of pipeline asset	WORKSHOP 1.3 From data to decision making,	TECHNICAL 1.10 Large scale water reuse and recycling	WORKSHO 1.18 IWA Clu wastewater	uster -based
SESSION 1 10:30 - 12:00		The One Water metamorphosis	communities' needs for sustainable and affordable water supply and sanitation services – Session 01		towards Sustainable Development Goals (SDG): Water saving, reuse and alternative sources		management	and back – Digital transformation and AI for the resilient water sector		epidemiolog surveillance health value wastewater	e – Public e from
<b>LUNCH</b> L2:00 - 13:30	EMERGING WATER	UTILITY LEADERS		TECHNICAL 2.19 Membrane	WORKSHOP 5.5 Climate change	<b>TECHNICAL</b> 2.30 Micropollutants		WORKSHOP 1.28: Digitalisation	TECHNICAL 1.7 Lessons from	WORKSHO 4.12 Nature-	based
<b>ESSION 2</b> 13:30 - 15:00				applications in wastewater management – Session 1	impacts on water sources and water infrastructure in Arctic communities	in wastewater treatment		of the water sector: Challenges and opportunities	utility operations	Solutions – S Partnering w from source back – Case s water manag	vith nature to tap and studies in
<b>BREAK</b> 15:00 - 15:30										from rural ca to urban app	
<b>SESSION 3</b> 15:30 - 17:00	EMERGING WATER LEADERS FORUM	UTILITY LEADERS FORUM	WORKSHOP 4.6 Going from treatment to recovery – A journey of	<b>TECHNICAL</b> 2.20 Membrane applications in wastewater	WORKSHOP 5.7 Solving California's Water crisis: bold solutions	WORKSHOP 2.2 Microplastics in wastewater and biosolids	WORKSHOP 1.7 Boost adoption of innovation in the water sector	TECHNICAL 1.4 Digital maintenance approaches	WORKSHOP 1.4 Unlock the worldwide potential of water reuse	WORKSHO 1.15 Toward global asses disease: Sta	ds unified ssment of indards
BREAK 17:00 - 17:15			wastewater as a net energy producer	management – Session 2	transforming water management				innovations	for wastewa surveillance	
17:15 - 18:00	KEYNOTE PLENARY										
Schedule continuation		ROOM 714	ROOM 715A	ROOM 715B	ROOM 716A	ROOM 716B	ROOM 717A	ROOM 718A	ROOM 718B	EXHIBITIO	N
17:15 - 18:00 Schedule continuation ROOM 711 KEYNOTE PLENARY	1	ROOM 714	ROOM 715A	ROOM 715B	ROOM 716A	ROOM 716B	ROOM 717A	ROOM 718A	ROOM 718B	EXHIBITIO	N
Schedule continuation	1	ROOM 714 TECHNICAL 5.1 Collaboration, capacity building and communication – Session 1	ROOM 715A SO.3 Enhancing Urban Sanitation: Applicable CWIS consultation	ROOM 715B TECHNICAL 2.10 Biofilm and granular sludge processes	ROOM 716A WORKSHOP 2.4 Membrane aerated biofilm reactor – From theory to modeling to practice & emerging applications	ROOM 716B WORKSHOP 1.24 Net-zero emissions in the water industry – Collaborating for Collaborating for Climate Action	ROOM 717A TECHNICAL 4.2 Impacts and mitigation of climate change	ROOM 718A WORKSHOP 2.6 Beyond automation – How digital tools can enable breakthrough innovation	ROOM 718B WORKSHOP 3.5 Particle-associated viruses as emerging pathogens in water and wastewater		N BUSINES FORUM
Cchedule continuation COOM 711 CEVNOTE PLENARY CECHNICAL .5 Occurrence and emoval of emerging ontaminants – ession 2 CECHNICAL .6 Occurrence and emoval of emerging ontaminants –	ROOM 713 TECHNICAL 3.12 Disinfection	<b>TECHNICAL</b> 5.1 Collaboration, capacity building and communication –	SO.3 Enhancing Urban Sanitation: Applicable CWIS	TECHNICAL 2.10 Biofilm and granular sludge	WORKSHOP 2.4 Membrane aerated biofilm reactor – From theory to modeling to practice & emerging	WORKSHOP 1.24 Net-zero emissions in the water industry – Collaborating for	<b>TECHNICAL</b> 4.2 Impacts and mitigation of climate	WORKSHOP 2.6 Beyond automation – How digital tools can enable breakthrough	WORKSHOP 3.5 Particle-associated viruses as emerging pathogens in water	BUSINESS FORUM	BUSINE FORUM BUSINE
Schedule continuation ROOM 711 KEYNOTE PLENARY ECHNICAL 8.5 Occurrence and emoval of emerging ontaminants –	ROOM 713 TECHNICAL 3.12 Disinfection methods TECHNICAL 3.13 Disinfection by-	TECHNICAL 5.1 Collaboration, capacity building and communication – Session 1 TECHNICAL 5.6 Collaboration, capacity building and communication –	SO.3 Enhancing Urban Sanitation: Applicable CWIS consultation WORKSHOP 6.9 Scaling financial instruments to avert	TECHNICAL 2.10 Biofilm and granular sludge processes TECHNICAL 2.18 Microbial electrochemistry &	WORKSHOP 2.4 Membrane aerated biofilm reactor – From theory to modeling to practice & emerging applications WORKSHOP 6.5 The secret lives of water professionals: Exploring water careers in academia, consulting, government and	WORKSHOP 1.24 Net-zero emissions in the water industry – Collaborating for Climate Action WORKSHOP 1.25 We kN2Ow enough – Mitigating nitrous oxide emissions at WRRFs	TECHNICAL 4.2 Impacts and mitigation of climate change WORKSHOP 4.2 Sustainability for urban water	WORKSHOP 2.6 Beyond automation – How digital tools can enable breakthrough innovation WORKSHOP 2.7 Blueprint for a circular water smart	WORKSHOP 3.5 Particle-associated viruses as emerging pathogens in water and wastewater WORKSHOP 3.6 Improving equity in intermittent water supply networks: A	BUSINESS FORUM BUSINESS FORUM	BUSINE

					Thursday 15 August					
SCHEDULE	ROOM 801A	ROOM 801B	ROOM 803A	ROOM 803B	ROOM 701A	ROOM 701B	ROOM 703	ROOM 705	ROOM 707	ROOM 709
09:00 - 09:45	KEYNOTE PLENARY									
<b>BREAK</b> 09:45 - 10:30	WORKSHOP 1.30 Water/ wastewater measurement and	SO.4 IWA Climate Smart Utilities Recognition Programme Workshop	SO.5 Enhancing Utility- Regulator collaboration for efficient and resilient water supply	WORKSHOP 4.13 Nature-based Solutions – Session 2: Barriers and	WORKSHOP 1.5 Incorporating hydrogen into business as usual, a	TECHNICAL 2.28 Food waste biosolids management & reuse	TECHNICAL 1.5 How to go digital as a water utility – Session 2	TECHNICAL 1.11 Nitrous oxide emissions in full-scale operations	WORKSHOP 1.17 Water tariffs in a challenging world	TECHNICAL 3.9 Biofilms And Pathogen management in water
<b>SESSION 1</b> 10:30 - 12:00	operations excellence	Programme workshop	and sanitation (WSS) services	challenges for implementation of NbS	global view	– Session 2	56221011 2	operations		distribution
<b>LUNCH</b> 12:00 - 13:30	WORKSHOP 1.29 Advancements in non-sewered sanitation	WORKSHOP 4.10 Water management in stressed urban areas	WORKSHOP 2.8 New paradigm of wastewater treatment in fast-urbanising	WORKSHOP 4.14 Nature-based Solutions – Session 3: Streamlining efforts	WORKSHOP 4.8 Navigating the waves: Achieving the Goals of the	WORKSHOP 3.8 Catalyzing innovations for water resilient cities: Policy	WORKSHOP 1.16 From drain to data: Navigating the waters of AI	TECHNICAL 1.12 Nitrous oxide modelling and control	TECHNICAL 3.8 Non-revenue water & leakage management	TECHNICAL 3.11 Pathogen detection methods
<b>SESSION 2</b> 13:30 - 15:00	Sanitation	– Bringing collective understanding of the value of water	region	to promote NbS	UN Water Ministers Conference 2023	and practice in India	in wastewater engineering		management	
<b>BREAK</b> 15:00 - 15:15										
15:15 - 16:45	CLOSING CEREMONY									
EVENING	CONGRESS GALA DINNER - MTCC North Building									
Schedule continuation										
ROOM 711	ROOM 713	ROOM 714	ROOM 715A	ROOM 715B	ROOM 716A	ROOM 716B	ROOM 717A	ROOM 718A	ROOM 718B	EXHIBITION

**KEYNOTE PLENARY** 

	WORKSHOP 4.3 Demonstrating global practices for smart resilient cities	TECHNICAL 2.24 Nanomaterials and nanotechnology	TECHNICAL 2.16 Recovery of nutrients and chemicals – Session 1	<b>TECHNICAL</b> 6.6 Integrated water resources management and climate change	WORKSHOP 2.9 MEWE-BioCluster workshop: Advancing the frontiers of integrated 'omics'	WORKSHOP 2.10 Collaborative Solutions to Emerging Contaminants under Climate Change	WORKSHOP 5.12 An accountability framework proposal for realistic youth engagement in SDG 6	WORKSHOP 6.8 Basin-connected cities: Enabling urban and rural stakeholders to take action in basin management	TECHNICAL 2.15 Energy efficiency and recovery	BUSINESS FORUM	BUSINESS FORUM
WORKSHOP 1.23 The perfect pairing; Data and digital meet ecology	WORKSHOP 1.14 Closing the gap between climate adaptation and climate mitigation	TECHNICAL 2.25 Other physico- chemical treatment techniques	<b>TECHNICAL</b> 2.17 Recovery of nutrients and chemicals – Session 2	TECHNICAL 6.9 Water resources management towards Sustainable Development Goals (SDG): Energy and resources management	WORKSHOP 4.11 Progress of inclusive sanitation in Bangladesh / South Asia	WORKSHOP 1.31 Women in water- the importance of equity diversity and inclusion across utility sectors and asset management	<b>TECHNICAL</b> 6.11 Challenges and progress towards achieving the Sustainable Development Goals (SDGs)	<b>TECHNICAL</b> 6.7 Integrated water resources management and climate resilience	TECHNICAL 3.17 In-premises water quality (house/ building plumbing, metal and plastic leaching)	BUSINESS FORUM	BUSINESS FORUM

CLOSING CEREMONY

CONGRESS GALA DINNER - MTCC North Building

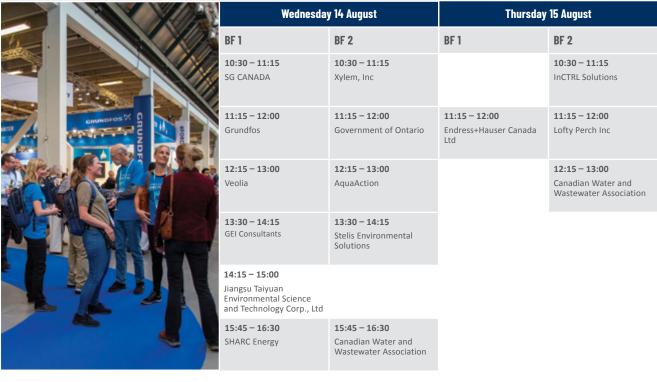
# **Business Forums Overview**

#### Learn about challenges and innovations

The Business Forums are a full component of the technical programme of the IWA World Water Congress & Exhibition and provide a series of sessions where sponsors and exhibitors present their innovations and projects that contribute to shaping our water future.

#### LOCATION: EXHIBITION HALL

Monday	Monday 12 August		13 August	
BF 1	BF 2	BF 1	BF 2	ing cha
<b>10:30 - 11:15</b> REATTS	<b>10:30 – 11:15</b> Xylem, Inc	<b>10:30 - 11:15</b> Grundfos	<b>10:30 – 11:15</b> Itron	inspiring chai
11:15 – 12:00 Puroxi Pure Water Global Inc	<b>11:15 – 12:00</b> Xylem, Inc	<b>11:15 – 12:00</b> Xylem, inc	<b>11:15 – 12:00</b> UK Pavilion	
<b>12:15 – 13:00</b> Government of Ontario	12:15 – 13:00 Canadian Water and Wastewater Association	<b>12:15 – 13:00</b> Advanced Drainage Systems	12:15 – 13:00 VerifiGlobal and CSA Group	
<b>13:30 – 14:15</b> Bureau of Waterworks, Tokyo Metropolitan Government	13:30 – 14:15 Canadian Water Network	<b>13:30 – 14:15</b> IPEX Inc.	<b>13:30 – 14:15</b> Stelis Environmental Solutions	
<b>14:15 – 15:00</b> Qingdao Comcore Technologies Co.,Ltd	<b>14:15 – 15:00</b> Zero Energy Water	<b>14:15 – 15:00</b> Government of Ontario	<b>14:15 – 15:00</b> Hetek Solutions Inc.	
<b>15:45 – 16:30</b> Ross Engineering (RSE)	15:45 – 16:30 MS Filter Systems Inc	<b>15:45 – 16:30</b> Netherlands Pavilion	15:45 – 16:30 QMC Metering Solutions	
<b>16:30 – 17:15</b> Black & Veatch	<b>16:30 – 17:15</b> Digital Water Solutions	<b>16:30 – 17:15</b> Beijing Drainage Group Co., Ltd	<b>16:30 – 17:15</b> Canadian Water and Wastewater Association	





# Recover. Revitalize. Reinvent.



# Information

## Practical & useful

#### **Useful Information**

#### ACCOMMODATION QUERIES

For questions about accommodation, please visit www.worldwatercongress. org/accommodation or go to the registration desk.

#### CATERING AND REFRESHMENTS

Get your morning coffee, lunch and afternoon coffee at one of the food stations, which are conveniently located throughout the Exhibition hall on level 800.

#### MEDICAL ASSISTANCE

A First Aid room is available on level 800 opposite the Exhibition hall and is designed to allow people feeling ill to rest temporarily. For medical assistance, please go to the registration desk. Please note for the Gala Dinner First Aid is also available in the MTCC North Building. It is located next to room 203C on level 200.

#### **TECHNICAL TOURS**

Please visit www.worldwatercongress.org/ technical-tours/ for latest information.

#### TRANSPORTATION

The Toronto Transit Commission (TTC) has subways, buses and street cars, there's bike share, taxi's or ride share services like Uber and lift. The venue is also connected by the Path - Toronto's Downtown Underground Pedestrian Walkway. Details and an estimated cost can be found at www. worldwatercongress.org/travel

#### EMERGENCY NUMBER

In case of an emergency, dial 911 for the police, fire services and ambulance. Please dial 416-585-8360 or 8360 from a house phone.

#### **REGISTRATION DESK**

The registration desk will be open from: Sunday 11 Aug — 09:00 / 19:00 Monday 12 Aug — 08:00 / 19:00 Tuesday 13 Aug — 08:00 / 17:00 Wednesday 14 Aug — 08:00 / 17:00 Thursday 15 Aug — 08:00 / 17:00

#### WIFI DETAILS:

WIFI is free for all attendees. login: WWCE2024 password: toronto2024

#### DISCLAIMER

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#### **Practical information**

#### CONGRESS MOBILE APP & PROCEEDINGS

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#### CONTACTS

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#### **Technical Programme**

Marsha Lwamusai International Water Association Email: marsha.lwamusai@iwahq.org

#### **Press and media**

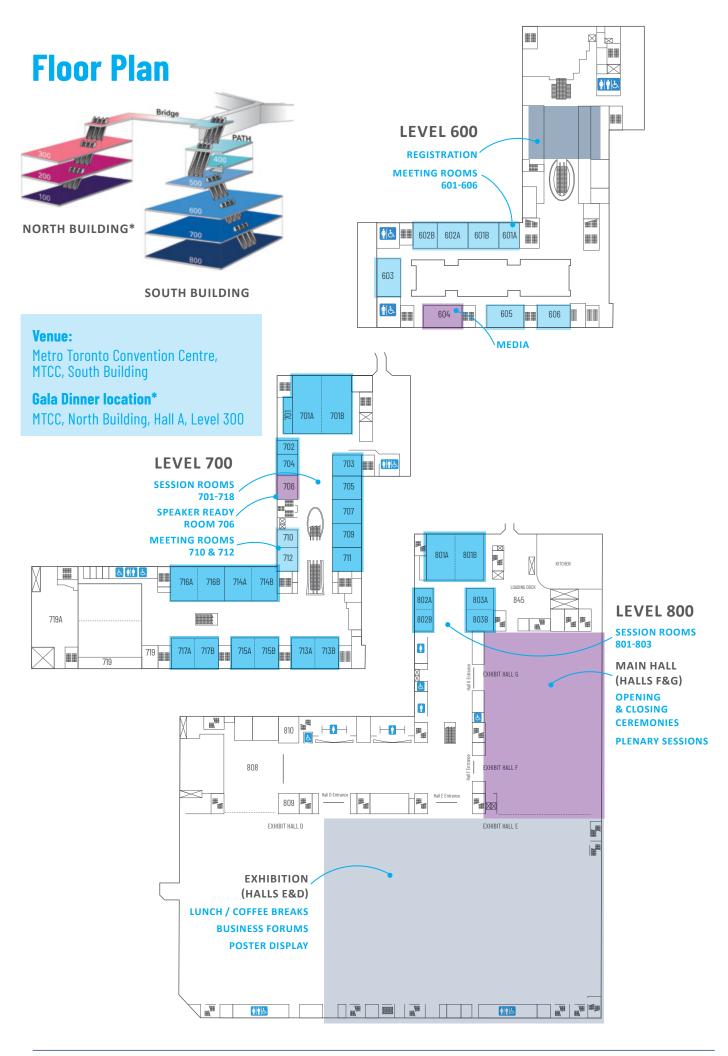
Keith Hayward International Water Association E: keith.hayward@iwahq.org

#### Exhibition

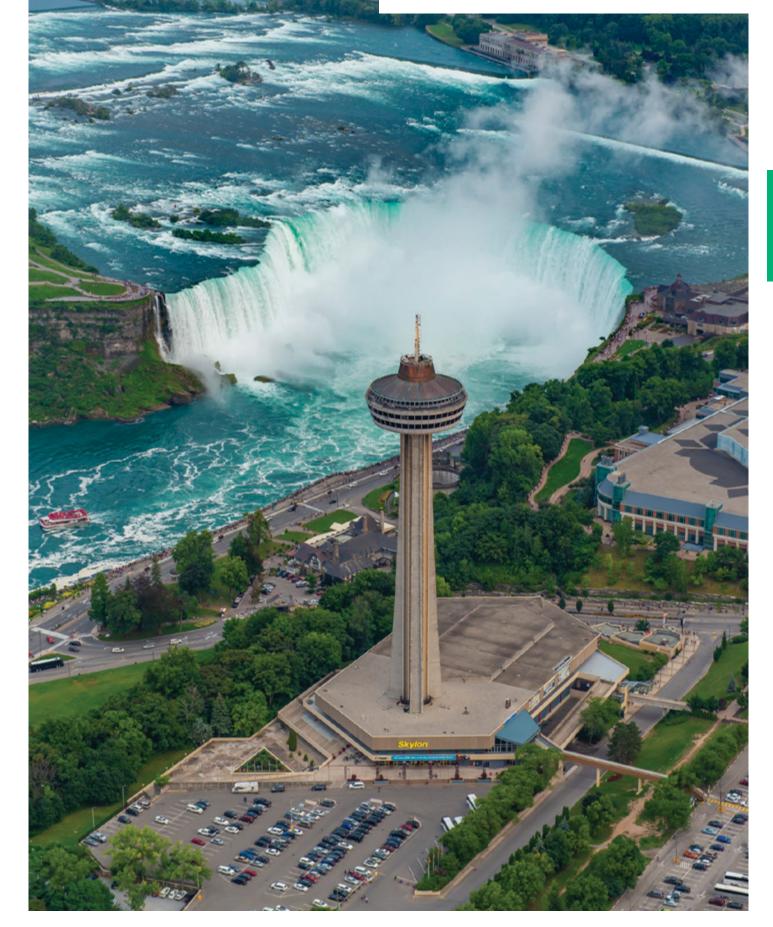
Roy Agterbos Match+ IWA Exhibition Management E: info@iwa-exhibitions.com

#### **Congress Director**

Kizito Masinde International Water Association E: kizito.masinde@iwahq.org



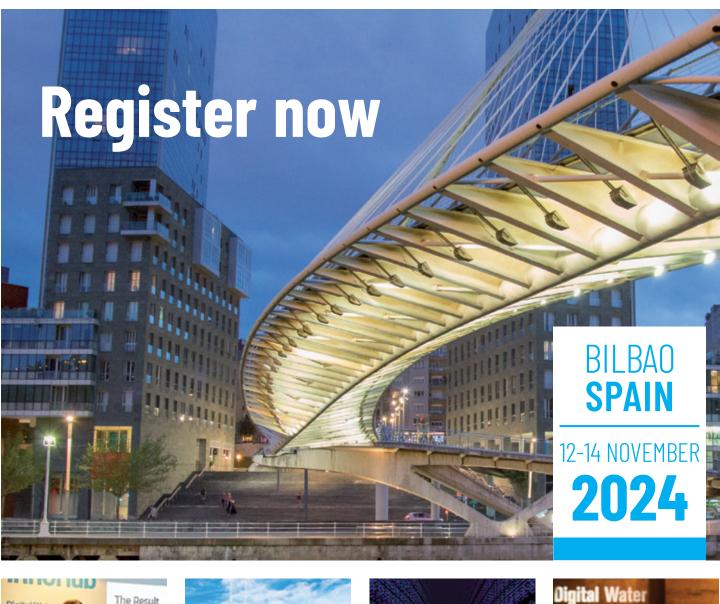




# IWA Digital Water Summit 2024

Join the transformation journey







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Summit

## www.digitalwatersummit.org

# **Opening Ceremony / Welcome Reception**

#### the IWA Awards, Exhibition Opening and Welcome Reception

Opening Ceremony | Sunday 11 August, 16:00 – 18:00 | MTCC, South Building, Level 800, Main Hall (Halls F&G)





Peter Gleick Co-founder, Pacific Institute

The must-attend Opening Ceremony gets the week in Toronto off to a start with a vibrant mix of formalities, recognition and celebrations. Participants will be welcomed ahead of the week's discussions centred on the vital topic of water.

The Opening Ceremony will feature a keynote presentation by Peter Gleick, a leading scientist, innovator, and communicator on water and climate issues. Peter co-founded the Pacific Institute in Oakland, California, USA in 1987.

#### The 2024 IWA Awards

The Opening Ceremony is also the platform for presentation of a number of IWA's most celebrated Awards. IWA Awards are a mechanism through which IWA encourages and rewards innovation and sets international benchmarks for innovative thinking and application of solutions for wise water management and practices. The ceremony will feature the IWA 2024 Global Water Award, Gender Diversity and Water Award, and Young Leadership Award.



Exhibition Opening / Welcome Reception | Sunday 11 August, 18:00 – 20:00 | MTCC, South Building, Level 800, Exhibition Hall (Halls E&D)



A first chance for delegates to access the World Water Exhibition. This provides a platform to connect industry, business, technology, innovation, practice, and science in what will be a networking hotspot during the rest of the week. All lunches, coffee and tea breaks will be served in the Exhibition Hall, providing key opportunities to interact with solution providers.

Open to all Delegates and Exhibitors, the Welcome Reception provides an early opportunity to engage and network with other professionals in the water industry – reconnecting with friends and contacts or making new ones – in a comfortable and casual setting.

# **Keynote Speakers**

#### and Plenary Panel Discussions



**Peter Gleick** *Co-founder, Pacific Institute* 

#### The past, present, and future of water

SUNDAY 11 AUGUST MAIN HALL (LEVEL 800) | 16:00 — 18:00 DURING OPENING CEREMONY

Peter Gleick is a leading scientist, innovator, and communicator on water and climate issues. He co-founded the Pacific Institute in Oakland, California, USA, in 1987 – one of the most innovative, independent non-governmental research centres, creating and advancing solutions to the world's most pressing water challenges, including work on the human right to water, water and climate, and water, peace, and security issues.

He is currently President-emeritus and Senior Fellow at the Pacific Institute, a MacArthur Fellow, an elected member of the U.S. National Academy of Sciences and the American Academy of Arts and Sciences. He is the author or editor of many scientific papers and fourteen books.



**Paul Brown** *President, Paul Redvers Brown Inc.* 

#### Resilience in practice: Avoiding planning traps

#### MONDAY 12 AUGUST MAIN HALL (LEVEL 800) | 09:00 - 09:45

Paul R Brown, AICP and IWA Fellow, has over 40 years' experience in project planning and program management, emphasizing multi-agency collaboration, public stakeholder participation, process facilitation, and multi-objective decision making. His clients have included the states of California and Colorado; the Metropolitan Water District of Southern California (MWD); the Santa Clara Valley Water District; the Orange County (CA) Sanitation District, the Orange County (CA) Water District; and the cities of Los Angeles, San Diego, San Francisco, San José, and Seattle. He served as the program manager for Pure Water Southern California during its feasibility phase. He authored the book, Too Good to Be True: Scottsdale and Privatization in the 1980s, published in 2020. In 2014, Paul completed a 2-year appointment as a Visiting Professor at the University of South Florida (USF) Patel College of Global Sustainability, where he also served as Director of Applied Research.

#### **Panel Discussion**

#### PANEL MODERATOR

Adam Lovell, ED, Water Services Association of Australia, Australia

#### PANELLISTS:

David LaFrance, CEO, American Water Works Association, USA Nerina Di Lorenzo, Managing Director, Melbourne Water, Australia Peter Simpson, Anglian Water, UK

Sangeeta Chopra, Director, Innovation, Process Optimisation and Technical Services, Ontario Clean Water Agency, Canada



**Ong Tze-Ch'in** Chief Executive, PUB, Singapore's National Water Agency

#### Smart and Al-enabled PUB

MONDAY 12 AUGUST MAIN HALL (LEVEL 800) | 17:15 — 18:00

Ong Tze-Ch'in is Chief Executive of PUB, Singapore's National Water Agency. In this role, he is responsible for the supply of clean water, the reclamation of used water, the management of stormwater, and the protection of Singapore's coasts against sea level rise.

Prior to PUB, Tze-Ch'in was Deputy Secretary (Resilience) at the Ministry of Sustainability and the Environment, where he oversaw water and food policies, as well as the Ministry's international relations, communications and engagement, and emergency planning functions.

Tze-Ch'in received a Masters in Business Administration from INSEAD in 2010 and a Masters in Defence Studies from King's College London in 2006. He graduated from Stanford University in 1998 with Master's and Bachelor's degrees in Electrical Engineering.



**Prof. Amy Pruden** Virginia Tech, USA

# The water sector and the slow pandemic of antimicrobial resistance

#### TUESDAY 13 AUGUST MAIN HALL (LEVEL 800) | 09:00 — 09:45

Prof. Amy Pruden is the W. Thomas Rice Professor and University Distinguished Professor in Civil and Environmental Engineering at Virginia Tech. She focuses on microbial ecology to control pathogens and antibiotic resistance in water systems. Her original paper on antibiotic resistance genes has been recognized by the Association for Environmental Engineering and Science Professors as a landmark paper. Pruden has published over 200 research articles and co-led the UNEP report 'Bracing for Superbugs'. She has served on several US National Academy of Sciences, Engineering and Medicine committees, received the 2024 ISME-IWA BioCluster Grand Prize, is a Fellow of the International Water Association, and a Senior Editor of the ISME Journal.

#### **Panel Discussion**

#### PANEL MODERATOR

**Deepa Karthykeyan**, Partner & Co-founder, Athena Infonomics, USA

#### PANELLISTS:

Dragan Savic, Professor of Hydroinformatics, University of Exeter, UK Mike McGann, Senior Vice President, Xylem, USA Cecilia Wennberg, Executive Vice President, Water in Cities Rosemary Campbell, Head of Water, Water & Sanitation for the Urban Poor

#### **Panel Discussion**

PANEL MODERATOR Peter Grevatt, Water Research Foundation, USA

#### PANELLISTS:

Ralph Erik Exton, Executive Director, Water Environment Federation, USA Rasha Maal-Bared, Principal Environmental Scientist, CDM Smith, Canada Corinne Cheeseman, CEO, Australian Water Association, Australia Jennifer Molwantwa, CEO, Water Research Commission, South Africa



**Batsirai Majuru** Technical Officer, Water, Sanitation, Hygiene and Health Unit, World Health Organization

#### Taps and toilets in the time of change: A new era for water and sanitation regulation

#### TUESDAY 13 AUGUST MAIN HALL (LEVEL 800) | 17:15 — 18:00

Batsirai Majuru is a Technical Officer in the Water, Sanitation, Hygiene and Health unit at the World Health Organization headquarters in Geneva, Switzerland, where she leads WHO's work on drinking water and sanitation regulation, including coordinating WHO's International Network of Drinking-water and Sanitation Regulators (RegNet). In this role she works with regulators and policymakers, as well as various international partners working on water and sanitation regulation.

She holds a PhD in public health and water policy from the University of East Anglia, UK. Her research focused on evaluating the health, social and economic impacts of South Africa's Free Basic Water Policy.



**Saroj Kumar Jha** Global Director, Water Global Practice, World Bank Group

#### Financing water solutions for climate resilience

#### WEDNESDAY 14 AUGUST MAIN HALL (LEVEL 800) | 09:00 — 09:45

Saroj Kumar Jha leads the Global Practice senior management team, which drives the policy direction of the Practice and oversees a portfolio of \$27 billion in water related investments, analytical work, multi-donor trust funds and global partnerships.

Before this appointment, he was World Bank Regional Director of the Middle East, Senior Director for the Fragility, Conflict and Violence Global Practice at the World Bank Group, World Bank Regional Director for Central Asia, World Bank Global Manager for the Disaster Risk Management Practice, and Head of the Global Facility for Disaster Reduction and Recovery, which he founded in 2006.

#### **Panel Discussion**

PANEL MODERATOR Yvonne Magawa, Executive Secretary, ESAWAS, Zambia

#### PANELLISTS:

Silvana Romero, President, URSEA, Uruguay Vida Duti, Country Director, IRC Ghana Marcel Sanches, President, ABES, Brazil



Henk Ovink Executive Director, Commissioner, Global Commission on the Economics of Water, USA

#### The economics of water and beyond

WEDNESDAY 14 AUGUST MAIN HALL (LEVEL 800) | 09:00 - 09:45

Henk Ovink is the Executive Director and founding Commissioner for the Global Commission on the Economics of Water. He was the first ever global water ambassador, appointed in 2015 by the Dutch Cabinet as Special Envoy for International Water Affairs. In this capacity he co-led the second UN Water Conference in 2023, the first since 1977. Henk served on President Obama's Hurricane Sandy Rebuilding Task Force where he led the long-term innovation, resilience, and rebuilding efforts and developed and initiated and led the groundbreaking 'Rebuild by Design' competition. Before joining the Task Force Ovink was both Acting Director General of Spatial Planning and Water Affairs and Director National Spatial Planning for the Netherlands after multiple roles in the private sector and academia. Henk holds an honorary doctorate at Delft University. In 2023 Henk Ovink was the 10<sup>th</sup> recipient of the Foreign Affairs Decoration of Honor in Gold for his unique and outstanding water diplomacy work and leadership.



Farokh Kakar Environmental Engineer, Brown and Caldwell Consultants

#### Youth, technology and water

#### WEDNESDAY 14 AUGUST MAIN HALL (LEVEL 800) | 17:15 — 18:00

Farokh Kakar is an award-winning young professional, an Environmental Engineer at Brown and Caldwell Consultants and the Founder of Blue College of Water and Technology. She is the founding member and President of the IWA Young Water Professionals in Canada and sits on the Strategic Council of IWA.

She has a Bachelor's degree in Mining Engineering from Balkh University, Afghanistan, and a Master's degree and PhD from Toronto Metropolitan University, Canada, in Environmental Engineering focused on resource recovery. She has won several national and international awards, including the most prestigious scholarship in Canada Vanier, the 'Emerging Leader' title from Water Canada, and more than 20 teaching, leadership, and public speaking awards.

#### **Panel Discussion**

#### PANEL MODERATOR

**Astrid Nørgaard Friis**, Group Vice President, Sustainability, External Relations & Communications, Grundfos, Denmark

#### PANELLISTS:

Marina Jimenez Galindo, IWA YWP Spain Chair/Aqualia, Spain Abishek Narayan, EAWAG, India/Switzerland Sabrina Rashid Sheonty, Founder, Tetra, Canada Saba Daneshgar, IWA Digital Water Steering Committee, Belgium



**Prof. Juliet Willetts** Institute for Sustainable Futures, University of Technology Sydney, Australia

## Path-shifting to address global challenges: Transformative adaptation in practice

#### THURSDAY 15 AUGUST MAIN HALL (LEVEL 800) | 09:00 — 09:45

Professor Juliet Willetts is Research Director at University of Technology Sydney's Institute for Sustainable Futures (UTS-ISF). She leads applied, innovative research to inform water and sanitation policy and practice in Asia and the Pacific for urban and rural services. Her contributions cover climate change, technical, environmental, governance, behavioural, gender equality and public health aspects, partnering with governments, UN agencies, research institutions and bilateral, multilateral and civil society organisations. Her achievements have been recognised by multiple awards, including Australian Financial Reviews' 100 Women of Influence. She holds a PhD from University of NSW in Environmental Engineering and is widely published with more than 150 peer-reviewed articles.

## **Panel Discussion**

#### PANEL MODERATOR

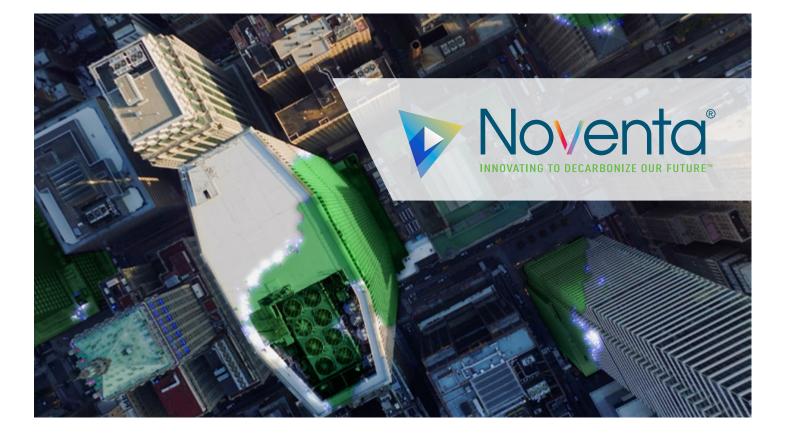
Annalisa Contos, Principal, Atom Consulting, Australia

#### PANELLISTS:

Miriam Feilberg, Head of Climate Change Adaptation and Planning, DANVA - Danish Water and Wastewater Association Dr Jabulile Mashwama, Managing Director, Eswatini Water Services Corporation, Eswatini Amit Chanan, CEO, Water Authority of Fiji, Fiji Adam Saffian Ghazali, CEO, Air Selangor, Malaysia



# Let's close the gap to a sustainable future



# **Congress Spotlights**

# Selected highlights of events during the Congress

Gala Dinner | Thursday 15 August, evening programme | Venue: Metro Toronto Convention Centre (MTCC), North Building



## The Gala Event at the IWA World Water Congress & Exhibition promises to be an outstanding evening.

With true IWA flair, the conference dinner is set to be the highlight of the social calendar, with fantastic entertainment accompanied by excellent food. Celebrate a successful week in Toronto.

VENUE: HALL A, LEVEL 300 DRESS CODE: SMART CASUAL TIME: 18:30

## The 2024 Project Innovation Awards (PIA) | Tuesday 13 August 2024 | Venue: Arcadian Court, Toronto



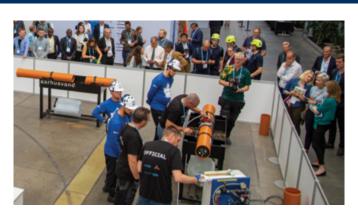
Awarded biennially at the IWA World Water Congress & Exhibition at a special celebratory event, the Project Innovation Awards (PIA) recognise and promote excellence and innovation in water management, research and technology.

The severe water challenges facing the world today require an unprecedented global response. Innovation plays a central role in achieving IWA's vision of a world in which water is managed wisely to satisfy the needs of human activities and ecosystems in an equitable and sustainable way. The Project Innovation Awards recognise that our shared challenges can be overcome through the development and implementation of creative water solutions.

**VENUE: ARCADIAN COURT, TORONTO** 

#### Operations Challenge | Wednesday 14 August | Venue: Exhibition Area

The IWA Operations Challenge allows utilities to showcase the diverse skills and competencies of their operations and maintenance personnel, testing the practical skills of the utility teams. The IWA Operations Challenge will see teams of four members compete in four events spanning maintenance, laboratory skills, collection systems, and process simulation. The challenge will be held in the exhibition area at the Congress venue, and the local host for the challenge is the Water Environment Association of Ontario (WEAO).



# **Programme Features**

Programme features are an important part of the Congress to get an in-depth understanding of current trends, latest research, guiding strategies and leading practices. For more information please visit: https://worldwatercongress.org/programme-features-and-highlights/

#### **MONDAY 12 AUGUST**

Room 803A | 10:30-17:00

## **Groundwater Forum**

Groundwater – a resilient resource in times of change and crisis

The Groundwater Forum aims to promote groundwater as a critical resource to achieve the Sustainable Development Goals. In three sessions, the forum will explore and facilitate participant discussions on strengths, weaknesses, opportunities and threats to a groundwater-based water supply. By sharing knowledge on the resilience of a groundwater-based water supply in times of conflict and climatic crisis, the forum aims to support water utilities and other decision-makers urgently in need of futureproof strategies.

#### **TUESDAY 13 AUGUST**

Room 801A | 10:30-17:00

## **Industrial Water Forum**

Corporate water strategy – how industry overcomes challenges when investing in water efficiency

The purpose of the Industrial Water Forum is to engage, inspire and share knowledge on the topic of corporate water strategy across industrial and regulatory sectors. Industry is a large consumer of water and energy, with > 22 % of total global water withdrawals being used for industrial purposes. This is projected to increase rapidly over the next years and decades. Decreasing availability of clean water is a risk many industries face across North America and many other regions. But with < 15 % of industrial water is being reused, there is massive potential. While this problem is global, the solutions are highly local. To solve this water and energy nexus collaboration across technology providers, governors, regulators and industries is crucial. The forum will be a place for fostering collaboration, sharing best practices, and exploring how to overcome barriers to accelerate actions on more efficient water use

#### TUE 13 AUGUST / WED 14 AUGUST

Room 801B | 13:30-17:00

## **Utility Leaders Forum**

The Utility Leaders Forum – a focus on the needs and interests of water and wastewater utility leaders charged with service delivery

The Utility Leaders Forum is a unique opportunity for those tasked with managing utilities to exchange views, network and access the insights of prominent water utility leaders in a setting that is by utility leaders for utility leaders.

Over the course of two days, the forum will bring together some of the world's most prominent water utility leaders with the most impactful case studies to share experiences and knowledge. Curated by an international committee of experienced utility practitioners, the forum is structured to facilitate an open and interactive dialogue around some of the most critical issues facing utilities. Active delegate participation will be key. On the agenda for 2024 are utilityled solutions for water scarcity, utility breakthroughs on climate adaptation, and utilities working to improve the circular economy.

#### **TUESDAY 13 AUGUST**

Room 803A | 10:30-17:00

## International Water Regulators Forum

The International Water Regulators Forum – the international meeting of the global network of regulators of IWA.

The International Water Regulators Forum gathers high-level representatives of regulatory authorities and officials of agencies with regulatory and supervisory functions over the provision of water, sanitation, and wastewater treatment services.

This ninth International Water Regulators Forum has a highly prioritised agenda addressing current regulatory challenges and topics of interest to regulators. Attendance of the forum is by invitation only. The forum will conclude with a closing plenary where discussions will be summarised and recommendations presented, providing an opportunity to engage with other relevant stakeholders and explore the interlinkages between regulation, science, policy and practice.

The forum is shaped and steered by a diverse and motivated Programme Committee, a committed group of professionals consisting of high-profile members of the IWA Regulators Community.

#### WEDNESDAY 14 AUGUST

Room 801A | 10:30-17:00

## **Emerging Water Leaders Forum**

The IWA Emerging Water Leaders Forum is an open platform for young water professionals to connect with their peers from around the world. The forum is a place to share professional experiences and highlight the critical responsibility of Young Water Professionals (YWPs) working on solutions for the future of water.

The global water sector faces unprecedented challenges, exacerbated by climate change, population growth, and urbanisation. To address these challenges effectively, it is crucial to empower and equip the next generation of water professionals with the knowledge, skills, and networks necessary to champion the course for a climate- and water-resilient future.

The primary objective of the 2024 Emerging Water Leaders Forum is to empower young water professionals to become leaders in addressing the challenges posed by climate change and water scarcity. Through engaging sessions, interactive workshops, and networking opportunities, participants will gain valuable insights and practical knowledge to contribute to a more sustainable and resilient water future

# **IWA Publishing's Journals** All Fully Open Access





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# **Specialist Groups**

# Task Groups and Clusters – Open meetings schedule

One of the unique strengths of IWA is bringing together experts from across the globe and specialisations. To facilitate this, IWA members organise themselves into Specialist Groups (SG), Task Groups (TG) and Clusters. IWA Specialist Groups are at the heart of the organisation's mission and activities. Members of the group work on projects such as organising conferences, seminars, and workshops, as well as publishing books, reports, newsletters, and journal papers.

During the IWA World Water Congress, many Specialist Groups (SG), Task Groups (TG) and Clusters have open meetings to which all congress delegates are welcome. Do not miss this unique opportunity to connect and network with specialists and leaders in the respective fields, and to update your knowledge on the issues that interest you.

## Assessment and Control of Hazardous Substances in Water

## MONDAY 12 AUGUST 10:30 – 12:00, ROOM 710

A meeting to describe SG's recent activities, such as the Micropol 2024 planning of the future SG events as well as open discussions among the members so that they can exchange views and plans.

# Diffuse Pollution and Eutrophication

## MONDAY 12 AUGUST 15:00 – 16:30, ROOM 710

An overview of the SG membership and activities. This meeting will focus on outreach, promotion, and recruitment. A brief presentation will be given on the group's activities.

# **Intermittent Water Supply**

## MONDAY 12 AUGUST 16:30 - 18:00, ROOM 710

An open meeting to discuss SG's activities and invite members to participate in future planning and organising international conferences. Topics to be discussed will include developing standards, XML Markup Languages, computational tools and frameworks to enable genome-based management of water systems. A Special Issue could be launched following the Open Meeting.

# Lake and Reservoir Management

MONDAY 12 AUGUST 09:00 - 10:30, ROOM 712

## Public and Customer Communications

MONDAY 12 AUGUST 10:30 - 12:00, ROOM 712

Introducing the new MC and SG management plan. Topic will include: boosting communication within all IWA events; communication management in extreme conditions (climate change, combat areas, major breakdowns etc.); Water engagement/education for future generations & inter-SG communication/cooperation.

# Sludge Management

## MONDAY 12 AUGUST 16:30 - 18:00, ROOM 712

We will discuss the role of new management committee members, future activities, and energising members about the group's future activities.

# Pretreatment of Industrial Wastewater

MONDAY 12 AUGUST 13:30 - 15:00, ROOM 712

## Benchmarking and Performance Assessment

## MONDAY 12 AUGUST 15:00 - 16:30, ROOM 712

The purpose of our open meeting is to offer an update on the group's activities, webinars, projects, and other initiatives. Our focus will be planning the 2025 Conferences.

## **Biofilms**

## TUESDAY, 13 AUGUST 16:30 - 18:00, ROOM 712

This open meeting is for Biofilms SG to discuss the possibility of having more SG activities (workshops or sessions) during future WWCs, ask about their interests, and discuss ways to become more involved with the SG.

# Modelling and Integrated Assessment

## TUESDAY, 13 AUGUST 13:30 - 15:00, ROOM 710

Presentation of current activities and developments. The meeting is open to all members to discuss new outreach and engagement initiatives.

# Instrumentation, Control and Automation

TUESDAY, 13 AUGUST 10:30 - 12:00, ROOM 710

Overview of recent and future activities & initiatives, presenting the new management committee, discussing possibilities for new task groups and fostering collaboration between SGs and call for new members.

## Design, Operation and Costs of Large Wastewater Treatment Plants

#### TUESDAY, 13 AUGUST 15:00 - 16:30, ROOM 710

SG's activities and the 14th IWA Conference on Design, Operation and Economics of Large Wastewater Treatment Plants, Budapest 2024 will be discussed.

# Water Reuse

TUESDAY, 13 AUGUST 16:30 - 18:00, ROOM 710

The SG will be introduced along with our nine working groups. The SG activities will be discussed including the 14th IWA International Conference on Water Reclamation and Reuse held at Cape Town, South Africa (16-20 March 2025). All interested members are welcome to join us for a lively and fruitful discussion.

# **Particle Separation**

## TUESDAY, 13 AUGUST 13:30 - 15:00, ROOM 712

Revision of the group's vision and mission, inviting more members to join the management committee, and discussing how to engage the members on IWA Connect Plus.

# Wetland Systems for Water Pollution Control

TUESDAY, 13 AUGUST 15:00 - 16:30, ROOM 712

We will discuss how to facilitate collaboration around NBS and interactions with other SGs; discuss plans and events such as the 18th International Conference on Wetland Systems for Water Pollution Control.

# Women in Water

TUESDAY, 13 AUGUST 09:00 - 10:30, ROOM 712

Next Steps in the Women in Water Project: Development of Professional Development Materials.

## Cluster Wastewater Based Epidemiological Surveillance

TUESDAY, 13 AUGUST 10:30 - 13:30, ROOM 712

Steering Group and delegates meeting to discuss activities and future plans.

# Health Related Water Microbiology

## WEDNESDAY, 14 AUGUST 09:00 - 10:30, ROOM 710

This meeting is open to all members who are interested in learning more about what the HRWM Specialist Group is doing and how they can get involved.

# Sustainability in the Water Sector

## TUESDAY, 13 AUGUST 10:30 - 12:00, ROOM 710

Facilitate collaborative work and interaction with other SGs. Getting the group together to discuss future plans and events including SG conference.

# **Statistics and Economics**

## TUESDAY, 13 AUGUST 13:30 - 15:00, ROOM 710

Presentation on our priority areas, current membership and how to engage members and collaboration with other Specialist Groups and activities.

## Sanitation and Water Management in Developing Countries

WEDNESDAY, 14 AUGUST 15:00 - 16:30, ROOM 710

# Institutional Governance and Regulations

## WEDNESDAY, 14 AUGUST 16:30 - 18:00, ROOM 710

The meeting will introduce the new Management Committee and invite other members and SG leaders to discuss future activities.

## Microbial Ecology and Water Engineering\*\*

#### WEDNESDAY, 14 AUGUST 09:00 - 10:30, ROOM 712

Description: In this meeting, the MEWE SG's activities and upcoming engagements will be discussed. The new Chair and MC members will give an overview of the current activities and future plans.

# **Chemical Industry**

#### WEDNESDAY, 14 AUGUST 10:30 - 12:00, ROOM 712

During the meeting, the new Chair and members of the MC will give an overview of the current activities and future plans.

# Watershed and River Basin Management

#### WEDNESDAY, 14 AUGUST 13:30 - 15:00, ROOM 712

Members interested in learning more about SG activities and getting involved are welcome to attend. A proposed workshop will be discussed along with the election of office bearers, and ideas and proposals for the SG conference are welcome.

## Efficient Urban Water Management

#### WEDNESDAY, 14 AUGUST 15:00 - 16:30, ROOM 712

The meeting is open to all, and the SG management committee will provide an update on Efficient SG activities, including planning for Efficient 2025. Please feel free to discuss and share your ideas for future activities.

# Water Security and Safety Management

## WEDNESDAY, 14 AUGUST 16:30 - 18:00, ROOM 712

The meeting is open to everyone. It will be an opportunity to meet the new Management Committee and receive an update on the Group's activities over the last 2 years. And provide input into planning for event(s) next year, including workshop on AI Innovations in Disaster Risk Reduction and Management being considered for 2025.



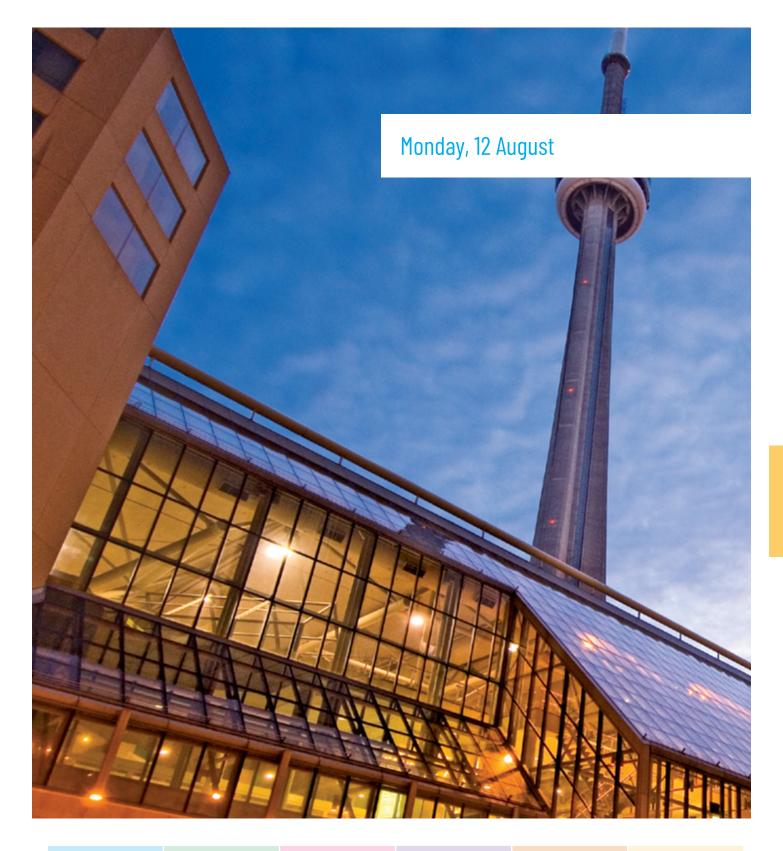
# **Getting More Out of Every Drop**

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Track 1 WATER UTILITY MANAGEMENT

#### Track 2

WASTEWATER TREATMENT AND RESOURCE RECOVERY

#### Track 3

DRINKING WATER AND POTABLE REUSE

#### ack 4

CITY-SCALE PLANNING AND OPERATIONS

#### ack 5

COMMUNITIES, COMMUNICATION AND PARTNERSHIPS

#### Track 6

WATER RESOURCES AND LARGE-SCALE WATER MANAGEMENT



Keynote Plenary	09:00 - 09:45
	practice: Avoiding planning traps, Paul Brown, President, Paul Redvers Brown Inc. n Lovell Panel: David LaFrance, Nerina Di Lorenzo, Peter Simpson, Sangeeta Chopra
Coffee Break	09:45 - 10:30
Session 1	10:30 - 12:00

Lunch	12:00 - 13:30			
Session 2	13:30 - 15:00			
			SO.6 WATER 2050 – VISION FOR A SUSTAINABLE & RESILIENT WATER FUTURE - SESSION 1 Heather Collins, Metropolitan Water District of Southern California Joe Jacangelo, Stantec David LaFrance, AWWA Barb Martin, AWWA - Moderator This session provides an in-depth look at AWWA's Water 2050 initiative, hig its vision and activities aimed at ensuring a sustainable and resilient water There will be an overview presentation, a moderated panel discussion on t challenges and solutions in the water community, and opportunities for au engagement.	future. he biggest
Coffee Break	15:00 - 15:30			
Session 3	15:30 - 17:00			
WOMEN'S LEADERS	SHIP NETWORK – SETTING THE AGENDA	Room 801 A <b>Workshop</b>	SO.6 WATER 2050 – VISION FOR A SUSTAINABLE & RESILIENT WATER FUTURE - SESSION 2 Heather Collins, Metropolitan Water District of Southern California Joe Jacangelo, Stantec David LaFrance, AWWA Barb Martin, AWWA This interactive session will kick off with an overview of the Water 2050 ini before diving into a World Café discussion. Participants will engage in small discussions to tackle key questions about the future of water, focusing on c strategic priorities, and actionable steps. The session will conclude with gro and a collaborative discussion.	l group hallenges,
Ducale	17:00 - 17:15			
Break				

#### Keynote Plenary

#### 09:00 - 09:45

Keynote: Resilience in practice: Avoiding planning traps, Paul Brown, President, Paul Redvers Brown Inc. Panel Moderator: Adam Lovell Panel: David LaFrance, Nerina Di Lorenzo, Peter Simpson, Sangeeta Chopra

Coffee Break	09:45 - 10:30
Session 1	10:30 - 12:00

**GROUNDWATER FORUM - SESSION 1** 

Room 803 A Forum

Strengths and Weaknesses of a Groundwater-Based Water Supply

Chair: Ida Holm Olesen, Danish Water Forum, Denmark Co-chair: Simon Gautrey, WSP Canada

co-chair. Simon Gautrey, M

Denmark

Official opening of Groundwater Forum Jarl Frijs-Madsen, Ambassador, Royal Danish Embassy to Canada

Why Groundwater is Important to the Future of Humanity, Dr John Cherry, University of Gualah Conada

25% Groundwater and Increasing – A Growth Scenario from the Region of Peel, Canada, Luis Lasso, Region of Peel, Canada

Groundwater in a South African Perspective, Dr Shafick Adams, Water Research Commission, South Africa

100% Groundwater – The Danish Experience, Dr Martin Rygaard, HOFOR – Greater Copenhagen Utility

Interactive session facilitated by Water Valley Denmark, Pia Jacobsen, Water Valley Denmark

Lunch	12:00 - 13:30		
Session 2	13:30 - 15:00		
	- ORUM – SESSION 2 5 of a Groundwater-Based Water Supply	Room 803 A <b>Forum</b>	4.5 HOLISTIC AND INTEROPERABLE DIGITAL TWINS FOR WATER FIT-FOR-PURPOSE APPLICATIONS Workshop
Hidden Opportunities of a Groundwater-Based Water Supply         Chair: Bjørn K. Jensen, Water4All, Denmark         Co-chair: Hans-Martin Friis Møller, Kalundborg Utility, Denmark         Any Hidden Potentials of Groundwater Towards SDG6 and Beyond? Gustavo Saltiel, Global Lead for Water Supply and Sanitation, World Bank         The Transition from Surface-Water Based to Groundwater-Based Water Supply in Times of Conflict, Viktor Pisotskiy, Director for Strategic Planning, Mykolaiev, Vodokanal, Ukraine         How to Find the Hidden Treasure? Geophysical Techniques, Esben Auken, TEMcompany, Denmark         Sustainable Groundwater Management in Rural Areas in Developing Countries, Anise Sacranie, Grundfos, Denmark         Towards SDG6 in Developing Countries: The Potential of Groundwater, Ryan Phillips- Page, Operations Water, Canada         Interactive session facilitated by Water Valley Denmark, Pia Jacobsen, Water Valley Denmark		<ul> <li>Chair: Saba Daneshgar, Belgium</li> <li>Co-chair: Janelcy Alferes Castano, Belgium</li> <li>The objective of the workshop is to present and discuss potential methodologies for scale-up of digital twins for the water sector focusing on interoperability and holistic decision making. It looks at successful case studies from the other domains (e.g., energy, mobility) to identify the gap.</li> <li>Speakers: Elena Torfs, Canada; Piet Seuntjens, Belgium; Ingmar Nopens, Belgium; Kris Villez, USA; Janelcy Alferes Castano, Belgium; Gabriel Fierro, USA; Elena, Canada; Jethro Akroyd, UK</li> </ul>	
Coffee Break	15:00 - 15:30		
Session 3	15:30 - 17:00		
Imminent Threats of	ORUM – SESSION 3 a Groundwater-Based Water Supply	Room 803 A <b>Forum</b>	
Chair: Anders Bækgaard, IWA Congress President 2022, Denmark Co-chair: Julia Gathu, IWA GWM SG, Kenya Groundwater Quality Threats from Mining for the Green Energy Transition, Roger Beckie, University of British Columbia, Canada Overview of Mining Practices and Regulation in Canada as They Relate to Groundwater, Simon Gautrey, WSP Canada Climate Change Increases the Frequency of Forest Fires – How Does This Impact			
Climate Change Increases the Frequency of Forest Fires – How Does This Impact Groundwater Quality? Monica B. Emelko, University of Waterloo, Canada Groundwater Vulnerability in the Face of Climate Change, Julia Gathu, Drilling for Life, Kenya Untreated Effluents as a Threat to Groundwater Quality and Public Health, Dr. Pabel Cervantes-Avilés, Tecnológico de Monterrey, Mexico Interactive session facilitated by Water Valley Denmark, Pia Jacobsen, Water Valley			

 Break
 17:00 - 17:15

 Keynote Plenary
 17:15 - 18:00

 Keynote: Smart and AI-enabled PUB, Ong Tze-Ch'in, Chief Executive, PUB, Singapore's National Water Agency

 Panel Moderator: Deepa Karthykeyan Panel: Dragan Savic, Mike McGann, Cecilia Wennberg, Rosemary Campbell

#### Keynote Plenary 09:00 - 09:45 Keynote: Resilience in practice: Avoiding planning traps, Paul Brown, President, Paul Redvers Brown Inc. Panel Moderator: Adam Lovell Panel: David LaFrance, Nerina Di Lorenzo, Peter Simpson, Sangeeta Chopra 09:45 - 10:30 **Coffee Break** Session 1 10:30 - 12:00 Room 701 A Room 701 B 5.1 PROGRESS OF GENDER-INCLUSIVE LEADERSHIP 2.33 PFAS IN WASTEWATER IN THE WATER AND SANITATION SECTOR Workshop **Technical** Chair: Prithvirai Chavan, United States Co-chair: Linda Müller, Germany Chair: Leticia Ackun, Ivory Coast Adsorption Of Per- And Polyfluoroalkyl Substances (PFAS) On Activated Carbon In The Co-chair: Florence Lak Low Ng|L Range, Be This session will explore practical strategies for breaking down gender barriers and Successful Removal Of PFAS, And Heavy Metals In Landfill Leachate, Caroline Kragelund, creating an environment that fosters equal opportunities. Participants will gain insights into successful case studies where the integration of the gender lens has led to improved decision-making processes, enhanced community engagement and increased overall An Emerging Challenge: Microplastics And Their Journey Through Anaerobic Digesters, efficiency Speakers: Juliet Willetts, Australia; Dr Yuan Yang, China; Faustina Boachie, Ghana; PFAS – Danish Experiences And Challenges, Hansen Anders, Denmark Mara Ramos, Brazil; Geraldine Mpouma Logmo, Cameroon; Julie Perkins, Germany 12:00 - 13:30 Lunch 13:30 - 15:00 Session 2 Room 701 A Room 701 B **5.2 MOVING TOWARDS EQUITABLE CITIZEN-FOCUSED** 2.3 NAVIGATING THE EVER-CHANGING PFAS LANDSCAPE: Workshop Workshop REGULATION LATEST DEVELOPMENTS AND BEST PRACTICES Chair: Dr Heather Smith, UK Co-chair: Julian Jacobs, UK Chair: Martha Dagnew,, Canada Co-chair: Anh Pham, Canada; Madhumita Ray, Canada This will be a joint session between the IWA Specialist Groups on Public and Customer Communication, and on Governance and Regulation. The purpose will be to help define The workshop will bring together scientists, engineers, policymakers, and industry professionals to delve into the pressing challenges surrounding PFAS contamination. It a cooperation agenda, looking at the role that communication and engagement can play in developing more citizen-focused governance and regulation. will provide a comprehensive overview of the current state of PFAS, offering insights into their environmental impacts, sources, and presence in various industries. It will also delve into the ongoing challenges associated with PFAS detection and regulatory measures. It will provide a platform for in-depth discussions on the latest advancements in PFAS treatment technologies and emerging solutions, focusing on practical applications, real-world case studies, and interdisciplinary collaboration in developing comprehensive solutions **Speakers:** Shirley Anne Smyth, *Canada*; Anna Kärrman, *Sweden*; Wayne Parker, *Canada*; Mohamed Ibrahim, *USA*; Bill Malyk, *Canada*; Richard Nei; Viraj Desilva, *USA*; Omar Mohamed, *Canada*. 15:00 - 15:30 **Coffee Break** Session 3 15:30 - 17:00 Room 701 A Room 701 B 5.4 SCALING-UP AND MAKING WAVES: UNPACKING 1.12 TRANSLATING WHAT WE KNOW ABOUT PFAS INTO FINANCE ACCESSIBILITY FOR WASH STARTUPS Workshop ACTION: WHAT WATER PRACTITIONERS WANT TO KNOW Workshop Chair: Rasha Maal-Bared, Canada Co-chair: Bipro Dhar, Canada Chair: Jacob Amengor, Ghana Despite the growing number of PFAS publications, many utilities and water professionals The workshop aims to provide WASH Entrepreneurs in the Global South with the knowledge and tools needed to access financing for their water-related startups/ideas. The desired output of the workshop is for participants to gain a deeper understanding still struggle to understand the context and value of PFAS research being performed in our industry. The purpose of this workshop is to work with participants to identify the of the different financing options available to them, as well as how to create effective funding strategies and proposals that target suitable sources of financing. value of current research and how that research can be turned into actionable results and decisions at utilities. The participants will also get a chance to exchange ideas with peers on how we can improve research communication and output reach in our industry. We will attempt to publish the summary of the workshop in IWA's Source magazine and/ Speakers: Yang Villa, Philippines; Akan Odon, UK; Beth Koigi, Kenya; Walid Khoury, UAE; elha Barreto, Switzerland or WEF's Water Environment and Technology magazine. Speakers: Miriam Hacker, USA; Greta Zornes, USA; Cresten Mansfeldt, USA; Dan Gerrity, USA; Sofia Mordojovich, USA; Jonathon Sheets, USA; Banu Ormeci, Canada; Saif Molla, Canada; Ian Ross, USA; Jason Morrison, USA **Break** 17:00 - 17:15

Keynote: Smart and Al-enabled PUB, Ong Tze-Ch'in, Chief Executive, PUB, Singapore's National Water Agency Panel Moderator: Deepa Karthykeyan Panel: Dragan Savic, Mike McGann, Cecilia Wennberg, Rosemary Campbell

**Keynote Plenary** 

17:15 - 18:00

Panel Moderator: Adam Lovell Panel: David LaFrance, Nerina Di Lorenzo, Peter Simpson, Sangeeta Chopra         Coffee Break       09:45 - 10:30         Session 1       10:30 - 12:00         1.17 UTILITY WIDE TRANSFORMATIONS       Room 703       1.9 LEVERAGING PUBLIC PRIVATE PARTNERSHIPS TO       Root	
Session 1       10:30 - 12:00         1.17 UTILITY WIDE TRANSFORMATIONS       Room 703       1.9 LEVERAGING PUBLIC PRIVATE PARTNERSHIPS TO       Root	
1.17 UTILITY WIDE TRANSFORMATIONS Room 703 1.9 LEVERAGING PUBLIC PRIVATE PARTNERSHIPS TO Room	
Chair: Ed Smeets, Netherlands Co-chair: Nick Copeland, CanadaIMPROVE OTICITY EFFICIENCYIntegrating GHG Evaluation And Reduction Into Water & Wastewater Infrastructure Capital Delivery, Jeremy Kraemer, CanadaChair: Daryyl Day, Australia Co-chair: Hiöðver Stefán Porgeirsson, IcelandThe importance of the Triple Bottom Line 3Ds- Decarbonization, Digitization and Diversity key success of canadian utilities, Vanessa Chau, CanadaChair: Daryyl Day, Australia Co-chair: Hiöðver Stefán Porgeirsson, IcelandEstablishing, Implementing And Coordinating A Holistic Asset Management System To A Water Utility, Henna Luukkonen, FinlandEntering The Second Decade Of Successful Innovation Through A Public-Private Partnership, Terence Reid, United StatesPostErs Lessons Learned From Disconnects Between Design And Operations That Can Lead To Process And Compliance Challenges At Wastewater Treatment Plants, Yoldah Azimi, CanadaPostErsDecarbonization Strategies In The Water Sector: The Regulatory Landscape And Collaborative Imperative, Alexis de Kerchove, SwedenNuter Sector: The Regulatory Landscape And Collaborative Imperative, Alexis de Kerchove, Sweden	
Session 2 13:30 - 15:00	
Coffee Break 15:00 - 15:30	
Session 3 15:30 - 17:00	
1.5 KEST ONSIDEL INDUSTRIAL WATER MARAGEMENT IN A	n 705 (s <b>shop</b>
Break 17:00 - 17:15	
Keynote Plenary 17:15 - 18:00	

Keynote: Smart and Al-enabled PUB, Ong Tze-Ch'in, Chief Executive, PUB, Singapore's National Water Agency Panel Moderator: Deepa Karthykeyan Panel: Dragan Savic, Mike McGann, Cecilia Wennberg, Rosemary Campbell

#### Keynote Plenary 09:00 - 09:45 Keynote: Resilience in practice: Avoiding planning traps, Paul Brown, President, Paul Redvers Brown Inc. Panel Moderator: Adam Lovell Panel: David LaFrance, Nerina Di Lorenzo, Peter Simpson, Sangeeta Chopra 09:45 - 10:30 **Coffee Break** Session 1 10:30 - 12:00 Room 709 Room 707 **1.13 EVALUATING COMMUNITIES FOR WATER** 2.5 ANAEROBIC PROCESS AUGUMENTATION **INFRASTRUCTURE PROJECTS THROUGH SUSTAINABLE** Workshop **Technical** Chair: Rasha Farai, Canada Co-chair: Huan Liu, Australia LIVELIHOODS APPROACH METHODOLOGY Evaluation Of Organic Waste Co-digestion: Case Studies And Lessons Learned, Chair: Carlos Aguilera, Ecuador Co-chair: Felipe Vasquez, Ecuador Production Of VFA-based Carbon Source For Denitrification From Fermented Thermally This session focuses on evaluating communities about water infrastructure projects using the Sustainable Livelihoods Approach (SLA) Methodology. Participants will delve Hydrolysed Digestate In WWTPs, An into the SLA method for assessing community assets to ensure alignment with water infrastructure goals. The session aims to equip attendees with the tools and knowledge Intensification Of Anaerobic Digestion By Bioaugmentation, Mohamed Zaghloul, Canada Integrating Hydrothermal Pretreatment Into Conventional WRRF: Advancing Sustainability And Resource Recovery, Abir Hamze, Canada needed to make informed decisions and establish a baseline for monitoring project progress. By the end of the session, participants will be better prepared to apply this approach to their own projects and contribute to the long-term well-being of the communities they serve Machine Learning Model For Visualizing Relationships In Anaerobic Co-digestion Of Waste Activated Sludge And Food Waste, Speakers: Carlos Aguilera, Ecuador; Felipe Vasquez, Ecuador; Wilmer Santacruz, Ecuador Comparing Conventional Anaerobic Digestion With An Innovative Plug-flow Digestion Technology In North America, Danny Traksel, Netherland Lunch 12:00 - 13:30 13:30 - 15:00 Session 2 Room 707 Room 709 2.6 PRETREATMENT OF ANAEROBIC PROCESSES 4.1 DECISION SUPPORT TOOLS IN URBAN WATER Technical **Technical** MANAGEMENT Chair: Ioannis Alexiou, United Kingdom Co-chair: Issabella Anim, Canada Chair: Dewi Rogers, Italy Co-chair: Tatiana Estevez, Canada Challenging The Retention Time Of Municipal Sludge Anaerobic Digestion. How Low Can Assessing The Needed Supply Buffer For Copenhagen's Water Supply, Martin Rygaard, You Go?, Pre-treatment For Methane Production Improvement In Anaerobic Co-digestion Of Organic Waste And Sewage Sludge, Allie (Minh-Anh) Nguye Improved Hydrological Modelling Of Infiltration Swales In Cold Climates Using Underground Water Levels, Tone Muthanna. No Sludge Digestion Capacity Challenge: Supervision When Moving From Mesophilic To Into The Wild: Calibrating A Large-Scale Water Quality Model In The City Of Markham's Thermophilic Phase While In Operation, Abhila Distribution System, Bra ks, United Kind Ammonia Recovery Through Chemical Stripping Of Hydrothermal Liquefaction Aqueous Planning Water Supply From A Viewpoint Of The Possibility Of Depopulation In The Future In A Developing Country, Sadahiko Itoh, Japan Stream To Enhance Anaerobic Co-digestion With Municipal Sludge, Alison Cox, Co POSTERS POSTERS High-pressure Anaerobic Digestion For In-situ Biogas Upgrading, Jing Zhao, China Digital Decision Support Tools To Tackle Water Planning Challenges: Two Success Stories Sulphate Reduction, Mixed Sulphide- And Thiosulphate-driven Autotrophic In Angola, Ma Denitrification, NItrification, And Anammox Integrated (SANIA) Process For Sustainable Wastewater Treatment, Chukuan Jiang, Hong Kong-China Expert Choice And Graph-Informed Engineering Solutions For Efficiency Enhancement In The Evolutionary Optimization Of A Real-World Water Distribution Network, **Coffee Break** 15:00 - 15:30 15:30 - 17:00 Session 3 Room 707 4.6 DECISION SUPPORT TOOLS IN WASTEWATER 2.7 MICROBIOLOGY IN ANAEROBIC PROCESSES MANAGEMENT Technical

 2.7 MICROBIOLOGY IN ANAEROBIC PROCESSES
 Room 709

 Chair: Mei Yee Chan, Singapore
 Technical

 Dark Fermentative Biohydrogen Production From Plastic-containing Primary Sludge, Monisha Alam, Canada
 Sludge, Monisha Alam, Canada

 Removal Of Complex Pharmaceuticals Compounds In Synthetic Sanitary Sewage Through Anaerobic Digestion: Is It Viable?, Ana Paula Paulinetti, Brazil
 Deciphering Anaerobic Ethanol Metabolic Pathways Shaped By Operational Modes, Bang Du, Ireland

 The Benefits Of Immobilized Sulfate-reducing Bacteria In mining-influenced Water Treatment, Xinting Yin, Australia
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Keynote: Smart and AI-enabled PUB, Ong Tze-Ch'in, Chief Executive, PUB, Singapore's National Water Agency Panel Moderator: Deepa Karthykeyan Panel: Dragan Savic, Mike McGann, Cecilia Wennberg, Rosemary Campbell

Chair: Eden Mati-Mwangi, Kenya Co-chair: Saba Daneshgar, Belgium

Case Study Of Dahanu City In India, S

Attribute Decision Making, Pr

Jesper Neilsen, Denmar

Keynote Plenary

Denmark POSTERS

Break

 $\mathsf{BOD}_{\mathsf{5}}$  And COD Soft Sensors Application For WWTP Organic Load Monitoring,

Hybrid Approach To Estimate Inflow And Infiltration In Data-Scarce Contexts,

Estimation And IOT Data With A Machine Learning Approach, Reza Pourmoa

17:00 - 17:15

17:15 - 18:00

Implications Of Population Density Variations On The Design Of Sewer Networks:

Monitoring And Optimization Of Wastewater Networks Using Adaptive Pump Flow

JalVishwa 1.0 : A Tool For Wastewater Treatment Technology Selection Based On Multiple

Flow Estimation And Prediction In Combined Sewer Systems Using Machine Learning,

Keynote Plenary	09:00 - 09:45				
Keynote: <b>Resilience in</b>	practice: Avoiding planning traps, Paul Brown, Presid				
Panel Moderator: Adam Lovell Panel: David LaFrance, Nerina Di Lorenzo, Peter Simpson, Sangeeta Chopra Coffee Break 09:45 - 10:30					
Coffee Break Session 1	10:30 - 12:00				
36551011 T	10.30 - 12.00				
2.1 ANAMMOX / DE Chair: Yves Comeau, C	ENITRIFICATION anada Co-chair: Yi Cao, United States	Room 711 <b>Technical</b>	6.3 SURFACE WATER MONITORING SYSTEMS AND MODELS Chair: Nilo Nascimento, Brazil Co-chair: Laya Ahmadi, Canada	Room 713 <b>Technical</b>	
Enhancing Denitrificati Sofia Bramstedt, Swede	on Without External Carbon Source - Full-scale Operat	tion,	An Autonomous Sampling Strategy For A Drinking Water Source Using A HD-1 Joseph Kwarko-Kyei, Norway	WAQ Model,	
Modelling Mainsteau, Sweden And Anammox Process In Membrane Granular Sludge Reactor At Low Temperature, Shi Chen, China			Ecosystem Dynamics And Phosphorus Cycling In Lake Ontario: A 3D Ecologica Assessment Of Dreissenid Mussels And Cladophora Interactions, Mohammac Canada		
	ilot To Full-Scale Implementation Of Mainstream Parti nox (PdNA) IFAS, Megan Bachmann, United States	ial	Exploring Innovative Approaches For Water Resources Assessments In Data-S Regions With Earth Observations, Rishma Chengot, United Kingdom	Scarce	
	naerobic, Sulfide-based Partial Denitrification And Ana For Treating Real Domestic Wastewater, Owaes Magra		The Effect Of Complexity On Water Quality Modelling Performance And Unce Joshua Rasifudi, South Africa POSTERS	ertainty,	
POSTERS			Design And Optimization Of Low Impact Development (LID) Controls Using Ev	vidence-	
Accumulation, Parin Izo			based Approach In A Tropical Urban Catchment, Gil Cruz, Philippines An Ontology-based Digital Architecture And Modelling Ecosystem For Water-j	fit-for-reuse	
	l Autotrophic Denitrification Coupled With Anammox F ream Nitrogen Removal, <mark>Yuanjun Liu, Hong Kong</mark>	Process	Applications, Saba Daneshgar, Belgium		
Lunch	12:00 - 13:30				
Session 2	13:30 - 15:00				
2.2 PHOSPHORUS R	REMOVAL	Room 711	6.1 ADVANCED TECHNIQUES FOR GROUND WATER	Room 713	
Chair: Bruce Johnson,	United States Co-chair: Salma Hendy, Canada	Technical	MANAGEMENT	Technical	
Synthesis And Characterization Of Fe(OH)s-modified Yellow Birch Woodchips Sorbent For Phosphorus Adsorption In Wastewaters, Soureyatou Hamidou, Canada					
Propioniciclava, A Potential Polyphosphate Accumulating Organism Without Denitrifying Phosphorus Uptake Function In An Enhanced Biological Phosphorus Removal Process, Yongmei Li, <i>China</i>			Accelerating Groundwater Mapping And Management Through Large-scale A Geophysical Surveys, Timothy Parker, USA Comprehensive Approach To Detect The Salinity Origin And Recharge Source		
	ocess Enhancements In Phosphorus Removal On WW ion In The Effluent, Henning Knerr, <i>Germany</i>	TPs By	Groundwater Using Stable Isotopes, Mixing Models, PCA, And K-Means Clust Mohamed Hamdy Eid Hemida, <i>Hungary</i>		
Simultaneous Phospho Emily Kin, United State	rus Removal And Nitrogen Recovery Using The CANDC s	)+P,	From Near Surface Geophysics To Groundwater Reservoir Characterisation Ar Establishment Of New Water Work, Per Gisselø, Denmark		
POSTERS Enlarged Angeropic Zou	ne - Evolution Of EBPR Design In MBR, <mark>Soubhagya Patt</mark>	tanavak	Hydro Geochemistry Of Ground Water By Using Water Quality Indexing And S Modelling In Outer Himalayan Region, Kanchan Deoli Bahukhandi, India	Statistical	
Canada	ds Retention Time (SRT) On Enhanced Biological Phosp		POSTERS Methodologies And Community Impacts Of Groundwater Recharge Intervent.	ions In	
	is In A Membrane Bioreactor Process, Rony Das, Canac		Almora District, Uttarakhand, India, Katya Koepsel, United States Better Protection Of Drinking Water - The Catchment Area Is An Integrated Po Waterworks Production Site, Pernille Jakobsen, Denmark	art Of The	
Coffee Break	15:00 - 15:30				
Session 3	15:30 - 17:00	De any 711		De are 717	
2.3 PARTIAL NITRIF	ICATION	Room 711 <b>Technical</b>	6.4 PROTECTION OF SURFACE WATER QUALITY AND QUANTITY	Room 713 <b>Technical</b>	
Chair: Liu Ye, Australia	Co-chair: Brett Wagner, United States		Chair: Katerina Schilling, Austria Co-chair: Deyvid Rosa, Brazil		
Exploration And Verification Of The Potential Of Partial Nitrification Achieved By Sulfide Inhibition For Sewage Treatment, Yang LIU, <i>Hong Kong, China</i>		l By Sulfide	Assessment Of PO <sub>4</sub> -P Release With A Novel Passive Sampler At The Sediment-Water Interface In A Shallow Eutrophic Lake, Kazuto Sano, Japan		
Autotrophic Biological Nitrogen Removal In An Algal-bacterial Symbiosis System: Formation And Structure Of Integrated Algae   partial-nitrification   anammox Biofilm, Zuocheng Liu, China			6 Years Treatment Variations Of A 10-ha Pond-wetland System Constructed For Polishing And Emergency Control At A Coastal Steel Industry, Viet-Anh Nguyen, Vietnam		
Superior Mainstream Partial Nitritation In Membrane Aerated Biofilm Reactor, Generational Pollution, Nicolaj Damgaard, Denmark					
Chenkai Niu, Australia Microbial Entrapment Of Nitrifiers, Denitrifiers And Polyphosphate Accumulating Organisms For Treatment Of Domestic And Industrial Wastewater, Koko Kawaura,			Coupling Geothermal Heating With Bioremediation For Enhanced Degradatic From Subsurface, Gurpreet Kaur, Canada POSTERS	on Of BTEX	
Australia POSTERS			Wastewater-effluent Phosphorus After Tertiary Treatment: An Additional Ana Unexpected Threat To Downstream Reservoir Eutrophication?, Kelvin Vianini,		
And Denitritation With	noval From Wastewater By Coupling Nitritation, Partic Anammox In Membrane-aerated Biofilm Reactor Inte Idge, Baoshan Xing, China		Contribution To The Quality Assessment Of Purified Water: A Case Study Of To Methods Used By UN Field Operations Mission In The Province Of South Kivu Soumana Gagara, Somalia	he	

 Break
 17:00 - 17:15

 Keynote Plenary
 17:15 - 18:00

Keynote: Smart and Al-enabled PUB, Ong Tze-Ch'in, Chief Executive, PUB, Singapore's National Water Agency Panel Moderator: Deepa Karthykeyan Panel: Dragan Savic, Mike McGann, Cecilia Wennberg, Rosemary Campbell

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(eynote Plenary	09:00 - 09:45				
	practice: Avoiding planning traps, Paul Brown, Presid m Lovell Panel: David LaFrance, Nerina Di Lorenzo, Pet				
offee Break	09:45 - 10:30				
ession 1	10:30 - 12:00				
	R BASED DRINKING WATER TREATMENT	Room 714 <b>Technical</b>	3.1 UNIT OPERATIONS (COAGULATION, (BIO) FILTRATION, MEMBRANE PROCESSES, OZONATION)	Room 715 A <b>Technical</b>	
	viofiltration Of Mn In Groundwater, Jérôme Ducret, Can	ada	Chair: Stephen Katz, Canada Co-chair: Haojie Ding, China		
Reducing Methane Emission And Optimizing Sand Filtration Performance By Membrane begassing And Controlling Oxidation-Reduction Potential, Frank Schonenberg,		Modification Of Commercial Polyaluminum Chloride To Prevent Irreversible F Coagulation-Membrane Filtration For Drinking Water Treatment, Qing Ding, .			
Education in Controlling Oxford in Reduction Formation Formation Control of the Second Se		Exploring Carbon Dynamics In Slow Sand Filters Using Stable Isotope Probing, Bayan Khojah, Netherlands			
Communities?, Noshin Karim, Canada		Biological Ion Exchange: A Tale Of Three Mechanisms To Remove NOM From Drinking Water, Karl Zimmerman, Canada			
De-scaling Of Water Using Sound And Magnetic Methods, Michael Bache, Denmark		Predicting Particulate Fouling In The Reverse Osmosis Using MFI UF Method,			
luoride Contaminatio	n In Southern Brazil Groundwater: Identifying Risks And ovement, Elvis Carissimi, Brazil	d Strategies	Nirajan Dhakal, Netherlands POSTERS		
	s A Sustainable Tool For Benzene-Toluene-Ethylbenzene 1, Diego Hernandez, Canada	And Xylene	High Performance Of Chloride-enhanced Heat-activated Peroxymonosulfate (PMS) Pretreatment Toward Zero Liquid Discharge (ZLD) System In Seawater Desalination, Jaewon Lee, Korea		
			Better Protozoa Removal With Direct Filtration?, Kalani Sachinthana Kalani, G	Canada	
.unch	12:00 - 13:30				
ession 2	13:30 - 15:00				
.16 WATER AND ENERGY ECONOMICS IN LOCAL Room 714 & GLOBAL CONTEXTS Technical		5.3 POLICY AND REGULATION	Room 715 A <b>Technical</b>		
chair: Annalisa Contos, Australia Co-chair: Nitish Ranjan Sarker, Canada			Chair: Armando Silva-Afonso, Portugal Co-chair: Miriam Hacker, United States		
Vater-Energy-Smart Future: Leveraging Day-Ahead Electricity Pricing For Cost-Efficient Vater Distribution, Krisztian Mark Balla, <i>Denmark</i>		Mapping Governance To Link Global Goals With Local Action: Process Tracing Methodologies For Urban Water Management Across Urban South Asia, Faisal Shaheen,			
ssessing The Impact Of Water Price Reform And Water Use Efficiency On Domestic Vater Demand In Saudi Arabia, Muhammad Javid, Saudi Arabia		Canada Affordability And Equitable Water Services Provision, Paul Jeffrey, UK			

Johanna Aarnisalo, Finlana

Aaron Atcheson, Ca

POSTERS

Portugal

Room 714

Workshop

Leak Detection ROI Sensitivity Analysis, Brian Harwood, USA

Beyond One's Means: Explaining Factors Of Unpaid Water Bills And Social Assistant Management. The Case Of Alicante And Murcia, Spain, Luis Zapana-Churata, Spain POSTERS

Adaptative IoT system for continuous dynamic pressure control IN water distribution networks, Jose Dario Luis Delgado, Spain

Water Supply System Optimization Reducing The Energy Costs And Withdrawal Of Surface Water Resources, Farid Zahir, Canada

Coffee Break	15:00 - 15:30
Session 3	15:30 - 17:00

1.19 REUSE AND RECYCLE WATERWORKS SLUDGE

Chair: Susan Andrews, Canada Co-chair: Kenneth Persson, Sweden

The water sector use substantial amounts of treatment chemicals. We want to show different methods on how to decrease the generation of waste in the treatment processes of surface water based on process optimization of coagulant dosing, reuse of sludge material and recycling of sludge chemicals, to initiate a discussion on proper strategies for sludge management in the drinking water industry.

Speakers: Olaf van der Kolk, Netherlands; Krister Hagström, Sweden; Jenny Åström, Sweden



Chair: Michael Rouse, United Kingdom Co-chair: Juviya Mathew, Canada

Evolving Water Governance In Japan: Lessons For Inclusive Decision-making And Sustainability, Ishiwatari Mikio, Japan

The Unintended Inequities Of Rural Piped Water Supply, Samantha LeValley, Canada

Legal Personhood For Waterways And Innovative Projects - Help Or Hindrance?,

Sustainable And Transformative Partnerships In The Water Sector, Elisabete Vale,

How To Achieve A Pricing Structure That Reflects The Cost Structure Of A Water Utility,

Legitimation Strategies For Water Related Reuse, Sandra Sikkema, Netherlands

Exploring The Narratives In New Zealand's Three Waters Reform: How Can Lessons From The Past Inform Future Policies?, Maryam Moridnejad, New Zealand

Room 715 A

**Technical** 

Evaluation Of World Bank|French Development Agency Financed Urban Water Reform Programme In Lagos Water Corporation (2005-2017), Babatope Babalobi, Nigeria POSTERS

Drinking Water Scarcity In Cameroon The Need For More Effective Management Of Water Supply Facilities, Mbah Obed Sama, Cameroon

Navigating The Waters Of Cooperation: Federated Learning Machine Learning And The Federated Collaborative Governance Framework, Elizabeth Taylor, USA

Break	17:00 - 17:15
Keynote Plenary	17:15 - 18:00

Keynote: Smart and Al-enabled PUB, Ong Tze-Ch'in, Chief Executive, PUB, Singapore's National Water Agency Panel Moderator: Deepa Karthykeyan Panel: Dragan Savic, Mike McGann, Cecilia Wennberg, Rosemary Campbell

Keynote Plenary	09:00 - 09:45			
Keynote: Resilience in J	practice: Avoiding planning traps, Paul Brown, Presid n Lovell Panel: David LaFrance, Nerina Di Lorenzo, Per			
Coffee Break	09:45 - 10:30			
Session 1	10:30 - 12:00			
Session 1       10:30 - 12:00         2.34 WASTEWATER-BASED EPIDEMIOLOGY       Room 715 B         Chair: Rasha Maal-Bared, Canada Co-chair: Catherine Hoar, United States       Technical         Development Of A Novel Method For Concentrating, Monitoring And Sequencing Of SARS-CoV-2 In Large Volumes Of Wastewater, Ghina El Soufi, France       Variations Of Relative Sequencing Depths Along The SARS-CoV-2 Genome For Wastewater Samples: Are They Characterizing Decay?, Sukriye Celikkol, Canada         Wastewater-Based Epidemiology In Wales - From COVID-19 To One Health Monitoring, Bhavik Barochia, United Kingdom       Evaluation Of Weather Dependent Sample Collection And Data Interpretation For Effective Wastewater-based Epidemiology In Combined Sewer Systems, Emily Garner, United States		<ul> <li>1.13 NEW PERSPECTIVES ON NET ZERO UTILITIES</li> <li>Chair: Sudhir Murthy, United States Co-chair: Francisca Braga, Denmark</li> <li>Wider Opportunities For Low-carbon Urban Water Systems, Ka Leung Lam, C</li> <li>Breaking Down "Decarbonization" For The Water   Wastewater Sector, Meliss</li> <li>Harclerode, United States</li> <li>The Oversimplification Of Greenhouse Gas Emissions From The Wastewater Sector, Marette Zwam Netherlands</li> <li>POSTERS</li> <li>Greenhouse Gas Emission Reductions As A Result Of Infrastructure Intensificat Water Resource Recovery Facilities, Daniel Andres Mendoza Grubert, Canada The Road Towards A Nordic Climate Neutral Water Sector, Jeanette Agertved Denmark</li> </ul>	a Sector, nborn, ntion In	
Lunch	12:00 - 13:30			
Session 2	13:30 - 15:00			
2.35 CONTAMINANTS OF EMERGING CONCERN IN SEWERS       Room 715 B         Chair: Jennifer Weidhaas, United States Co-chair: Daneish Despot, Germany       Technical         H2S Formation In A Sewer Physical Twin: Understanding Process Dynamics And Control Strategies, Mingu Kim, Canada       Toto Toto Sever Physical Twin: Understanding Process Dynamics And Control Strategies, Mingu Kim, Canada         Fate And Interactions Of Imipenem In Wastewater: Assessing Stability And Environmental Impact, Pratishtha Khurana, Canada       Pharmaceutically Active Compounds In Wastewater: A Review Of Occurrence, Regulatory Framework And Removal Methods, Shahab Minaei, Canada         From Sewers To Solutions: Wastewater-Based Epidemiology And The Future Of TB, Hlengiwe Mtetwa, South Africa         POSTERS         Profiles Of Antibiotic Resistant Bacteria And Their Resistance Genes In The Influent And The Effluent Of Wastewater Treatment Plants In Kanagawa, Japan, Miku Kanazashi, Japan         Methods For Surveillance Of Antibiotic-Resistant Bacteria In Wastewater From Healthcare Facilities, Ean Warren, United States			<ul> <li>1.15 CIRCULAR ECONOMY INITIATIVES ON UTILITY LEVEL</li> <li>Chair: Linda Åmand, Sweden Co-chair: Ruobin Dai, China</li> <li>Advancing Towards A Circular Economy In Membrane Technology, Kelly Hill, A</li> <li>Towards Phosphorus Circularity: Biofilm EBPR With Subsequent Struvite Proc Hias WWTP - Insights From Full-Scale, Lab Testing, Sondre Eikås, Norway</li> <li>Risk Analysis Of Water Recovery From Waste Water Based On The MBR Techn Case Study Poland, Klara Ramm, Poland</li> <li>A Full Scale Advanced Anaerobic Digestion Case Study At Tarnow Wwtp, Pola Ashish Sahu, Norway</li> </ul>	duction At nology -
Coffee Break	15:00 - 15:30			
Session 3	15:30 - 17:00			
Developing A Wastewat Prevalence In Communi Timothy Garant, Conod Accelerating Cross-insti Devolution In Kenya, Dc Redefining Priorities: Th World Through Wastew Follow The Drop: An Inr Management In Honolu POSTERS Design Thinking Process	nited Kingdom Co-chair: Kala Sritharan, Australia ere Surveillance System To Accurately Detect Influenzz tities With Different Populations And Sewer Infrastruc a tutional Collaboration And Coordination In The Conte pris Kirui, Kenya ne Imperative Of Addressing Chronic Diseases In The I ater-Based Epidemiology, Patrick D'Aoust, Canada novative Public-Private-Philanthropic Approach To Sto Iu, Hawaii, Lauren Roth Venu, USA ses In Águas E Energia Do Porto, Neves Moises, Portug sessing Investments In Drinking Water Infrastructure	ture, ext Of Developing prmwater gal	<ul> <li>1.27 CONSTRUCTION TO PRODUCTION IN THE WATER INDUSTRY</li> <li>Chair: Simon Parsons, Scotland</li> <li>Co-chair: Shaunna Berendsen, England; Rachel Fox, Scotland</li> <li>The water industry is facing many challenges and opportunities in the transit construction to production, with the aim to improve productivity. Standardis as a key enabler in an industry with a history of bespoke infrastructure projer relying on traditional carbon intensive engineering solutions. This workshop provide a platform for water professionals, researchers, and stakeholders to experiences, insights, and best practices on how to manage this transition eff The workshop will cover topics such as: modular construction, quality and sa innovation and technology, transition to 3D digital designs and BIM.</li> <li>Speakers: Simon Parsons, Scotland; Shaunna Berendsen, England; Rachel Fox</li> </ul>	ation is seen cts, often aims to share their fectively. ifety,
Break	17:00 - 17:15			

Keynote: Smart and Al-enabled PUB, Ong Tze-Ch'in, Chief Executive, PUB, Singapore's National Water Agency Panel Moderator: Deepa Karthykeyan Panel: Dragan Savic, Mike McGann, Cecilia Wennberg, Rosemary Campbell

Keynote Plenary

17:15 - 18:00

#### 09:00 - 09:45 Keynote Plenary Keynote: Resilience in practice: Avoiding planning traps, Paul Brown, President, Paul Redvers Brown Inc. Panel Moderator: Adam Lovell Panel: David LaFrance, Nerina Di Lorenzo, Peter Simpson, Sangeeta Chopra **Coffee Break** 09:45 - 10:30 Session 1 10:30 - 12:00 Room 716 B Room 717 A 5.2 DIGITAL TRANSFORMATION 2.8 ACTIVATED SLUDGE PROCESSES - SESSION 1 **Technical Technical** Chair: Tom Arnot, United Kingdom Co-chair: Jacqueline Sampah-Adjei, Ghana Chair: Janelcy Alferes Castano, Belgium Co-chair: Liudmyla Odud, Ukraine Customer Oriented Smart Metering, David Marciniak, Belgium Appropriate Technologies For Secondary Wastewater Treatment At High Elevations, CX360: Customer Communication Platform At Águas E Energia Do Porto, Joana Araújo, Influence Of PH On Microbial Communities During Ammonia Retention From Simulated Industrial Wastewater By Microaerobic Activated Sludge Process, Xinyi Zhou, Japan Analysis Of The Benefits Of Introducing Smart Water Meters To Smart Water Network System: A Pilot Project In Penghu, IHsiao Hsin, Chinese Tal Sensitivity Analysis of Anaerobix Zone Mass Fraction and Hydrolosic/ Fermentation rate, Improving Customer Service And Promote Digital Transformation By Developing Applications For Smartphones, Taisuke Kikuchi, Japan Digital Tools For Participatory Water Governance: A Knowledge-Centered Approach To ICT-Facilitated Public Engagement In The Great Lakes Basin, Johanna Dipple, Canada Device To Continuously Detect The Sludge Volume And Physico-chemical Characteristics Of Faecal Sludge Within A Septic Tank For Informing Treatment Plant Design, Monisha Naik. Canada Lunch 12:00 - 13:30 13:30 - 15:00 Session 2 Room 716 B Room 717 A 2.9 ACTIVATED SLUDGE PROCESSES - SESSION 2 2.36 DIGITAL WATER & MODELLING - SESSION 1 **Technical Technical** Chair: Leiv Rieger, Canada Co-chair: Jan Ruppelt, Germany Chair: Jeremy Kraemer, Canada Co-chair: Agustin Landaburu, Argentina Activated Sludge Models Aeration Control System For Energy Conservation In WWTP, Dynamic Prediction Of Nitrous Oxide Emissions In A Full-scale Industrial Wastewater Treatment Plant Using A Plant-wide Model Approach, Tianyu Lei, Biokinetic Modelling To Predict Seasonal Variations Of Nitrous Oxide Emissions From A Towards Development Of System-Wide Digital Twins For Water And Resource Recovery Full-scale Wastewater Treatment Plant, Siddharth Se Facilities, Sh o Angula, South Africa When Wastewater Treatment Processes Meet Machine Learning: Improving Predictive Evaluation Of Combined Control Scheme For Better Effluent Quality And Reducing Cost In Wastewater Treatment Plants, Yuta Performance Through Optimization Of Dataset Construction, The Key Of Mechanistic Understanding For Effective Mitigation Of Nitrous Oxide Mechanistic Modelling Insights Into Fermentative And Conventional Polyphosphate Emissions In Wastewater Treatment Plants, Wim Audenaert, Be Accumulating Organisms, Rhys Thomson, Australia **Coffee Break** 15:00 - 15:30 Session 3 15:30 - 17:00 Room 716 B Room 717 A 2.26 TREATMENT AND RECOVERY OF INDUSTRIAL 2.37 DIGITAL WATER & MODELLING - SESSION 2 WASTEWATER **Technical Technical** Chair: Prabhu Chandrasekeran, United States Co-chair: Jiayuan Ji, Japan Chair: Avner Adin, Israel Co-chair: Hayat Raza, Canada Characterizing Accumulated Sludge: A Key Factor In Understanding And Modelling

Influence Of The Wastewater Quality On The Performance Of Chlorella Vulgaris, Hussein Znad, Australia

Enzyme Production By Alcanivorax Borkumensis For Diesel Contaminated Water, Jean Viccari Pereira, Canada

Elucidating The Role Of Feed Water Constituents In Governing The Chemical Cleaning Performance Of Aged Ultrafiltration Membranes, Rahul Dutta, Canada

Comparative Evaluation Of Removal Of Cationic And Anionic Dyes Using Graphene Oxide Produced By Hummers And Couette-Taylor Flow Method, Chaehwi Lim, *Republic of Korea POSTERS* 

Advanced Membrane Modification Techniques To Improve The Ion Selectivity Of Nanofiltration And Ion Exchange Membranes For Developing Circularity Processing Of Urban Industrial Waste, Tanaz Moghadamfar, Spain

17:00 - 17:15

17:15 - 18:00

Break

**Keynote Plenary** 

Aerated Lagoons, Ali Reza Dehghani Tafti, Canada

Data-driven Prediction Of N $_2$ O For Model-based Control In The Activated Sludge Process, Laura Hansen, Denmark

Full-Scale Pilot Testing Of A Digital Twin Controller: The Water Research Foundation Advanced Nutrient Controller Project, Bruce Johnson, United States

Enhancing Predictive Simulation And Operational Optimization Of Advanced Oxidation Processes Through Integrated Agent-based And Machine Learning Modelling, Bing Chen, Canada

#### POSTERS

ell

Flow Into The Future: AI In Wastewater Treatment, Mohamed Zaghloul, Canada Benchmarking Alternative Chemical Disinfection And Process Control Strategies For Wastewater: PAA And PFA Vs Sodium Hypochlorite, Lomesh Tikariha, Canada

Keynote: Smart and AI-enabled PUB,	Ong Tze-Ch'in, Ch	nief Executive,	PUB, Singapore's	National Water Agency
Panel Moderator: Deepa Karthykevan	Panel: Dragan Sa	vic. Mike McG	ann. Cecilia Wen	nberg, Rosemary Campb

Keynote Plenary	09:00 - 09:45			
	oractice: Avoiding planning traps, Paul Brown, Presic Lovell Panel: David LaFrance, Nerina Di Lorenzo, Pel			
Coffee Break	09:45 - 10:30			
Session 1	10:30 - 12:00			
Session 1       10:30 - 12:00         4.7 NATURE BASED SOLUTIONS       Room 718 A         Chair: Marion Savill, New Zealand Co-chair: Nancy Lilly, United States       Technical         Nature-based Solutions: Future Research Needs To Meet The Challenges Of Water Management, Bénédicte Rulleau, France       Practical Synthesis And Guidance For Decision Makers On Nature-Based Solutions In North America, Jennifer Ogrodnick, USA         Integrated Sustainability Assessment Of Nature-based Solutions For Water Management, Herman Helness, Norway       Evaluation Of Urban Constructed Wetlands Application For Enhanced Ecosystem Services, Lee-Hyung Kim, Republic of Korea         POSTERS       Maximising The Physical, Environmental, Human, And Cultural Outcomes Of Nature-based Solutions Through Design, Tyler McNabb, New Zealand         Documentation Of The Degradation Potential In Rain Gardens, Majbritt Deichgræber Lund, Denmark		<ul> <li>1.22 ADVANCEMENTS IN GREAT LAKES SCIENCE FROM CANADA'S LARGEST WATER RESEARCH PROGRAM</li> <li>Chair: Philippe Van Cappellen, Canada Co-chair: Nancy Goucher, Canada</li> <li>The Laurentian Great Lakes – the largest surface fresh water system in the w provides drinking water to 40 million residents yet evidence signals disturbin of degradation (e.g., eutrophication, ecosystem destruction, accelerating pol flooding and shoreline erosion, etc.). Water managers and policymakers stru to effectively respond. Protecting the Great Lakes requires new advancemen innovations in water management and related policy.</li> <li>Moderator: Nancy Goucher, Canada Speakers: Nandita Basu, Canada; Roy B Canada; Juliane Mai, Canada; Philippe Van Cappellen, Canada</li> </ul>	ng levels Ilution, ggle ts and	
Lunch	12:00 - 13:30			
Session 2	13:30 - 15:00			
S.11 THE WORKFORCE OF TOMORROW – SUSTAINABILITY IN ATTRACTING AND RETAINING TALENT       Workshop         Chair: Dr Nerea Uri Carreño Co-chair: Helle Katrine Andersen, Denmark       Chair: Helle Katrine Andersen, Denmark         The purpose of this workshop is to compile global lessons learned on sustainable recruitment and employment strategies for attracting the right talent and maintaining people in the water sector. We will discuss how to create places of work that are attractive, diverse and give ample opportunity for young people to pursue their careers in the water sector as managers and specialists. Based on global cases, we will discuss recommendations for young water professionals, employers, and organizations in the water sector for sustainable recruitment strategies, and roles and responsibilities for key actors in the sector.         Speakers: Blanca Antizar, UK; Matt Ries, USA; Jabulile Mashwama, Eswatini; Beverly Stinson, USA; Elena Torf, Canada; Inès Breda, Denmark; Oana-Daniela Cristea, Denmark		<ul> <li>3.1 GRAVITY DRIVEN MEMBRANE FILTRATION (GDMF) – APPLICATION TO SMALL, REMOTE AND/OR MARGINALIZED COMMUNITIES</li> <li>Chair: Dr Pierre Bérubé, Canada Co-chair: Peter Desmond, Germany</li> <li>The purpose of this workshop is to compile global lessons learned on sustain recruitment and employment strategies for attracting the right talent and m people in the water sector. We will discuss how to create places of work that attractive, diverse and give ample opportunity for young people to pursue th in the water sector as managers and specialists. Based on global cases, we w recommendations for young water professionals, employers, and organizatic water sector for sustainable recruitment strategies, and roles and responsibil actors in the sector.</li> <li>Speakers: Regula Meierhofer, Switzerland; Peter Desmond, Germany; Marya Peter, Switzerland; Luca Fortunato, Saudi Arabia, Pierre Bérubé, Cana</li> </ul>	aintaining : are heir careers ill discuss hns in the lities for key	
Coffee Break	15:00 - 15:30			
Session 3	15:30 - 17:00			
A.7 PRACTICAL APPLICATION OF NATURE-BASED SOLUTIONS FOR WATER UTILITIES Chair: Daniel Shemie, USA This is Daniel Shemie, USA Workshop Chair: Daniel Shemie, USA Nature-based solutions (NbS) like reforestation, wetland restoration and sustainable agricultural practices can be an efficient way to complement grey infrastructure by protecting water sources, avoiding damages caused by extreme events, optimizing the design or delaying the need for major capital expenditure while reducing related O&M costs. NbS can also generate benefits for biodiversity and recreation, as well as create local green jobs. Hence, NbS can attract resources and help close the funding gap faced by many service providers. Speakers: Peter Simpson, UK; Sandra Andreu, France; Mara Ramos, Brazil; Paul Hunt, USA		3.2 USE OF GENETIC METHODS FOR MICROBIAL WATER QUALITY TESTING: A GLOBAL, WATER INDUSTRY-WIDE SURVEY Chair: Andreas Farnleitner, Austria Co-chair: Joan Rose, USA The presented and discussed survey is a joint project by the IWA Health-Rela Microbiology Specialist Group, the Global Water Pathogen Project (GWPP) an Austrian Interuniversity Cooperation Centre for Water & Health (ICC Water 8 The survey is supported by a global support team of experts. The workshop of the survey outcomes and will invite participants to reflect on the most strikin offered by the survey. The focus will be on how the field may / should move Speakers: Regina Sommer, Austria; Rosina Girones, Spain; Katalin Demeter, A Ricardo Santos, Portugal; Kwanrawee Sirikanchana, Thoiland	nd the & Health). will present ng insights forward.	
Break	17:00 - 17:15			
Keynote Plenary	17:15 - 18:00			

Keynote: Smart and Al-enabled PUB, Ong Tze-Ch'in, Chief Executive, PUB, Singapore's National Water Agency Panel Moderator: Deepa Karthykeyan Panel: Dragan Savic, Mike McGann, Cecilia Wennberg, Rosemary Campbell

#### Keynote Plenary

#### 09:00 - 09:45

#### **BUSINESS FORUM ROOM 1**

10:30 - 11:15 | REATTS

#### Air Turbo & Magnetic Levitation Aeration Blowers Technology, Application and Costsaving Case Study

The aeration blower is the leading power-consumption equipment in sewage treatment plants. Meanwhile, routine maintenance and overhaul cost much more than operation costs if they use traditional blowers. With the replacement of magnetic levitation or airfoil suspension turbo, up to 30% less power compared with Roots, an 8-15% power reduction, and 1/3 of lifespan cost to centrifugal can be achieved. RAETTS has implemented over 50 renovated projects and accumulated contrasted data to prove the result. We want to introduce the working principle of magetic levitation. RAETTS will offer the 1-3 project(s) for free trial selected from the attendees Ava Lee

#### 11:15 - 12:00 | PUROXI PURE WATER GLOBAL INC.

#### **Ultrasonic Algae Treatment Demystified**

Puroxi Pure Water Global Inc. specializes in water, algae, scale, and surface purification-Ultrasonic Algae Treatment Works. It has a low impact on the ecosystems and environment and is an advanced technology that has been in use for many years Our Ultrasonic Algae Treatment is not just effective with many cost-saving's but also environmentally responsible, making it the ideal choice for those who prioritize sustainability in their purification processes.

Zak Motala, President.CEO of Puroxi Pure Water Global Inc.

#### 12:15 - 13:00 | GOVERNMENT OF ONTARIO

Innovating the Future of Water Management

#### 13:30 - 14:15 | BUREAU OF WATERWORKS. TOKYO METROPOLITAN GOVERNMENT

Technology in Tokyo Waterworks and Sewerage Business for future sustainability The Waterworks and Sewerage Bureau have important lifeline functions that support the lives of 14 million residents in Tokyo, providing a stable supply of safe, pure and high quality tap water 24 hours a day, 365 days a year, while also ensuring a safe and comfortable living environment and creating a good water cycle. Our technology which would be our strengths in developing future sustainable water supply and sewerage business have solved many problems revealed in our history. We can contribute to the improvement of water conditions in cities around the world by utilizing our technical and management capabilities.

(Mr.) UENO Naoki, Director for International Affairs, General Affairs Division

#### 14:15 - 15:00 | QINGDAO COMCORE TECHNOLOGIES CO..LTD.

The Symbolic AI algorithm solution

Symbolic Al dynamic leakage monitoring technology adopts double optimization artificial intelligence algorithm, embedding professional knowledge in it, relying on human-like reasoning to clean and analyze the water supply network data, providing optimal placement of flow and pressure sensors, while reducing the number of sensors as much as possible, realizing accurate positioning of leakage points and establishing an intelligent leakage monitoring system. In the future use process, it can learn independently according to the changes of pipe data, constantly put forward optimization suggestions, and continue to save water and increase efficiency. Jack Yang

#### 15:45 - 16:30 | ROSS ENGINEERING (RSE)

Modular Water Treatment Works in the Water Sector RSE is disrupting the water industry through modular solutions for the purification of drinking water, recycling effluent and cleaning water in industrial processes. Through lean manufacturing-based techniques RSE is leading the industry by delivering certainty and savings in time, costs, client resources, logistics and carbon footprint, whilst achieving enhanced quality of build, health, safety and well-being performance. Mark Livingston

16:30 - 17:15 | BLACK & VEATCH

#### **BUSINESS FORUM ROOM 2**

#### 10:30 - 11:15 | XYLEM, INC.

#### **Overcoming the Data Deluge**

As utilities add digital assets to legacy technology, they also add data sources to an increasingly complex picture. Hosted by Xylem Vue powered by GoAigua, an integrated software and analytics platform created for the water industry, this session will discuss the challenges and benefits of integrating data from disconnected systems to give operators a holistic, real-time view of a utility's processes and infrastructure Leading experts will offer insight into the value of an integrated approach including informed decision making, greater awareness and control across the water cycle, and a greater return on investment in digital solutions. Attendees will also learn from the firsthand experiences of pioneering US and European water utilities about how they are harnessing the power of data to transform how they serve their customers. Michele Samuels; Three Utility panel members

#### 11:15 - 12:00 | XYLEM, INC.

A Movement Towards Digital Transformation Workshop This workshop will be an interactive walk-through of Xylem's Ripple Effect White Paper and help attendees better understand the practical applications of the principles explained in the paper. Working in groups, attendees will be asked to develop a plan, through a series of prompts, for how they would navigate the digital transformation of a fictional water utility company. The goal of this session is to show attendees that taking a step back early in the process of implanting digital solutions can create a far greater benefit than addressing individual challenges as they arise. Michele Samuels

#### 12:15 - 13:00 | CANADIAN WATER AND WASTEWATER ASSOCIATION:

#### **Canadian Innovation**

As the Canada Pavilion and co-hosts, we hope to be able to feature a number of our Canadian Exhibitors in short 15 minute presentations. I would hope for one 45 min session each day for the Canada Pavilion. We are very flexible on time slots available. Each session will feature 3 presenters (15 mins each) from amongst our exhibitors in the Canada Pavilion

#### 13:30 - 14:15 | CANADIAN WATER NETWORK

Application of molecular and genomics technologies to monitor and protect human health To date, health risks of chemical substances have generally been characterized in

isolation. Recent amendments to the Canadian Environmental Protection Act require that cumulative effects on the environment and human health are considered during risk assessments. Evaluating the cumulative risk of exposure to multiple chemicals has long been advocated, but implementation will require adoption of new assessment methodologies. Join experts Dr. Milou Dingemans of the Dutch KWR Water Research Institute and Dr. Niladri Basu of McGill University to learn about evolving chemical assessment methods that are enabling this giant leap forward in regulation and product design, internationally and in Canada.

Nicola Crawhall, CEO, Canadian Water Network; Dr. Niladri Basu, Professor, Faculty of Agricultural and Environmental Sciences, McGill University; Dr. Milou Dingemans, Principal Toxicologist, KWR Water Research Institute

#### 14:15 - 15:00 | ZERO ENERGY WATER

Improved performance of graphene based reverse osmosis membranes Zero Energy Water has developed a graphene-based, high-performance Sea Water Reverse Osmosis membrane that produces up to ten times more water than a traditional polyam-ide-based membrane per kilowatt of electrici-ty used. In our session we will share the per-formance characteristics of our membrane, product availability and our roadmap

Raymond Williamson - President - Zero Energy Water

#### 15:45 - 16:30 | MS FILTER SYSTEMS INC.

Sustainable high quality treatment for Small Systems

#### 16:30 - 17:15 | DIGITAL WATER SOLUTIONS

AI/ML - Advanced Leak Detection Technology Applied to Municipal Water Systems The use of artificial intelligence and machine learning in leak detection and pressure analysis within municipal water distribution networks. An emphasis will be on simplifying the concept of AI/ML and its application to a level that us common folk can understand and relate

Barclay Whittaker, Director of Sales

# Tuesday, 13 August

Track 1 WATER UTILITY MANAGEMENT

#### Track 2

WASTEWATER TREATMENT AND RESOURCE RECOVERY

#### Track 3

DRINKING WATER AND POTABLE REUSE

#### rack 4

CITY-SCALE PLANNING AND OPERATIONS

#### ack 5

COMMUNITIES, COMMUNICATION AND PARTNERSHIPS

#### Track 6

WATER RESOURCES AND LARGE-SCALE WATER MANAGEMENT



Kanna ka Diana ma	00.00.00./5					
Keynote Plenary	09:00 - 09:45					
	tor and the slow pandemic of antimicrobial resistant Grevatt Panellists: Ralph Erik Exton, Rasha Maal-Bar					
Coffee Break	09:45 - 10:30					
Session 1	10:30 - 12:00					
Corporate water strate investing in water effic Moderator: Jay Stellma Keynote Speaker: How collaborate to overcom Technology Officer, Arg Case story from end-us Jason Morrison, Preside Mandate Case story from consul		ience & Nater	2.11 CROSS SECTOR COLLABORATION ON THE CIRCULAR WATER ECONOMY: LESSONS FROM NORTH AMERICA Chair: Aimee Killeen, USA Co-chair: John Ikeda, USA A circular water economy recycles and recovers resources within the water r treatment cycle to maximize value for people, nature, and businesses. As the water sector transitions to support the circular economy, sharing lessons lea positive and negative, is imperative. This panel of leaders will feature both as plans and case studies of successes from utilities and industry. Speakers: Aimee Killeen, USA; John Ikeda, USA	e global rned, both		
Lunch	12:00 - 13:30					
Session 2	13:30 - 15:00					
Corporate water strate investing in water effic Moderator: Walter Koz Regulator: How to man Ateia Ibrahim, Environn New information: Data Energy Savings using M Research institute: Res		ve Analysis of ttor, Xylem anding the	<ul> <li>UTILITY LEADERS FORUM – SESSION 1</li> <li>Utilities working to improve the Circular Economy</li> <li>Chairs: Helle Katrine Andersen, DANVA; Joe Jacangelo, President, AWWA</li> <li>The Utility Leaders Forum (ULF) is a unique opportunity for those tasked with utilities to exchange views, network and to access the insights of prominent leaders in a setting that is by utility leaders for utility leaders.</li> <li>Over the course of two days, the Forum will bring together some of the worl most prominent water utility leaders with the most impactful case studies to experiences and knowledge. Curated by an international committee of experiutility practitioners, the forum is structured to facilitate an open and interact around some of the most critical issues facing utilities. Active delegate partice be key.</li> <li>Igniting talks: Bernard Koh, Assistant Chief Executive, PUB Singapore, Dines Theod of Development, BIOFOS Copenhagen, Lou Gironimo, General Manager Water, Canada</li> <li>Panel discussion with audience facilitated by the Chairs</li> </ul>	water utility d's share ienced tive dialogue ipation will <b>Fhornberg</b> ,		
Coffee Break	15:00 - 15:30					
Session 3	15:30 - 17:00					
INDUSTRIAL WATER FORUM – SESSION 3       Room 801 A         Corporate water strategy: How industry overcomes challenges when investing in water efficiency       Investing in water efficiency         Moderator: Eric Rosenblum, Envirospectives       Panel debate featuring industry experts, researchers, and regulators Strategies to overcome long return on investment in water technologies, and ways to share responsibility and risk effectively.         Panellists: Michael Theodoulou, Veolia; Seth Darling, Argonne National Lab, Mohamed Ateia Ibrahim, USEPA, Christopher Lawson, University of Toronto and Michael Skovgaard, Grundfos		<ul> <li>UTILITY LEADERS FORUM – SESSION 2</li> <li>Building Water Security and Resilience</li> <li>Chair: Adam Lovell, ED, Water Services Association of Australia; Jonathan Clement, Chair ULF</li> <li>The Utility Leaders Forum (ULF) is a unique opportunity for those tasked with utilities to exchange views, network and to access the insights of prominent v leaders in a setting that is by utility leaders for utility leaders.</li> <li>Over the course of two days, the Forum will bring together some of the work most prominent water utility leaders with the most impactful case studies to experiences and knowledge. Curated by an international committee of exper utility practitioners, the forum is structured to facilitate an open and interact around some of the most critical issues facing utilities. Active delegate partice be key.</li> <li>Igniting talks: Doeke Schippers, Director CTO Vitens, Netherlands; John Kmie Director, Tucson Water, USA; Pat McCafferty, Managing Director, Yarra Valley Australia</li> <li>Panel discussion with audience facilitated by the Chairs</li> </ul>	water utility d's o share ienced tive dialogue ipation will c, Managing			
Break	17:00 - 17:15					
Keynote Plenary	17:15 - 18:00					
Keynote: Taps and toile	ets in the time of change: A new era for water and s ne Magawa Panellists: Silvana Romero, Vida Duti, Ma		ation, Batsirai Majuru, Technical Officer, Water, Sanitation, Hygiene and Health L	Init, WHO		

Keynote Plenary	09:00 - 09:45					
	or and the slow pandemic of antimicrobial resistan Grevatt Panellists: Ralph Erik Exton, Rasha Maal-Bar					
Coffee Break	09:45 - 10:30					
Session 1	10:30 - 12:00					
	TER REGULATORS FORUM	Room 803 A <b>Forum</b>	4.15 ASSET MANAGEMENT OF URBAN DRAINAGE SYSTEMS	Room 803 B Workshop		
	<i>IWA, Switzerland</i> ed under the title of "The Road to 2030: What Lies A gulators", aiming to address the critical issues and e		Chair: Bert Van Duin, Canada In June 2024, IWA Publishing released the first comprehensive handbook tha with the asset management of infrastructure dedicated to both sewage and s			
innovative solutions that Sustainable Developmen	will determine the success in achieving the targets it Goal (SDG) 6 and other water and sanitation SDG f e of water and sanitation regulation.	set in	including blue-green infrastructure. This session provides an overview of key the state-of-the-art of urban drainage asset management (UDAM), suppleme presentations by speakers from Canada and Europe who will share their pers how a risk-based approach to asset management can be practically adopted.	tenets and ented by spective of		
Water and Sanitation Re Panel Discussion and Q&			Speakers: Frederic Cherqui, France; Franz Tscheikner-Gratl, Norway; Francois Meyer, Norway			
Filipe Sampaio, ANA, Bra Gillian Blythe, Water Nei						
Lunch	12:00 - 13:30					
Session 2	13:30 - 15:00					
	TER REGULATORS FORUM	Room 803 A <b>Forum</b>	SO.1 THE TECHNOLOGY ROADMAP FOR NET-ZERO URBAN WASTEWATER	Room 803 B Session		
Moderator: Batsi Majuru, RegNet-WHO, Switzerland The 9th IWRF is developed under the title of "The Road to 2030: What Lies Ahead for Water and Sanitation Regulators", aiming to address the critical issues and explore innovative solutions that will determine the success in achieving the targets set in Sustainable Development Goal (SDG) 6 and other water and sanitation SDG targets, and that will shape the future of water and sanitation regulation. Ensuring and Mobilising Sustainable Finance to Support Climate Resilient Water and Sanitation Services Around the World Panel Discussion and Q&A Mara Ramos, DAAE, Brazil Loga Sunthri Veeraiah, SPAN, Malaysia		Where are we on the road to low-carbon neutrality?         Co-chairs: Xiaochang Wang; Ana Soares         This session will assess the current state of technology and practices in achieving low-carbon wastewater systems. It will feature keynote presentations from experts in the field, followed by a panel discussion exploring the progress made so far and identifying remaining challenges on the path to net-zero emissions.         Keynote Speakers:         Liu Ye, University of Queensland, Australia         Amanda Lake, Jacobs, UK         Panelists:         Jessica Akande, Canadian Water Network         David Ponder, US Water Alliance         John Willis, Brown ad Coldwell         Xiaochang Wang         Facilitator:         Z. Jason Ren				
Coffee Break	15:00 - 15:30					
Session 3	15:30 - 17:00					
INTERNATIONAL WATER REGULATORS FORUM Moderator: Robert Bos, IWA, Switzerland The 9th IWRF is developed under the title of "The Road to 2030: What Lies Ahead for Water and Sanitation Regulators", aiming to address the critical issues and explore innovative solutions that will determine the success in achieving the targets set in Sustainable Development Goal (SDG) 6 and other water and sanitation SDG targets, and that will shape the future of water and sanitation regulation. Unlocking New Opportunities for Innovation, Resilience and Efficiency in Water and Sanitation Regulation Panel Discussion and Q&A Yvonne Magawa, ESAWAS, Zambia Lauseani Santoni, ANA, Brazil		<ul> <li>SO.2 THE TECHNOLOGY ROADMAP FOR NET-ZERO URBAN WASTEWATER</li> <li>What new technology innovations are needed to achieve the 'net-zero' goal?</li> <li>Co-chairs: Xiaochang Wang; Ana Soares</li> <li>This session will focus on identifying and discussing innovative technologies of drive the wastewater sector towards net-zero emissions. Keynote speakers we emerging technologies and approaches, while the panel discussion will delve specific innovations needed to overcome current barriers and accelerate pro- towards a low-carbon future.</li> <li>Keynote Speakers:</li> <li>Z. Jason Ren, Princeton University, USA Charles Bott, Hampton Roads Sanitation District, USA</li> <li>Panelists:</li> <li>Mark Philbrick, US Department of Energy</li> </ul>	vill highlight into the			
Break	17:00 - 17:15					
Keynote Plenary	17:15 - 18:00					

#### Keynote Plenary 09:00 - 09:45 Keynote: The water sector and the slow pandemic of antimicrobial resistance, Prof. Amy Pruden, Virginia Tech, USA Panel Moderator: Peter Grevatt Panellists: Ralph Erik Exton, Rasha Maal-Bared, Corinne Cheeseman, Jennifer Molwan 09:45 - 10:30 **Coffee Break** Session 1 10:30 - 12:00 Room 701 A Room 701 B 6.3 WHAT THE WATER INDUSTRY CAN LEARN FROM 1.14 BECOMING A NET ZERO UTILITY Workshop THE INDIGENOUS PERSPECTIVE **Technical** Chair: Carla Pimentel-Rodrigues, Portugal Co-chair: Xorse Doe-Ba Chair: Liudmyla Odud, Ukraine Co-chair: Titilola Bright-Oridami, Nigeria Greening The Water Industry: Pidpa's Path To Sustainable Drinking Water Provision, Water is a basic need for different forms of life in all communities. It plays a significant role for economic, environmental and cultural purposes. Difficulties associated with Be Ambitious - Net-Zero GHG Roadmap For Durham Region's Water And Wastewater living in challenging environments contributed to indigenous cultural and spiritual perspectives that reflect the importance of water for the survival of all life on earth. Systems, Er Indigenous peoples' knowledge and practices are often very different from water Navigating Uncertainty And Circular Economy Drivers In Wastewater Using An Adaptive management approaches in the modern world, which tend to focus on technical Pathways Approach, F measurements, and water's value as a commodity. A deeper understanding of the value and importance of water is necessary in order for the water industries to deal Establishing A Standard Carbon Balance For Drinking Water Utilities: A Key Initiative In Addressing Water Leakages, Alexis de Ker adequately with its current challenges in relation to water quality, water quantity, and climate change POSTERS Speakers: Dawn Martin-Hill, Canada; Bradley Moggridge, Kamilaroi, Australia; Dave Archambault, USA; Douglas Aitken, Chile; Leticia Lisseth Tituaña Picuasi, Ecuador Fugitive Methane Emissions At A Water Resource Recovery Facility: Preliminary Results From A Top-Down|Bottom-Up Field Campaign, Em Estimation Of CO2 Reduction Potentials -Development Of An Estimation Tool And Assessment Of The Water Purification System Using It-Development Of An Estimation Tool And Assessment Of The Water Purification System Using It-, Iku 12:00 - 13:30 Lunch 13:30 - 15:00 Session 2 Room 701 A Room 701 B **5.3 WATER IS A HUMAN RIGHT: LABOUR MOVEMENTS** 1.18 SUSTAINABLE APPROACHES TO ASSET MANAGEMENT **Technical** Workshop ROLE IN ADDRESSING THE INDIGENOUS WATER CRISIS Chair: Helena Alegre, Portugal Co-chair: Bowen Xu, Can Chair: Krista Maracle, Canada Co-chair: Paige Malcolm, Canada Towards Sustainable Wastewater Facilities: Embracing The Cradle To Cradle (c2c) Principle For Wastewater Buildings, Jan Ru Identify and understand the Indigenous water crisis in Canada and how it impacts the Strategy For Restructuring Water Treatment Plants Against To Coming Aging Society, labour movement. Will learn ways in which the Labour movement can become a partner is the fight for clean safe drinking water for all. Carbon Footprint In Water Infrastructure Projects - Where Are The Potential Speakers: OPSEU, Layla Staats, Turtle Island; Chris Koptie, Turtle Island; Jordyn Playne, Metis Nation of Ontario Savings, Methodology For Defining Them And Experience From Implementing Them, Climate Resilient Utility – Low Carbon, High Water Quality Through Modular Off Site Build Of Ceramic Membrane Plants, Clement Pierart, Net POSTERS Carbon Footprint Reduction Through Advanced Imaging And Wastewater Tank Cleaning, 15:00 - 15:30 **Coffee Break** 15:30 - 17:00 Session 3 Room 701 A Room 701 B 5.9 WASTEWATER SURVEILLANCE TO ENSURE SUSTAINABLE, 1.10 DEVELOPING THE MARKETS FOR A CIRCULAR INCLUSIVE AND EQUAL ACCESS TO PUBLIC HEALTH AND Workshop ECONOMY: A BOX SPRINT Workshop **RESOURCE RECOVERY: SMALL PIECES, BIG PICTURE** Chair: David Millar, Scotland Co-chair: Ania Escudero, Scotland

Chair: Cresten Mansfeldt, USA Co-chair: Rasha Maal-Bared, Canada; Mark Knight, Canada

Session Description: The chair will provide opening comments (8 min). Presenters will sestion beschpicht me chain win provide opening comments (o min). Presenters win each take 7 minutes to provide insight into the topics identified in the learning objectives using clear and concise case studies (7 min x 4 = 28 min), followed by 12 minutes of questions and answers. The audience will then be presented with a list of questions to discuss at their table for 20 minutes and report out on for the next 12 minutes (32 min). Each table will have a facilitator, note taker, and giant flippad. The chair and Co-Chair:: will provide summation and take home messages (10 minutes, 3 min each ).

Speakers: Miriam Hacker, USA: Carol Martinson, USA: Mark Knight, Canada: Lola abode, USA

The development of resource recovered products from water sector processes can be challenging. There is a need to work through appropriate regulatory routes and work with others to develop markets and products. To date although some circular economy products have been developed it is often a slow and arduous process. This session will present international examples of cicular economy products e.g.: 1. Grit recovery development of a commercial product and how end of waste criteria was achieved. 2. Heat recovery - development of district heating networks from wastewater.

Speakers: David Millar, Scotland; Ania Escudero, Scotland

Break	17:00 - 17:15
Keynote Plenary	17:15 - 18:00

Keynote: Taps and toilets in the time of change: A new era for water and sanitation regulation, Batsirai Majuru, Technical Officer, Water, Sanitation, Hygiene and Health Unit, WHO Panel Moderator: Panellists:

Keynote Plenary	09:00 - 09:45				
Keynote: <b>The water se</b>	ctor and the slow pandemic of antimicrobial resistan	ice, Prof. Amy F	Pruden, Virginia Tech, USA		
Panel Moderator: Pete	r Grevatt Panellists: Ralph Erik Exton, Rasha Maal-Bar	ed, Corinne Che	eeseman, Jennifer Molwantwa		
Coffee Break	09:45 - 10:30				
Session 1	10:30 - 12:00				
2.21 ADVANCED OX	(IDATION PROCESSES - SESSION 1	Room 703	1.16 UTILITY RESPONSES AND ADAPTATION TO	Room 705 <b>Technical</b>	
Chair: Satinder Kaur B	rar, Canada Co-chair: Jacob Amengor, Ghana	Technical	CLIMATE CHANGE IMPACTS	rechnical	
	ith Perovskite And Phosphorene As The Electrode Mat n And Ciprofloxacin Photodegradation From Wastewar se Taipei		Chair: Peter Dane, Netherlands Co-chair: Yang Villa, Philippines A Natural Solution To A Complex Delta Issue: The Climate Buffer For Ecologic Climate-resilient Drinking Water Provision, Koen Zuurbier, Netherlands	al And	
	Persulfate Oxidation Pathway: Enhancement Of Urea C Iction, Taegeun Park, <i>Republic of Korea</i>	Dxidation In	The Effects Of Climate Change: Are The Water Systems Ready?, Shakhawat C Saudi Arabia	howdhury,	
	on Characteristics Of Widespread Organic Pollutants Ir r Based On Pilot UV H <sub>2</sub> O <sub>2</sub> System From Compound To ina		Papakura Water Treatment Plant: A Phoenix Rises, Chris Aspinall, Australia Water Use Amidst The Climate Crisis: Challenges In Delivering Basic Sanitatio		
Green And Risk-free Di	isinfection Of Real Sewage: Using Magnetically Recycla riven By Solar Energy, Irene Lo, China	able TiO2	A Case Study Of Rio De Janeiro, Brazil, Natália Rodrigues Costa Flecher, Brazil POSTERS	/	
			Strategic Planning To Adress Climate Change Impacts On Wastewater Infrast From Águas Do Tejo Atlântico, <mark>Rita Lourinho, Portugal</mark>	ructures	
Lunch	10.00 17.70				
Lunch	12:00 - 13:30				
Session 2	13:30 - 15:00	_			
	XIDATION PROCESSES - SESSION 2 ingapore Co-chair: Patrick D'Aoust, Canada	Room 703 <b>Technical</b>	1.21 TOWARDS INCREASED RESILIENCE AND BETTER GOVERNANCE FOR URBAN WATER	Room 705 <b>Workshop</b>	
Combined Ozonation A Of Organic Micropollut	And Granular Activated Carbon In Pilot Plant Scale For tants In Municipal Wastewater Treatment Effluent In G		Chair: Marie Whaley, UK Co-chair: Helle Katrine Andersen, Denmark		
	ollutant Treatment: Best Practices And Key Learnings F	rom	In this workshop will look into topics such as: - Stakeholder engagement and participation - The need for cooperation in partnerships - How to get the support needed from senior policy- and decision-makers - How to connect cities to basins to make sure		
Tuning The Selectivity	ee, Amanda Murillo, <i>Switzerland</i> Of Catalytic Ozonation Towards Wastewater Purification e Catalysts, Xiaoyuan Zhang, <i>China</i>	on By	we handle water where it is most optimal - Experiences with aligning technical solutions with multiple benefits and outcomes. There is increasing global experience on these topics and we aim to present experience and discuss lessons to be shared globally, in		
Comparison Of Differen Treatment, Guihua Dor	nt Advanced Oxidation Processes For Marine Oily Was	tewater	particular related to governance models. Speakers: Helena Alegre, Portugal; Brian Hansen, Denmark; Kevin Tudhope,	, Canada;	
			Pat Mc Cafferty, <i>Australia</i> ; Matthew Whaley, <i>UK</i> ; Ching Thoo a/I Kim, <i>Malay</i> : Whaley; Helle Katrine Andersen; Adam Lovell; Robin Price; Norhayati Abdull Amengor	sia; Marie	
Coffee Break	15:00 - 15:30				
Session 3	15:30 - 17:00				
2.23 ADVANCED O	XIDATION PROCESSES - SESSION 3	Room 703	2.1 CONTAMINANTS OF EMERGING CONCERN IN A	Room 705	
Chair: Abidelfatah Nas	sser, Israel Co-chair: Xiaoyuan Zhang, China	Technical	CHANGING CLIMATE: INNOVATIVE STRATEGIES FOR SUSTAINABLE MANAGEMENT	Workshop	
Processes For Ion-Exch	For PFAS Contamination: Regeneration And Electroche aange Resin Management, Fatemeh Asadi Zeidabadi, C	anada	Chair: Satinder Kaur Brar, <i>Conodo</i> Co-chair: Harsha Ratnaweera, <i>Norway</i>		
	/ ClO2 Advanced Oxidation Treatment: A More Energy 2 Treatment, Aleksandra Szczuka, United States	Efficient	The purpose of this session is to empower broader stakeholder groups with of the climate change impact on the fate of contaminants of emerging conce		
Removal Of PPCPs In H Gen-Shuh Wang, Chine	lospital Wastewater Through Advanced Oxidation Procese Taipei	cesses,	(CECs) and their complex formation and to discuss innovative strategies for a CECs in the context of climate change. The participants will share and gain in	managing nsights	
Optimisation Of Advanced Oxidation   reduction Processes In View Of Micro-pollutant Removal From (waste) Water With Different (natural) Organic Matter Content,			into innovative approaches, technologies, and policy considerations related management. We hope attendees will leave with a renewed commitment to CFC challenges, armed with practical ideas and the inspiration to adapt and	addressing	

POSTERS

Efficient Persulfate Activation By Photo-excited Organic Dyes: Mechanism And Application For Actual Dyeing Wastewater Self-purification, Xue Bai, China

solutions in their own contexts including vulnerable communities.

Speakers: Shirley Anne Smyth, ECCC; Charles De Lannoy, Canada; Rama Pulicharla, USA; Harsha Ratnaweera, Norway; Satinder Kaur Brar, Canada

Break	17:00 - 17:15
Keynote Plenary	17:15 - 18:00

Keynote Plenary	09:00 - 09:45				
Keynote: <b>The water sector and the slow pandemic of antimicrobial resistance, Prof. Amy Pruden</b> , <i>Virginia Tech, USA</i> Panel Moderator: Peter Grevatt Panellists: Ralph Erik Exton, Rasha Maal-Bared, Corinne Cheeseman, Jennifer Molwantwa					
Coffee Break	09:45 - 10:30				
Session 1	10:30 - 12:00				
1.2 REAL WORLD DIG	GITAL TWIN APPLICATIONS	Room 707	1.8 INNOVATIONS IN POLLUTANT MANAGEMENT	Room 709	
Chair: Zheng Yi Wu, Unit	ted States Co-chair: Leo Huan	Technical	Chair: Michael Storey, Australia Co-chair: Ishi Keenum, United States	Technical	
Creating Value With Digi Canada	tal Twins: Case Studies And Real World Examples, Di	ana Tao,	Characterization Of Snow Deposits And Development Of Passive Methods Of Meltwater Desalination, Rachida Hamidou, Canada		
Evergreen Digital Twin A Management, Zheng Wu	s Paradigm Shift For Smart Water Grid Operational 1, <i>United States</i>		Assessment Of Hydrodynamic Separators As Stormwater Treatment Option, Moritz Gesterding, Germany		
Flexible Digital Twin Plat Zhangjiagang As Case St	form Supporting Water Utility Digital Transformation udy, Michael Yu, Canada		Use Of Atmospheric Dissolved Air Flotation (DAF) In Removal Of Surfactants, Elnaz Zehtab Lotfi, <i>Iran</i>		
An Online Receiving Env In Brisbane, Australia, M	ironment Digital Twin Supporting Whole Of Catchme léven Huiban, <i>Canada</i>	nt Planning	GAC Reactors Optimization For Micropollutants Removal In Wastewater Reus Mathieu DELAHAYE, France	e,	
POSTERS			POSTERS		
	Aodelling (BIM) And Common Data Environment (CD rojects And Asset Management, Alonso Hurtado, Can		Demonstration Plant For Post-treatment Options For Ozonation In Tertiary M Wastewater Treatment, Regina Gnirss, Germany	unicipal	
			Purification Of Phenolic Compounds From Segmenter Mandarin Wastewater Ultrafiltration And Nanofiltration, Pablo Alonso Vázquez, Spain	By	
Lunch	12:00 - 13:30				
Session 2	13:30 - 15:00				
1.1 HOW TO GO DIG	ITAL AS A WATER UTILITY - SESSION 1	Room 707	1.20 SEWER OVERFLOW MANAGEMENT	Room 709	
Chair: Dragan Savic, Net	herlands Co-chair: Ricardo Ferreira, Portugal	Technical	Chair: Jo Burgess, South Africa Co-chair: Will Dubin, Canada	Technical	
Louisville MSD's Data Dr <i>Canada</i>	iven Digital Transformation Journey Over 20 Years, D	iana Tao,	Designing An Effective Stormwater Treatment System: A Case Study In South Queensland Using PCSWMM And MUSIC Tools, Xuli Meng, Australia	East	
	timizing Decision-making In Planning, Operations Ar γ, Katrine Møller, <i>Denmark</i>	d Customer	Managing Smart For The Future: How Toronto Water Is Reducing CSOS With I Implementation Through Digital And Automation Technology, Jane Zou, Cana		
Cinter – A Human-centri Ingemar Clementson, Sw	c Data Management Platform For The Water Sector, veden		Prediction Of Combined Sewer Overflows Using A Data Driven Solution And Machine Learning Approach, Reza Pourmoayed, <i>Denmark</i>		
Valuing Data – Adopting Janelcy Alferes, <i>Belgium</i>	Transformative Digital Solutions For The Water Sector	or,	Willow Trunk Feasibility Assessment And Design – A Watershed-wide Solution For CSO Reduction With The Use Of InfoWorks ICM Modelling, Angela Steward, Canada		
POSTERS			POSTERS		
Mechanistic And Data-da Audenaert Wim, Belgiun	riven Models: From Confusion To Synergies And Oppo n	ortunities,	Pysewer: A Simple Tool For Sewer Network Generation In Data-scarce Regions, Daneish Despot, Germany		
Seven Steps Towards Dig	italizing Sludge Management, Puja Doshi, Germany		Formation And Dynamics Of Sewer Blockages Caused By Snagging Of Wet Wipes, Katayoun Kargar, Canada		
Coffee Break	15:00 - 15:30				
Session 3	15:30 - 17:00				
1.1 META-DATA COL WHAT, WHEN, AND V	LECTION AND ORGANIZATION: WHY?	Room 707 <b>Workshop</b>	1.20 TORONTO SPONGE CITY WORKSHOP Chair: Charles Ormsby, Canada	Room 709 <b>Workshop</b>	
Chair: Kris Villez, USA Co-chair: Emily Zegers, C	Canada		Co-chair: Anishia Patel, Canada This session will build on the successful format we adopted at a similar charr	ette during	
2 Meta-data describes data by means of (a) the way are produced and modified, (b) the quality of the data (e.g., accuracy), and (c) contextual information describing the circumstances in which data was produced. With up-to-date and comprehensive meta- data, raw sensor signals can be turned into actionable information. Water utilities small and large are intensifying data collection for plant monitoring, operation, automation, and upgrade planning. Today, data are collected and stored in an ad hoc fashion.			This session will build on the successful format we adopted at a similar charfette during COP15 in which we gathered a diverse range of individuals to provide unique and varied perspectives on the built environment and quality of urban life – reimagining our cities as healthy, safe, inclusive spaces rich with nature. The outcomes of this session will be strengthened by the diversity of the participants such that together we may explore means of achieving outcomes that equitably build community resilience. Speakers: Kris Villez, USA; Emily Zegers, Canada; Leiv Rieger, Canada; Janelcy Alferes,		

Speakers: Kris Villez, USA; Emily Zegers, Canada; Leiv Rieger, Canada; Janelcy Alferes, Belgium

Speakers: Kris Villez, USA; Emily Zegers, Canada; Leiv Rieger, Canada; Janelcy Alferes,

Break	17:00 - 17:15
Keynote Plenary	17:15 - 18:00

Keynote Plenary	09:00 - 09:45				
Keynote: The water sec	tor and the slow pandemic of antimicrobial resistan Grevatt Panellists: Ralph Erik Exton, Rasha Maal-Bar				
Coffee Break	09:45 - 10:30				
Session 1	10:30 - 12:00				
2.31 CONTAMINANT WASTEWATER	S OF EMERGING CONCERN IN	Room 711 <b>Technical</b>	3.3 POTABLE REUSE TECHNOLOGIES	Room 713 <b>Technical</b>	
Regeneration Of Magne	da <b>Co-chair: Mohammad Noor Tamim</b> , <i>Canada</i> tic Powdered Activated Carbon For The Removal Of ( ary Wastewater Effluents, Heidrun Steinmetz, <i>Germ</i> a		Chair: Josef Lahnsteiner, Austria Co-chair: Muhammad Anique Azam, Pakistan Quantification Of Carbon Emissions In Reverse Osmosis And Carbon-Based Po Reuse Treatment Configurations, Brett Wagner, USA		
Motivation For Advance	pact On A Recipient Regarding Emerging Contaminar ed Treatment To Achieve EQS, Aleksandra Lazic, <i>Swed</i> ed Mineral-based Materials To Remove Organic Cont	en	Social Perceptions And Legitimacy Of Potable Water Reuse, Heather Smith, U How A Partnership Between Physicians And Utilities To Promote Potable Wat Silicon Valley Launched A National Initiative, Eric Rosenblum, USA		
From Wastewater, Agnie	eszka Solinska, <i>Poland</i> nts Of Emerging Concern-CECs- Using an Environmen		An Overview Of Phased Inline Coagulation Pretreatment For Low-Pressure Mi Joseph Ladouceur, Canada POSTERS	embranes,	
	r The Removal Of Micropollutants By Biologically Gro AC), Lennert Dockx, Belgium	ınular	Clean Waters Ahead: Harnessing Salinity Fluctuations To Prevent Biofilm Forn Reverse Osmosis Membranes, Jan Poulsen, Denmark Adoption Of Nature-Based Solutions For Sewage Treatment: Quantifying Envi		
			Benefits From A Life-cycle Perspective, Shweta Lokhande, India		
Lunch	12:00 - 13:30				
Session 2	13:30 - 15:00				
3.4 OCCURRENCE AN CONTAMINANTS - S	ND REMOVAL OF EMERGING ESSION 1	Room 711 <b>Technical</b>	3.7 IN-PREMISES WATER QUALITY (HOUSE/BUILDING PLUMBING, MICROBIAL WATER QUALITY)	Room 713 <b>Technical</b>	
	Mexico Co-chair: Yiqi Cao, Canada	_	Chair: Nirajan Dhakal, Netherlands Co-chair: Emily Garner, United States		
Advanced Models For A Operation, Pieter Vlasso	dvanced Treatment: Smart Process Selection, Design haert, <i>Belgium</i>	And	Interplay Of Nitrification, Temperature, And Chloramine Decay Affect Opportunistic Pathogen Growth In Premise Plumbing, Darel Snead, USA		
Nature-based Solutions Pedro Carvalho, Denma	For Controlling Organic Micropollutants In Urban Wa rk	iters,	Legionella Pneumophila: Hidden In Plain Water, Atheesha Singh, South Africa Knowledge Gaps To Predict Legionella Within Building Water Systems, Catalina Ortiz,		
Water Produced From S	Organic Micropollutants And Enhances Biostability C urface Water, Rinnert Schurer, Netherlands		Canada Novel Control Of Legionella Pneumophila In Premise Plumbing Through Probiotics And Nutrient Limitation Madeline Deck USA		
USA	ed Oxidation Using 222 Nm KrCl* Excimer Lamps, Ka	rl Linden,	Nutrient Limitation, Madeline Deck, USA POSTERS		
	Activated Filter For Potable Water Reuse Treatment: I	Design,	Insulation As An Economical And Effective Means Of Limiting Legionella Grow Heaters, Fernando Roman Jr, United States	rth In Water	
2	idies,Adriano Vieira, United States ving Disinfection-free Drinking Water Treatment Plan um, Koen Joris, Belgium	ts: A Case	Drinking Water And Meeting Canada's Housing Shortage, Aaron Atcheson, Canada		
Coffee Break	15:00 - 15:30				
Session 3	15:30 - 17:00				
			3.15 WATER QUALITY STANDARDS, REGULATIONS AND ECONOMICS	Room 713 <b>Technical</b>	
			Chair: Markus Starkl, Austria Co-chair: Weslley Barbosa, Brazil		
			Cyanobacterial Bloom Management: Technology Performance & Optimisation Assessments, Arash Zamyadi, Australia		
			Severe Wildfire In Fort McMurray, Canada: A Legacy Of Threats To Water Qua Treatability, Monica Emelko, Canada	lity And	
			Maximising The Value Of Smart Metering. The Case Of Canal De Isabel II, Jaiver Fernandez, Spain		
			Effects of UV-C irradiation on cellular metabolisms and precursors of disinfect products during algal growth, Sidik Fahrudin, Taiwan POSTERS	,	
			Olympics For Sensors - Results Of Online Water Quality Monitoring Devices Te Patryk Wójtowicz, Finland	-	
			Determining Impact Of Artisanal & Small-scale Mining On Drinking Water Qu Investigating Heavy Metal Concentration Variations From Source Water To Ta Jacob Amengor, Canada		

Break	17:00 - 17:15	
Keynote Plenary	17:15 - 18:00	

Keynote Plenary

17:15 - 18:00

Keynote Plenary	09:00 - 09:45				
	or and the slow pandemic of antimicrobial resistan Grevatt Panellists: Ralph Erik Exton, Rasha Maal-Bare				
Coffee Break	09:45 - 10:30				
Session 1	10:30 - 12:00				
3.14 EMERGING CONTAMINANTS/PATHOGENS AND ANTIBIOTIC RESISTANT BACTERIA/RESISTANCE GENES       Room 714 Technical         Chair: Naresh Singhal, New Zealand Co-chair: Sudipti Arora, India       Unveiling E. Coli: A Looming Crisis Of Resistance, Zakkirah Delair, South Africa         Characterization Of The Resistome Throughout A Ozone   Biologically-Active Carbon Filtration Based Treatment Train Intended For Indirect Potable Reuse, Matthew Blair, USA         Prophage Induction By Environmental Pollutants Promotes Transformation Of Released Antibiotic Resistance Genes From Cell Lysis, Ji Lu, Australia         Stream Contamination With Emerging Pathogens And Antibiotic Resistance From Point And None-point Pollution Sources, Abidelfatah Nasser, Israel         POSTERS		2.11 MEMBRANE REACTORS Chair: Bing Tang, China Co-chair: Syed Salman Ali Shah, China Optimizing Air Scouring Energy For Sustainable Membrane Bioreactor Operat Characterizing The Combination Of Factors Leading To Critical Flux, Changyoo United States Improving MBR Performance Through Continuous Flow Densification At The of Detroit Lakes, Chris Shaw, Canada Influence Of Size And Spatial Distribution And Air Bubbles Around Ceramic Fi Membrane Module On Fouling Mitigation, Hiroshi Nagaoka, Japan Oxygen Transfer In MBR Before And After Densification, Diego Rosso, USA POSTERS Control Of Micro(nano)plastics In Wastewater By Innovative Living Membrane	on Jun, City Of lat-Sheet		
Public Health In The Gau Characterization of Antik	al Waterscape: Analysing The Potential Risks And In teng Province, Zaakirah Delair, South Africa oiotic Resistance Genes in Drinking Water Sources of thern China: The Correlation with Bacterial Commur heng Chang, China	the Douhe	Bioreactors, Vincenzo Naddeo, Italy		
Lunch	12:00 - 13:30				
Session 2	13:30 - 15:00				
The Structure And Comp Gang Liu, <i>China</i> Characterizing Microbial Cunningham, <i>United Star</i> Potential Pathogen Expo Indigenous Tribe's Drinki Interrogating The Effects And Function Related To Wastewater, Catherine H POSTERS	Australia Co-chair: Gaurav Bhardwaj, Canada nosition Of Shower Hoses Biofilm Revealed By Multi-o Communities Across Ozone-Biofiltration Operations tes sure By Determining Microbial Ecology In An Amazon ing Water, Caroline Reed, United States Of Operating Conditions On Microbial Community S Simultaneous Nitrogen And Phosphorus Removal Fr Ioar, United States	, Kara nian itructure om	<ul> <li>2.14 WATER RECLAMATION FOR NON-POTABLE REUSE (PLANNING)</li> <li>Chair: Melissa Meeker, United States Co-chair: Krithika Iyer Shivakumar, Ind Power-to-X As A Driving Force For Effluent Water Reuse In Denmark, Patrick O Denmark</li> <li>The Impact Of Informal Settlement Expansion On Greywater Generation: A Po Missed Opportunity?, Wihann Van Reenen, South Africa</li> <li>Boosting Water Reuse: Comparing Alternative Water-smart Solutions For Two Water Resource Recovery Facilities, Giorgio Mannina, Italy</li> </ul>	Campbell, otential	
Coffee Break	15:00 - 15:30				
Session 3	15:30 - 17:00				
Chair: Ka Leung Lam, Ch Addressing Circularity As Of Wastewater Resource Assessing Indicators Of C Caroline Samberger, UK Activated Carbon From F Fiber And Its Performance Testing, Mitchell Ubene, Hydrogen Economy Base POSTERS Global Sanitation Transfo Sumeet Powar, Netherland	Arguna Stranger Strategy From Circular Strategy	n Of Corn le Column i, <b>Australia</b> silience,	<ul> <li>2.13 WATER RECLAMATION FOR NON-POTABLE REUSE (TECHNOLOGY)</li> <li>Chair: Katsuki Kimura, Japan Co-chair: Amin Minaei, Austria</li> <li>Expanding The Application Of Reclaimed Water In Non Potable Activities With Domestic Household, Sayani Halder, Japan</li> <li>Nutrient Water Recovery From Anaerobic Effluent Through The Integration O Electrodialysis (ED) With Forward Osmosis (FO): Process Optimization And Co Improvement, Xue Jin, United States</li> <li>Industrial Water Reuse - A Key Element Of Circular Economy In The City Of Ch India, Josef Lahnsteiner, Austria</li> <li>Enhanced Capacitive Removal Of Cr(VI) Using Functionalized Vanadium Alum Carbide And Biochar As The Asymmetric Electrode Materials, Tse-Wei Tung, C Taipei</li> </ul>	f onfiguration nennai, inum	
Break	17:00 - 17:15				

Keynote Plenary	09:00 - 09:45					
	tor and the slow pandemic of antimicrobial resistan Grevatt Panellists: Ralph Erik Exton, Rasha Maal-Bar					
Coffee Break	09:45 - 10:30					
Session 1	10:30 - 12:00					
2.38 DECENTRALISEI SANITATION	D TREATMENT AND NON-SEWERED	Room 715 B <b>Technical</b>	6.6 ESTABLISHING SUCCESSFUL MARKETS TO CLOSE THE CIRCULAR ECONOMY LOOP FOR PRODUCTS FROM WATER RESOURCE RECOVERY FACILITIES	Room 716 A <b>Workshop</b>		
Realizing The Beneficial Implementation On Dov	Denmark Co-chair: Abishek Sankara Narayan, Switze Integration Of Upstream Non-sewered Sanitation (N vnstream Sewered Wastewater Treatment Through A tik Chandran, United States	SS)	Co-chairs: Sangeeta Chopra, Canada; Caroline Samberger, Europe; Arthur Umble, USA; Jeff Peeters 1. Concentrating materials (nutrients, carbon, metals, energy) for efficient re	covery 2		
0 11 ,	ynamics For Subsurface Treatment Wetlands In Cold	l Climates,	Sorting and separating recovered materials. 3. Converting/re-manufacturing materials into a product that has potential economic value 4. Value-marketin to off-take market (wholesale, retail, institutional). Step 4 relies on identifyin	recovered og products og specific		
	ons And Climate Adaptation Of Non-Sewer Sanitation nk And Conventional Septic Tank, Tatchai Pussayana		market endpoints. Without markets in place, the circularity loop is compromised and the implementation of CE is greatly weakened. Furthermore, regulatory challenges fron various areas (supply chain, manufacturing, water/waste management, etc.) as well as			
Advanced Insights Into E Sanitation Systems, Cae POSTERS	Biodegradation And Greenhouse Gas Dynamics In No tano Dorea, <i>Canada</i>	n-Sewered	stakeholder pushback and social perception can create barriers to closing the Speakers: Sangeeta Chopra, Canada			
And Climate Change Mit	e Gases (GHGs) Emissions From Non-sewered Sanita tigation In Dhenkanal, India, <mark>Shirish Singh, Netherlan</mark> 1 Real Human Urine In Research On Developing Dece.	ds				
Sanitation Technologies,	Caitlin Courtney, Sweden					
Lunch	12:00 - 13:30					
Session 2	13:30 - 15:00	_				
5.5 WASH AND COM SESSION 1	MUNITY-SCALE WATER MANAGEMENT -	Room 715 B <b>Technical</b>	6.4 HOW CAN LAURENTIAN GREAT LAKES YOUTH-INCLUSIVE WATERSHED GOVERNANCE IMPROVE COLLABORATION?	Room 716 A Workshop		
	a Co-chair: Matthew MacRorie, United Kingdom		Chair: Laina Timber, Canada Co-chair: Lauren Lawson, Canada This session will show how an adapted version of the Blue Peace Index methodology can be used on transboundary watersheds to educate youth and young professionals and encourage enhanced collaboration amongst nations. The session will take an adapted version of the Blue Peace Index (BPI) methodology and allow workshop participants to practice using the methodology to learn more about collaboration between Great Lakes nations. No prior experience in the Laurentian Great Lakes basin is required. The workshop results will be used to frame subsequent youth and young professional			
	n The Face Of Climate Challenges: A Study Of Water I ssia's Flood-Prone Urban Informal Settlements, Wika					
Management In India, N From Insight To Impact:	On Best Available Technologies For Decentralised W Markus Starkl, Austria A Ground-Up Approach For Strengthening Decentral ad Regulation, Nitish Ranjan Sarker, Canada					
	viour Change Communication Adoption Stairways To d Practices (KAP) Towards WASH In Two Local Govern Adizue, <i>Nigeria</i>		driven work accessible by workshop attendees within the NAYPW's Young Pro program. The NAYPW Young Professionals program focuses on transboundard provide recommendations for nations from a youth and young professional p that will promote water as an opportunity for enhancing peace globally.	y basins to		
	ness Of Climate Change Impacts On Water Resources South Africa, Lee-Ann Modley, South Africa	In A Rural	Speakers: Laina Timber, Canada; Lauren Lawson, Canada			
	ocumentary Film), Karl Zimmermann, Canada					
Coffee Break	15:00 - 15:30					
Session 3	15:30 - 17:00					
	10.00 17.00	0 545 0		D		
5.7 WASH AND COM SESSION 2	MUNITY-SCALE WATER MANAGEMENT -	Room 715 B Technical	6.1 SUSTAINABLE USE OF GROUNDWATER RESOURCES	Room 716 A Workshop		
Chair: Abdul Majeed O	sman, Ghana Co-chair: Ananya Mohanty, Canada		Chair: Ruud Bartholomeus, Netherlands Co-chair: Shafick Adams, South Africa			
Bangladesh, Md Azizur F			The availability of sufficient and sufficiently clean water is under increasing pressure Anthropogenic water use increases while climate change leads to prolonged dry periods. Worldwide more and more attention is being paid to the overexploitation o			
Bangladesh, Md Tahmid			groundwater, groundwater pollution, and the effects this has on the natural and society, and the liveability of areas. In a more sustainable use of the grou system, a new balance needs to be found between extracting and using the v	undwater		
A Quantitative And Qualitative Analysis Of Public Level Knowledge, Awareness, Behaviour And Perceptions Of Domestic Water Use In The City Of Durban, South Africa, Ismail Banoo, South Africa			replenishing the system, while ensuring good water quality. Speakers: Ruud Bartholomeus, Netherlands; Paul Nwulu; Shafick Adams; Mehul Pa			
Tools For Water Partners Karl Zimmermann, Cana	ships: Lessons For Community-led Water Manageme Ida	nt,	Koen Zuurbier			
POSTERS Sustainable Achievemen	t In WASH Implementations In Lunugala Division Of .	Sri Lanka				
Through Context Specific Improvement Of The Qu	t in WASH implementations in Lunugula Division () : c Sustainable Community Approach, Sarath Kumara, ality Of Water Used In The Pulping Of Açaí (Euterpe I zaqão-AP, Brazil	Sri Lanka				
Break	17:00 - 17:15					
Keynote Plenary	17:15 - 18:00					

Kounata Planaru	09:00 - 09:45			
Keynote Plenary	ector and the slow pandemic of antimicrobial resistan	ice. Prof. Amy F	Pruden, Virainia Tech. USA	
	er Grevatt Panellists: Ralph Erik Exton, Rasha Maal-Bar			
Coffee Break	09:45 - 10:30			
Session 1	10:30 - 12:00			
	GAS EMISSIONS AND MITIGATION	Room 716 B <b>Technical</b>	4.3 RESPONSE TO FLOOD AND SEA LEVEL RISE	Room 717 A <b>Technical</b>
	ina Co-chair: Frances Okoye ns By Catalytic Treatment Of N <sub>2</sub> O, Jeanette Madsen, De	enmark	Chair: John Riddiford, Australia Co-chair: Marina Macedo, Brazil ISEA - Operational Platform For Forecasting And Decision Support For Undue	Coastal
-	emoval And Mitigated N <sub>2</sub> O Emission By Algal-Bacterial (		Occurrences, Nuno Pimentel, <i>Portugal</i> The Advantage Of 2D Modelling Downtown Toronto To Alleviate Basement A	
-	te Control And Documented Effect, Mikkel Stokholm-B	jerregaard,	Flooding, Philip Gray, Canada Modelling Of Flood Protection Facilities On A Highly Urbanised Area In São P	
Basic Study On Opera Treatment Plant, Tosh	tion Planning System Towards Carbon Neutrality Of A S iki Fukushima, <i>Japan</i>	Sewage	Metropolitan Region – Brazil, Debora Santos, Brazil Planning For Sea Level Rise - Understanding Of Future Challenges, Oeystein I	Rapp,
POSTERS			Norway	
Unveiling №O Emissio System, Ziping Wu, Au	ns In A Pilot Hybrid Membrane-Aerated Biofilm Reacto I <mark>stralia</mark>	r (MABR)	POSTERS Multiple Overland Flow Paths To Enhance 1 D-1D Flooding Modelling Of Corr Corridor, Julian Li, Canada	pound Road
Next-generation Technology - In-situ Reuse Of Dissolved Methane To Support Nitrogen Removal In Anaerobically Treated Mainstream Wastewater, Jianhua Guo, Australia			Critical Analysis To Evaluate Uncertainty Of The Regional Scale Key Climate D Depending On Bias And Strategic Location Of The Meteorological Stations, N Islam, Canada	
Lunch	12:00 - 13:30			
Session 2	13:30 - 15:00			
2 27 EOOD WASTE	BIOSOLIDS MANAGEMENT & REUSE -	Room 716 B	4.8 WATER SENSITIVE URBAN DESIGN	Room 717 A
SESSION 1	DIOSOLIDS MANAGEMENT & REOSE	Technical	Chair: Florian Kretschmer, Austria Co-chair: Mendy Shozi, South Africa	Technical
Chair: Kwok-Wai Tsan	g, United States Co-chair: Andrea Carranza, Sweden		Smart Blue Roof Implementation Project, James Cowan, Canada	
Jared Philpott, Canado			Co-designing Water-sensitive Suburbs Through Blue-green Infrastructure Planning By Research, Municipality, And Housing Association Partners, Jan Fiesen, Germany	
For South Africa, Shale	isal And Treatment Of Food Waste With Wastewater: A ongo Angula, South Africa		Creating A Water Sensitive City Strategy For Fishermans Bend Urban Renewa Melbourne, Australia, Ryan Brotchie, Canada	al Area In
activated Persulfate O	ced For Anaerobically Digested Food Waste Through Fe xidation In Filter-press System, Sujin Lee, <i>Republic of K</i>		Development Of Agro-Industrial Biofilters For Urban Stormwater Runoff Red Diffuse Pollution Mitigation, Lee-Hyung Kim, <i>Philippines</i>	uction And
Aerobic Granular Slud POSTERS	ge For Sustainability, Paula Dorn, United States		POSTERS	
Improving Dewaterab	ility Of Digested Food Waste Sludge By Microwave-acti Sujin Lee, Republic of Korea	ivated	Understanding Adoption And Performance Of Rainwater Harvesting Systems Using Sensors: A Pilot Study, Eren Rudy, Canada	
A Comprehensive Eval	luation Of Chemical Conditioning For Anaerobic Digester armeen Hyder, Canada	ate Post-	Generation Of Planning Scenarios For Stormwater Management In European Cities, Maria Chiara Lippera, Germany	
neuthent, onine sh	inneen ryder, cunddd			
Coffee Break	15:00 - 15:30			
Session 3	15:30 - 17:00			
2.32 PHARMACEU	TICALS IN WASTEWATER	Room 716 B <b>Technical</b>	4.4 ADVANCES IN RAINFALL AND STORMWATER MANAGEMENT	Room 717 A <b>Technical</b>
	nited States Co-chair: Koji Matsunaga, Japan		Chair: Bu Lam, Canada Co-chair: Chiara Lucia Tregnago, Italy	Toolinical
An Innovative And Energy-efficient Radio Frequency Pretreatment For Anaerobic Sludge Digestion To Boost The Removal Of Antimicrobials, Gokce Kor Bicakci, <i>Turkey</i>			Splitting Rainfall For Sewer Modelling, An Innovative Method Solving Proble	ms Out Of
Designing Tools To Optimize Community-based Wastewater Remediation Of Pharmaceutical Contaminants, Vanessa Maybruck, <i>United States</i>			Box, Li Julian, Canada Runoff Coefficient And Rainfall Estimates From Opportunistic Flow Measure	ments And
	e Bark Bionanocomposites For Antibiotic Degradation E Aqueous Solution, Tiina Leiviskä, <i>Finland</i>	By Activating	Weather Radar, Janni Mosekær Nielsen, <i>Denmark</i> Revolutionizing Control Systems: Unleashing The Power Of Real-time Adaptive Control	
The Interaction Between Disposable Face Masks And Polybrominated Diphenyl Ethers, Xing Song, Canada			(RTAC) In Stormwater Management, Xuli Meng, <i>Australia</i> Rodney Cook Sr. Park In Historic Vine City – From Flooded Brownfield To Innovative Stormwater Solution. Julie Stein, <i>United States</i>	

Rodney Cook Sr. Park In Historic Vine City – From Flooded Brownfield To Innovative Stormwater Solution, Julie Stein, United States

POSTERS

Forecasting Future Groundwater Levels Under Select Climate scenarios In Saskatchewan, Ahmed O

Source Water Protection In Quebec City: Using An Integrated 3D Hydrological Model To Investigate Groundwater Pathways And Travel Times, Benjamin Frot, Canada

Break	17:00 - 17:15
Keynote Plenary	17:15 - 18:00

eynote Plenary	
leynole Plenary	

#### 09:00 - 09:45

Keynote: The water sector and the slow pandemic of antimicrobial resistance, Prof. Amy Pruden, Virginia Tech, USA Panel Moderator: Peter Grevatt Panellists: Ralph Erik Exton, Rasha Maal-Bared, Corinne Cheeseman, Jennifer Molwan

Coffee Break	09:45 - 10:30
Session 1	10:30 - 12:00

#### 4.1 INCLUSIVE RESEARCH - THE ROLE OF SCIENCE TO ACCELERATE WATER ACTION IN THE GLOBAL SOUTH

Room 718 A Workshop

Chair: Lee-Ann Modley, South Africa, Co-chair: Ines Breda, Denmark; Jacol mark; Jacob Amengor, Ghand

This workshop aims to accelerate inclusive research by seeking a cultural fit between the scope of the research and the researcher. Ideally, research should include the entire 5-helix understanding (academia, industry, governance, citizen, and environment). Currently, there needs to be more access to facilities or methodologies that could support local researchers to drive solutions for their communities. For that reason, Global North has been leading research for Global South which retracts its ownership and cultural understanding of the local 5-helix dynamic. Further, unfitting research meets high obstacles in implementation.

Speakers: Tao Li, IWA, Pabel Cervantes, Mexico; Dr Jennifer Balatedi Molwantwa, uth Africa; Ikechukwu Okuzu, Nigeria

#### 5.6 MISSION-DRIVEN INNOVATION FOR SYSTEMIC TRANSFORMATION OF WATER MANAGMENT

Chair: Magnus Arnell, Sweden

In Sweden, one of the largest initiatives ever undertaken to drive system innovation for transformation of water management is now being started (Mars 2024). The innovation programme named Water for Vital Environments (WAVE) with the mission "Sustainable Water for All by 2050" is including water from source to seacoast or for people & societies, business & industries and nature & biodiversity.

Room 718 B

Workshop

Workshop

Room 718 B

Workshop

Speakers: Will Sarni, USA; Tony Wong, Australia; Trine Stausgaard Munk, Denmark

Lunch	12:00 - 13:30			
Session 2	13:30 - 15:00			
4.4 WATER SECURI	TY FOR FUTURE GENERATIONS	Room 718 A	3.3 UV LIGHT: PROTECTING PUBLIC HEALTH AROUND	Room 718 B

THE WORLD

Workshop

	different aspects of Wa assessment framework The influence of the er development, 6 Water across generations The containing a roadmap t <b>Speakers:</b> Chad Staddo Alex Godoy, <i>Chile</i> ; Yang	develop a World Café with different round tables discussing ater Security: 1 Water Security at different scales 2 The use of ss for water security 3 Water security and equality and inclusivity 4 heregy transition on water security S Water security and economic security and innovation 7 Water governance, 8 Capacity building e outcome of these tables will be summarized in a policy brief for achieving Water Security. on, <i>UK</i> ; Juliana Marçal, <i>UK/Brazil</i> ; Berta Macheve, <i>World Bank</i> ; g villa, <i>Philippines</i> ; Oriana Romano, <i>France</i> ; Inês Breda, <i>Denmark</i>	<ul> <li>Chair: Karl Linden, USA</li> <li>Co-chair: Todd Elliott, USA; Natalie Hull, USA; Phyllis Posy, Israel</li> <li>This session has been developed by the International UV Association (IUVA) Educational Committee to disseminate information to the IWA member community about new and traditional UV solutions and UV disinfection technologies that can improve health and sanitation (SDG 6) cost-effectively.</li> <li>Speakers: Karl Linden, USA; Todd Elliot, USA; Erin Mackey, USA; Roberta Hofman, Netherlands; Hadas Mamane, Israel; Natalie Hull, USA; Phyllis Posy, Israel; Karlye Wong, Canada; Castine Bernardy, USA; Ted Mao, IUVA.</li> </ul>
Session 3 15:30 - 17:00	Coffee Break	15:00 - 15:30	
	Session 3	15:30 - 17:00	

Workshop

Room 718 A 5.8 REDESIGNING MENTORSHIP FOR CROSS-GENERATIONAL (#CROSSGEN) COLLABORATIONS

# Chair: Chelsea Hayward, Australia Co-chair: Yang Villa, Philippines

This session will launch the IWA mentorship program which aims to make IWA the gold standard for #crossgen collaboration in the water sector. In IWA, mentoring relationships have been sporadic and there has been limited YWP involvement in programmes and decision-making under the guidance of senior members. There is an opportunity to generate more mentoring relationships not only to upskill YWPs but also to further embed them into IWA's various working unit.

Speakers: Chelsea Hayward, Australia; Mr Yang Villa, Philippines; Tom Mollenkopf OR Kala Vairavamoorthy, IWA; Dr. Andre Taylor, Australia; Dr. Sudipti Arora, India; Ulrike Kelm. France

#### 3.4 POSITIONING WATER SCARCITY AT CENTRE **OF CLIMATE CHANGE**

Chair: Christian Juul, Denmark Co-chair: Ikechuckwu Okuzu, Nigeria

In many parts of the world fresh water access is effectively a privilege rather than a right. With this workshop we wish to contribute to the advancement of water access through improvement to water consumption. We aim to do this by equipping our workshop participants, from across the water sector, with solid communication strategies for educating major water consumers and distributors on proper water utilization. How are these to be identified, which messages do we need to get through and how do we communicate this? The workshop speakers will set the scene for the challenges at hand and provide insights about effective communication strategies

Speakers: Johnathon Sheets, USA; Ananda Tiwar, Finland; Dan Gerrity, USA; Miriam Hacker, USA; Cresten Mansfeldt, USA; Alex Chik, Canada; Rasha Maal-Bared, Canada; Scott Bessle, USA; Suzana Bohrerova, USA; Vanessa Maybruck, USA

Break	17:00 - 17:15	
Keynote Plenary	17:15 - 18:00	

Keynote: Taps and toilets in the time of change: A new era for water and sanitation regulation, Batsirai Majuru, Technical Officer, Water, Sanitation, Hygiene and Health Unit, WHO Panel Moderator Panellists:

Keynote Plenary

#### 09:00 - 09:45

**BUSINESS FORUM ROOM 1** 

#### 10:30 - 11:15 | GRUNDFOS

Empowering Water Futures: Are Public Private Partnerships the answer? Public Private Partnerships (PPPs) play a pivotal role in facilitating water access in developing nations, particularly in rural areas. In this context, PPPs offer a promising avenue to enhance small-town water systems. Drawing from Grundfos' expertise and insights summarised in a Hilton Foundation-commissioned feasibility study, this session will dive into the opportunities and challenges for PPPs. The session will concentrate on contention for constructions performed and advance the on strategies for constructing partnerships to ensure sustained impact and advance the water access agenda, while acknowledging the risks associated with small-town water schemes.

Anise Sacranie

#### 11:15 - 12:00 | XYLEM, INC.

#### Net Zero: The Race We All Win

Reducing the water sector's greenhouse gas (GHG) footprint is essential to delivering the world's decarbonization agenda. Lowering GHG emissions will also lessen the impact of climate change over time, alleviating the sector's adaptation burden. Innovative water utilities are showing that GHG emissions are a solvable problem and that data-driven approaches can drive meaningful progress, whatever the operational circumstances. Their experiences provide a blueprint for decarbonization. This session focuses on the experiences of water utilities as they have implemented their own decarbonization plans by setting realistic targets, optimizing existing assets, prioritizing capital planning, and planning for the future.

Adam Ryder, Stephanie Smith and guest speakers

#### 12:15 - 13:00 | ADVANCED DRAINAGE SYSTEMS

Creating resilient and sustainable communities through water management solutions Water is the world's most precious resource. As an industry leader, we are committed to protecting and managing water by providing sustainable water management solutions that safeguard the environment and build resilient communities. In this forum, we'll discuss the everchanging patterns of our climate, and how as an industry leader in water management, we're committed to helping prevent floods, recharging the aquifers. recharging aquifers, improving food security, and mitigating the risk of water scarcity, ensuring resilient and sustainable communities. We do this as one of the largest plastic recycling companies in North America, creating a circular economy and reducing our carbon footprint.

Brian King, EVP of Marketing, Sustainability and Product Management at Advanced Drainage Systems

#### 13:30 - 14:15 | IPEX INC.

#### Vortex Flow – The magical drop structure insert that dissipates energy and suppresses odors

Discover the innovative Vortex Flow, a drop structure insert designed to revolutionize sanitary and storm drops. This cutting-edge solution dissipates energy efficiently and supresses odors in sanitary drop structures, all without any moving parts or maintenance requirements. Our Sales Engineer, Alex Sandovski, will be presenting this ground-breaking technology. With his expertise, he'll guide you through the benefits and applications of Vortex Flow, demonstrating how it stands to transform the industry. Don't miss this opportunity to learn about this game-changing technology. Join us for an informative session on Vortex Flow.

Alex Sandovski – Sales Engineer, Municipal for IPEX Inc.

#### 14:15 - 15:00 | GOVERNMENT OF ONTARIO

Safeguarding Our Water: Cybersecurity Strategies for Protecting Critical Infrastructure Diego Ramirez, Manager, Cyber Intelligence Center (CIC) at Stratejm, a Bell Company

#### 15:45 - 16:30 | NETHERLANDS PAVILION: AQUATECH. HYDRALOOP. WATER4ALL

Aquatech, Hydraloop, Water4All Aquatech: World of Aquatech Hydraloop: Blueprint for a Circular Water Smart City

Water4All: Water4All, an EU Research & Innovation partnership developing solutions for

Government of the Netherlands Vision from the Netherlands.

Walter van der Schoot, Sr. Sales Consultant Aquatech Global Events; Melissa Lubitz B.Sc., CET, Director Business Development North America; Melissa Lubitz B.Sc., CET, Director Business Development North America; Meike van Ginneken

## 16:30 - 17:15 | BEIJING DRAINAGE GROUP CO. LTD.

Planning and Practice of Low-Carbon Development Plan of Beijing Drainage Group Co. Ltd.

Water In response to the goal of achieving carbon peak by 2030 and carbon neutral by 2060, Beijing Drainage Group CO.,LTD BDG is leading the low-carbon and green energy revolution with innovation and practicing. As an emission peak & carbon neutrality leader in wastewater treatment industry, BDG will achieve carbon neutrality ahead of schedule. In June 2021, To clarify the timetable and pathway of carbon neutrality, BDG released the "Beijing Drainage Group Carbon Neutrality Plan", which is the first enterprise-level carbon neutrality report in China's wastewater treatment industry.

#### BUSINESS FORUM ROOM 2

#### 10:30 - 11:15 | ITRON

Enhancing Water Utility Data Management with Temetra

Whater utilities face rising challenges from climate, aging infrastructure and limited resources. Learn how utilities of every size are using their data management platform to mitigate these challenges by harnessing the power of the data they collect. Itron solutions revolutionize water utility management, seamlessly integrating diverse metering devices compatible with AMR/AMI networks. Supporting multi-vendor, multi-commodity, Temetra ensures flexible and efficient data collection. Discover how Temetra is the ontimal choice regardless of your data collection iourney to deliver actionable. is the optimal choice regardless of your data collection journey to deliver actionable insights for achieving business outcomes. Sheila Kee, Sr Product Manager

11:15 - 12:00 | UK PAVILION

UK Innovations Driving Climate Adaptation in Water and Wastewater Management This UK business forum session hosted by British Water at the IWA WWCE 2024 will spotlight UK innovations and capabilities in water and wastewater management. Industry leaders from GHD, Water Research Centre (WRC), RSE, and Capgemini-UK will discuss how their organisations are actively employing innovative approaches and cutting-edge technologies to improve water and wastewater management, meet Net Zero targets, and ensure climate adaptation in the UK water sector and globally. John Hensman, UK Market Leader – Water GHD; Stephen Slessor, Chief Executive Officer RSE; Martin Crawford, Global Client Partner UK Water Sector Capgemini UK; Simon Ayley, Director of Strategic Growth Partnerships Water Research Centre (WRC)

#### 12:15 - 13:00 | VERIFIGLOBAL AND CSA GROUP

Market adoption of water technology solutions across multiple sectors This Panel Discussion will focus on the importance of stakeholder engagement, standardization, and technology performance verification in facilitating market adoption of water-related technology-based solutions across multiple sectors. The Panel will provide a broad perspective on how this approach is particularly relevant to innovative technology providers, early adopters, investors and enablers. Thomas Bruun, ETA-Danmark / VerifiGlob-al Michael Leering, CSA Group, Environ-ment

& Business Excellence Selection of two other panelists to be confirmed John Neate, VerifiGlobal (Moderator) Co-Managing Di-rector, VerifiGlobal, Canada

#### 13:30 - 14:15 | STELIS ENVIRONMENTAL SOLUTIONS

Revolutionizing Water Safety: Introducing ColiMinder for Rapid Pathogen Detection Dr. Saad Jasim, Director of Science and Technology

#### 14:15 - 15:00 | HETEK SOLUTIONS INC.

Distribution Network Monitoring using Acoustic Loggers As water scarcity becomes increasingly critical, municipalities seek effective ways to minimize water losses. Acoustic loggers actively survey pipelines, detecting leaks by analyzing sound waves. Unlike traditional methods, acoustic loggers provide several advantages: Data Variety: They capture sound frequency and leak probability warnings. Consistent Data Delivery: Information is relayed consistently without interpretation. Easy Sharing: Sound files can be effortlessly shared. Zero Marginal Cost: Data acquisition is cost-effective. Remote Analysis: Data can be collected and analyzed remotely. By integrating acoustic loggers into water loss management strategies, municipalities can the source of the source proactively identify and repair leaks in an affordable and efficient manner. Ashwin Mohan, P.Eng, Manager and Project Engineer

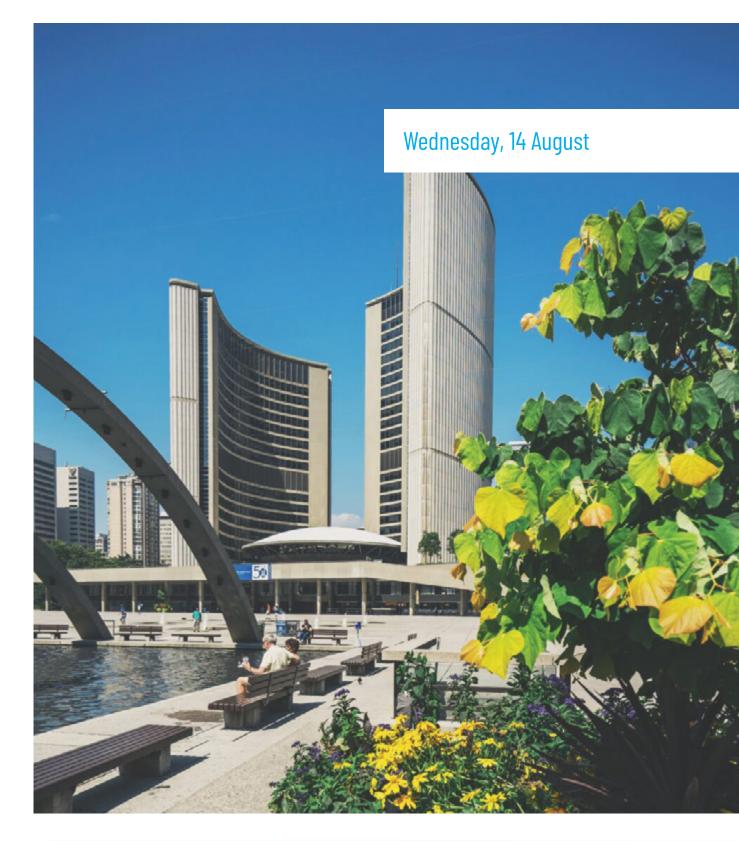
#### 15:45 - 16:30 | QMC METERING SOLUTIONS

How Wireless Water Metering and IoT Solutions Reduce Water Loss in the Built Environment

Innovations in wireless communications are rapidly being integrated into the utility metering industry for residential, commercial, and industrial applications. New cellular technologies like LTE-M and long range radio systems like LORAWAN are enabling water meters to be remotely monitored at very low costs. This enables commercial, institutional and residential property managers to meter suites, buildings and factories efficiently, and to meter applications that were previously not cost effective. The systems are also increasing the amount of interval data available to utilities, properties and consumers, which is advantageous for utility use reduction, energy management, leak detection. Mike Easton

#### 16:30 - 17:15 | CANADIAN WATER AND WASTEWATER ASSOCIATION

As the Canada Pavilion and co-hosts, we hope to be able to feature a number of our Canadian Exhibitors in short 15 minute presentations. I would hope for one 45 min session each day for the Canada Pavilion. We are very flexible on time slots available. Each session will feature 3 presenters (15 mins each) from amongst our exhibitors in the Canada Pavilion



#### Track 1 WATER UTILITY MANAGEMENT

#### Track 2

WASTEWATER TREATMENT AND RESOURCE RECOVERY

#### Frack 3

DRINKING WATER AND POTABLE REUSE

#### Track 4

CITY-SCALE PLANNING AND OPERATIONS

#### rack 5

COMMUNITIES, COMMUNICATION AND PARTNERSHIPS

#### Track 6

WATER RESOURCES AND LARGE-SCALE WATER MANAGEMENT



# Wednesday | Programme

Keynote Plenary	09:00 - 09:45			
	er solutions for climate resilience, Saroj Kumar Jha, s of water and beyond, Henk Ovink, Executive Direc		; Water Global Practice, World Bank Group er, Global Commission on the Economics of Water, USA	
Coffee Break	09:45 - 10:30			
Session 1	10:30 - 12:00			
The 6th Emerging Water pivotal contributions of digital era. These discuss Al and digital solutions i and future water challer a major role in this proc YWPs to connect globall	EADERS FORUM – SESSION 1 r Leaders Forum (EWL Forum) will emphasise the both young and seasoned professionals in this sions will centre on how to effectively integrate nto traditional water management practices to mee rges, and how Young Water Professionals (YWPs) car ess. In addition, the Forum will create an open platfor y and share professional experiences. spter of the Year, Chapter Updates & Keynote	n play	<ul> <li>4.9: TRANSFORMING SOUTHERN CALIFORNIA: THE ONE WATER METAMORPHOSIS</li> <li>Chair: Paul Brown, USA Co-chair: Zakir Hiran, USA</li> <li>Roundtable summit of decision-makers and industry professionals to discuss world's largest implementations of One Water concepts in an urban megacity</li> <li>Speakers: Shane Trussell, USA; Douglas Owen, USA; Heather Collins, USA; John Bednarski, USA; David Pettijohn, USA; Shivaji Deshmukh, USA</li> </ul>	
Lunch	12:00 - 13:30			
Session 2	13:30 - 15:00			
	EADERS FORUM – SESSION 2	Room 801 A <b>Forum</b>	UTILITY LEADERS FORUM – SESSION 3 Utility breakthroughs on Climate Adaptation	Room 801 B Forum
<ul> <li>pivotal contributions of both young and seasoned professionals in this digital era. These discussions will centre on how to effectively integrate AI and digital solutions into traditional water management practices to meet present and future water challenges, and how Young Water Professionals (YWPs) can play a major role in this process. In addition, the Forum will create an open platform for YWPs to connect globally and share professional experiences.</li> <li>Is digitalisation creating career opportunities for YWP? if so, how?</li> <li>Panel Discussion: Jackie Fortin Flefil, Xylem, United States; Marina Batalini de Macedo, IWA Digital Water Steering Committee/IWA &amp; Grundfos Youth Fellow, Brazil; Krisztian Mark Balla, Grundfos/IWA &amp; Grundfos Youth Fellow, Brazil; Braimah, Ghana Water Limited, Ghana; Paul Chuo, Stantec, Chinese Taipei</li> </ul>		<ul> <li>Chair: Simon Parsons, Director of Environment, Scottish Water; Peter Nicol, Canada</li> <li>The Utility Leaders Forum (ULF) is a unique opportunity for those tasked with managing utilities to exchange views, network and to access the insights of prominent water utility leaders in a setting that is by utility leaders for utility leaders.</li> <li>Over the course of two days, the Forum will bring together some of the world's most prominent water utility leaders with the most impactful case studies to share experiences and knowledge. Curated by an international committee of experienced utility practitioners, the forum is structured to facilitate an open and interactive dialogue around some of the most critical issues facing utilities. Active delegate participation will be key.</li> <li>Igniting talks: Alex Plant, CEO, Scottish Water; Iman Hashemi, President &amp; CEO, Ontario Clean Water Agency, Canada; Debashree Mukherjee IAS, Secretary of the Ministry of Jal Shakti (Water), India</li> <li>Panel discussion with audience facilitated by the Chairs</li> </ul>		
Coffee Break	15:00 - 15:30			
Session 3	15:30 - 17:00			
EMERGING WATER LEADERS FORUM – SESSION 3       Room 801 A         The 6th Emerging Water Leaders Forum (EWL Forum) will emphasise the pivotal contributions of both young and seasoned professionals in this digital era. These discussions will centre on how to effectively integrate       Al and digital solutions into traditional water management practices to meet present and future water challenges, and how Young Water Professionals (YWPs) can play a major role in this process. In addition, the Forum will create an open platform for YWPs to connect globally and share professional experiences.         Empowering Young Water Professionals for a Sustainable Digital Future Workshop:         Preparing for the Digital Age: Essential Skills and Experiences         Lead discussion: Maria Elisa Costa, ANA, Brazil         Integrating Data and Al in the Water Sector: Identifying Disruptions and Innovations         Lead discussion: Dongjian Xu, IWA Digital Water Programme China Subgroup, China         Bridging Generational Gaps: Leveraging Al and Data for Collaborative Solutions         Evaluating Al and Data: Pros and Cons from a Young Professional's Perspective         Fostering Equity: Using Al and Data to Reduce Disparities Among Water Sector		UTILITY LEADERS FORUM – SESSION 4 Final Closing Discussion with Review Panel Chair: Jonathan Clement, Chair ULF Co-chair: Nancy Kodousek Short Reactions: Sangeeta Chopra, Director of Innovations, Process Optimization and Technica Services, OCWA Canada; Jennifer Crosby, Director, Project Management Offic Vancouver, Canada; Vicki Campbell, Director, Water Treatment Plants, EPCOF Tom Mollenkopf, Chairman, Gippsland Water, Australia; Nerina di Lorenzo, M Director, Melbourne Water, Australia; Daniel Duchniak, General Manager, Wa Water Utility, USA; Rob van Dongen, Managing Director, Brabant Water, Netl Chris Rockey, Head of Water Quality, Southwest Water, England	ce, Metro R Canada; Nanaging aukesha	
Break	17:00 - 17:15			
Keynote Plenary	17:15 - 18:00			
	l <b>ogy and water, Farokh Kakar</b> , Environmental Engine Nørgaard Friis Panellists: Marina Jimenez Galindo, A			

### Keynote Plenary

### 09:00 - 09:45

Keynote: Financing water solutions for climate resilience, Saroj Kumar Jha, Global Director, Water Global Practice, World Bank Group Keynote: The economics of water and beyond, Henk Ovink, Executive Director, Commissioner, Global Commission on the Economics of Water, USA

Room 803 A

Session

Coffee Break	09:45 - 10:30
Session 1	10:30 - 12:00

SO 7. GOVERNANCE MODELS ADDRESSING INDIGENOUS COMMUNITIES' NEEDS FOR SUSTAINABLE AND AFFORDABLE WATER SUPPLY AND SANITATION SERVICES – SESSION 1

Co-chair: Robert Bos, Switzerland; Marion Savill, New Zealand

The "Leaving no one behind" motto of the Sustainable Development Goals highlights marginalized groups who lack access to essential services, are under-represented in decision-making, and suffer disproportionately from such marginalization. Indigenous peoples are a key group left behind in terms of access to clean drinking water and adequate sanitation. The United Nations estimates over 370 million indigenous persons across 70 countries. Despite their marginalized status, indigenous communities posses valuable knowledge for sustainable water and sanitation systems. New initiatives now address this issue through participatory governance models based on human rights and sustainability. This session will present examples from Australia, Canada, and New Zealand, followed by an interactive discussion on adapting these initiatives to meet context-specific needs and scaling them up.

Speakers: Curtis Bergeron, Canada; Nova Scotia, Canada; Melanie Debassige, Canada; Brendon Green, New Zealand; Adam Lovell, Australia

### **1.3 DIGITAL LEAK DETECTION**

Chair: Adesola Adedugbe, Nigeria

AGS's Journey Through The Implementation Of A Performance Based Agreement In Romania To Reduce Non-revenue Water, Rui Malheiro, *Portugal* 

Artificial Intelligence Models For Prioritizing Active Leak Detection Activities - The Case Of A Water Utility In Southwest Asia, André Arsénio, Portugal

Room 803 B

**Technical** 

Repair Leaks ASAP - Digital Tool Focused On The Strategy To Reduce Non-Revenue Water In Porto, Ricardo Ferreira, Portugal

Cloud-enhanced Pressure Management: A Digital Solution Towards Resilient Water Networks, Krisztian Mark Balla, *Denmark* 

Lunch	12:00 - 13:30			
Session 2	13:30 - 15:00			
			2.19 MEMBRANE APPLICATIONS IN WASTEWATER MANAGEMENT - SESSION 1	Room 803 <b>Technic</b>
			Chair: Glen Daigger, United States	
			Boosting Water Efficiency Of Reverse Osmosis Desalination Using A Sr Controller, Loreen Villacorte, Denmark	mart Brine
			Visible Light Guided Cleaning Of Membranes To Mitigate Fouling In W Wastewater Treatment, Pritam Das, UK	ater And
			Understanding Rejection Mechanisms Of Trace Organic Contaminants Membranes Via Data-Knowledge Co-Driven Machine Learning, Ruobir	
			3D Printed Membranes For Water And Wastewater Treatment, Cejna Denmark	Anna Quist-Jense
			POSTERS	
			Direct Membrane Filtration Of Municipal Wastewater Assisted By A To Coagulant For An Energy-efficient Water Resource Recovery Facility, E Brazil	
Coffee Break	15:00 - 15:30			
Session 3	15:30 - 17:00	_		
	REATMENT TO RECOVERY - STEWATER AS A NET ENERGY PRODUCER	Room 803 A <b>Workshop</b>	2.20 MEMBRANE APPLICATIONS IN WASTEWATER MANAGEMENT - SESSION 2	Room 80 <b>Techni</b>
Chair: Catherine Mull			Chair: Martha Dagnew, Canada	
Co-chair: Satinder Ka	ur Brar, Conodo : in water-energy nexus (WEN) is crucial to sustainabili	ty but the	Turning Waste Into Resources: Ammonia Recovery From Wastewater Membrane Electrodialysis, Sebastien Allard, Australia	With Bipolar
methodological requir challenging. This work	ements to support decision-making in an integrated p shop will bring together academic researchers and col I Indigenous community partners, to develop an innov	aradigm are llaborators,	Performance Enhancement Of Spiral-wound Reverse Osmosis Membr Novel Diagonal-flow Feed Channels, Weichen Lin, <i>China</i>	ane Elements Wi
modeling framework	to generate fundamental and applied WEN knowledge decision-making in WEN. Benefits internationally will	to	Predicting Densification Index SVI With Design Curve From Datasets ( scale Membrane Systems, Hui Guo, Canada	Correlations Of F
improved water qualit	y-efficient and sustainable technologies for wastewate y, emission reductions, and energy generation.		Lowering Microfiltration Membrane Fouling Through Real-time Online Removal Colloidal Particles, Ganesh Rajagopalan, United States	e Monitoring And
Speakers: Catherine N Brar	Aulligan, Canada; Raj Chavan; Tanush Wadhawan; Satin	nder Kaur	POSTERS	
			Effects Of High Salinity On The Antifouling Performance Of Reverse Os Membrane Modified By Hydrophilic Polymer, Xuesong Li, China	smosis (RO)
			Research On The Preparation And Anti-fouling Performance Of Activa Conductive Microfiltration Membrane, <u>Zhen Lei, China</u>	ted Carbon-based
Break	17:00 - 17:15			

Keynote Plenary	09:00 - 09:45			
	solutions for climate resilience, Saroj Kumar Jha, o of water and beyond, Henk Ovink, Executive Directo		r, Water Global Practice, World Bank Group ner, Global Commission on the Economics of Water, USA	
Coffee Break	09:45 - 10:30			
Session 1	10:30 - 12:00			
SUSTAINABLE DEVELC WATER SAVING, REUS Chair: Jenny Åström, Swei Improving Sustainable And Systems, Zi Zhang, Hong K Making Water Reuse A Rei Bay Area (California) Utilit Sponge Cities; A New Strat Spatial-temporal Analysis Metropolises South Of The POSTERS The Management Of Urba	d Resilient Coastal Cities By Integrating Seawater Int ong, China ality: Strategies For Forging Utility Partnerships, Sar ies Collaborate To Reuse Water, Eric Rosenblum, US tegy In Water Resources Management, Hossein Rad Of Human Access To Green And Blue Infrastructure e Equator, Deyvid Rosa, Brazil In Storm Water At Block-level (MUST-B): A New App	n Francisco A I <mark>mand, <i>Iran</i> In Two</mark>	2.29 MICRO PLASTICS IN WASTEWATER TREATMENT Chair: Thammarat Koottatep, Thailand Role Of Permeable Pavement System In Mitigating Microplastics From Urban Jiwon Kong, Republic of Korea Marine Plastics Biodegradation Leveraging The Role Of Petroleum-degrading Yiqi Cao, Canada Microplastic Fibers Deteriorate The Dewaterability Of Activated Sludge By Alt Properties, Jing Sun, China Determination Of Optimum Polymer Dose To Maximize Microplastics Remove Sludge Dewatering, Mary Jislin, Canada POSTERS Seasonal Variation Of Microplastics In WWTP Sludges: A Case Study In Ottaw Nimitha Choran, Canada	Bacteria, tering Floc al During
Ganbaata Khurelbaatar, G	ecentralized Storm Water Management Systems, iermany euse Of Beverage Facility Wastewater, <mark>Craig Duvall</mark> ,	Canada		
Lunch	12:00 - 13:30			
Session 2	13:30 - 15:00			
AND WATER INFRASTI Chair: Dr Stephanie Gora, Co-chair: Stephanie Guilh		Room 701 A <b>Workshop</b>	2.30 MICROPOLLUTANTS IN WASTEWATER TREATMENT Chair: Faisal Hai, Australia Amazing Co-metabolic Abilities Of Aerobic Ammonia Oxidizers For Organic Micropollutant Removal In WWTPs, Qingxian Su, China	Room 701 B <b>Technical</b>
Northerners from differen to drinking water in Arctic regions, the known and lik Arctic communities, and h of technical and policy sol sustainable over time.	Arctic regions with different skills and experience: communities to learn about current practices in di rely future impacts of climate change on water man ow different stakeholders can contribute to the dev utions to these challenges that are inclusive, effecti anada; Bing Chen, Canada; Caroline Duncan, Canad	s related fferent agement in velopment ve, and	Complete Cometabolic Removal Of 1,4-Dioxane In Biologically Active Filtratic Indirect Potable Reuse, Hannah Stohr, United States Micropollutant Biotransformation Rates In Conventional Activated Sludge Sys Julian Munoz Sierra, Netherlands Micropollutant Elimination With Combined Ozonation And GAC-Filtration Us From Electrolysis, Johanna Walther, Germany POSTERS Mixed Liquor Ozonation On WWTP As A Complementary Barrier For Micropol Removal In Potable Reuse, Mathieu Delahaye, France	stems, ing Oxygen
Coffee Break	15:00 - 15:30			
Session 3	15:30 - 17:00			
TRANSFORMING WAT Chair: Craig Miller, USA Co-chair: Heather Dyer, U California hydrologic cond historic flooding—climate challenges, including wate growth. It assesses Califor Water is fundamentally a partnerships, yet in Califor		s pressing lation ance. ing and	2.2 MICROPLASTICS IN WASTEWATER AND BIOSOLIDS Chair: Banu Ormeci, Canada Co-chair: Dilek Sanin, Turkey Approximately 350 million tons of plastic were produced globally in 2017 alo increased production rate and limited recycle rate have led to the accumulat plastics in the environment, which are known to have adverse environmenta impacts. One of the main pathways of microplastics is wastewater treatment Determining the quantities and fate of microplastics in wastewater treatment an important step in understanding their behavior and impact not only durin but also after land application and other beneficial uses of sludge. Th	ion of I and health plants. It plants is g treatment uence the

 Break
 17:00 - 17:15

 Keynote Plenary
 17:15 - 18:00

Keynote: Youth, technology and water, Farokh Kakar, Environmental Engineer, Brown and Caldwell Consultants Panel Moderator: Astrid Nørgaard Friis Panellists: Marina Jimenez Galindo, Abishek Narayan, Sabrina Rashid Sheonty, Saba Daneshgar

Keynote Plenary	09:00 - 09:45			
	er solutions for climate resilience, Saroj Kumar Jha, ss of water and beyond, Henk Ovink, <i>Executive Direc</i>		; Water Global Practice, World Bank Group ner, Global Commission on the Economics of Water, USA	
Coffee Break	09:45 - 10:30			
Session 1	10:30 - 12:00			
Chair: Joe Dalton, Irelat The Multiple Benefits O Review Of Best Practice Repairing A 110-year Ol Island WTP, Allan Choi, High Risk Cluster Select Year Case Study With R Machine Learning Appli Mains, Mohamed Ahme POSTERS Development Of An Unr Sewer Pipes By A Robot Japan Applied Research For M	of Asset Management For Pipelines – Global Case Stu s, Mike Wrigglesworth, <i>Canada</i> Id Treated Water Tunnel Below Lake Ontario For The <i>Canada</i> ion For Pipeline Replacement And Renewal Planning aleigh NC, Thomas Chen, <i>United States</i> ication For Prioritising Replacement Of Urban Infrast	Toronto — A Multi- ructure raning Of Motoyoshi,	<ul> <li>1.3 FROM DATA TO DECISION MAKING, AND BACK – DIGITAL TRANSFORMATION AND AI FOR THE RESILIENT WATER SECTOR</li> <li>Chair: Ina Vertommen, Netherlands</li> <li>Co-chair: Suze van der Meulen, Netherlands</li> <li>In today's information era, the water sector is generating an ever-growing am of data. The questions that now arise are: do we actually have the data we ne informed decision-making? Or should we focus on improving how to collect d can we integrate data with each other? And finally, how can we overcome the information-poor paradox afflicting the water industry?</li> <li>Speakers: Riccardo Taormina, Netherlands; Pilar Conejos, Spain; Dragan Savio Netherlands; Alex van der Helm, Netherlands</li> </ul>	eed for lata? How e data-rich/
Lunch	12:00 - 13:30			
Session 2	13:30 - 15:00			
1.2 BE THE LEAD IN THE IQALUIT WATER Chair: Michelle Albert,		Room 703 <b>Workshop</b>	1.28 DIGITALISATION OF THE WATER SECTOR: CHALLENGES AND OPPORTUNITIES Chair: Harsha Ratnaweera, Norway	Room 705 <b>Workshop</b>
Co-chair: Angus English	n, Canada		Co-chair: Arthur Guischet, Germany	
including uncovering th consumer confidence, a the water treatment pla investigation start? Wha landscape?	he on-the-ground investigation into the Iqaluit Wate e mysteries of the Void, addressing the severely erod and implementing critical repairs and upgrades to rei ant back into safe and sustainable facility. Where do at do you find? How will you navigate the complex st an, <i>Canada</i> ; Justin Rak-Banville, <i>Canada</i> ; Dr. Charles of	ded nstate you start akeholder	The water sector is undergoing rapid digitalisation. It provides enormous opp not only to the industrial countries but also to the developing world. Real-tim quality monitoring, advanced process surveillance and control, and more con and user-friendly access to water services data for managers, operators, engi and the general public have become much more accessible than costly and or technologies. It also provides a better foundation for decision-makers to get to the limited resources. IoTs, advanced modelling tools and SCADA systems are more affordable and integrated in innovations in the water sector. <b>Speakers:</b> Ramon Vilanova, <i>Spain</i> ; Patrick Willems, <i>Belgium</i> ; Elena Nikolaou, O Ismail Koyuncu, <i>Turkey</i> ; Zakhar Maletskyi, <i>Norway</i>	ne water nprehensive neers utdated more out of becoming
Coffee Break	15:00 - 15:30			
Session 3	15:30 - 17:00			
Chair: Blanca Antizar, L Co-chair: Elvira Serra, L The goal of this session partnerships and coope create new partnership innovation, and knowle uptake. Speakers: Luz Herrero, : Natalia Laguyas, USA; N Jo Burgess, South Africa	JK is to compile lessons learned and best practices from ration in and beyond the water sector. We will discur s, identify the main barriers and enablers for the add dge gaps in the journey from concept development t Spain; Feliu Sempere Nacher, Spain; Yang Villa, Philip fatti Reinikainen, Finland; Doug Aitken, Chile; a	ss how to option of to market	<ul> <li>1.4 DIGITAL MAINTENANCE APPROACHES</li> <li>Chair: Francisco Javier Fernandez, Spain</li> <li>Automated Estimation Of Pump Characteristics And Their Use Within Engineer Operations, And Maintenance, Marcelo Cusacovich, United States</li> <li>Research On The Utilization Of Sensing Technologies For The Maintenance Ar Management Of Water Supply Facilities, Motohiro Kobayashi, Japan</li> <li>Machine Learning To Support The Monitoring And Optimisation Of Pumping S Processes, Rita Lourinho, Portugal</li> <li>Intelligent Pumps Support Decarbonization In Wastewater Pumping, Stephan United Kingdom</li> <li>POSTERS</li> <li>Wastewater Network Age Prediction For Critical Assets Identification Using M Learning Algorithm Gradient Boosting, Ricardo Ferreira, Portugal</li> <li>LEAKman: A Danish Demonstration Platform For Integrated Leakage Manager Solutions, Gitte Marlene Jansen, Denmark</li> </ul>	nd Stations ie Smith, lachine
Break	17:00 - 17:15			
Keynote Plenary	17:15 - 18:00			

Keynote: Youth, technology and water, Farokh Kakar, Environmental Engineer, Brown and Caldwell Consultants Panel Moderator: Astrid Nørgaard Friis Panellists: Marina Jimenez Galindo, Abishek Narayan, Sabrina Rashid Sheonty, Saba Daneshgar

Keynote Plenary	09:00 - 09:45			
Keynote: Financing wate	er solutions for climate resilience, Saroj Kumar Jha, of water and beyond, Henk Ovink, Executive Direct		; Water Global Practice, World Bank Group er, Global Commission on the Economics of Water, USA	
Coffee Break	09:45 - 10:30			
Session 1	10:30 - 12:00			
Chair: Paul Jeffrey, Unite Ultrafiltration And Rever City Water Reclamation I Evaluation Of Pathogenic For Hydroponic Irrigatior United States National Water Regulatic Symbiosis In Kalundborg	se Osmosis Testing On Tertiary Wastewater At San D Plant, Susan Guibert, <i>United States</i> : Bacteria In A Pilot-Scale Wastewater Treatment Sys In Controlled Environment Agriculture, Welllington	tem Arthur, ndustrial	1.18 IWA CLUSTER WASTEWATER-BASED EPIDEMIOLOGICAL SURVEILLANCE   PUBLIC HEALTH VALUE FROM WASTEWATER DATA Chair: Kate Medlicott Co-chir: Gertjan Medema, Netherlands The COVID-19 pandemic has boosted wastewater testing for information abou health in communities from city to building scale. And wastewater surveillance from polio and COVID-19 to other infectious diseases, antimicrobial resistance health indicators. Wastewater-based epidemiological surveillance is an interse activity, where the water sector can mine information for the public health see Therefore, both sectors need to be well connected; the water sector can play active role in demonstrating what information can be mined from wastewater, the public health sector needs to identify the most pressing needs and added wastewater testing for public health data. Speakers: Prof. Gertjan Medema, Netherlands; Kate Medlicott, WHO; Amy Kirl Thailand CDC; Ottawa Public Health, Canada	eevolved and other ectoral ctor. a pro- ; while values of
Lunch	12:00 - 13:30			
Session 2	13:30 - 15:00			
Effluent Treatment Plant To Assess The Impact Of Ff Water And Sanitation Low Income Areas In Nai Digital Approach For Enh Utilities, Rodrigo Pereira DREAM - Data For Reeng Of Operational Data To C Mathieu Delahaye, Franc POSTERS +45 Years Of Reliable Op	ermany Solutions For Operational Efficiency Improvement O s At Industrial Parks In Vietnam, Viet-Anh Nguyen, V Social Connection Policy And Output Based Aid To T Among Communities Residing In The Informal Settle robi Kenya, Victor Oruko, Kenya Jancing Performance In Workforce Management In V Brazil ineering And Evaluation Of Algorithms And Models: Optimize A Design Tool For Wastewater Treatment Sy	ietnam he Access ments And Vater Mining stems,	<ul> <li>4.12 NATURE-BASED SOLUTIONS - SESSION 1: PARTNERING WITH NATURE FROM SOURCE TO TAP AND BACK - CASE STUDIES OF NBS IN WATER MANAGEMENT FROM RURAL CATCHMENTS TO URBAN APPLICATIONS</li> <li>Chair: Anacleto Rizzo, IRIDRA; Chair, IWA NbS Working Group Co-chair: Nancy Lilly, TNC</li> <li>Speakers: Anacleto Rizzo, Italy; Maria Wirth, Austria; Oscar Alvarado, The Netl Sylvie Spraakman, Canada; Chris Gerrard, UK; Pedro Carvalho, Denmark; Tony Australia; Nancy Lilly, USA</li> </ul>	
Coffee Break	15:00 - 15:30			
Session 3	15:30 - 17:00			
REUSE INNOVATION: Chair: Jennifer Khemai, Co-chair: Linda Li, Canac Join our expert panel for water reuse practices for areas of expertise includ non-potable reuse. This goes beyond the issue of development, nutrient m	Canada fa an interactive and engaging session as they highligh r residential, institutional, and industrial application: e governance framework, utilities, industrial, and pc session will explore the urgent need for global water water scarcity, such as environmental impacts, sust nanagement, and more. r, WRF; Charles Bott, HRSD; Melanee Short, Sanofi P	s. Panelist otable and r reuse that ainable	<ul> <li>1.15 TOWARDS UNIFIED GLOBAL ASSESSMENT OF DISEASE: STANDARDS FOR WASTEWATER SURVEILLANCE</li> <li>Chair: Dr Ishi Keenum, USA Co-chair: Nancy Lin, USA</li> <li>Standards to support wastewater based surveillance (WBS) are needed to incr confidence in and improve comparability of results in order to inform decision related to public health and safety. Although the COVID-19 pandemic led to sig and rapid improvements in WBS, challenges remain. In this session, we will co leading voices in this global field to discuss emerging and ongoing measureme data quality challenges in WBS and efforts toward standards and controls to a them. The session is expected to derive a clear direction where WBS measuren improvement and standards are still needed. This session output will be applic to WBS programs globally, informative for standards development efforts, and disseminated via a peer-reviewed viewpoint article.</li> <li>Speakers: Alex Ho Shing Chik, Canada; Bernd Manfred Gaelic; Nishita DSouza,</li> </ul>	n-making gnificant invene ent and ddress ment cable I
Break	17:00 - 17:15			
Keynote Plenary	17:15 - 18:00			
Keynote: Youth, technol	ogy and water, Farokh Kakar, Environmental Engine Nørgaard Friis Panellists: Marina Jimenez Galindo, A			

Keynote Plenary	09:00 - 09:45				
	r solutions for climate resilience, Saroj Kumar Jha, of water and beyond, Henk Ovink, Executive Direct		; Water Global Practice, World Bank Group er, Global Commission on the Economics of Water, USA		
Coffee Break	09:45 - 10:30				
Session 1	10:30 - 12:00				
3.5 OCCURRENCE AN CONTAMINANTS - SE	D REMOVAL OF EMERGING SSION 2	Room 711 <b>Technical</b>	3.12 DISINFECTION METHODS Chair: Marjolein Vanoppen, UGent	Room 713 <b>Technical</b>	
Chair: Martin Rygaard, D		and a d	Monitoring And Control Of Peracetic Acid In Water Disinfection Applications, Vadim Malkov, USA		
	val In Drinking Water Treatment Using Granular Acti eneration And Destruction, Martin Van Veggel, Neth		Disinfectant Persistence At The Building Point Of Entry As A Risk Factor For Le	gionella	
Impact Of Different Pollu Ecosystems, Sheena Kum	tion Sources On Plastisphere Microbiome In Aquatic ari, <i>South Africa</i>	:	Growth, Krystin Kadonsky, USA Illuminating Alternative UV Dosing Strategies, Appana Lok, Canada		
	hange Resins: A Novel Approach For Simultaneous F NOM) And Per- And Poly-fluoroalkyl Substances (PFA rro, <i>Canada</i>		Peroxide Disinfection Of Vesicle-Cloaked Murine Norovirus Clusters: Vesicle N Protect Viruses From Inactivation, Zhenzhen He, USA	lembranes	
Long-term Changes In Th Processes, Yoshifumi Nak POSTERS	e Removal Of Perfluoroalkyl Substances By Activated azawa, Japan	d Carbon	POSTERS AMOZONE Kinetic Model For Design And Optimization Of AOPs For Drinking V Production, Pieter Vlasschaert, Belgium	Vater	
Exploring Geospatial Envi On Caffeine Occurrences	ironmental Analysis With Large Language Models: A In Global Water Bodies, Qiao Kang, Canada t Water Crisis, Ian Moran, Canada	Case Study	Physiological And Transcriptional Responses Of Legionella Pneumophila To Re Oxygen Species And Their Implications To Water Treatment, Li Qian, USA	active	
Lunch	12:00 - 13:30				
Session 2	13:30 - 15:00				
3.6 OCCURRENCE AN CONTAMINANTS - SE	D REMOVAL OF EMERGING SSION 3	Room 711 <b>Technical</b>	3.13 DISINFECTION BY-PRODUCTS	Room 713 <b>Technical</b>	
Chair: Manuel Kofi Tetteh, Ghana			Chair: Mark T. Ayertey, Ghana Alternative Water Sources: How To Deal With The Organics?, Marjolein Vanor	open,	
Does Lake Stratification A Harbor Water?, Behman	Affect The Vertical Distribution Of Microplastics In Ha Nayebi, <i>Canada</i>	amilton	Belgium N-nitrosodimethylamine Formation During Oxidation Of N,N-dimethylhydrazine		
Microplastics Enhanced V Public Health, Ahmad Am	/irus Transport In Saturated Porous Media: A New Co neen, <i>Austria</i>	oncern For	Compounds By Peroxymonosulfate, Linlu Shen, China		
Profile Of Microplastics In	n Water For Human Consumption By Micro-FTIR: Lis	bon Case	How Does Viewing DBPs Through The Lens Of Hazard Index Change Our Persp Risk Minimisation?, Bruce Jefferson, UK	ective On	
	licroplastics And Tyre Residues In The Toulon Bay Ar	ea (France),	Trihalomethane And Haloacetic Acid Species Prediction In Drinking Water, Arumugam Sathasivan, Australia		
Marie-Pierre Denieul, Fro POSTERS	ince		POSTERS Understanding The Chemistry Of Brominated Disinfection By-Product Formation, Polly Grundy, UK		
	f North Portugal, Jose Fernandez, Portugal				
	bial Resistance Surveillance In Wastewater: A Comp Metagenomics Approaches, Margaret Knight, Unite		Seawater Intrusion Into The Drinking Water Sources: Impact On Formation Of Disinfection Byproducts In Drinking Water, Shakhawat Chowdhury, Saudi Arat		
Coffee Break	15:00 - 15:30				
Session 3	15:30 - 17:00				
3.10 INTERMITTENT S AND OPTIMISATION	SUPPLY SYSTEM CHALLENGES	Room 711 <b>Technical</b>	6.2 IT AIN'T EASY BEING GREEN – HOW MUNICIPALITIES ACROSS CANADA ARE IMPLEMENTING GREEN STORMWATER INFRASTRUCTURE	Room 713 <b>Workshop</b>	
Chair: Raziyeh Farmani,		unalis la	Chair: Sylvie Spraakman, Canada		
Gujarat Suggest New Mo Canada	nient: User's Experiences With Rural Piped Water So del For Estimating Water Consumption, Florence Ud	lenby,	Co-chair: Kristina Hausmanis, Conodo How do you start a green infrastructure program? How do you work green infrastructure into existing bureaucracies for managing utilities and streets? How do we design these		
Harnessing Smart Meters Water Supply (IWS), Mat	To Investigate Household Water Usage Under Inter the MacRorie, UK	mittent	systems, and decide where green infrastructure should be placed? How do w green infrastructure over the long term?		
	ittent Water Supply, Dewi Rogers, <i>Italy</i> I Python Package For SWMM-based Modelling Of In eem, Canada	termittent	Speakers: Dr Sylvie Spraakman, Kristina Hausmanis, Bert Van Duin, Helen Langille, Aaron Ward, <i>Canada</i>		
	f Intermittent And Continuously Operated Drinking V dwater, Hemant Arora, Canada	Nater			
	ter Consumption In San Pedro Garza García, Mexico:	A Case			
Break	17:00 - 17:15				
Keynote Plenary	17:15 - 18:00				

Keynote: Youth, technology and water, Farokh Kakar, Environmental Engineer, Brown and Caldwell Consultants Panel Moderator: Astrid Nørgaard Friis Panellists: Marina Jimenez Galindo, Abishek Narayan, Sabrina Rashid Sheonty, Saba Daneshgar

Keynote Plenary	note Plenary 09:00 - 09:45					
	er solutions for climate resilience, Saroj Kumar Jha, s of water and beyond, Henk Ovink, Executive Direct		; Water Global Practice, World Bank Group er, Global Commission on the Economics of Water, USA			
Coffee Break	09:45 - 10:30					
Session 1	10:30 - 12:00					
5.1 COLLABORATION COMMUNICATION -	I, CAPACITY BUILDING AND SESSION 1	Room 714 <b>Technical</b>	SO.3 ENHANCING URBAN SANITATION: APPLICABLE CWIS FRAMEWORK CONSULTATION	Room 715 A <b>Session</b>		
Chair: Victor-Lucian Cro			The session will commence with two keynotes showing where the sector star concerning the definition of a CWIS Framework. A video will then show the s			
	lity Forecasting System, Liza Ballantyne, Canada ment For Innovative Water Systems: Water Reuse In ISA	The United	example of a utility, MAWASCO, based in Malindi (Kenya), planning for and in a CWIS approach in its city. Participants will then, in groups, respond to the questions: 1) What are the th	nplementing		
	ry Work Activities To Enhance Credible, Salient And I olinary Research Projects, Lisa Andrews, Netherlands		successful factors that help local authorities and utilities to implement a CWI 2) What are the three most important challenges that local authorities and u	S approach?		
Water-Energy-Food-Ecos	system Nexus: How To Frame And How To Govern? Ir on In The Lielupe And Nestos-Mesta River Basin, Car	sights	face in implementing a CWIS approach? 3) What examples or stories of interor CWIS implementation can you provide? The results of the working groups will presented and discussed in plenary, followed by a conclusion of the highlight workshop and suggested next steps.	ll then be		
	e Water Resources Planning In England And Wales, A	li Leonard,				
	ırs, Influencers And TikTok - Young People As The Tar ards Water Management, Leena Mikkonen-Young, Fi					
Lunch	12:00 - 13:30					
Session 2	13:30 - 15:00					
5.6 COLLABORATION COMMUNICATION -	I, CAPACITY BUILDING AND SESSION 2	Room 714 <b>Technical</b>	6.9: SCALING FINANCIAL INSTRUMENTS TO AVERT CLIMATE DAMAGES	Room 715 A <b>Workshop</b>		
Chair: Natalie DeRoock, United States			Chair: John Joyce, Ireland Co-chair: Henk Ovink, Ireland			
Ensuring Safe Drinking V Owner Network, Yilin Zh	Vater From Private Wells In Florida Through The Flor uang, USA	ida Well	This session contributes to innovate a novel financial instrument to contribute to c the financial gap for investments in adaptation/resilience and for disaster/damage averting. The session takes the analogous market-based instrument of carbon cred	e to closing		
	Capacity Building Efforts Across Small And Medium S tan, Faisal Shaheen, <i>Canada</i>	Sized Water				
Decision-making Factors In Urban Multi-stakeholo	For Financing Nature-based Solutions For Water Ma der Settings: Understanding Financers And Deriving I ing, Maria Wirth, Austria		explore establishing a resilience/damage/loss credit system. Speakers: Saroj Jha, USA; Sudhir Murthy, USA; Beverley Stinson, USA; John Ik	eda, USA		
Enabling Safe Practices I POSTERS	n Wastewater-irrigated Urban Agriculture, David Gal	ibourg, <i>UK</i>				
	ositioning Tap Water, <mark>Nuno Branco, Portugal</mark> Thinking And Planning In Revitalizing Rural Water Se a	rvices In				
Coffee Break	15:00 - 15:30					
Session 3	15:30 - 17:00					
6.5 SOURCE-TO-SEA & POLLUTION FROM	POLLUTION MANAGEMENT POINT SOURCES	Room 714 <b>Technical</b>	5.10 NAVIGATING THE FUTURE LANDSCAPE OF GRADUATE TRAINING IN WASH	Room 715 A <b>Workshop</b>		
Chair: Gertjan Zwolsma			Chair: Caetano Dorea, Canada Co-chair: Sara Beck, Canada			
	The Faecal Pollution Of Navigable Rivers: A Novel Ap ion, Sophia Steinbacher, Austria	oproach For	How can we prepare graduates not only with specialized WASH knowledge be			
	er Production In Coastal Dunes By Extracting Brackis f A Field Pilot In The Netherlands, Gertjan Zwolsman		the skills and attributes necessary for success in a rapidly changing and interc world? This session aims to facilitate a dialogue on contemporary practices a trajectories in graduate training programs dedicated to water, sanitation, and (WASH). It will highlight effective approaches and suggested opportunities for	nd future I hygiene		
	Consumption For The Biodiversity Impacts In Global n, Masaharu Motoshita, <i>Japan</i>	Supply	of addressing shifting priorities in the field of WASH. Speakers: Prof. Thammarat Koottatep, <i>Thailand</i> ; Prof. Konstantina Velkushan.	· ·		
	work And Principal Component Analysis Applied To E rediation Selection, Antonio Cavalcante Pereira, Cano		Speakers: Prof. Inammarat Koottatep, Thalland; Prof. Konstantina Veikushahova, Netherlands; Prof. Sayed Mohammad Nazim Uddin, Bangladesh			
Water Levels, Hossein Ro	For Measuring And Mitigating N2O At Water Resour					
Break	17:00 - 17:15					
Keynote Plenary	17:15 - 18:00					

Keynote: Youth, technology and water, Farokh Kakar, Environmental Engineer, Brown and Caldwell Consultants Panel Moderator: Astrid Nørgaard Friis Panellists: Marina Jimenez Galindo, Abishek Narayan, Sabrina Rashid Sheonty, Saba Daneshgar

Keynote Plenary	09:00 - 09:45			
	ater solutions for climate resilience, Saroj Kumar Jh ics of water and beyond, Henk Ovink, Executive Dire		r, Water Global Practice, World Bank Group ner, Global Commission on the Economics of Water, USA	
Coffee Break	09:45 - 10:30			
Session 1	10:30 - 12:00			
Chair: Daniel A. Nola: Biofilm Process Enhar Decentralized Sewage Ozonation Of The Pes Moving Bed Biofilm R Assessing The Influen Target PFAS: Impacts I Community, Zanina III A Full-Scale Study On Performance, Jan Drie POSTERS CELLATM - A New Biofil	ced Nitrogen Removal Through Partial Denitrification Treatment Plants, Xiaoxin Cao, <i>China</i> ticide Imidacloprid And Assessment Of The Impacts O eactor (MBBR), Marcia Dezotti, <i>Brozil</i> ce Of Prolonged Exposure Of Aerobic Granular Sludga On Granule Formation, System Performance And Mic eva, <i>Canada</i> The Impact Of Aerobic Granular Sludge On Membrar	Caused In A e To Four robial ne Filtration	<ul> <li>2.4 MEMBRANE AERATED BIOFILM REACTOR – FROM THEORY TO MODELING TO PRACTICE &amp; EMERGING APPLICATIONS</li> <li>Chair: Nerea Uri Carreno, Denmark Co-chair: Rob Nerenberg, USA</li> <li>MABR is experiencing accelerated adoption due to its ability to offer process intensification in combination with energy savings and N<sub>2</sub>O mitigation. At th time, researchers continue to study the fundamentals and new potential app this technology.</li> <li>Speakers: Rob Nerenberg, USA; Dwight Houweling, Canada; Tim Constantine Barry Heffernan / John McConomy, Ireland; Neri Nathan, Israel; Jeff Peeters,</li> </ul>	e same blications for e, Canada;
Lunch	12:00 - 13:30			
Session 2	13:30 - 15:00			
2.18 MICROBIAL E Chair: Juan Antonio I	LECTROCHEMISTRY & MICROALGAE	Room 715 B <b>Technical</b>	6.5 THE SECRET LIVES OF WATER PROFESSIONALS: EXPLORING WATER CAREERS IN ACADEMIA, CONSULTING, GOVERNMENT AND UTILITIES	Room 716 A <b>Workshop</b>
Digester, Tae Hyun (Ca Can Microalgae Be Gr Of Bacteria?, Sathasiv	own In Primary Effluent Of Municipal Wastewater In an Arumugam, Australia her Education Institution: A Case Study In A Public Un	The Presence	Co-chair: Frances Amoye, Canada The workshop will be divided into three components. The first involves four in highting their daily jobs/tasks, in addition to their favorite and least favorite the job. The panelists will explain their backgrounds and how they ended up careers. The second part has discussions around hiring in different sectors ar job requires for success. This transitions into a hands-on exercise focused on writing for specific water careers. Panelists will join different tables and work participants will be asked to work with the panelist on "prepared resumes" to provide (not from actual workshop participants). The panelists and participant prepare a "dos/don'ts" list that will be shared with the room. The third part workshop is focused on transitions. The first transition discussion is focused from one career/sector to another (e.g., academic to consultant or governm- utility). The second transition discussion focuses on the move from YP to mic professional. Speakers: Dr. Jeff Charrois, Canada; Rasha Maal-Bared, Canada; Teresa Brool Bipro Dhar, University of Alberta	parts of in specific nd what each resume kshop that we nts will of the on moving ent to d-career
Coffee Break	15:00 - 15:30			
Session 3	15:30 - 17:00			
Station For Ashbridge Geoff Cole, Canada Overcoming Diverse V Kevin Waher, Canada Optimisation Of Activ Berlin's Wastewater T		ri and lant Outfall, Studies On	<ul> <li>6.7 SUSTAINABLE WATER RESOURCE MANAGEMENT AND LARGE-SCALE DEVELOPMENT IN ETHIOPIA</li> <li>Chair: Eshetu Cheru, Ethiopia</li> <li>This session seeks to present a comprehensive strategy for sustainable water management and large-scale development in Ethiopia, highlighting the critic importance of equitable water distribution, environmental sustainability, and socio-economic growth. Desired Output: The desired output is to disseminat proposal for effective water resource utilization and management, emphasiz implementation of an integrated water management framework, sustainable usage practices, capacity-building programs, and strategic partnerships for for support.</li> <li>Speakers: Eshetu Cheru Techebo, Ethiopia</li> </ul>	al d long-term te a detailed ing the e water
Break	17:00 - 17:15			
Keynote Plenary	17:15 - 18:00			
Keynote: Youth, techr	nology and water, Farokh Kakar, Environmental Engin rid Nørgaard Friis Panellists: Marina Jimenez Galindo,			

1/ I DI	00.00.00.05			
Keynote Plenary	09:00 - 09:45			
	er solutions for climate resilience, Saroj Kumar Jha, s of water and beyond, Henk Ovink, <i>Executive Direct</i>		; Water Global Practice, World Bank Group er, Global Commission on the Economics of Water, USA	
Coffee Break	09:45 - 10:30			
Session 1	10:30 - 12:00			
COLLABORATING FO Chair: Nerea Uri Carrent Co-chair: Rob Nerenber	o, Denmark	Room 716 B <b>Workshop</b> workshop	4.2 IMPACTS AND MITIGATION OF CLIMATE CHANGE Chair: Amit Chanan, Fiji Wastewater Management In Urban Areas In Vietnam: Solutions For Sanitatio Improvement And Climate Change Adaptation, Nguyen Viet - Anh, Vietnam	Room 717 A <b>Technical</b> In Coverage
series at Toronto's Globa by members of the IWA the WEF GHG Focus Gro including: GHG Accounti Mitigating Nitrous Oxide A Net zero water industr	I Congress. The workshop series has been jointly de Climate Smart Utilities Group, the Water Research Fr up, and Ontario's WEAO/OWWA Climate Change Cor ng for Water & Wastewater Utilities We kN2Ow Eno Emissions at WRRFs Today Targeting WRRF Methan	veloped oundation, mmittee, ugh -	Study Of Rainfall Distributions In The City Of Vancouver To Improve Climate Preparedness, Allyson Bingeman, Canada Protection And Valorisation Of Urban Water Courses In The Context Of Clima Cláudia Costa, Portugal UMngeni-uThukela Water - Water Security Action Hub For Sustainable Water Ntombifuthi Vilakazi, South Africa POSTERS A New Assessment Tool For Disaster Risks To Water Supply, Masaru Goto, Jap Water Distribution Systems And Climate Change Design Standards And Resea Arctic, Audrey Tam, Canada	Supply,
Lunch	12:00 - 13:30			
Session 2	13:30 - 15:00			
EMISSIONS AT WRRI Chair: Emily Zegers, Can Co-chair: Jose Porro, US This session will tell the experiences from aroum academic participants to and play our rightful role Speakers: Nerea Uri, Dei	ada	and emissions Denmark;	<ul> <li>4.2 SUSTAINABILITY FOR URBAN WATER MANAGEMENT</li> <li>Chair: Miriam Feilberg, Denmark</li> <li>Co-chair: Mbali Sibiya, South Africa</li> <li>Urban water management is imperative to sustainable cities. The workshop of explore risks and challenges and the role of water utilities for providing solut sustainability. We will share knowledge on ensuring sustainability for urban of management, and discuss how utilities can contribute directly to the achieve SDG 6, while also contributing to other goals.</li> <li>Speakers: John Buur, Denmark; Cheryl Davis, USA; Kaia Bing, Norway; Titilola Oridami, Nigeria; Mohmad Asari Daud, Malaysia; Prasad Kulkarni, India</li> </ul>	ions to water ement of
Coffee Break	15:00 - 15:30			
Session 3	15:30 - 17:00			
WASTEWATER Chair: John Willis, USA Co-chair: Charlotte Sche This two-part Workshop outlier sources and solut understanding of CH <sub>4</sub> -en part begins with two inti participation exercises. In from those exercises. In Because of CH <sub>4</sub> 's much h compared to GWP-100 = this Session a "must have	(first identifying likely CH <sub>4</sub> sources; and second on e tions) will engage the audience to develop better inc insisions sources in centralized wastewater treatmeni- roductory presentations framing context for related. The speakers and organizers of this session are eager aking this an obvious workshop (as opposed to "train igher short-term global warming potential (GWP-20 ·~25) and its potential leveraged use for renewable e" for Toronto. Canada; Eveline Volcke, Belgium; Jason Ren, USA; Joh	Justry t. Each attendee- · to learn ning"). = ~90 energy make	<ul> <li>4.5 CHALLENGES IN SEWERAGE AND SEWER MANAGEMENT</li> <li>Chair: Annalaura Carducci, Italy</li> <li>City Of Toronto Foundation Drainage Policy: Preserving Sewer Design Capacit Nicole Segal, Canada</li> <li>Impacts Of Myopic And Panoramic Scheduling On Integrating The Dynamic R Of Urban Water Infrastructure Systems, Amin Minael, Austria</li> <li>Sewer Gas Monitoring Pilot To Assess The Impact Of Sealing Perforated Sanit Maintenance Hole Covers, Alonso Hurtado, Canada</li> <li>Increasing Flexibility Of Control In Sewer Management, Rodrigo da Silva Gess Luxembourg</li> <li>POSTERS</li> <li>Sewer Capacity Analysis And Discharge Permit Challenges In The Construction Ramona Mirtorabi, Canada</li> <li>Techno-economic Analysis Of Sewage Conveyance In Scaled Decentralized Sys Pradip Kalbar, India</li> </ul>	ehabilitation ary Sewer ser, n Industry,
Break	17:00 - 17:15			
Keynote Plenary	17:15 - 18:00			

Keynote: Youth, technology and water, Farokh Kakar, Environmental Engineer, Brown and Caldwell Consultants Panel Moderator: Astrid Nørgaard Friis Panellists: Marina Jimenez Galindo, Abishek Narayan, Sabrina Rashid Sheonty, Saba Daneshgar

### Keynote Plenary

### 09:00 - 09:45

Keynote: Financing water solutions for climate resilience, Saroj Kumar Jha, Global Director, Water Global Practice, World Bank Group Keynote: The economics of water and beyond, Henk Ovink, Executive Director, Commissioner, Global Commission on the Economics of Water, USA

Coffee Break	09:45 - 10:30
Session 1	10:30 - 12:00

### 2.6 BEYOND AUTOMATION - HOW DIGITAL TOOLS CAN ENABLE BREAKTHROUGH INNOVATION

Room 718 A Workshop

Chair: Hein Molenkamp, Netherlands Co-chair: Alan Shapiro, Canada

water scarcity.

Chair: Jan Hennigs, Germany Co-chair: Kathrin Gantner, Germany; Deepa Karthykeyan, USA

The workshop aims to explore problems in the process chain from planning over constructing to operating innovative water treatment technologies. The outcomes will form the basis of a roadmap towards overcoming these problems using digital tools. Zahnen Technik has created an engineering platform for the automatic creation of technical documents like circuit diagrams, P&IDs, and Bills of Quantities based on customer specifications. In combination with another digital tool, a cloud based process control system, it enables the company's R&D team to focus solely on innovation.

Speakers: Jan Hennigs, Germany; Kimberly Worsham, USA; Deepa Karthykeyan, USA

The purpose of this session is to inform organizations on a global scale what types of circular water can be safely applied. The session also informs on existing obstacles in specific countries and on ways to overcome them, in order to accelerate the application

of circular water worldwide and thus provide an important solution to the increasing

Speakers: Hein Molenkamp, Netherlands; Alan Shapiro, Canada; Maarten Den Ouden, Netherlands; Arthur Valkieser, Netherlands

### 3.5 PARTICLE-ASSOCIATED VIRUSES AS EMERGING PATHOGENS IN WATER AND WASTEWATER

### Chair: Danmeng Shuai, USA

Co-chair: Tiong GimAw, USA; Yun Shen, USA; Joan Rose, USA

The workshop aims to provide the state-of-the-art knowledge and techniques to characterize particle-associated viruses in water environments, understand their presence, fate, transfer, and inactivation in water and wastewater treatment, and quantify their health risks. Ultimately, the discussion will promote the understanding of particle-associated viruses by the environmental engineering community and advance engineering interventions for waterborne pathogen control. The expected outcome from this workshop is an open-access perspective/review article published on top-tier environmental engineering journals, and it will be disseminated to the community at no

Speakers: Charles Gerba, USA; Scott Meschke, USA; Tiong Gim Aw, USA; Yun Shen, USA; Brian Pecson, USA: Raul Gonzalez, USA

Lunch	12:00 - 13:30			
Session 2	13:30 - 15:00			
2.7 BLUEPRINT FOR	A CIRCULAR WATER SMART SOCIETY	Room 718 A Workshop	3.6 IMPROVING EQUITY IN INTERMITTENT WATER SUPPLY NETWORKS: A COLLABORATIVE GAME	Room 718 B <b>Workshop</b>

Room 718 B

Workshop

Chair: David Meyer, Canada Co-chair: Pradip Kalbar, India; Raziyeh Farmani, UK; Kondwani Simukonda, Zambia

The workshop aims to disseminate information and encourage discussion about Intermittent Water Supply (IWS) through an innovative, collaborative and interactive game. The workshop facilitators have created a game that allows for an enjoyable and productive experience, in which participants roleplay as IWS managers attempting to improve the equity of an IWS network. The game is designed to facilitate an exchange of experiences – academic and practical – and encourage participants to cooperate in addressing major IWS challenges. The game revolves around a simple water network designed to be operated continuously but due to underestimated demand, the network is forced to operate intermittently

Speakers: Chaitanya Ahuja, Canada; Florence Udenby, Canada; Ashish Nair, India; Pranesh M, India; Gabrielle Marega, Canada; Kevin Kuriakose Joseph, Canada; Omar Abdelazeem, Canada; Samantha LeValley, Canada

Coffee Break	15:00 - 15:30	
Session 3	15:30 - 17:00	
		3.7 BRINE REDUCTION AND RESOURCE RECOVERY Chair: Loreen Ople Villacorte, Denmark Co-chair: Victoria Flexer, Argentina Freshwater is one of the most valuable resources for human consumption, agriculture and many industrial activities. Where freshwater is limited, brackish and saline water sources are converted to clean freshwater typically through reverse osmosis (RO) desalination process. Brine discharge (saline watewater) from RO desalination and other industrial processes receives significant attention globally due to water scarcity and the need to protect the environment. Combining smart and water efficient membrane operations with brine valorization enables sustainable water treatment for the future. This synergy bring high recovery RO and zero liquid discharge into more widespread technological solutions. Speakers: Victoria Flexer, Argentina; Ruben Muñoz, Chile; Heidi Richards, South Africa; Loreen Ople Villacorte, Denmark; Aamer Ali, Denmark
Break	17:00 - 17:15	
Keynote Plenary	17:15 - 18:00	

Panel Moderator: Astrid Nørgard Friis Panellists: Panelliste and a faring Jimer Z Galindo, Abishek Narayan, Sabrina Rashid Sheonty, Saba Daneshgar

### **Keynote Plenary**

### 09:00 - 09:45

**BUSINESS FORUM ROOM 1** 

### 10:30 - 11:15 | SGS CANADA

### **PFAS 1633**

SGS will discuss the state of PFAS measurement in Canda and how it intersects with current and upcoming policy. New reference methods such as EPA 1633 have standardized the practice of targeted analysis of PFAS especially to aid in enforcement of regulation, PFAS treatment and more. But as the number and diversity of PFAS under scrutiny increases, new approaches such as organic fluorine testing, non target analysis and more are emerging. We will discuss all of these approaches and how they are being used today to inform PFAS mitigation and policy setting Dr. Bharat Chandramouli

### 11:15 - 12:00 | GRUNDFOS

Sewer Security: predict, prevent and protect to enable a cleaner, greener world More than 80% of the world's wastewater flows back into the environment without being treated or reused, according to the United Nations. Over 850 billion gallons of raw sewage are released into US waterways each year from sewer overflows alone. Higher temperatures and changing precipitation patterns are leading to more frequent and extreme weather events, such as floods and storms overwhelming the sewage system. With aging infrastructure, limited resources, a shortage of skilled labor, shifting regulatory standards and the pressure of time, utilities don't feel able to address today's problems, let alone what's coming next. What is the solution? What technologies are there available to address the problem? How IoT, Telemetry and sensors can help utilities predict storms, prevent overflows and protect the environment. Ralph Exton, Grundfos VP and CMO Water Utility

### 12:15 - 13:00 | VEOLIA

Transforming Municipal Wastewater Facilities into Energy Hubs Canada has to replace, refurbish or build a sizable proportion of its vital municipal environmental infrastructure to accommodate demands for new housing and meet its climate change commitments.

If Canada is to address its housing challenges while rebuilding or refurbishing its wastewater processing capacity, municipalities will have to consider new ways to support the development of critical environmental infrastructure.

A number of communities throughout the world have transformed conventional wastewater facilities into resilient, productive local sustainability hubs called "Ecofactories." This presentation will discuss the Ecofactory approach, explore the challenges to overcome as well as present a case study.

Marco Fontana-Giusti, Vice-President of Municipal Services, Veolia North America (Canada)

### 13:30 - 14:15 | GEI CONSULTANS

### Is Asset Management the tide we need to navigate? Let's dive into the evolution of Asset Management and the crucial need to plan ahead, flowing from Ontario regulations and beyond Asset Management: Critical planning for the long-term, sustainable management of

your infrastructure and services provided to your community – are you ready? Join GEI, City of Toronto, Region of Peel and the Toronto Transit Commission to discuss the evolution of Asset Management under Ontario's regulations. Ontario is a leader in AM in North America, learn the challenges, opportunities and successes that have allowed these 3 leading organizations build better tools to make decisions and advance their AM initiatives, such as how to implement innovative digital tools/technology and how to integrate climate resilience goals into AM decision making.

Panel Discussion: Shelley Hazen, (GEI, Climate Change Specialist), Lou Di Gironimo (City of Toronto, GM of Water), Leanne Brannigan (Region of Peel, Director EAM), Sam Sidawi (TTC, Head of Enterprise Asset Management)

### 15:45 - 16:30 | SHARC ENERGY

SHARC Energy's wastewater thermal energy exchange technology fits seamlessly into decarbonization plans by promoting electrification and significantly conserving water. Strategic access to the sewage authorities piping via tap easements can turn waste flow into a valuable community resource. The massive energy potential in daily wastewater can be harvested and transferred to the community buildings, creating a profit center for municipalities. SHARC Energy's innovative approach demonstrates how sustainable practices can drive environmental and economic benefits. Michael Albertson

### Keynote Plenary

### 17:15 - 18:00

### 14:15 - 15:00 | JIANGSU TAIYUAN ENVIRONMENTAL SCIENCE AND TECHNOLOGY CORP., LTD

Water plant in LEGO typeLow carbon Fast Construction Lossless installation & removal Water plant in LEGO type is steel structure assembled & prefabricated sewage (water purification) plant technology. Through standardized design, assembly, intelligent manufacturing, convenient in transport and installation. It can be disassembled and reassembled, based on the principle from Lego Blocks, developed more than the different functions steel standardized modules for combination. Such industrial intelligent manufacturing model is a groundbreaking research which would subvert the traditional concrete sewage treatment plant, wastewater purification plant which were rely on non-standardized site construction mode, Enable water treatment engineering to achieve assembled-engineering, modular-equipment, standardized-module, convenient(efficient)-assembly. Cao Hui

### **BUSINESS FORUM ROOM 2**

### 10:30 - 11:15 | XYLEM, INC.

### Are today's technology roadmaps sufficient to address reuse capacity that the world needs?

Attendees will be provided with throughputs of key existing and emerging technologies that can support potable reuse, and apply their own knowledge of technologies and processes to predict the scale of installations that might be required to keep pace with population growth. Groups will collate the results of this fun "mini-hack," which will lead to discussion of the gap between where we are today, and where we will need to be in 2030, when global demand is expected to exceed supply by 40%. Identification of technology and knowledge gaps will be summarized and shared by email after the conference

Walt Kozlowski, Adam Ryder Session Moderator: Stephanie Smith

### 11:15 - 12:00 | GOVERNMENT OF ONTARIO

Ontario Global Business Showcase: Empowering International Expansion Dive into the diverse landscape of Ontario's business prowess with our Global Business Showcase, featuring presentations from 20 dynamic companies. Explore their innovative strategies and products as they aim to conquer international markets. Gain insights into the challenges and successes of expanding globally from Ontario's thriving business community.

Cinthya Ortiz

### 12:15 - 13:00 | AquaAction

### AquaAction Innovation Zone: Showcase of 10 water tech start ups

AquaAction is a North American freshwater innovation catalyzer, covering the full arc from water problem statement definition, through ideation, development, piloting and commercialization. It runs two technology programs from coast to coast, engaging young innovators into the AquaHacking Challenge and supporting their entrepreneurship journey, as well as accelerating commercial ready water tech startups across all industries. With over 85 start-ups in its community of water tech enterprises, AquaAction has created an Innovation Zone at IWA, and will share the 10 innovative water technologies that are on display.

Soula Chronopoulos, President of AquaAction

### 13:30 - 14:15 | STELIS ENVIRONMENTAL SOLUTIONS

Driving Change: How ColiMinder Transforms Water Treatment Economics and Ecology Steven Mallette, President, Stelis Environmental

### 15:45 - 16:30 | CANADIAN WATER AND WASTEWATER ASSOCIATION

### **Canadian Innovation**

As the Canada Pavilion and co-hosts, we hope to be able to feature a number of our Canadian Exhibitors in short 15 minute presentations. I would hope for one 45 min session each day for the Canada Pavilion. We are very flexible on time slots available Each session will feature 3 presenters (15 mins each) from amongst our exhibitors in the Canada Pavilion

## Thursday, 15 August



Track 1 WATER UTILITY MANAGEMENT

### Track 2

WASTEWATER TREATMENT AND RESOURCE RECOVERY

### Frack 3

DRINKING WATER AND POTABLE REUSE

### Track 4

CITY-SCALE PLANNING AND OPERATIONS

### Frack 5

COMMUNITIES, COMMUNICATION AND PARTNERSHIPS

### Track 6

WATER RESOURCES AND LARGE-SCALE WATER MANAGEMENT



Keynote Plenary	09:00 - 09:45			
	to address global challenges: Transformative adapta ator: Annalisa Contos Panellists: Miriam Feilberg, Dr J		<b>e, Prof. Juliet Willetts,</b> Institute for Sustainable Futures, Univ. of Technology Syc ama, Amit Chanan, Adam Saffian Ghazali	lney,
Coffee Break	09:45 - 10:30			
Session 1	10:30 - 12:00			
1.30 WATER/WASTE AND OPERATIONS E	WATER MEASUREMENT EXCELLENCE	Room 801 A <b>Workshop</b>	SO.4 IWA CLIMATE SMART UTILITIES RECOGNITION PROGRAMME WORKSHOP	Room 801 <b>Sessio</b>
speakers, followed by fo Workshop participants ensure public safety and world examples of best	Canada e presentations by leading water industry and govern orum discussions, and an engaging closing panel sess will learn about and discuss risk management approa d water facility effectiveness, discussing and exchang practice operation in Canadian municipalities. ersen, Canada; Steve Craik, Canada; Ema Gitej, Canada	ion. aches to ing on real-	The International Water Association (IWA), with the support of Xylem, is ple present the third edition of the IWA Climate Smart Utilities Recognition Prog Building upon the successes of the 2022 and 2023 editions, this programme an excellent opportunity for utilities to reflect on their Climate Smart journe their initiatives to an international audience, and share their aspirations for climate-smart water sector. During this workshop, the six most outstanding utilities of the 2024 edition, Achiever and Entrant categories will showcase the key actions they have und across three interconnected pillars: adaptation, mitigation, and leadership. A certificates of recognition will be awarded to all utilities recognized in the 20 Climate Smart Utilities Recognition Programme. <i>The 2024 edition is powered by Xylem</i> .	gramme. provides cys, present achieving a from dertaken Additionally,
Lunch	12:00 - 13:30			
Session 2	13:30 - 15:00			

Room 801 B Session

Room 801 A Room 801 B 1.29: ADVANCEMENTS IN NON-SEWERED SANITATION 4.10: WATER MANAGEMENT IN STRESSED URBAN AREAS -Workshop Workshop BRINGING COLLECTIVE UNDERSTANDING OF THE VALUE Chair: Jay Bhagwan, South Africa; Kartik Chandran, USA OF WATER This workshop aims to share practical developments and interventions, as well as new science and innovation in the area of Non-sewered sanitation (which includes Faecal Sludge management). There are many people in world and cities who will not realise piped or sewered sanitation, NSS and FSM offers the opportunity to leapfrog new systems, approaches, technology and processes to ensure that human waste can be Chair: Lykke Leonardsen, Denmark; Inês Breda, Denmark The purpose of this session is to reinforce the imperative for collaborative efforts among diverse stakeholders in addressing climate change within urban environments. Additionally, it will underscore the importance of integrating urban water resilience into management through innovation and smartness. comprehensive city planning, emphasizing the need for collaborative initiatives across businesses with an impact on the local ecosystem, considering both water footprint and Speakers: Jennifer Molwantwa, South Africa; Doulaye Kone, USA; Kartik Chandran, USA; Marc Dehusses, USA; Srinivas Chari, India handprint. Speakers: Virginia Newton, Grundfos; Cassie Sutherland; Mayor NYC (TBC); Mayor Phoenix (TBC); Mayor Sao Paulo (TBC); Mayor Montreal (TBC); IWA Representative (TBC)

Coffee Break	15:00 - 15:15
Closing Ceremony	15:15 - 16:45
Gala Dinner	Evening

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### 09:00 - 09:45

10:30

Keynote: Path-shifting to address global challenges: Transformative adaptation in practice, Prof. Juliet Willetts, Institute for Sustainable Futures, Univ. of Technology Sydney, Australia Panel Moderator: Annalisa Contos Panellists: Miriam Feilberg, Dr Jabulile Mashwama, Amit Chanan, Adam Saffian Ghazali ontos Panellists: Miriam Feilberg, Dr Jabu

Coffee Break	09:45 - 10:30
Session 1	10:30 - 12:00

### SO.5 ENHANCING UTILITY-REGULATORS COLLABORATION FOR EFFICIENT AND RESILIENT WATER SUPPLY AND SANITATION (WSS) SERVICES

Room 803 A Session

The purpose of this session is to explore the multifaceted relationship between water and sanitation regulators and utilities, with a focus on achieving efficiency gains, appropriate tariff setting, and attaining resilient Water Supply and Sanitation (WSS) services. The session will address the challenges and opportunities for collaboration, emphasizing dynamics involved in governance and operational interactions.

The desired output of this session is to generate actionable insights and strategies for regulators and utilities. Participants will leave with a better understanding of how to navigate the complex relationship between governance and operations within utilities, and how to sustain service improvements towards achieving SDG targets and beyond.

The outcomes of this session will be disseminated through a comprehensive report. The insights gained will be applicable in policy formulation, operational strategies, and educational programmes.

### 4.13 NATURE-BASED SOLUTIONS - SESSION 2: BARRIERS AND CHALLENGES FOR IMPLEMENTATION OF NBS

Chair: Guenter Langergraber, BOKU University Co-chair: Rob Cunningham, TNC

Chair: Guenter Langergraber, BOKU University Co-chair: Anacleto Rizzo, IRIDRA IWA NbS Working Group

Speakers: Bernhard Pucher or Guenter Langergraber, BOKU University; Jaimie Nivala (INRAE) or Pedro Carvalho, Aarhus University; Nancy Lilly, TNC; Oscar Alvarado, LG Sonic; Robin Price or Chris Gerrard, Anglian Water

Speakers: Robin Price or Chris Gerrard, Anglian Water; Jan Friesen, UFZ; Nancy Lilly, TNC; Alexandra Popartan, University of Girona; Tom Mollenkopf, IWA President (TBC); N.N., High-level exec from The Nature Conservancy (TBD); N.N., IWA Urban Drainage (G (TBC); Tony Wong, Monash Sustainable Development Institute; Anacleto Rizzo, IRIDRA, Chair, IWA NbS Working Group

Room 803 B

Workshop

Workshop

Lunch	12:00 - 13:30		
Session 2	13:30 - 15:00		
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2.8 NEW PARADIGM OF WASTEWATER TREATMENT IN 4.14 NATURE-BASED SOLUTIONS - SESSION 3: Workshop FAST-URBANIZING REGION STREAMLINING EFFORTS TO PROMOTE NBS

# Chair: Rong Chen, China Co-chair: Shuming Liu, China; Zhiwei Wang, China; Yujie Feng, China

The purpose of this session is to gather experts, policymakers, and practitioners from fast-urbanizing countries to discuss the challenges and opportunities of the wastewater treatment. Specifically, the session aims to highlight the latest innovations and best practices in wastewater treatment and management, focusing on energy efficiency, greenhouse gas reduction, and the transformation of wastewater into a valuable resource. The desired output of this session is to: Identify common challenges and opportunities in wastewater management across fast-urbanizing countries; Showcase successful case studies and best practices in innovative wastewater treatment technologies

Speakers: Rong Chen, China; Zhiwei Wang, China; Shuming Liu, China; Can Wang, China; Yu-You Li, Japan; Yujie Feng, China; Guanghua Wang; Fengyu Guo, China; Joan Rose, USA; Xiaochang Wang, China; Guodong Xu, China

Coffee Break	15:00 - 15:15
Closing Ceremony	15:15 - 16:45
Gala Dinner	Evening

### Keynote Plenary 09:00 - 09:45 Keynote: Path-shifting to address global challenges: Transformative adaptation in practice, Prof. Juliet Willetts, Institute for Sustainable Futures, Univ. of Technology Sydney, Australia Panel Moderator: Annalisa Contos Panellists: Miriam Feilberg, Dr Jabulile Mashwama, Amit Chanan, Adam Saffian Ghazali tos Panellists: Miriam Feilberg, Dr Jabu 09:45 - 10:30 **Coffee Break** Session 1 10:30 - 12:00 Room 701 A Room 701 B 1.5 INCORPORATING HYDROGEN INTO BUSINESS AS USUAL, 2.28 FOOD WASTE BIOSOLIDS MANAGEMENT & REUSE -A GLOBAL VIEW Workshop **SESSION 2 Technical** Chair: Shaunna Berendsen, UK Chair: Banu Ormeci, Canada Co-chair: Kwadwo Gyasi, Ghana In 2022 Anglian Water were awarded £4.7m by Ofwat, their economic regulator, to fund the project coined 'Triple Carbon Reduction'. The evidenced a step change reduction Achieving Unprecedented Intensification Rates Coupling Anaerobic Digestion And Side-stream Evaporation With The IntensiCarbTM Process: Experimental And Modelling in greenhouse gas emissions and electricity used in the water treatment process. Studies, Ali Kha t simultaneously created a new renewable energy source through green hydrogen production. Now well underway, this workshop and panel looks in more detail at that Anaerobic Digesters Mixing Performance Simulations, Considering Solids To Understand Long-term Performances, project and, best practice examples of hydrogen creation and use across the globe Biosolids Management And Cryptic Currencies – Net Zero, Emerging Contaminants, And Speakers: Blanca Antizar, Spain; Chris Brace, Australia; Jacobs, Canada; Mark Fletcher New Biosolids Markets, Ru The Effect Of Coagulant Conditioning On The Dewaterability Of Digested Food Waste Sludge For Filter-press, Sanggyun Kim, Republic of Kored POSTERS Screening Of Emerging New Technologies For Sludge Treatment With Focus On Destruction Of Environmentally Hazardous Substances And Energy Production, Anne Holm Jensen, Denmark Lunch 12:00 - 13:30 13:30 - 15:00 Session 2 Room 701 A Room 701 B 4.8 NAVIGATING THE WAVES: ACHIEVING THE GOALS OF 3.8 CATALYZING INNOVATIONS FOR WATER RESILIENT Workshop Workshop THE UN WATER MINISTERS CONFERENCE 2023 **CITIES: POLICY AND PRACTICE IN INDIA** Chair: Michael Rouse, UK Co-chair: Gemma Boag, Canada Chair: Srinivas Chary Vedala, India Co-chair: Ramakant, India The Global Water Cycle is a global common good; the human right to safe drinking water and sanitation must be accessible to all populations without further delay; and rather With an urban population of over 470 million and over 4041 urban local bodies, India faces significant challenges in providing adequate and safely managed urban water than being a threat to life, water must become a catalyst for health and well-being, securing nutrition and energy for all. and sanitation services to its rapidly growing population. Climate change exasperated the situation. The government recognised that the business-as-usual approach to infrastructure and service delivery would compromise the time of implementation and quality of service. In response, it has introduced a technology sub-mission, focusing **Speakers:** Michael Rouse, *UK*; Gemma Boag, *Canada*; Representatives from IWMI; IWA Strategic council; IWA Regulatory Forum; Oxford graduate from developing country on sourcing and institutionalising innovations. The Wash Innovation Hub (WIH) at the Administrative Staff College of India (ASCI) was mandated to anchor this initiative. Speakers: D. Tara, IAS, India; Ramakant, India; Manoj Gulati, India; Suresh Krishana, India (TBC); Malini Reddy, India.

Coffee Break	15:00 - 15:15
Closing Ceremony	15:15 - 16:45
Gala Dinner	Evening

### Keynote Plenary

**Closing Ceremony** 

**Gala Dinner** 

15:15 - 16:45

**Evening** 

### 09:00 - 09:45

Keynote: Path-shifting to address global challenges: Transformative adaptation in practice, Prof. Juliet Willetts, Institute for Sustainable Futures, Univ. of Technology Sydney, Australia Panel Moderator: Annalisa Contos Panellists: Miriam Feilberg, Dr Jabulile Mashwama, Amit Chanan, Adam Saffian Ghazali

Coffee Break	09:45 - 10:30			
Session 1	10:30 - 12:00			
Chair: Rosemary Camp How GIS Supports Digi United States Low-energy IoT System Distribution Networks, Technology Adoption / Faisal Shaheen, Canad Water Service Replace And GIS Visualization T Aditya Dhamorikar, Ca POSTERS A Full-scale Operatione Of Eindhoven WRRF, Su Lunch Session 2 1.16 FROM DRAIN OF ALIN WASTEWA Chair: Mohamed Zagh Co-chair: Ahmed Alsa This 2-part (90-minute machine learning (ML) its limitations and con- water industry profess providers, will engage Post-workshop, we wil it among participants of Speakers: Usman Khar	Image: Construction of the experimentation of the experiment	Nater nalysis, o, e Case com 703 orkshop	<ul> <li>1.11 NITROUS OXIDE EMISSIONS IN FULL-SCALE OPERATIONS</li> <li>Chair: Mark Van Loosdrecht, Netherlands Co-chair: Nerea Uri Carreno, Denmark</li> <li>AWAIRE - Novel Approaches To Plant-Wide N<sub>2</sub>O Quantification: Comparative S Four Measurement Methods, Dines Thornberg, Denmark</li> <li>Quantifying Nitrogenous Greenhouse Gas From Emerging Biological Nutrient (BNR) Processes, Kartik Chandran, United States</li> <li>Assessment And Long-term Monitoring Of N<sub>2</sub>O Process Emissions At Two Scott WRRFs, Susan Lee, United States</li> <li>Demonstrating N<sub>2</sub>O Mitigation In Two Advanced Full-scale WWTPs, Maria Vall POSTERS</li> <li>N<sub>2</sub>O Emissions Assessment, Mitigation, And Reporting At A Canadian Full-scal Roberta Muoio, Belgium</li> <li>Chair: Wim Audenaert, Belgium Co-chair: Hui Guo, Canada</li> <li>Application Of Advanced Process Control To Reduce N<sub>2</sub>O Emissions In Wastew Treatment Works, Otto Icke, Netherlands</li> <li>Predicting And Mitigating N<sub>2</sub>O Emissions In WWTPs – Can Digital Twins Help O Achieve Carbon Neutrality? Ryan Sanford, Denmark</li> <li>N<sub>2</sub>O Monitoring Redefined: Interpretable Machine Learning For Robust Decisi In WRRFs, Mostafa Khalil, Canada</li> <li>Designing WWTPs For Both Minimal N<sub>2</sub>O Emissions And Best Effluent Quality, Wim Audenaert, Belgium</li> <li>POSTERS</li> <li>Quantifying, Modelling And Mitigating N<sub>2</sub>O Emissions Control Kingdom</li> </ul>	Removal tish ari, Finland e WWTP, Room 705 Technical rater Utilities on Support
Coffee Break	15:00 - 15:15			

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Gala Dinner

Evening

Keynote Plenary	09:00 - 09:45					
Keynote: Path-shifting to address global challenges: Transformative adaptation in practice, Prof. Juliet Willetts, Institute for Sustainable Futures, Univ. of Technology Sydney, Australia Panel Moderator: Annalisa Contos Panellists: Miriam Feilberg, Dr Jabulile Mashwama, Amit Chanan, Adam Saffian Ghazali						
Coffee Break	09:45 - 10:30					
Session 1	10:30 - 12:00					
Chair: Ed Smeets, The N Co-chair: Teodor Popa, A The main outcome of the of the finance impact of the operational, technica resources; how this impact		tween funding	<ul> <li><b>3.9 BIOFILMS AND PATHOGEN MANAGEMENT IN</b> WATER DISTRIBUTION</li> <li><b>Chair: Gertjan Medema</b>, <i>Netherlands</i> <b>Co-chair: Chenwei Zheng</b>, <i>United State</i>: Enhancing Drinking Water Quality: Impact Of Biofilm In Danish PE Pipe System Lone Tang, <i>Denmark</i></li> <li>Reconsidering The Impact Of Water Age On Opportunistic Pathogen Growth, Tolulope Odimayomi, <i>USA</i></li> <li>Biofilm Structure And Composition Under Varied Flow Conditions: Implication Drinking Water Distribution, Vinila Vasam, <i>USA</i></li> <li>Development And Validation Of A Web-based Tool (CaST) For Minimising The Nitrification In A Chloraminated System, Arumugam Sathasivan, <i>Australia</i> <i>POSTERS</i></li> <li><i>Composition Of The Microbial Communities Within Sediment And Water In Ch Drinking Water Distribution System Storage Tanks, Eva Bridges, USA</i></li> </ul>	ns, ns For Risk Of		
Lunch	12:00 - 13:30					
Session 2	13:30 - 15:00					
Chair: Gary Wyeth, Thai Challenges In Tackling Tr Region Of The People's F Experimental Observatic Pipes Due To Cyclic Wate Porto's NRW Manageme Years, Sara Cunha, Portu A Collaborative Model To Challenges, Victoria Edw POSTERS Scalable District Meterin Application   Deploymen	o Accelerate And Scale Transformative Solutions To C	on Water gdom is Than 20 ritical Water	<ul> <li>3.11 PATHOGEN DETECTION METHODS</li> <li>Chair: Ricardo Santos, Portugal Co-chair: Bayan Khojah, Netherlands</li> <li>Development Of A Simple Analytical Method For Legionella Pneumophila Usin DNA Aptamer-Gold Nanoparticle Conjugates, Koji Matsunaga, Japan</li> <li>Using Natural Virus Markers To Safeguard The Integrity Of Membrane Treatme Emile Cornelissen, Netherlands</li> <li>Paper-based Microfluidic Device For The Detection Of Bacteria And Antimicro Resistance Genes In Drinking Water, Zhugen Yang, United Kingdom</li> <li>Enhanced Virus Capture And Detection In A Freshwater Lake: Implications For Monitoring And Microbial Risk Assessments, Emalle Hayes, Canada</li> <li>POSTERS</li> <li>Comparing The Diversity Of Microbial Fungal Communities Found In Different Types, Caroline Reed, USA</li> <li>UVB Direct Photolysis Inactivates Vesicle-cloaked Murine Norovirus Clusters, J USA</li> </ul>	ent Plants, obial r Viral <i>Water</i>		
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<b>Closing Ceremony</b>	15:15 - 16:45					

Keynote Plenary	09:00 - 09:45			
	to: Annalisa Contos Panellists: Miriam Feilberg, Dr J		<b>e, Prof. Juliet Willetts,</b> Institute for Sustainable Futures, Univ. of Technology Sydi ama, Amit Chanan, Adam Saffian Ghazali	ıey,
Coffee Break	09:45 - 10:30			
Session 1	10:30 - 12:00			
		Room 711 Workshop	<ul> <li>4.3 DEMONSTRATING GLOBAL PRACTICES FOR SMART RESILIENT CITIES</li> <li>Chair: Tony Wong, Australia Co-chair: Dr Michael Storey, Australia</li> <li>This panel conversation on Demonstrating Global Practices for Smart Resilier will convene city officials that have implemented, in a significant way, initiati design and planning principles to meet the increasing challenges of climate of urbanisation. This is moving from conceptual ideas and implementation one specific initiatives to learning and gaining inspirations from cities that have "a pulled it off".</li> <li>Speakers: Tony Wong, Australia; Wnag Hao, China; Bernard Koh, Singapore; I Lorenzo, Australia</li> </ul>	ves and hange and or a few actually
Lunch Session 2	12:00 - 13:30 13:30 - 15:00			
1.23 THE PERFECT P/ ECOLOGY	AIRING; DATA AND DIGITAL MEET	Room 711 <b>Workshop</b>	1.14 CLOSING THE GAP BETWEEN CLIMATE ADAPTATION AND CLIMATE MITIGATION	Room 713 <b>Workshop</b>
investments, to solution solutions where ever po closer to, the source. Di inform and transform ou		based s at, or hich we can	<ul> <li>Chair: Alexis De Kerchove, Sweden Co-chair: Amanda Lake, UK</li> <li>Amid the escalating global climate crisis, the imperative to strategically prior adaptation projects in the water sector is more pressing than ever for water professionals. This workshop emphasizes the critical need for action. As clima continues to exert its influence, the reduced focus on climate mitigation heig risk of perpetuating conventional water services, magnifying the urgency for adaptation efforts.</li> <li>Speakers: Jon Rathjen, Scotland; Sarah Bergado, Philippines; Lindsay Birt, Xyk David Ponder, USA; Jessica Akande, Canada; Daniel Nolasco</li> </ul>	ate change htens the future
Coffee Break	15:00 - 15:15			
<b>Closing Ceremony</b>	15:15 - 16:45			
Gala Dinner	Evening			

Keynote Plenary	09:00 - 09:45			
	o address global challenges: Transformative adapt tor: Annalisa Contos Panellists: Miriam Feilberg, Dr J		e, Prof. Juliet Willetts, Institute for Sustainable Futures, Univ. of Technology Syda ma, Amit Chanan, Adam Saffian Ghazali	ney,
Coffee Break	09:45 - 10:30			
Session 1	10:30 - 12:00			
Chair: Wenjun Sun, Chin Influence Of Residual Co Insights From Foulant Cc Floatable ZnO-coated M Driven Photodegradation From By-product To Reso From Industrial Side Stre	LS AND NANOTECHNOLOGY na Co-chair: Daniel Kamal, Canada bagulant On The Dynamic Evolution Of RO Membran omposition And Metagenomic Analysis, Haojie Ding, icro Glass Bubbles For Sustainable And Renewable S n Of Micropollutants In Wastewater Treatment, Yana ource: An Integrated Approach For The Recovery Of eam, Malgorzata Szlachta, <i>Finland</i> station For Lithium Recovery From Saline Water, Xi Ch	, <i>China</i> Solar Light- an Li <i>, Canada</i> Phosphorous	2.16 RECOVERY OF NUTRIENTS AND CHEMICALS - SESSION 1 Chair: Catherine Mulligan, Canada Co-chair: Daniel Gyamfi Opoku, Ireland Exploring The Valorisation Potential Of Urban Wastewater In Flanders By The Of A 2-stage Technology, Lennert Dockx, <i>Belgium</i> Ozone Treatment To Achieve Dominant Culture Of A Microalga Haematococc In Wastewater For Sustainable Phosphorous Recovery, Hideaki Nagare, Japar Relevance Of The Selection Time Of Mixed Microbial Cultures On PHA (polyhydroxyalkanoates) Production And Composition Using Residual Stream Fruit Juice Industry, Heidrun Steinmetz, <i>Gernany</i> Resource Recovery In Practise, Dines Thornberg, <i>Denmark</i>	us Lacustris
Lunch Session 2	12:00 - 13:30 13:30 - 15:00			
	D-CHEMICAL TREATMENT TECHNIQUES elgium Co-chair: William Amoah, Ghana	Room 714 <b>Technical</b>	2.17 RECOVERY OF NUTRIENTS AND CHEMICALS - SESSION 2 Chair: Jianhua Guo, Australia Co-chair: Soureyatou Hamidou, Canada	Room 715 A <b>Technical</b>
<b>Chair: Stijn Van Hulle</b> , B Novel Use Of Ferrous Iro		Technical ater		Technical
Chair: Stijn Van Hulle, B Novel Use Of Ferrous Iro Desalination Pretreatme Modelling The Chemical Canada Catalytic-oxidation Of M	elgium Co-chair: William Amoah, Ghana on   peroxymonosulfate For High-performance Seawa ent Under Harmful Algal Blooms, How Young Ng, Chi Phosphorus Removal Of Peroxide Regenerated Iron In(II) By Superfine Activated Carbon: Mechanism An	<b>Technical</b> atter na , Amr Ismail,	Chair: Jianhua Guo, Australia Co-chair: Soureyatou Hamidou, Canada Comparing Two Advanced Selection Strategies For Polyhydroxyalkanoate Pro From Domestic Wasted Sewage Sludge, Giorgio Mannia, Italy CaCO: Packed Electrochemical Precipitation Systems For Wastewater Nutrien Boosted Performance And Innovations In Sustainable Solid Waste And Waste Management, Zhengshuo Zhan, China	Technical duction t Recycling: water
Chair: Stijn Van Hulle, B Novel Use Of Ferrous Iro Desalination Pretreatme Modelling The Chemical Canada Catalytic-oxidation Of M Analysis, Shun Saito, Jap	elgium Co-chair: William Amoah, Ghana on   peroxymonosulfate For High-performance Seawa ent Under Harmful Algal Blooms, How Young Ng, Chi Phosphorus Removal Of Peroxide Regenerated Iron In(II) By Superfine Activated Carbon: Mechanism An	<b>Technical</b> Itter Ind Ind Amr Ismail, d Kinetic	Chair: Jianhua Guo, Australia Co-chair: Soureyatou Hamidou, Canada Comparing Two Advanced Selection Strategies For Polyhydroxyalkanoate Pro From Domestic Wasted Sewage Sludge, Glorgio Mannina, Italy CaCO <sub>3</sub> Packed Electrochemical Precipitation Systems For Wastewater Nutrien Boosted Performance And Innovations In Sustainable Solid Waste And Waste	Technical duction t Recycling: water
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Chair: Stijn Van Hulle, B Novel Use Of Ferrous Iro Desalination Pretreatme Modelling The Chemical Canada Catalytic-oxidation Of M Analysis, Shun Saito, Jap Surface Engineering Of F	elgium Co-chair: William Amoah, Ghana on   peroxymonosulfate For High-performance Seawa ent Under Harmful Algal Blooms, How Young Ng, Chi Phosphorus Removal Of Peroxide Regenerated Iron In(II) By Superfine Activated Carbon: Mechanism An- ian	<b>Technical</b> Itter Ind Ind Amr Ismail, d Kinetic	<ul> <li>Chair: Jianhua Guo, Australia Co-chair: Soureyatou Hamidou, Canada</li> <li>Comparing Two Advanced Selection Strategies For Polyhydroxyalkanoate Pro From Domestic Wasted Sewage Sludge, Giorgio Mannina, Italy</li> <li>CaCO<sub>3</sub> Packed Electrochemical Precipitation Systems For Wastewater Nutrien Boosted Performance And Innovations In Sustainable Solid Waste And Waste Management, Zhengshuo Zhan, China</li> <li>Eutectic Freeze Crystallization; A Novel Technique To Recover Nutrients From Urine, Caitlin Courtney, South Africa</li> <li>Removal Of Boron By Multi-stage Calcium-based Chemical Oxo-precipitation, Chinese Taipei</li> <li>POSTERS</li> <li>Use Of The By-product Oxygen From Water Electrolysis For Wastewater Treat Linda Muller, Germany</li> <li>Analysis Of Phosphorus Recovery Pathways During Wastewater Treatment: P</li> </ul>	Technical duction tt Recycling: water Human Po Lin Liao, ment,
Chair: Stijn Van Hulle, B Novel Use Of Ferrous Iro Desalination Pretreatme Modelling The Chemical Canada Catalytic-oxidation Of M Analysis, Shun Saito, Jap Surface Engineering Of F Canada	elgium Co-chair: William Amoah, Ghana on   peroxymonosulfate For High-performance Seawa ent Under Harmful Algal Blooms, How Young Ng, Chi Phosphorus Removal Of Peroxide Regenerated Iron In(II) By Superfine Activated Carbon: Mechanism An an Polyurethane For E.coli Removal From Water, Mina N	<b>Technical</b> Itter Ind Ind Amr Ismail, d Kinetic	<ul> <li>Chair: Jianhua Guo, Australia Co-chair: Soureyatou Hamidou, Canada</li> <li>Comparing Two Advanced Selection Strategies For Polyhydroxyalkanoate Pro From Domestic Wasted Sewage Sludge, Giorgio Mannina, Italy</li> <li>CaCO<sub>3</sub> Packed Electrochemical Precipitation Systems For Wastewater Nutrien Boosted Performance And Innovations In Sustainable Solid Waste And Waste Management, Zhengshuo Zhan, China</li> <li>Eutectic Freeze Crystallization; A Novel Technique To Recover Nutrients From Urine, Caitlin Courtney, South Africa</li> <li>Removal Of Boron By Multi-stage Calcium-based Chemical Oxo-precipitation, Chinese Taipei</li> <li>POSTERS</li> <li>Use Of The By-product Oxygen From Water Electrolysis For Wastewater Treat Linda Muller, Germany</li> <li>Analysis Of Phosphorus Recovery Pathways During Wastewater Treatment: P</li> </ul>	Technical duction tt Recycling: water Human Po Lin Liao, ment,

### Keynote Plenary 09:00 - 09:45 Keynote: Path-shifting to address global challenges: Transformative adaptation in practice, Prof. Juliet Willetts, Institute for Sustainable Futures, Univ. of Technology Sydney, Australia Panel Moderator: Annalisa Contos Panellists: Miriam Feilberg, Dr Jabulile Mashwama, Amit Chanan, Adam Saffian Ghazali os Panellists: Miriam Feilberg, Dr Jabu 09:45 - 10:30 **Coffee Break** Session 1 10:30 - 12:00 Room 715 B Room 716 A 6.6 INTEGRATED WATER RESOURCES MANAGEMENT 2.9 MEWE-BIOCLUSTER WORKSHOP: ADVANCING AND CLIMATE CHANGE **Technical** THE FRONTIERS OF INTEGRATED 'OMICS Workshop Chair: Kay Moeller, Germany Co-chair: Mariolein Vanoppen, Belgium Chair: Ameet Pinto, USA Co-chair: Cindy Smith, UK Adaptive Pathways Approach To Achieving City Water Resilience, Ryan Brotchie, Canada Advances in 'omics methods are pushing the boundaries of discovery in the Designing Wastewater Treatment Plant Sites To Deliver Significant Biodiversity Value, microbiology. Nowhere are the impacts of these advances more apparent than in the water industry which relies on microbial communities to deliver sustainable processes of wastewater treatment, resource recovery, and drinking water. Yet, the microbial lie Hackett, Austra Reaching Carbon Neutral Water Services In Finland, Suvi Lehtoranta, Finland discovery process can be rife with pitfalls and lost opportunities. Circularity And Sustainability Of Minimal Liquid Discharge Desalination System And Products: Assessment Approaches And Allocation Methods, João Ribeiro, UK POSTERS Thirsty Crops, Hungry Populations: Balancing Water Use In Bangladesh's Diet, Kamrul Islam, Ja Impact Of Wastewater Characteristics And Climate Factors On The N2 And N1 Gene Target Ratios During Wastewater Surveillance Of SARS-CoV-2, Lena Carolin Bitter, Canada Lunch 12:00 - 13:30 13:30 - 15:00 Session 2 Room 715 B Room 716 A 4.11 PROGRESS OF INCLUSIVE SANITATION IN 6.9 WATER RESOURCES MANAGEMENT TOWARDS Workshop Technical SUSTAINABLE DEVELOPMENT GOALS (SDG): **BANGLADESH / SOUTH ASIA** ENERGY AND RESOURCES MANAGEMENT Chair: Tanvir Ahmed, Bangladesh Co-chair: Md Tahmidul Islam, Bangladesh Paul Brown, United States Co-chair: Pranesh Muthuchami, India The purpose of our session at the IWA World Water Congress 2024 is to share the progress of inclusive sanitation in Bangladesh as well as the experience from the Assessing The Impact Of Indirect Groundwater Recharge Through Recycled Water For Food Security In Semi-Arid Regions, Manjari Manjari, India South Asia region, focusing on Citywide Inclusive Sanitation (CWIS) approach. The output is to generate comprehensive insights into the current state of inclusive Assessment Of The Viability Of PRO Technology For Environmentally Sustainable Treatment Of Mining Wastewater And Energy Production, Giti Nouri, Canada sanitation, highlighting key obstacles and potential solutions. This aims to disseminate these findings widely within the international water and sanitation community, Liquid Metal Technology For Collection Of Metal Resources From Seawater Desalination including policymakers, practitioners, researchers, and NGOs, to catalyze meaningful collaboration. Brine And Polluted Groundwater, Toranosu Horikawa, Japar The Importance Of A Systemic Approach To Tackle The Issue Of Emerging Contaminants: Speakers: Abdullah, Al-Muyeed, Bangladesh Mapping Is The Key, Dores Cirne, Belgium POSTERS Circularity Assessment Of High Value-Added Resource Recovery; Ectoine Production From Biogas, David Renfrew, L The Perspective Of A Smart City By Endorsing The Nexus In Integrated Water And Energy Security Management: The Case Of Semnan, Iran, Mohammad Reza Safaeian, Iran **Coffee Break** 15:00 - 15:15 15:15 - 16:45 **Closing Ceremony**

Gala Dinner Ev

Evening

### Keynote Plenary

### 09:00 - 09:45

Keynote: Path-shifting to address global challenges: Transformative adaptation in practice, Prof. Juliet Willetts, Institute for Sustainable Futures, Univ. of Technology Sydney, Australia Panel Moderator: Annalisa Contos Panellists: Miriam Feilberg, Dr Jabulile Mashwama, Amit Chanan, Adam Saffian Ghazali

Coffee Break	09:45 - 10:30
Session 1	10:30 - 12:00

### 2.10 COLLABORATIVE SOLUTIONS TO EMERGING CONTAMINANTS UNDER CLIMATE CHANGE

Room 716 B Workshop

Chair: Bing Chen, Canada Co-chair: Chris Marvin, Canada; Baiyu (Helen) Zhang, Canada; Satinder K. Brar, Canada

This workshop focuses on the emerging contaminants (not covered by the other sessions This workshop locuses on the emerging contaminats (not covered by the other sessions in the Congress) including flame retardants, pharmaceuticals and personal care products (PPCPs), PAHs and derivatives, and hazardous & noxious substances (HNS), etc. They have been given significant and growing attention due to their toxic, carcinogenic, and/ or bio-accumulative properties and associated long-term ecological and health risks. This workshop aims to work with participants to identify the value of current research and facilitate the understanding of the scientific issues associated with their production and usage and the research gaps they brought. Moreover, we will delve into critical aspects and discust collaborative column cargors disciplings and acctors a global scale. and discuss collaborative solutions across disciplines and sectors at a global scale.

Speakers: Adewale Adewuyi, *Nigeria*; Bill Malyk, *Canada*; David Waite, *Australia*; Dongxiao Wang, *China*; Gertjan Medema, *Netherlands*; Jinren Ni; Katrin Vorkamp, *Denmark*; Roland Kallenborn, *Norway* 

### 5.12 AN ACCOUNTABILITY FRAMEWORK PROPOSAL FOR **REALISTIC YOUTH ENGAGEMENT IN SDG 6**

Chair: Yang Villa, Denmark Co-chair: Farokh Kakar, Canada

In this session, we will launch and present the YouthAction4SDG6 Accountability Framework to support organizations to start or elevate their youth engagement, particularly through their Water Action Agenda commitments.

Room 717 A

Workshop

Lunch	12:00 - 13:30			
Session 2	13:30 - 15:00			
	ATER- THE IMPORTANCE OF EQUITY CLUSION ACROSS UTILITY SECTORS GEMENT	Room 716 B <b>Workshop</b>	6.11 CHALLENGES AND PROGRESS TOWARDS ACHIEVING THE SUSTAINABLE DEVELOPMENT GOALS (SDG)	Room 717 A <b>Technical</b>
Chair: Vanessa Chau, Canada		Chair: Ruben Fernandes, Portugal Co-chair: Alyina Rizwan Hashmi, Pakistan		
The Women in Water- Equity Diversity and Inclusion Forum includes interactive panels and presentations by leading water/wastewater/reuse/energy power/transportation		The Status Of Water Insecurity In Small, Rural, Remote, And First Nations Communities In Canada: A Review On Technical, Theoretical, And Socio-economic Contexts, Sorour Nasimi, Canada		
industry professionals and utility managers and EDI speakers, followed by forum discussions, and an engaging closing panel session.			Water Supply Of The Future In Saarland, Germany, Kay Moller, Germany	
Forum participants will learn about the importance of equity diversity and inclusion (EDI) in the workplace within the water/wastewater and other utility sectors across the globe		Closing The Water For People And Communities Gap - Improving Water Services To Australian First Nations Remote Communities, Adam Lovell, Australia		
through the diverse we	through the diverse women in water-leaders across the globe.		From Nearly Zero Water Buildings To Urban Water Communities: The Need To Define Parameters To Support The New Paradigms, Armando Silva-Afonso, <i>Portugal</i>	
	au, <i>Canada</i> ; Rhonda Harris, <i>USA</i> ; Derrik Dunkley, <i>UK</i> ; B da; Imran Motala; Richard Wong, <i>Canada</i> ; Hany Ibrahir		POSTERS	

Commodified Access To Water: What Happens To The Poor When Bottled Water Is The Only Source Of Safe Drinking Water?, Joshua Greene, Mex

SaNiTi - New Innovative Non-sewered Sanitation Game Changing Strategy To Meet Water Security And SDG Goals, Jay Bhagwan, South Africa

Coffee Break	15:00 - 15:15
Closing Ceremony	15:15 - 16:45
Gala Dinner	Evening

(evnote Plenary	
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### 09:00 - 09:45

Keynote: Path-shifting to address global challenges: Transformative adaptation in practice, Prof. Juliet Willetts, Institute for Sustainable Futures, Univ. of Technology Sydney, Australia Panel Moderator: Annalisa Contos Panellists: Miriam Feilberg, Dr Jabulile Mashwama, Amit Chanan, Adam Saffian Ghazali

Coffee Break	09:45 - 10:30
Session 1	10:30 - 12:00

6.8 BASIN-CONNECTED CITIES: ENABLING URBAN AND RURAL STAKEHOLDERS TO TAKE ACTION IN BASIN MANAGEMENT Workshop

Chair: John Riddiford, Australia Co-chair: Jodie Bignall, Australia

The workshop will focus on the actions such as economic incentives, partnerships and sharing of data that different stakeholders are taking to connect cities to their watershed; as well as the foundations needed such as governance, common vision and knowledge and skills. Perspectives in responding to extreme events will also be covered. There will be short perspectives from industry, regulators, utilities, city representatives and water resource agencies.

Speakers: John Riddiford, Australia; Peifang Wang, China; Philip Weller, Austria/Canada; Walter King, Vienna Waterworks

### 2.15 ENERGY EFFICIENCY AND RECOVERY

Chair: Julian Sandino, United States

Preparation Of Coarse Flocculant From Concentrated Organic Matter: Achieve Carbon Capture And Enrichment In Municipal Wastewater, Xiao Zha, China

Room 718 B

**Technical** 

Wastewater Energy Transfer For Toronto Western Hospital, Mark Bruder, Canada

Identification Of Sites For Electrolysers At Municipal Wastewater Treatment Plants In Germany, Johanna Walther, Germany

Unveiling The Water-energy Nexus: Wastewater Reuse For District Heating Application, Francisca Sousa Braga, *Denmark* 

Lunch	12:00 - 13:30			
Session 2	13:30 - 15:00			
6.7 INTEGRATED V AND CLIMATE RES	VATER RESOURCES MANAGEMENT ILIENCE	Room 718 A <b>Technical</b>	7 IN-PREMISES WATER QUALITY (HOUSE/BUILDING JMBING, METAL AND PLASTIC LEACHING)	Room 718 B <b>Technica</b>
Chair: Ligia Pinto, Po	rtugal Co-chair: Nidhi Singh, Canada		ir: David Meyer, Canada Co-chair: Shweta Lokhande, India	
Assessing The Impact Of Climate Change On Conventional Drinking Water Treatment Using 2 Decades Of Historical Data, Ryan Swinamer, Canada		Residential Lead And Copper Sampling In Atlantic First Nations Water Authority Communities – Sharing What We Learned, Megan Fuller, Canada		
Assessing Climate Change Impacts On Water Quality In Montreal's Natural Water Bodies: A Big Data And Machine Learning Perspective, Bowen Xu, Canada		What Can Homeowners Do About Their Drinking Water Quality? Development Of Guidance Document For Inorganic Contaminants In Premise Plumbing, Evelyne Dore, Canada		
Impact of Climate Change On a Large Regional Watershed, Allyson Bingeman, Canada				
Climate Change And Groundwater, The Case Of The State Of Chihuahua, Mexico, Miguel Angel Gonzalez-Nuñez, <i>Mexico</i>		nagement Of Legacy Mn Deposits In A Distribution Network, . d Dissolution In Various Solvent Conditions For Drinking Wate abeth Jacobia, USA		
POSTERS		POSTERS		
Exploring The Impacts Of Adaption Strategies For Climate Change On Groundwater Resource Management, Chihhao Fan, Chinese Taipei		nvestigation Into The Influence Of Natural Organic Matter Or hophosphate Treatment For Lead Control In Chloraminated W		
	nd Participatory GIS For Flood Resilience On The Dunde	e	taran Mosavari, Canada	ater systems,
Waterfront, Sarah Crowe, United Kingdom		Effect Of Pipe Roughness Variation Due To Aging On Hydraulic Transients' Results: A Computational Analysis And Comparison Of Materials In A Water Main Pipeline, Erico Manzochi, Brazil		
Coffee Break	15:00 - 15:15			
<b>Closing Ceremony</b>	15:15 - 16:45			

Gala Dinner Evening

Keynote Plenary 09:00 - 09:45	
BUSINESS FORUM ROOM 1	BUSINESS FORUM ROOM 2
	<ul> <li>10:30 — 11:15   InCTRL SOLUTIONS</li> <li>Be inCTRL Using Model-Based and Data-Driven Digital Solutions</li> <li>This session will showcase how model- and data-driven techniques provide valuable insights for process optimization and control. Discover how inCTRL's consulting leads to advanced modeling and data analytics, culminating in innovative product solutions. We will highlight our soft sensors for real-time predictions, the N2O model for emissions reduction, and the patented ABAC-SRT strategy for balanced treatment performance and energy savings, demonstrating a comprehensive approach from consulting to modeling to data analytics to product.</li> <li>Carsten Owerdieck, CEO; Mahsa Sadeghassadi, PhD, Data &amp; Control Specialist; Mirzaman Zamanzadeh, PhD, Senior Process Specialist</li> </ul>
<ul> <li>11:15 — 12:00   ENDRESS+HAUSER CANADA LTD.</li> <li>The Benefits of Digital Instruments: Unlocking Their True Potential How do plant operators access the valuable data in digital instruments and utilize it to increase their efficiency in maintenance and operations? Dean Rudd Industry Manager, Water &amp; Wastewater</li> </ul>	11:15 — 12:00   LOFTY PERCH INC. Assessing SCADA/OT Cyber Security Risk in Water Operations: Using Consequence and Engineering- Informed Approaches This fast-paced and informative session will showcase real world use cases to provide an objective review on how water utilities are moving toward more modern, accurate cyber risk assessment programs for their operational technology and industrial control systems (OT/ICS) infrastructures. With more than 25 years focused on engineering-informed OT/ICS cyber security, combined with more than 150 water/wastewater assessments globally, Lofty Perch will present intelligence and analysis to help water utilities identify realistic and appropriate cybersecurity assessment activities that are specific to their actual needs and help them address their rapidly changing cyber risk challenges. Mr. Mark Fabro, President and Chief Security Scientist
	12:15 — 13:00   CANADIAN WATER AND WASTEWATER ASSOCIATION Canadian Innovation As the Canada Pavilion and co-hosts, we hope to be able to feature a number of our Canadian Exhibitors in short 15 minute presentations. I would hope for one 45 min session each day for the Canada Pavilion. We are very flexible on time slots available. Each session will feature 3 presenters (15 mins each) from amongst our exhibitors in the Canada Pavilion
Keynote Plenary 17:15 - 18:00	

# **Poster Presentations** 1 M

### Track 1 WATER UTILITY MANAGEMENT

### Track 2

WASTEWATER TREATMENT AND RESOURCE RECOVERY

### Track 3

DRINKING WATER AND POTABLE REUSE

### Track

CITY-SCALE PLANNING AND OPERATIONS

### ack 5

COMMUNITIES, COMMUNICATION AND PARTNERSHIPS

### Track 6

WATER RESOURCES AND LARGE-SCALE WATER MANAGEMENT



# **Posters**

P1.1	+45 Years Of Reliable Operation For World Largest Seawater Treatment Plant & Nine (9) Scattered Water Injection Plants	Quassem Bojbarah, Saudi Aramco, Saudi Arabia
P1.2	2D Or Not 2D - That Is The Question	Eric Kohnen, Jacobs, Canada
P1.3	A Building Information Modelling (BIM) And Common Data Environment (CDE) Pilot For Toronto Water Capital Projects And Asset Management.	Alonso Hurtado, City of Toronto, Canada
<b>P1.4</b>	A Full Scale Advanced Anaerobic Digestion Case Study At Tarnow Wwtp, Poland	Ashish Sahu, <i>Cambi Group AS, Norway</i>
P1.5	A Full-scale Operational Digital Twin For A Water Resource Recovery Facility The Case Of Eindhoven WRRF	Saba Daneshgar, Ghent University, Belgium
P1.6	A Low Energy Consumption Wireless Telemetry And Tanks Control Level System For Small Water Distribution Networks In Isolated Remote Population Centres	Javier García Del Río, Canal de Isabel II, Spain
P1.7	Advancing Towards A Circular Economy In Membrane Technology	Kelly Hill, Isle Utilities, Australia
P1.8	Aligning Pre-modern Urban Water Distribution Networks Into District Metered Areas: A Modelling And Optimization Approach Adopted In The City Of Lilongwe, Malawi	Kenneth Kuntambila, <i>Lilongwe Waterboard, Malawi</i>
P1.9	Applied Research For Multi-scale Asset Management Of The Walloon Water Company's Drinking Water Supply Network	Eric Smit, Société Wallonne Des Eaux, Belgium
P1.10	Carbon Footprint Reduction Through Advanced Imaging And Wastewater Tank Cleaning	Megan Ross, SediVision, LLC, United States
P1.11	Chances And Barriers Of Heat Extraction From Water Supply Systems	Florian Kretschmer, University of Natural Resources and Life Sciences, Vienna, Austria
P1.12	Comparison Of Data-driven And Industry Approach On Leak Noise Correlation Using Iterative Computation On Acoustic Signal	Chun Wai Lau, The Hong Kong Polytechnic University, Hong Kong, China
P1.13	Cost Saving By Using Ultrasonic Clamp On Flow Meter-Best Practice	Marko Rosenthal, NIVUS GmbH, Germany
P1.14	Decarbonization Strategies In The Water Sector: The Regulatory Landscape And Collaborative Imperative	Alexis De Kerchove, Xylem, Sweden
P1.15	Demonstration Plant For Post-treatment Options For Ozonation In Tertiary Municipal Wastewater Treatment	Regina Gnirss, Berliner Wasserbetriebe, Germany
P1.16	Developing And Applying A System-wide Energy Optimization Strategy For Large-scale Water Distribution Networks	Marcelo Cusacovich, Xylem Inc, United States
P1.17	Development Of An Unmanned Cleaning Robot For Sewer Pipes - Efficient Cleaning Of Sewer Pipes By A Robot Enables Human Workers To Avoid Danger -	Hiroyuki Motoyosh,i Tokyo Metropolitan Government, Japan
P1.18	Digital Twins: Transforming Nutrient Removal Optimization And Operation In WRRFs	Raj Chavan, Atkinsrealis, United States
P1.19	DREAM - Data For Reengineering And Evaluation Of Algorithms And Models: Mining Of Operational Data To Optimize A Design Tool For Wastewater Treatment Systems	Mathieu Delahaye, Suez, France
P1.20	Drought Projection In Gediz Basin In Turkey Based On The Outputs Of General Circulation Models	Farzad Rotbei, Istanbul Gelisim University Turkey

P1.21	Eco-Economic Benefits Of Underground Wastewater Treatment Plants In Beijing: Greener Urban Wastewater Management?	Gang Liu, Chinese Academy of Sciences, China
P1.22	Embracing Performance Based Contract For Management Of Non- Revenue Water; The Case Of Muranga South Water And Sanitation Company In Kenya.	Abdi Wario, Gatsby Africa, Kenya
P1.23	Emergency Watermain Rehabilitation Of A 12 Lane Expressway & 4-Track Rail Crossing Within A Joint Utility Tunnel, A Study In Stakeholder Consultation During A Complex Structural Lining Project.	Arthur Sinclair, City of Toronto, Canada
P1.24	Energy And Modern Infrastructure Socity	Rana Elbittibssi, Xylem, Canada
P1.25	Energy Efficient High-Strength Organic Beverage Wastewater Treatment	Wenny Noha, PepsiCo, USA
P1.26	Environmental Decision Making For Innovative Drainage Management Works In South-Western Region Of Bangladesh: A Critical Approach	Md Monirul Islam, City of Toronto University of Toronto, Canada
P1.27	Establish The Waterworks Decision-making And Tracking Management System Based On Space-time Scan Statistics And Utility Network Model	Taemun Hwang, Korea Institute of Civil Enginnering and Buliding Technology, Republic of Korea
P1.28	Estimation Of CO <sub>2</sub> Reduction Potentials -Development Of An Estimation Tool And Assessment Of The Water Purification System Using It -Development Of An Estimation Tool And Assessment Of The Water Purification System Using It-	Ikuma Hayakawa, Osaka Municipal Waterworks Breau, Japan
P1.29	Expanding Water Resource Recovery With Sustainable Food Waste Management	Michael Keleman, InSinkErator, USA
P1.30	Exploring The Role Of Meal-Free Synthetic Organic Dyes In Shaping A Sustainable Water Futur	Hooman Moh, Xylem Company, Canada
P1.31	Financing Of Water Infrastructure Construction, Rehabilitation And Expansion Projects In Canada	Aaron Atcheson, Miller Thomson LLP, Canada
P1.32	Formation And Dynamics Of Sewer Blockages Caused By Snagging Of Wet Wipes	Katayoun Kargar, Toronto Metropolitan University, Canada
P1.33	Fugitive Methane Emissions At A Water Resource Recovery Facility: Preliminary Results From A Top-Down Bottom-Up Field Campaign	Embrey Bronstad, Brown and Caldwell, USA
P1.34	Greenhouse Gas Emission Reductions As A Result Of Infrastructure Intensification In Water Resource Recovery Facilities	Peter Vanrolleghem, Université Laval, Canada
P1.35	Identification Of Factors Causing Taste And Odor And Their Removal Methods In The Golpayegan Water Treatment Plant.	Fahimeh Amiri, <i>Isfahan Water and Wastewater</i> company, Iran
P1.36	Initiatives For The Stable Operation Of Energy-Neutral Incinerators	Yukio Nagaya, Tokyo Metropolitan Government, Japan
P1.37	LEAKman: A Danish Demonstration Platform For Integrated Leakage Management Solutions	Gitte Marlene Jansen, NIRAS, Denmark
P1.38	Legal And Government Related Impediments To Innovation In Water Testing And Treatment In Canada	Aaron Atcheson, Miller Thomson LLP, Canada
P1.39	Lessons Learned From Disconnects Between Design And Operations That Can Lead To Process And Compliance Challenges At Wastewater Treatment Plants	Yaldah Azimi, <i>Ontario Clean Water Agency, Canada</i>
P1.40	Low-energy IoT System For Continuous Monitoring Of Water Quality In Drinking Water Distribution Networks	Javier García Del Río, Canal De Isabel II, Spain
P1.41	Mechanistic And Data-driven Models: From Confusion To Synergies And Opportunities	Wim Audenaert, AM-Team, Belgium

P1.42	Monthly Precipitation Forecast, Based On The ARIMA Model: Case Study Of The Totonicapán Area, Guatemala	Rubeny Garcia Campos, University Of San Carlos of Guatemala, Guatemala
P1.43	Multidimensional Spectral Analysis And Modeling In The Composting Process Of Tofu Residue	Weihua Li, Anhui Jianzhu University, China
P1.44	$N_2 O$ Emissions Assessment, Mitigation, And Reporting At A Canadian Full-scale WWTP	Roberta Muoio , <i>AM-Team, Belgium</i>
P1.45	Navigating Carbon Emissions In Water Utilities: Mapping, Mitigation, And Innovation For A Sustainable Future	Alexis De Kerchove, <i>Xylem, Sweden</i>
P1.46	Occupational Exposure To Viral Pathogens, NGS In The Wastewater Treatment Plant Environment	Rosina Girones, Universitat de Barcelona, Spain
P1.47	Optimizing Granular Filter Performance: A Preventive Maintenance Program	Xiaohui Jin, Ontario Clean Water Agency, Canada
P1.48	Optimizing Water Efficiency In Porto: The Sectorization Plus Project's Impact	Flávio Oliveira , Águas e Energia do Porto, Portugal
P1.49	Porto's New Water Supply Master Plan: A Resilient And Sustainable Path To The Future	Flavio Oliveira, Águas e Energia do Porto, Portugal
P1.50	Prague Water ISO 14064-1 Certified Carbon Footprint And Strategy	Martin Srb, Prazske vodovody a kanalizace, Czech Republic
P1.51	Pro-poor Municipality Led Piped Water Supply System Is Transforming Lives In Bangladesh	Yeasin Arafat, WaterAid, Bangladesh
P1.52	Purification Of Phenolic Compounds From Segmenter Mandarin Wastewater By Ultrafiltration And Nanofiltration	Pablo Alonso Vázquez, Instituto de Seguridad Industrial, Radiofísica y Medioambiental, Universitat Politècnica de València, Spain, Spain
P1.53	Pysewer: A Simple Tool For Sewer Network Generation In Data-scarce Regions	Daneish Despot, Helmholtz Centre for Environmental Research GmbH, Germany
P1.54	Quantifying, Modelling And Mitigating N2O Process Emissions: The Launch Of Welsh Water's N2O Reduction Journey, Jose Porro	Susan Lee , Cobalt Water Global, United States
P1.56	Reporting GHG Emissions From Water Resource Recovery Facilities Best Practice Approaches	Alexis De Kerchove, <i>Xylem, Sweden</i>
P1.57	Seven Steps Towards Digitalizing Sludge Management	Puja Doshi, Engineers without Borders, Germany
P1.58	Strategic Planning To Adress Climate Change Impacts On Wastewater Infrastructures From Águas Do Tejo Atlântico	Rita Lourinho, Águas do Tejo Atlântico,S.A, Portugal
P1.59	SUSTRATO, The Leading Monitoring Platform In The Water Sector	Javier García Del Río, Canal de Isabel II, Spain
P1.60	The Life Cycle Of A Pipe Leak	Brian Harwood, Gagliacqua Consulting, United States
P1.61	The Road Towards A Nordic Climate Neutral Water Sector	Jeanette Agertved Madsen, EnviDan A/S, Denmark
P1.62	The Secrets To Incentivising And Achieving Great Customer Service	Julian Jacobs, AtkinsRéalis, United Kingdom
P1.63	The Xylem Wastewater Pump Manufacturing Plant In Emmaboda, Sweden: A Holistic Approach To Sustainability	Alexis De Kerchove, Xylem, Sweden
P1.64	Toronto Deep Lake Water Cooling Expansion - District Cooling For A Growing City	Ian Lake-Thompson, R.V. Anderson Associates Limited, Canada

# **IWA WEBINARS**



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P1.65	Unconventional Hydropower The Hidden Opportunity Case Studies From South Africa	Jay Bhagwan, Water Research Commission, South Africa
P1.66	Unlocking The Gaps And Progress Of CWIS: Learnings From Five Cities In Bangladesh	Abdullah Al-Muyeed, CWIS-FSM Support Cell, DPHE, Bangladesh
P1.67	Wastewater Network Age Prediction For Critical Assets Identification Using Machine Learning Algorithm Gradient Boosting	Ricardo Ferreira, Águas e Energia do Porto, EM, Portugal
P1.68	Water Quality For Electrolysis: Utilizing Wastewater Final Effluent As A Feedwater Source	Ravina Bains, Cranfield University, United Kingdom
P1.69	Evaluation Of Pathogenic Bacteria In A Pilot-Scale Wastewater Treatment System For Hydroponic Irrigation In Controlled Environment Agriculture	Welllington Arthur, Auburn University, USA
P2.1	A Comprehensive Evaluation Of Chemical Conditioning For Anaerobic Digestate Post-Treatment	Umme Sharmeen Hyder, <i>Toronto Metropolitan</i> University, Canada
P2.2	A New Oxidative Process For Removal Of Dissolved Manganese Using Activated Carbon As A Catalyst: Practical Considerations	Shun Saito, Metawater Corp., Ltd, Japan
P2.3	A Side-stream Sludge Fermenter To Increase P-recovery In Bio-P WWTPs	Mengqi Cheng, Universitat Autonoma de Barcelona, Spain
P2.4	A Sustainable Sludge-based Bio-augmentation Strategy For Heterotrophic Bio-reduction Process Of Hexavalent Chromium	Chuanzhou Liang, Wuhan University of Technology, China
P2.5	Advanced Anaerobic Digestion For Enhanced Methane Yields And Micropollutants Degradation	Gowtham Balasundaram, Indian Institute of Technology, Roorkee, India

P2.6	Advanced Mainstream Partial Denitrification-anammox Process Was Rapidly Established Without Pre-domestication Through Inoculated Side- stream PN A Biofilm	Shenhua Yang, Beijing University of Technology, China
P2.7	Advanced Membrane Modification Techniques To Improve The Ion Selectivity Of Nanofiltration And Ion Exchange Membranes For Developing Circularity Processing Of Urban Industrial Waste	Tanaz Moghadamfar, Universitat Politècnica de Catalunya (UPC), Spain
P2.8	Advanced Nitrogen Removal From Wastewater By Coupling Nitritation, Partial Nitritation And Denitritation With Anammox In Membrane- aerated Biofilm Reactor Integrated Fixed-film Activated Sludge	Baoshan Xing, Xi'an University of Architecture and Technology, China
P2.9	An Urgent Call For Using Real Human Urine In Research On Developing Decentralised Sanitation Technologies	Caitlin Courtney, Swedish University of Agricultural Sciences, South Africa
P2.10	Anaerobic Co-digestion Of Ozone-pretreated Sewage Sludge And Food Waste	Toshiya Komatsu, Nagaoka University of Technology, Japan
P2.11	Analysis Of Phosphorus Recovery Pathways During Wastewater Treatment: Plant-wide Effects	Eveline Volcke, Ghent University, Belgium
P2.12	Analysis Of The Presence Of Microplastics In Drinking Water Sources	Aleksandra Bogdanowicz, Warsaw University of Technology, Poland
P2.13	Analysis Of The Presence Of Microplastics In Water And The Adsorption Of Various Pollutants On Their Surface	Aleksandra Bogdanowicz, Warsaw University of Technology, Poland
P2.14	Assessing Bioaerosol Production And Exposure Associated To Various Processes In Wastewater Treatment Plants	Salim Khaddouma, École Polytechnique Montréal, Canada
P2.15	Assessing Challenges Associated With Use Of Machine Learning For Forecasting COVID-19 Community Spread Via Wastewater-based Epidemiological Data	Arash Zamyadi, Monash University, Australia
P2.16	Benchmarking Alternative Chemical Disinfection And Process Control Strategies For Wastewater: PAA And PFA Vs Sodium Hypochlorite	Lomesh Tikariha, University of Toronto, Canada
P2.17	Biochar-mediated Interspecific Electron Transfer For Enhanced Propionate Syntrophic Methanogenesis: A Kinetic And Thermodynamic Analysis	Danyang Zhao, Xi 'an University of Architecture and Technology, China
P2.18	Biodegradation Of Surfactants In The O <sub>2</sub> -based MBfR And The Impacts On The Microbial Community And Antimicrobial-resistance Genes	Chenwei Zheng, Arizona State University, United States
P2.19	Biogas Synthesis Enhancement Of Laundry Wastewater By Hydrodynamic Cavitation	Andreas Schmid, University of Applied Sciences, Germany
P2.20	Biomass Buffer Design For Capturing Excess Nutrients From Agricultural Runoff	Tianying Li, University of Guelph, Canada
P2.21	Can Thermophilic And Mesophilic Dark Fermentation Of Soybean Molasses Produce Moss Hydrogen And Carboxylic Acid Ethanol?	Isabela Mehi Gaspari Augusto, São Carlos School of Engineering, São Paulo University (EESC/USP), Brazil
P2.22	Capacitive Deionization For Wastewater Treatment And Reuse In Cooling Towers	Wenny Noha, PepsiCo, United States
P2.23	CELLA™ - A New Biofilm Technology For Advanced, Compact And Sustainable Wastewater Treatment	Fernando Morgan-Sagastume, AnoxKaldnes-Veolia Water Technologies, Sweden
P2.24	Characterizing Microbial Communities Across Ozone-Biofiltration Operations	Kara Cunningham, West Virginia University, United States
P2.25	Circular nitrogen removal, recovery and reuse technologies	Wu Lina, BUCEA, China
P2.26	Cleaning Of Oil Contaminated Water Using A Novel Treatment Process	Florence Dennis Uzuh, <i>The University of</i> Manchester, UK

P2.27	Cobalt And Zinc Imidazolate Frameworks Derived Nitrogen-doped Carbon In Reduced Graphene Oxide (CoNC@rGO) For Oxidative Detection Of Acetaminophen (APAP)	Yujen Shih, National Sun Yat-sen University, Chinese Taipei
P2.28	Combined Biocatalytic And Photochemical Degradation Of Emerging Micropollutants In Water	Arbab Tufail, University of Wollongong, Australia
P2.29	Comparing Conventional Anaerobic Digestion With An Innovative Plug- flow Digestion Technology In North America	Sigrid Scherrenberg, Royal Haskoning DHV, Netherlands
P2.30	Continuous Filtration For The Removal Of Micropollutants By Biologically Granular Activated Carbon (Bio-GAC)	Lennert Dockx, Aquafin NV, Belgium
P2.31	Control Of Micro(nano)plastics In Wastewater By Innovative Living Membrane Bioreactors	Vincenzo Naddeo, University of Salerno, Italy
P2.32	Correlation of SR-AOP catalytic activity with the electrical properties of PBA based Co-LDH	Eunju Yang, Yonsei University, Republic of Korea
P2.33	Decentralised Wastewater Treatment Using The Example Of A Homestay In Hoa Bac, Da Nang	Mona Möller, Ostfalia University of Applied Science, Germany
P2.34	Development Of A Ceramsite-based Composite For Selective removal Of Se And As From (waste)water	Jingya Ren, Ghent University, Belgium
P2.35	Development Of A Representative Method For The Identification And Quantification Of Microplastics In Municipal Wastewater	Rachida Hamidou, Centre des Technologies de L'eau, Canada
P2.36	Dimensionless Correlation Of Oxygen Mass Transfer Coefficient In Membrane Bioreactors	Allyson Paris, Lakehead University, Canada
P2.37	Direct Membrane Filtration Of Municipal Wastewater Assisted By A Tannin-based Coagulant For An Energy-efficient Water Resource Recovery Facility	Eduardo Subtil, Federal University of ABC, Brazil
P2.38	Directional Bioelectrochemical Dechlorination Of Trichloroethene To Valuable Ethylene By Introduction Poly-3-hydroxybutyrate As A Slow Release Carbon Source	Xueqi Chen, Harbin Institute of Technology, China
P2.39	Effect Of Extended Solids Retention Time (SRT) On Enhanced Biological Phosphorus Removal (EBPR) Kinetics In A Membrane Bioreactor Process	Rony Das, Assocaited Engineering, Canada
P2.40	Effect Of High-density Polyethylene Microparticles In Aerobic Digestion And Their Influence On The Process And Biomass Characteristics	José Alonso, Universitat Politècnica de Valencia, Spain
P2.41	A Novel UV-LED Electrochemical Photoreactor For Decentralized Water Treatment	Arman Hejazi, The University of British Columbia, Canada
P2.42	Efficient Persulfate Activation By Photo-excited Organic Dyes: Mechanism And Application For Actual Dyeing Wastewater Self-purification	Xue Bai, Xi'an Jiaotong University, China
P2.43	Elemental Sulfur-based Autotrophic Denitrification Coupled With Anammox Process Realized Stable Mainstream Nitrogen Removal	Yuanjun Liu, The Hong Kong University of Science and Technology, Hong Kong
P2.44	Elucidating The Role Of Feed Water Constituents In Governing The Chemical Cleaning Performance Of Aged Ultrafiltration Membranes	Rahul Dutta, University of British Columbia, Canada
P2.45	Energy, Emissions, And Effluent Quality Insights From A Full-scale Membrane Aerated Biofilm Reactor (MABR) Upgrade	Narasimman Lakshminarasimman, University of Waterloo, Canada
P2.46	Enhancing Lithium Recovery From Brines: The Emerging Promise Of Direct Lithium Extraction Technologies	Malgorzata Szlachta, Geological Survey of Finland, Finland
P2.47	Enhancing Wastewater Reclamation: Integrative Valorization Of Ion- Exchange Eluates Via Membrane Technology Synergies	Maros Grosik, MamBrain, s.r.o., Czech Republic
P2.48	Enlarged Anaerobic Zone - Evolution Of EBPR Design In MBR	Soubhagya Pattanayak, Associated Engineering, Canada



Hossein Salehizadeh, Biopolymix Inc., Canada

Adrian Oehmen, The School of Chemical

Australia

Engineering, The University of Queensland,

On Workers In WWTPs

Wastewater

P2.57

P2.58

Extracellular Polymeric Substances For Microplastics Removal In

Phosphorus Removal Biomass To Promote The Circular Economy.

Extraction And Recovery Of Polyphosphate From Enhanced Biological

P2.59	Flow Into The Future: AI In Wastewater Treatment	Mohamed Zaghloul, Toronto metropolitan University, Canada
P2.60	Smart Maintenance Of Sewer Networks Via Internet Of Things	Jiuling Li, The University of Queensland, Australia
P2.61	Generic Framework For A National Wastewater Surveillance Programme For Infectious Diseases And Antimicrobial Resistance (AMR)	Aleida Hommes-De Vos Van Steenwijk, KWR Water Research Institute, Netherlands
P2.62	Harnessing Nanobubbles For Treating Harmful Algal Blooms In Surface Waters For Improved Water Quality	Danillo Couto, York University, Canada
P2.63	High-performance Seawater Desalination Pretreatment Under Harmful Algal Blooms By Using Fe $_2+ calciumPeroxide(CaO_2)$	Boyan Xu, National Univerisity of Singapore, Singapore
P2.64	High-pressure Anaerobic Digestion For In-situ Biogas Upgrading	Jing Zhao, Tsinghua University, China
P2.65	High-rate Nitrogen Removal Using HAP-PNA (partial Nitritation anammox) Granular Sludge	Yujie Chen, Tohoku University, Japan
P2.66	How Quantitative Is Quantitative PCR? Applying Fundamental Microbial Water Quality Theory To Improve Interpretation Of Trace Detections	Monica Emelko, University of Waterloo, Canada
P2.67	Hydrogen Recovery In A Modular Encapsulated Two-Stage Anaerobic Digestion System	lan Song, University of Minnesota, Twin Cities, United States
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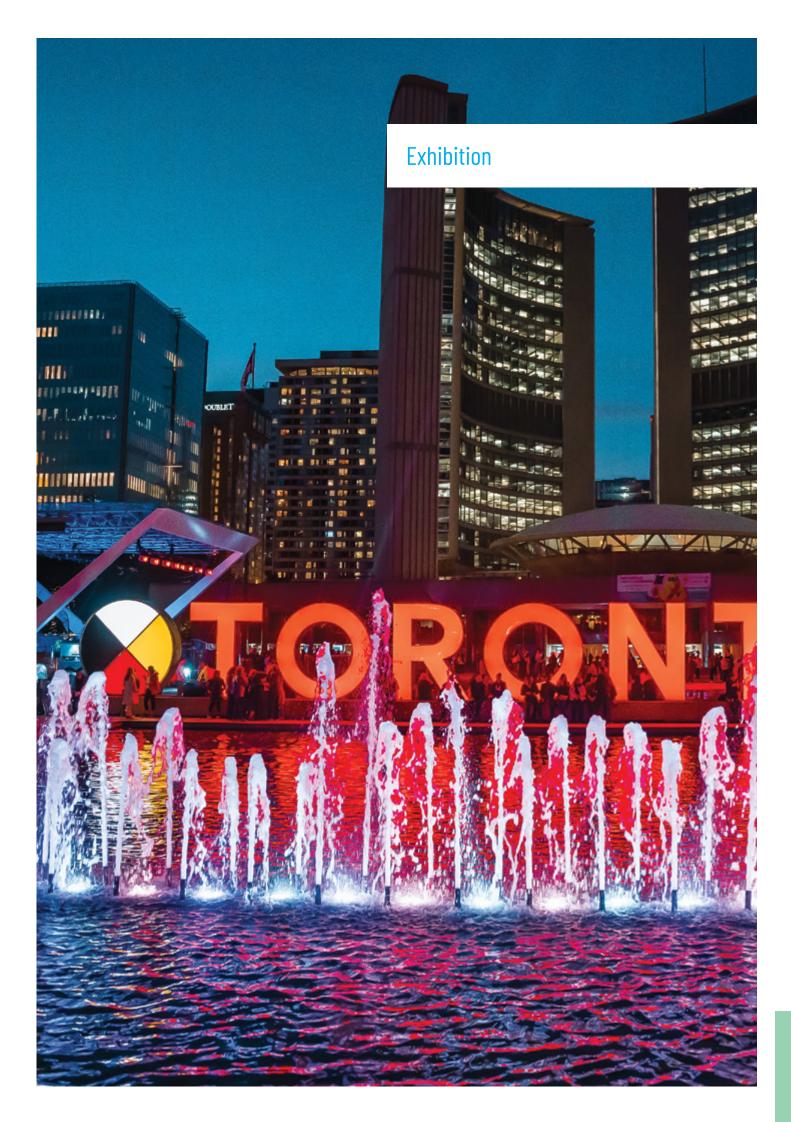
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P5.15	Mapping Governance To Link Global Goals With Local Action: Process Tracing Methodologies For Urban Water Management Across Urban South Asia	Faisal Shaheen, Toronto Water, Canada
P5.16	Our Water, Together (documentary Film)	Karl Zimmermann, University of British Columbia, Canada
P5.17	Perceptions And Awareness Of Climate Change Impacts On Water Resources In A Rural Community In Limpopo, South Africa.	Lee-Ann Modley, University of Johannesburg, South Africa
P5.18	Plastic Free School Repositioning Tap Water	Nuno Branco, AdRA - Águas da Região de Aveiro, S.A, Portugal
P5.19	Residual Chlorine Adsorption By Activated Carbon: A Strategy To Increase Chlorination Acceptance In Isolated Communities	Lyda Patricia Sabogal-Paz, University of Sao Paulo, Brazil
P5.20	Retention Profiles Of Aerobic Spore-forming Bacteria In A Household Slow Sand Filter: An Analogy With The Transfer Of Resistant Organisms	Emanuel Júnior Silva Soares, University of Sao Paulo, Brazil
P5.21	Risk Assessment Of Several Organic Materials In Contact With Water For Human Consumption	Rui Neves Carneiro, EPAL - Empresa Portuguesa das Águas Livres, S.A., Portugal

P5.22	School Visits, Guided Tours, Influencers And TikTok - Young People As The Target Audience For Raising Interest Towards Water Management	Leena Mikkonen-Young, Helsinki Region Environmental Services HSY, Finland
P5.23	Sustainable Achievement In WASH Implementations In Lunugala Division Of Sri Lanka Through Context Specific Sustainable Community Approach	Sarath Kumara, Sri Lanka
P5.24	Sustainable And Transformative Partnerships In The Water Sector	Elisabete Vale, Águas do Tejo Atlântico, S.A., Portugal
P5.25	The Unintended Inequities Of Rural Piped Water Supply	Samantha Levalley, University of Toronto, Toronto
P5.26	Understanding The Interdependencies Of Intermittent Water Supply Systems In India Using System Dynamics	Pranesh Muthuchami, Indian Institute of Technology Bombay, India
P5.27	Waterlab: A Multidimensional Incubator For Innovation Acceleration	David Marciniak, SWDE, Belgium
P5.28	Legal Personhood For Waterways And Innovative Projects - Help Or Hindrance?	Aaron Atcheson, Miller Thomson LLP, Canada
P6.1	Hydrochemical And Major Ions Appraisal In Granitic Aquifers In Upper East Region Of Ghana	Albert Acheampong, World Vision International, Ghana
P6.2	Isolation And Dechlorination Mechanism Of A Novel Organohalide- respiring Pseudomonas Sp. Strain CP-1	Xueqi Chen, Harbin Institute of Technology, China
P6.3	Evaluation Of Methanotrophic Consortium To Aerobic Cometabolism Of Mixed Vinyl Chloride Pollutants By Adding Methane Micro- And Nano- bubbles	Chu Fang Yang, Feng Chia University, Chinese Taipei
P6.4	Dust Storms In Iran Following The Drought Crisis In The Middle East	Zahra Elmi, Gilan Water and WasteWater Company, Iran
P6.5	Life Cycle Assessment Of Industrial Munitions Wastewater Treatment Trains	Jennifer Weidhaas, University of Utah, United States
P6.6	'OCTOPUS'' Principle Reduces Wastewater Management Costs Through Network Optimization And Clustering	Jan Friesen, Helmholtz Centre for Environmental Research GmbH - UFZ, Germany
P6.8	Global Risk Of Excess Sulfate In Groundwater	Chengyu Xiao, The Hong Kong University of Science and Technology, Hong Kong, China
P6.9	Sustainability As A Driver In Aarhus ReWater	Jeanette Madsen, EnviDan A/S, Denmark
P6.10	Characterizing DOC Sources In Greater Montreal And Their Impact On Water Quality For Drinking Water Supply	Evelyne Pouliot, Polytechnique Montréal, Canada
P6.11	Removal Of Organotin From Water Using A Coupled Adsorption And Electrochemical Regeneration Process	Mingchong Wang, University of Manchester, United Kingdom
P6.12	What Makes A Product Sustainable: How We Make It, Or How You Use It?	Stephanie Smith, Xylem, Inc, United States.
P6.13	The Increasing Conflict Over Shared Water Resources Between The Countries Of The Tigris And Euphrates River Basins	Zahra Elmi, Gilan Water and WasteWater Company, Iran
P6.14	Women In Water Leadership: Catalyst For Iran's Peace And Security	Maryam Moridnejad, Wintec Te Pūkenga, New Zealand
P6.15	Methodologies And Community Impacts Of Groundwater Recharge Interventions In Almora District, Uttarakhand, India	Katya Koepsel, Western Colorado University, United States
P6.16	Embracing Resource Recovery And Circular Economy For Iona Island Treatment Plant Starts With 2100 Vision	Joyce Chang, Jacobs, Canada
P6.17	Nitrification Of Ammonia Nitrogen In Liquid Fertilizer Using Titanium Dioxide Photocatalyst	Chiho Mihara, University of Shizuoka, Japan

P6.18	Effects On Ice Cover On Wave-driven Resuspension Of Organic Matter In A Boreal Lake	Clemens Klante, Sydvatten AB, Sweden
P6.19	Long-term Trend Of Dissolved Organic Carbon In Woronora Drinking Water System, Australia	Thusyanthini Ramanathan, Western Sydney University, Australia
P6.20	Water Access In Rural Healthcare Clinics: A Case Study Within Mpumalanga Province, South Africa.	Lee-Ann Modley, <i>University of Johannesburg,</i> South Africa
P6.21	Purification Of Drinking Water With A High Nitrate Content.	Signe Krogh, Aalborg Forsyning, Denmark
P6.22	Halogenated Microbials: A Ubiquitous And Active Contamination In Nationwide Urban Rivers	Dylan Ming-Han Li, The Hong Kong University of Science and Technology, Hong Kong, China
P6.23	Collection Device For Residential Water Sampling After Natural Disasters To Test Water Quality	Kayla Fericy, Duke University, United States
P6.24	Biofiltration-based Drinking Water Treatment Technologies For Resilience Post-wildfire	Emma Blackburn, University of Waterloo, Canada
P6.25	Visualizing Water Supply Inequalities In A Large Indian City	Kevin Kuriakose Joseph, University of Toronto, Canada
P6.26	The Impact Of Flue Gas Carbon Capture On Water And Wastewater In Existing Facilities	Joshua Lawrence, Fluor Corporation, Canada
P6.27	Reflection On Terms And Concepts Related To Aquifer Recharge	Miguel Angel Gonzalez-Nuñez, Universidad Autónoma de Chihuahua, Mexico
P6.28	Runoff Analysis In Urban Areas Through Parameter Optimization And LID Techniques	Hyeong Joo Lee, Hoseo University, Republic of Korea
P6.29	Rapid Detection Of Microplastics In Water Samples Using Surface- Enhanced Raman Scattering (SERS) Technique	Zhugen Yang, Cranfield University, United Kingdom
P6.30	Occurrence, Source Modeling, Influencing Factors And Exposure Assessment Of Drinking Water PAHs: A Mega Study From Mainland China	Sheng Chang, Chinese Research Academy of Environmental Sciences, Canada
P6.32	Spatial-temporal Analysis Of Human Access To Green And Blue Infrastructure In Two Metropolises South Of The Equator	Deyvid Rosa, Universidade Federal de Minas Gerais, Brazil
P6.33	The Management Of Urban Storm Water At Block-level (MUST-B): A New Approach For Potential Analysis Of Decentralized Storm Water Management Systems	Ganbaatar Khurelbaatar, Helmholtz Centre for Environmental Research, Germany
P6.34	Water-based Architecture; A Way For Coastal Communities To Coexist With Rising Ocean Water Levels	Hossein Radmand, <i>Rasam Tarh Arjmand Company,</i> Iran
P6.35	Hydro Geochemistry Of Ground Water By Using Water Quality Indexing And Statistical Modelling In Outer Himalayan Region	Kanchan Deoli Bahukhandi, University of Petroleum and Energy Studies, India
P6.36	Drinking Water Scarcity In Cameroon The Need For More Effective Management Of Water Supply Facilities.	Mbah Obed Sama, EF-ENSECO Inc., Cameroon
P6.37	Exploring Innovative Approaches For Water Resources Assessments In Data-Scarce Regions With Earth Observations	Rishma Chengot, UKCEH, UK
P6.38	Design And Optimization Of Low Impact Development (LID) Controls Using Evidence-based Approach In A Tropical Urban Catchment	Gil Cruz, De La Salle University, Philipines
P6.39	Coupling Geothermal Heating With Bioremediation For Enhanced Degradation Of BTEX From Subsurface	Gurpreet Kaur, York University, Canada
P6.40	Wastewater-effluent Phosphorus After Tertiary Treatment: An Additional And Unexpected Threat To Downstream Reservoir Eutrophication?	Kelvin Vianini, University of Waterloo, Canada

P6.41	Adaptive Pathways Approach To Achieving City Water Resilience	Ryan Brotchie, GHD, Canada
P6.42	Thirsty Crops, Hungry Populations: Balancing Water Use In Bangladesh's Diet	Kamrul Islam, National Institute of Advanced Industrial Science and Technology, Japan
P6.43	Exploring The Impacts Of Adaption Strategies For Climate Change On Groundwater Resource Management	Chihhao Fan, National Chinese Taipei University, Chinese Taipei
P6.44	Sponge Cities; A New Strategy In Water Resources Management	Hossein Radmand, <i>Rasam Tarh Arjmand Company,</i> Iran
P6.45	Flood Risk Mapping And Participatory GIS For Flood Resilience On The Dundee Waterfront.	Sarah Crowe, The University of Dundee, UK
P6.46	A "Sustainability-risk Assessment" Process For Sourcing Water For Green Hydrogen Production	Kabir Suara, Fortescue, Australia
P6.47	Circularity Assessment Of High Value-Added Resource Recovery; Ectoine Production From Biogas	David Renfrew, Imperial College London, UK
P6.48	Global Sanitation Transformation: Bridging Circular Economy And Climate Resilience	Sumeet Pawar, WASTE Netherlands, Netherlands
P6.49	An Ontology-based Digital Architecture And Modelling Ecosystem For Water-fit-for-reuse Applications	Saba Daneshgar, Ghent University, Belgium
P6.50	The Perspective Of A Smart City By Endorsing The Nexus In Integrated Water And Energy Security Management: The Case Of Semnan, Iran	Mohammad Reza Safaeian, Water & Wastewater Company, Iran
P6.51	Navigating The Waters Of Cooperation: Federated Learning Machine Learning And The Federated Collaborative Governance Framework	Elizabeth Taylor, Waterloom, USA
P6.52	Towards Tier 3 Lessons For Measuring And Mitigating N₂O At Water Resource Recovery Facilities	Amanda Lake, Jacobs, UK
P6.53	Advanced Recovery And Reuse Of Beverage Facility Wastewater	Craig Duvall, Veolia Water Technologies & Solutions, Canada
P6.54	Contribution To The Quality Assessment Of Purified Water: A Case Study Of The Methods Used By UN Field Operations Mission In The Province Of South Kivu In The DRC.	Soumana Gagara, United Nations, Somalia
P6.55	Urban Water Consumption Prioritizing Reduce Strategy From Circular Economy Framework	Nikita Kakwani, Indian Institute of Technology Bombay, India
P6.56	SaNiTi - New Innovative Non-sewered Sanitation Game Changing Strategy To Meet Water Security And SDG Goals	Jay Bhagwan, Water Research Commission, South Africa
P6.57	Better Protection Of Drinking Water - The Catchment Area Is An Integrated Part Of The Waterworks Production Site.	Pernille Jakobsen, Aalborg Forsyning, Denmark
P6.58	Impact Of Wastewater Characteristics And Climate Factors On The N2 And N1 Gene Target Ratios During Wastewater Surveillance Of SARS- CoV-2	Lena Carolin Bitter, Carleton University, Canada
P6.59	Commodified Access To Water: What Happens To The Poor When Bottled Water Is The Only Source Of Safe Drinking Water?	Joshua Greene, Center for Advanced Research in Social Anthropology, Mexico
P6.60	Probabilistic Monitoring And Forecasting Of Meteorological Drought Impacts On Vegetation Using Copula Function	Jeongeun Won, Pukyong National University, Republic of Korea



# Floorplan

# to the Exhibition





THE UK PAVILION

# We look forward to meeting you at the UK Pavilion (Stand 1000)

The events below are open to all:

<b>MON</b> (12 AUG)	<b>TUE</b> (13 AUG)	<b>WED</b> (14 AUG)	<b>THU</b> (15 AUC
Morrison Climate Change: Impacts and a Sustainable Solution Approach 11:00 - 12:00	Ofwat Supporting Water Sector Innovation in England & Wales	Scottish Government & Hydro Nation Scotland - A Leading Hydro Nation Through Research and Innovation	Vyntelligence Al Powered Capital Delivery and Customer Engagement 10:00 - 11:00
Global Leaders Share Net Zero Initiatives 13:00 - 13:40	10:00 - 11:00	WRC Microplastics Awareness	Young Water Professionals Lunchtim Reception
GHD From Concept to Context	RSE Modular Solutions for the Water Sector	10:30 - 11:00	Sponsored by RSE 12:30 - 14:00
in Seconds 14:00 - 14:30	11:00 - 12:00	ARUP Coastal Resilience and Adaptive Planning	Official Closing Ceremony Handing over the baton
Atkins Resilient futures: Using growth in the water	WaterAid WaterAid Showcase	11:00 - 12:00	to Glasgow (Alex Plant, CEO Scottish Water) in Main Theatre
sector to create resilient infrastructure, enhanced environments and thriving communities	12:30 - 13:30	Women in Water Lunchtime Reception Sponsored by ARUP	15:15 - 16:45
15:00 - 15:30	Panel Discussion on River Health	13:00 - 14:00	Find us at:
Capgemini Digitally Enabling Sustainable Water Infrastructure		Women in Water Panel Discussion	STAND
15:30 - 16:00	15:30 - 16:30	14:00 - 14:30	1000
Enabling and Celebrating Clobal Collaboration Networking reception sponsored by Morrison	Looking ahead to Glasgow 2026 Networking reception sponsored by RSE	Managing Demand and Reducing Surface Water Panel	IWA World Water Congress and Exhibition MTCC, South Building, Toronto
16:30 - 18:30	16:30 - 18:30	15:30 - 16:30	11 - 15th August 2024

Morrison 🥏 Construction

Charles

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Capgernini 🌰

Did you know the next IWA World Water Congress & Exhibition will be in Glasgow? We hope to see you there in 2026.

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# **Exhibitor**

# by organisation name

Exhibitor	Stand
Aarhus Vand Denmark	300
ACME Engineering Products Canada	710-4
Acti-Zyme Products Ltd <i>Canada</i>	515
ADS Pipes <i>Canada</i>	422
Advancing Canadian Water Assets (ACWA) Canada	610-7P
AECOM - Operations Challenge Canada	740
Aguardio <i>Denmark</i>	300
Anglian Water United Kingdom	1000
AquaAction <i>Canada</i>	710-1
Aquacycl USA	820
AquaTech Netherlands	910
Armtec Canada	610
ARUP United Kingdom	1000
Asian Water <i>Malaysia</i>	
ATCovers <i>Italy</i>	635
Atkins Realis United Kingdom	1000
AWWA USA	929
Balmoral United Kingdom	421
Beijing Drainage <i>China</i>	308
Bisan Incl Operations Challenge Canada	740
Bishop Water <i>Canada</i>	510-15
Black & Veatch - sponsor lounge USA	402
BluMetric <i>Canada</i>	610
BPC Instruments Sweden	104
British Water United Kingdom	1000
Bureau of Sewerage Japan	730
Bureau of Waterworks Japan	730
Cambi USA	1012
Cameron <i>Canada</i>	407
Canada Pavilion <i>Canada</i>	510/610/710
Canadian Water Network <i>Canada</i>	510-8

Exhibitor	Stand
Capgemini United Kingdom	1000
Carleton University Canada	610-7P
CAWQ ACQE Canada	510/610/710
China Pavilion China	310
Cima+ <i>Canada</i>	740
City of Toronto <i>Canada</i>	610-14
City of Toronto - Toronto Water Lounge Canada	610-3
Cla-Val USA	913
Clean <i>Denmark</i>	300
Comcore <i>China</i>	505
Concordia University Canada	610-7P
Consibio <i>Denmark</i>	300
Continental Carbon Canada	423
Continental Carbon – Operations Challenge Canada	740
CrayoNano <i>Canada</i>	735
Critical Matrix Canada	610-1
Cromer Canada	407
CST Industries USA	912
CWI Canada	610-1
CWWA <i>Canada</i>	510/610/710
Dalhousie Univeristy and Centre for Water Resources Studies <i>Canada</i>	610-16
Danish Export Association Denmark	300
Danva <i>Denmark</i>	300
DataStream <i>Canada</i>	510-10
Deepchill <i>Canada</i>	610-1
Denmark Pavilion Denmark	300
DHI Denmark	300
Digital Water Solutions Inc. Canada	610-10P
Directrik Inc - Operations Challenge Canada	740
DTU <i>Denmark</i>	300

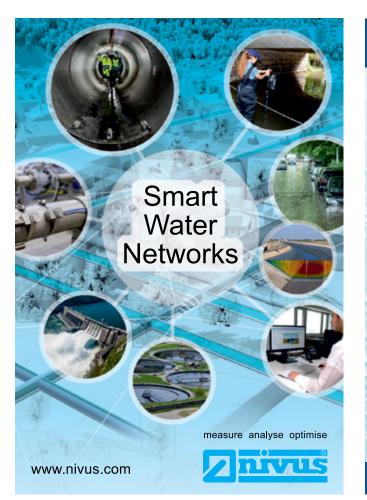
Durham Region - Operations Challenge Canada	740
M Fluids Inc. <i>Canada</i>	710-12
BC Foundation Netherlands	910
coAl Innovates Inc. Canada	710-13
merging Technology Pavilion Global	820
indress + Hauser Switserland	411
inspired Solutions - PFAStigator USA	820
Environmental Science & Eng. Magazine Canada	1013
inwave Energy Corporation - sponsor ounge <i>Canada</i>	403
ISRI <i>USA</i>	406
TA <i>Canada</i>	610-1
xactBlue Technologies Inc. Canada	510-5
ibracast <i>Canada</i>	610-1
leming College Canada	710-11
lownergia <i>Canada</i>	610-1
YLD <i>UK</i>	820
GEI Consultants <i>Canada</i>	610-11P
GEMU <i>Canada</i>	630
GHD United Kingdom	1000
Greatario <i>Canada</i>	421
Grundfos <i>Denmark</i>	400
GWI United Kingdom	
łarmsco <i>USA</i>	926
lermann Sewerin GmbH <i>Germany</i>	407
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ligh Sense Solutions Canada	510-4
luber Technology Ltd. <i>Canada</i>	Room 803
lydraloop Netherlands	910
nCTRL <i>Canada</i>	510-6
ndia Pavilion India	810
nnovation Pavilion Global	820
NRS Canada	610-7P
PEX <i>Canada</i>	<b>610-2</b>
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Isle Utilities Australia	820
ltron USA	1015
IUVA - International UV Association Canada	734
IWA United Kingdom	600
IWA Cities of the Future Research Center (Xi'An) <i>China</i>	600
IWA WWCE 2026 host United Kingdom	600
IWA WWCE 2028 host <i>Malaysia</i>	600
IWA YWP Canada <i>Canada</i>	610-13
Jacobs - sponsor lounge USA	403
Jacobs - Operations Challenge USA	403
John Brooks - Operations Challenge Canada	740
Jiangsu Taiyuan Environmental Protection Techn. Co. <i>China</i>	310
K&K Trading Nepal	931
Kamstrup <i>Denmark</i>	300
KWR Netherlands	907
LG Sonic Netherlands	910
Lofty Perch <i>Canada</i>	710-6
Lovibond <i>Germany</i>	420
Malaysia Water Association (MWA) Malaysia	Room 705
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Branche (MWAS) <i>Malaysia</i>	510-3
Branche (MWAS) <i>Malaysia</i> MANTECH <i>Canada</i>	510-3 736
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Branche (MWAS) <i>Malaysia</i> MANTECH <i>Canada</i> MDGBio <i>USA</i> MDPI <i>China</i> Memorial University <i>Canada</i> Morrison Construction <i>United Kingdom</i> MS Filter Systems Inc. <i>Canada</i>	736 1204 610-7P 1000
Branche (MWAS) <i>Malaysia</i> MANTECH <i>Canada</i> MDGBio <i>USA</i> MDPI <i>China</i> Memorial University <i>Canada</i> Morrison Construction <i>United Kingdom</i> MS Filter Systems Inc. <i>Canada</i> Much More Water <i>Denmark</i>	736 1204 610-7P 1000 510-13
Branche (MWAS) <i>Malaysia</i> MANTECH <i>Canada</i> MDGBio <i>USA</i> MDPI <i>China</i> Memorial University <i>Canada</i> Morrison Construction <i>United Kingdom</i> MS Filter Systems Inc. <i>Canada</i> Much More Water <i>Denmark</i> Mueller <i>Canada</i>	736 1204 610-7P 1000 510-13 300
Manyuan pump industry Co. <i>China</i> Nanyuan pump industry Co. <i>China</i> National Mission for Clean Ganga (NMCG) <i>India</i>	736 1204 610-7P 1000 510-13 300 805
Branche (MWAS) <i>Malaysia</i> MANTECH <i>Canada</i> MDGBio <i>USA</i> MDPI <i>China</i> Memorial University <i>Canada</i> Morrison Construction <i>United Kingdom</i> MS Filter Systems Inc. <i>Canada</i> Much More Water <i>Denmark</i> Mueller <i>Canada</i> Nanyuan pump industry Co. <i>China</i> National Mission for Clean Ganga (NMCG)	736 1204 610-7P 1000 510-13 300 805 310
Branche (MWAS) <i>Malaysia</i> MANTECH <i>Canada</i> MDGBio <i>USA</i> MDPI <i>China</i> Memorial University <i>Canada</i> Morrison Construction <i>United Kingdom</i> MS Filter Systems Inc. <i>Canada</i> Much More Water <i>Denmark</i> Mueller <i>Canada</i> Nanyuan pump industry Co. <i>China</i> Nanyuan pump industry Co. <i>China</i> National Mission for Clean Ganga (NMCG) <i>India</i> National Water & Sewerage Company	736 1204 610-7P 1000 510-13 300 805 310 810
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PWNT Netherlands	910
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RLS Wacon <i>Germany</i>	928
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Scottish Water United Kingdom	1000
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outh West Water United Kingdom	1000
PD Sales Limited - Operations Challenge Canada	740
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tate of Green <i>Denmark</i>	300
telis Environmental Solutions Canada	710-8
ulfiLogger <i>Denmark</i>	300
WEL - Operations Challenge Canada	740
ymbiant <i>Canada</i>	610-1
yntec Process Equipment - Operations Challenge <i>Canada</i>	740
CI Carbon Fibre <i>Canada</i>	710-7
EMcompany <i>Denmark</i>	300
erra15 Australia	820
GS Japan	730
he University of British Columbia Canada	610-7P
he Water Tower Global Innovation Center ISA	708-6P
intometer <i>Germany</i>	420
MG Japan	730
okyo Pavilion <i>Japan</i>	730
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radeworks <i>Canada</i>	610-1
rojan Technologies <i>Canada</i>	608
IK Pavilion United Kingdom	1000
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Inited Utilities United Kingdom	1000
Iniversité Laval <i>Canada</i>	610-7P
Iniversity of Calgary Canada	610-7P
niversity of New Brunswick Canada	610-7P
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Iniversity of Waterloo - The Water Institute Canada	610-7P
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Vaughan Company, Inc - Operations Challenge <i>Canada</i>	740
Veolia <i>France</i>	305
VerifiGlobal / CSA Group Canada	710-16
VEWIN Netherlands	910
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WASTECORP PUMPS - Operations Challenge Canada	740
Water Alliance Netherlands	910
Water Canada Canada	634
Water Project Canada	825
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Water4All Netherlands	910



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WEAO - Operations Challenge Canada	740
WEF USA	631
WEF - Operations Challenge USA	740
Wessex Water United Kingdom	1000
Wellmaster Canada	610-1
Wietec <i>China</i>	310
WPI - Water Professionals International USA	Room 703-3
WRC United Kingdom	1000
WWEMA USA	708-2
Xylem <i>Luxemburg</i>	800
York Region - Operations Challenge Canada	740
York University Canada	610-7P
Yorkshire Water United Kingdom	1000
Zero Energy Water Canada	710-10

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# Exhibitor

# by stand number

Stand	Exhibitor
103	Skyjuice Foundation Australia
104	BPC Instruments Sweden
300	Aarhus Vand Denmark
300	Aguardio Denmark
300	Clean <i>Denmark</i>
300	Consibio <i>Denmark</i>
300	Danish Export Association Denmark
300	Danva <i>Denmark</i>
300	Denmark Pavilion Denmark
300	DHI Denmark
300	DTU Denmark
300	Kamstrup <i>Denmark</i>
300	Much More Water Denmark
300	State of Green Denmark
300	SulfiLogger <i>Denmark</i>
300	TEMcompany Denmark
300	Unisense <i>Denmark</i>
300	Unisense Environment Denmark
300	Water Valley Denmark Denmark
305	Veolia <i>France</i>
308	Beijing Drainage China
310	China Pavilion China
310	Jiangsu Taiyuan Environmental Protection Techn. Co. <i>China</i>
310	Nanyuan pump industry Co. China
310	Shanghai Beifu Inverter technology Co. <i>China</i>
310	WaterTech <i>China</i>
310	Wietec <i>China</i>
400	Grundfos <i>Denmark</i>
403	Black & Veatch - sponsor lounge USA
403	Enwave Energy Corporation - sponsor lounge Canada
403	Jacobs - sponsor lounge USA

Stand	Exhibitor
403	Ramboll - sponsor lounge Denmark
403	Stantec - sponsor lounge USA
406	ESRI <i>USA</i>
407	Cameron Canada
407	Cromer <i>Canada</i>
407	Hermann Sewerin GmbH Germany
409	Nivus <i>Germany</i>
411	Endress + Hauser Switserland
420	Lovibond <i>Germany</i>
420	Tintometer Germany
421	Balmoral United Kingdom
421	Greatario <i>Canada</i>
422	ADS Pipes Canada
423	Continental Carbon Canada
425	National Water & Sewerage Company <i>Uganda</i>
505	Comcore <i>China</i>
505	Qingdao Comcore Technologies Co., Ltd. <i>China</i>
510/610/710	Canada Pavilion Canada
510/610/710	CAWQ ACQE Canada
510/610/710	CWWA <i>Canada</i>
510-1	SciCorp International Canada
510-10	DataStream Canada
510-11	Ontario Clean Water Agency (OCWA) <i>Canada</i>
510-12	Hetek Solutions Canada
510-12	SebaKMT <i>Germany</i>
510-13	MS Filter Systems Inc. Canada
510-14	Ontario First Nations Technical Services Corporation <i>Canada</i>
510-15	Bishop Water Canada
510-2	PR'eautech Canada
510-3	MANTECH Canada

510-4	High Sense Solutions Canada
510-5	ExactBlue Technologies Inc Canada
510-6	inCTRL Canada
510-7	Puroxi Pure Water Global Inc <i>Canada</i>
510-8	Canadian Water Network Canada
510-9	SkyTEM Canada Inc. <i>Canada</i>
515	Acti-Zyme Products Ltd Canada
600	IWA United Kingdom
600	IWA Cities of the Future Research Center (Xi'An) <i>China</i>
600	IWA WWCE 2026 host United Kingdom
600	IWA WWCE 2028 host <i>Malaysia</i>
608	Trojan Technologies Canada
610	Armtec Canada
610	BluMetric <i>Canada</i>
610-1	Critical Matrix Canada
610-1	CWI <i>Canada</i>
610-1	Deepchill <i>Canada</i>

610-1	Wellmaster Canada
610-1	ETA <i>Canada</i>
610-1	Fibracast <i>Canada</i>
610-1	Flownergia <i>Canada</i>
610-1	Government of Ontario Canada
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610-1	Tradeworks Canada
610-1	UVPure <i>Canada</i>
610-10P	Digital Water Solutions Inc. Canada
610-11P	GEI Consultants Canada
610-13	IWA YWP Canada Canada
610-14	City of Toronto Canada
610-14	SHARC Energy Canada
610-15	Toronto Metropolitan University Canada
610-16	Dalhousie Univeristy and Centre for Water Resources Studies Canada
610-2	IPEX Canada
610-3	City of Toronto - Toronto Water Lounge <i>Canada</i>



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- Reduce losses
- » Drive sustainability
- » Optimize asset replacement
- » Protect revenue

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610-7PAdvancing Canadian Water Assets (ACWA) Canada610-7PCarleton University Canada610-7PINRS Canada610-7PINRS Canada610-7PMemorial University Canada610-7PPolytechnique Montreal Canada610-7PThe University of British Columbia Canada610-7PToronto Metropolitan University Canada610-7PUniversity of British Columbia Canada610-7PToronto Metropolitan University Canada610-7PUniversity of Calgary Canada610-7PUniversity of New Brunswick Canada610-7PUniversity of Vaterloo - The Water Institute Canada610-7PUniversity of Waterloo - The Water Institute Canada610-7PVork University Canada610-7PVork University Canada610-7PWater Canada Canada630GEMU Canada631WEF USA634Water Canada Canada635ATCovers ItalyRoom 705Malaysia Water Association (MWA) MalaysiaMalaysia Water Association, Sarawak Branche (MWAS) Malaysia708US Pavilion USA708US Pavilion USA708-2WWEMA USA708-4PWashington University in St. Louis USA708-6PThe Water Tower Global Innovation Center USA710-10Zero Energy Water Canada710-11Fleming College Canada710-12E M Fluids Inc. Canada710-13ecoAl Innovates Inc. Canada710-14Neptune Technology Group Canada		
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710-16 VerifiGlobal / CSA Group Canada	710-16	VerifiGlobal / CSA Group <i>Canada</i>

710-3	SGS North America Canada
710-4	ACME Engineering Products Canada
710-5	QMC Metering Solutions Canada
710-6	Lofty Perch Canada
710-7	TCI Carbon Fibre Canada
710-8	Stelis Environmental Solutions Canada
710-9	Peel Region Canada
730	Bureau of Sewerage Japan
730	Bureau of Waterworks Japan
730	TGS Japan
730	TMG Japan
730	Tokyo Pavilion Japan
734	IUVA - International UV Association Canada
734	UV Solutions Magazine Canada
735	CrayoNano <i>Canada</i>
736	MDGBio <i>USA</i>
740	AECOM - Operations Challenge Canada
740	Bisan Incl Operations Challenge Canada
740	CIMA+ - Operations Challenge Canada
740	Continental Carbon - Operations Challenge <i>Canada</i>
740	Directrik Inc - Operations Challenge Canada
740	Durham Regiuon - Operations Challenge Canada
740	IPEX - Operations Challenge Canada
740	Jacobs - Operations Challenge Canada
740	John Brooks - Operations Challenge Canada
740	Operation Challenge Canada
740	Peel Region - Operations Challenge Canada
740	Rapid Assessment Technology Services - Operations Challenge <i>Canada</i>
740	SPD Sales Limited - Operations Challenge <i>Canada</i>
740	SWEL - Operations Challenge Canada
740	Syntec Process Equipment - Operations Challenge <i>Canada</i>
740	Vaughan Company, Inc - Operations Challenge <i>Canada</i>

740	WASTECORP PUMPS - Operations Challenge <i>Canada</i>
740	WEAO - Operations Challenge Canada
740	WEF - Operations Challenge USA
740	York Region - Operations Challenge <i>Canada</i>
800	Xylem <i>Luxemburg</i>
Room 803	Huber Technology Ltd. <i>Canada</i>
Room 803	Noventa Energy Partners Canada
805	Mueller <i>Canada</i>
810	India Pavilion India
810	National Mission for Clean Ganga (NMCG) India
820	Aquacycl USA
820	Emerging Technology Pavilion Global
820	Enspired Solutions - PFAStigator USA
820	FYLD <i>UK</i>
820	Innovation Pavilion Global
820	IQ Energy Australia
820	Isle Utilities Australia
820	Terra15 Australia
820	VorTech Ireland
825	Nickel Institute Canada
825	Water Project Canada
907	KWR Netherlands
910	AquaTech Netherlands
910	EBC Foundation Netherlands
910	Hydraloop Netherlands
910	LG Sonic Netherlands
910	Netherlands Pavilion Netherlands
910	Netherlands Water Partnership (NWP) Netherlands
910	PWNT Netherlands
910	VEWIN Netherlands
910	Water Alliance Netherlands
910	Water4All Netherlands
912	CST Industries USA
913	Cla-Val USA

915	Toray USA
926	Harmsco USA
928	RLS Wacon Germany
929	AWWA USA
931	K&K Trading <i>Nepal</i>
1000	Anglian Water United Kingdom
1000	ARUP United Kingdom
1000	Atkins Realis United Kingdom
1000	British Water United Kingdom
1000	Capgemini United Kingdom
1000	GHD United Kingdom
1000	Morrison Construction United Kingdom
1000	Northumbrian Water United Kingdom
1000	Ofwat Innovation Fund United Kingdom
1000	RSE United Kingdom
1000	Scottish Gov United Kingdom
1000	Scottish Water United Kingdom
1000	Severn Trent United Kingdom
1000	South West Water United Kingdom
1000	UK Pavilion United Kingdom
1000	United Utilities United Kingdom
1000	Visit Britain United Kingdom
1000	Vyntelligence United Kingdom
1000	Wessex Water United Kingdom
1000	WRC United Kingdom
1000	Yorkshire Water United Kingdom
1010	Raetts Germany
1012	Cambi <i>USA</i>
1013	Environmental Science & Eng. Magazine Canada
1015	Itron USA
1203	Royal Society of Chemistry <i>United</i> Kingdom
1204	MDPI <i>China</i>
	Asian Water <i>Malaysia</i>
	GWI United Kingdom





Since 1988, *Environmental Science and Engineering Magazine* has covered Canada's multi-billion dollar a year water, wastewater and environmental protection sectors.



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# **Exhibitor Profiles**



Stand 300 AARHUS VAND



Stand 710-4 ACME ENGINEERING PRODUCTS Country: Canada



Stand 515 ACTI-ZYME PRODUCTS LTD



Stand 422 ADS PIPES Company/organization name: ADS City: Thorndale, ON Country: Canada Web address: https://adspipe.ca/ LinkedIn: https://www.linkedin.com/company/ advanced-drainage-systems-inc-X: https://X.com/ADS\_lnc Facebook: https://www.facebook.com/ AdvancedDrainageSystems

Company description/products and services: Advanced Drainage Systems is a leading manufacturer of innovative stormwater and onsite septic wastewater solutions that manages the world's most precious resource: water. ADS is one of the largest plastic recycling companies in North America, ensuring over half a billion pounds of plastic is kept out of landfills every year. Visit adspipe.ca



Stand 610-7P ADVANCING CANADIAN WATER ASSETS (ACWA)



#### Stand 740 AECOM - OPERATIONS CHALLENGE City: Markham Country: Canada Web address: aecom.ca LinkedIn: https://www.linkedin.com/company/aecom X: https://x.com/AECOM Facebook: https://www.facebook.com/ AecomTechnologyCorporation/

AECOM is the world's trusted infrastructure consulting firm, partnering with clients to solve the world's most complex challenges and build legacies for generations to come. From flood protection to nutrient control to desalination, AECOM's goal is to ensure that our water clients have access to globally sustainable technologies, locally delivered.



#### Stand 300 AGUARDIO

City: Viby J Country: Denmark Web address: www.aguardio.com LinkedIn: www.linkedin.com/company/AGUARDIO X: www.X.com/aguardio Facebook: www.facebook.com/aguardio

Company description/products and services: Aguardio designs and produces IoT sensors that help reduce water usage in bathrooms, specifically showers and toilets. The sensors alert users to water waste and enable usage monitoring, promoting user interaction and leading to behavioral change. The online Aguardio platform helps industries make building planning and time management more effective.



#### Stand 1000

ANGLIAN WATER SERVICES Company/organization name: Anglian Water Services City: Huntingdon Country: UK Web address: Anglian Water - Love Every Drop LinkedIn: @anglianwater X: @anglianwater Facebook: @anglianwater

Anglian Water is the largest water and water recycling company in England and Wales by geographic area and the first major utility to incorporate their purpose into their Articles of Association.

In 2023, Anglian Water received several prestigious accolades, including being named Water Industry Awards Company of the Year. They were also featured in The Times Top 50 Employers for Gender Equality and recognized as one of the Top 10 Best Private Companies in the FTSE Women Leaders Review.

# AP><10°

#### Stand 300

APX10 City: Milwaukee, WI Country: USA Web address: www.apx10.com

Revolutionizing water data The APX<sup>®</sup> platform brings superior infrastructure overview and pipeline reinvestment decision guidance to water and wastewater utilities



### Stand 710-1

AQUAACTION City: Montreal Country: Canada Web address: www.aquaaction.org LinkedIn: https://www.linkedin.com/company/ aquaaction/mycompany/ X: https://x.com/iflow/login?redirect\_after\_ login=%2FTakeAquaAction Facebook: https://www.facebook.com/TakeAquaAction

Founded in 2015, AquaAction is a registered charity focused on revitalizing freshwater health, through innovative technologies.

innovative technologies. Through its two tech-focused programs, AquaAction develops entrepreneurial skills, and supports the launch of water-tech startups (AquaHacking Challenge) as well as secure pilots and 1st clients for water tech start-ups (AquaEntrepreneur).



Stand 820 AQUACYCL



Stand 910 AQUATECH GLOBAL City: Amsterdam Country: The Netherlands Web address: www.aquatechtrade.com LinkedIn: https://www.linkedin.com/company/ aquatech-global-events/ X: https://x.com/aquatech/ Facebook: https://www.facebook.com/aquatechtrade/

Aquatech is the leading global platform on technology & solutions driving a sustainable water future, hosting international trade shows in Amsterdam, China, and Mexico and an online community. The flagship event, Aquatech Amsterdam, attracts an attendance of over 25,000 and 800 exhibitors biennially, showcasing cutting-edge water technologies and fostering industry connections worldwide.



Stand 608

ARIA FILTRA City: Cortland, NY Country: USA Web address: www.ariafiltra.com LinkedIn: Aria Filtra

Aria Filtra, a division of Trojan Technologies, is the filtration partner of choice for municipal and industrial customers that need reliable access to consistent, high-quality water. Featuring industry-leading durability, reliability, and ease of operations, our broad portfolio of solutions ensures mission-critical functions continue to work as needed, day in, day out, for years to come.



## ARUP

#### **Stand 1000** ARUP

Dedicated to sustainable development, Arup is a collective of designers, consultants and experts working globally. Founded to be humane and excellent, we collaborate with our clients and partners using imagination, technology, and rigour to shape a better world



#### ASIAN WATER MAGAZINE City: Petaling Jaya, Selangor Country: Malaysia Web address: www asianwater com my LinkedIn: www.linkedin.com/company/asian-watermagazine

Asian Water has been an impartial, interesting and trusted source of information covering every country on Asia. Asian Water continues to be an unbeatable source of the very information that Asia's water professionals are keen to read about. Asian Water also brings to you a regular digital weekly newsletter, where you will be kept abreast with the latest news, trends and developments in the water and wastewater industry as it happens.



Stand 635 A.T COVERS S.R.L City: Piacenza Country: italy Web address: www.atcovers.it

A.T COVERS srl is an Italian company with 25 years of experience in producing Aluminum Covers for odors containment in Public and Industrial Wastewater Treatment Plants. We offer our clients a complete service: Customized design, Producion and Installation on all types and shapes of tanks.

### C AtkinsRéalis

**Stand 1000 ATKINSRÉALIS** 

Created by the integration of long-standing organizations dating back to 1911, AtkinsRéalis is a world-leading professional services and project management company dedicated to engineering a better future for our planet and its people. We create sustainable solutions that connect people, data and technology to transform the world's infrastructure and energy systems.



### Stand 421

BALMORAL TANKS City: Thurnscoe Country: England Web address: www.balmoraltanks.com LinkedIn: www.linkedin.com/company/3049519

Balmoral Tanks is a leading design and manufacturing company that provides unique turnkey services spanning civils groundwork, tank design and manufacture, installation, commissioning and technical after sales services. Producing what is believed to be the most

comprehensive range of tank products from a single source.



#### Stand 308

BEIJING DRAINAGE Beijing Drainage Group Co., LTD City: Beijing Country: China Web address?https://www.bdc.cn/

Beijing Drainage Group Co., LTD is a franchise enterprise specializing in sewage treatment and reclaimed water utilization in the urban area of Beijing. It is a national leader in sewage treatment and recycling, sludge treatment and disposal, pipe network O&M, integrated plant and network operation, and technological innovation.

### BISAN

#### Stand 740

**BISAN INCL. - OPERATIONS CHALLENGE** City: Mississauga Country: Canada Web address: www.bisaninc.com LinkedIn: https://www.linkedin.com/company/ bisan-trading-and-industrial-services inc/?originalSubdomain=ca Facebook: https://www.facebook.com/bisaninccanada

BISAN offers equipment and pre-engineered systems to both municipal and industrial clients including: Chemical Feed equipment and systems (Local Ontario

- representative for Watson Marlow Pumps)
- Dry & Wet Polymer preparation and feed systems Dynamic and static Mixing Systems
- Instrumentation & Instruments panels
- Specialty valves.



Stand 510-15 **BISHOP WATER** 



Stand 402 **BLACK & VEATCH - SPONSOR LOUNGE** 





#### **Stand 820**

**bNOVATE TECHNOLOGIES** City: Ecublens

Country: Switzerland Web address: https://www. bnovate.com/ LinkedIn: https://www.linkedin.com/ company/bnovate-technologies/ X: https://x.com/ hNovatePR?mx=2

Facebook:n/a YouTube: https://www.youtube.com/ channel/UCub7ZhAR\_kK4O1xlB26\_UMQ Featured by Isle at: USA Technology Approval Group

bNovate Technologies enhances water quality monitoring with products, AQUA@Sens and Bactosense. The BactoSense is an automated and online sensor for the rapid monitoring of bacteria in drinking water. It provides a direct, high-resolution bacteria count to quickly detect microbiological contamination, dramatically reducing the current routine measurement time from 1-5 days to 20 minutes

### BPC INSTRUMENTS

Stand 104 BPC INSTRUMENTS City: Lund Country: Sweden Web address: www.bpcinstruments.com LinkedIn: https://www.linkedin.com/company/ bioprocess-control-sweden-ab/mycompany/

BPC Instruments is a global Swedish based pioneering technology company developing and offering analytical instruments enabling more efficient, reliable, and higher quality research and analysis for industries in renewable bioenergy and environmental biotechnology. Today, BPC Instruments exports to nearly 70 countries around the world.



#### Stand 730

BUREAU OF SEWERAGE, TOKYO METROPOLITAN GOVERNMENT City: Tokyo

Country: Japan Web address: https://www.gesui.metro.tokyo.lg.jp/ X: @tocho suido (available in Japanese)

The Bureau of Sewerage TMG is a public corporation operating sewerage services in Tokyo, a capital city with a population of over 14 million. We are working to solve problems on facility maintenance utilizing the strength of Tokyo Sewerage



Bureau of Waterworks Tokyo Metropolitan Government

#### **Stand 730**

BUREAU OF WATERWORKS, TOKYO METROPOLITAN GOVERNMENT City: Tokyo Country: Japan X: @tocho\_suido (available in Japanese)

We have been constantly providing a stable supply of high quality water to approx. 13.6 million customers. While constructing a water supply system with higher reliability at both the hard and soft aspects, we are aiming at developing the high quality water service and the waterworks that make customers satisfied.



#### **Stand 1012**

CAMBI City: Malvern, PA Country: United States of America Web address: www.cambi.com LinkedIn: https://www.linkedin.com/company/ cambithp/ X: https://X.com/CambiTHP Facebook: https://www.facebook.com/CambiTHP/

With over 89 facilities, Cambi is the acknowledged worldwide leader in Thermal Hydrolysis. For over 25 years Cambi THP has been successfully pre-treating solids prior to digestion. Cambi THP reduces capital and operating costs by reducing digester volume by 60% alone and producing.



Stand 407 CAMERON INSTRUMENTS INC. City: Guelph, ON Country: Canada Web address: www.cameroninstruments.com LinkedIn: https://www.linkedin.com/company/ cameron-instruments-inc-/mycompany/ X: https://X.com/Cameron\_Inst Facebook: https://www.facebook.com/ cameroninstruments

Cameron Instruments Inc. is a Canadian distributor of high quality calibration, measurement & test instrumentation for pressure, temperature, gas and flow measurement. Proudly representing Sewerin -Technologies for Leak Detection across Canada. We are also the Approved Service Partner for all Sewerin Gas Detectors in Canada.



### Stand 510/610/710 CANADA PAVILION

The Canada Pavilion Country: Canada Web address: www.cwwa.ca

Visit the Canada Pavilion to meet over 40 Canadian innovators and solution providers. Relax in the Toronto Water Lounge and hear presentations from Canadian entrepreneurs. Be sure to drop by Tuesday afternoon 1700-1830 for the Canada Reception and try our poutine – a Canadian classic!



#### **Stand 510-8**

CANADIAN WATER NETWORK City: Waterloo, Ontario Country: Canada Web address: https://cwn-rce.ca/ LinkedIn: https://www.linkedin.com/company/ canadian-water-network/ X: @CdnWaterNetwork Facebook: https://www.facebook.com/ CanadianWaterNetwork

Canadian Water Network supports decision-makers across sectors in addressing nationally relevant waterrelated challenges and opportunities within three focus areas: water and communities, water and health, and water and climate. Our goal is to foster a more resilient, equitable and healthy relationship with water while contributing to reconciliation with Indigenous peoples.



#### Stand 1000 CAPGEMINI

Company/organization name: Capgemini UK City: London

Country: United Kingdom Web address: https://www.capgemini.com/gb-en/ LinkedIn: Capgemini Energy Transition & Utilities

Capgemini is a global business and technology transformation partner, helping organisations to accelerate their dual transition to a digital and sustainable world, while creating tangible impact for enterprises and society. Capgemini delivers end-toend services and solutions leveraging strengths from strategy and design to engineering, all fueled by its market leading capabilities in AI, cloud and data, combined with its deep industry expertise and partner ecosystem.



Stand 610-7P

CARLETON UNIVERSITY City: Ottawa, Ontario Country: Canada Web address: https://carleton.ca/ LinkedIn: https://www.linkedin.com/school/carletonuniversity/ X: https://x.com/Carleton\_U Facebook: https://www.facebook.com/ carletonuniversity

Carleton University, Canada's capital university is situated on a beautiful campus bordered by the sparkling Rideau River and Canal, Carleton is just minutes from the heart of our nation's government and enjoys easy access to the many organizations, associations and businesses which thrive in Ottawa. Many of Ontario's leading high tech companies surround our campus where cutting-edge research joins with highly innovative teaching to solve real-life problems. Members of a dynamic, research-intensive university, Carleton's faculty and staff provide a superior learning experience for our fine students who hail from every province and from over 100 countries around the world.



#### Stand 510/610/710

CAWQ/ACQE - CANADIAN ASSOCIATION ON WATER QUALITY/ASSOCIATION CANADIENNE SUR LA QUALITÉ DE L'EAU City: Hamilton

Country: Canada

Web address: https://www.cawq.ca/en/home/ LinkedIn: https://www.linkedin.com/company/ canadian-association-on-water-quality-cawq-acqe/ X: https://x.com/i/flow/login?redirect\_after\_ login=%2Fcawq1967

Facebook: https://www.facebook.com/CAWQACQE

The mission of the Canadian Association on Water Quality (CAWQ) is to create and foster a nationwide network of professionals dedicated to the development and communication of knowledge to preserve and enhance the water quality environment.



#### Stand 310

CHINA PAVILION The China pavilion includes, industry representative enterprises business platform and academic institution from China. They are Beijing Drainage Group Co., Ltd.,Jiangsu Taiyuan Environmental Protection Technology Co., Ltd.,Shanghai Beifu Inverter technology Co., Ltd.,Nanyuan pump industry Co., Ltd., WieTec and Watertech China, IWA Cities of the Future Research Center (Xi'An).



Stand 740 CIMA+



Stand 610-14 CITY OF TORONTO



Stand 610-3 CITY OF TORONTO - TORONTO WATER LOUNGE



Stand 913 CLA-VAL

City: Costa Mesa, California Country: USA Web address: www.cla-val.com LinkedIn: https://www.linkedin.com/company/cla-val Facebook: https://www.facebook.com/clavalusa

For over 80 years, Cla-Val has been a leading manufacturer of automatic control valves, serving customers throughout the world. Our commitment to excellence shows in each valve we produce. The valves are designed to improve system efficiency along with a complete line of electronic products, enhancing the functionality of the valves.



#### Stand 300 CLEAN

CLEAN City: Copenhagen Country: Denmark Web address: www.cleancluster.dk LinkedIn: www.linkedin.com/company/cleancluster

Clean is the Danish Water and Environmental Cluster. We connect and work with companies, utilities, universities, and the public sector to create innovative market-driven solutions to accelerate the green transition.

By connecting these actors, we facilitate projects to strengthen the Danish ecosystem within water with international partners.



#### Stand 610-7P

CONCORDIA UNIVERSITY Montreal, Quebec Canada https://www.concordia.ca/about.html https://www.linkedin.com/school/concordia-university/ https://x.com/Concordia https://www.facebook.com/ConcordiaUniversity

As a next-generation university, we reimagine the future of higher education. Concordia's innovative approach to experiential learning and cross-functional research benefits our 50,000 students. Concordia is the top-ranked university in North America under 50, located in vibrant Montreal on the traditional lands of the Kanien'kehá:ka Nation. We strive to be socially responsible and create a more equitable and sustainable world.



#### Stand 300

CONSIBIO City: Aarhus Country: Denmark Web address: www.consibio.com

Consibio, a Danish company, helps water utilities and private companies tackle climate change and stricter regulations by providing real-time, high-quality data on sewer health and climate monitoring.

#### Continental Carbon Group

#### Stand 423

CONTINENTAL CARBON GROUP City: Stoney Creek Country: Canada Web address: www.continental-carbon.com Linkedin. https://www.linkedin.com/company/ continental-carbon-group/

Continental Carbon Group (CCG) is a turn-key solutions provider for air, water and wastewater solutions within the municipal, industrial,

commercial, and construction industries. We have the technology, resources, and

expertise in designing,

manufacturing, and implementing innovative air and water treatment solutions. Our dedicated and experienced team of engineering,

dedicated and experienced team of engineering, project management, and field

service personnel provide our customers with high quality solutions and services.

#### Continental Carbon Group

#### Stand 740

#### CONTINENTAL CARBON – OPERATIONS CHALLENGE City: Stoney Creek Country: Canada Web address: https://continental-carbon.com/ LinkedIn: https://www.linkedin.com/company/ continental-carbon-group/

Continental Carbon Group is a turn-key solutions provider for the treatment of air, water and wastewater within the municipal, industrial, commercial, and construction industries. We have the technology, resources, and expertise in designing, manufacturing, and implementing systems to address air and water treatment needs.

# 🜔 CrayoNano

#### Stand 735

CRAYONANO AS City: Trondheim Country: Norway Web address: www.crayonano.com Linkedin: https://no.linkedin.com/company/crayonano X: @crayonanoas (https://X.com/crayonanoas Instagram: https://www.instagram.com/crayonano/

CrayoNano develops and manufactures nanomaterialsbased semiconductor components using proprietary technologies. Headquartered in Trondheim, Norway with a branch office in Chinese Taipei, CrayoNano supports our customers with global sales representatives and distributors in EMEA, APAC and Americas. CrayoNano's innovative semiconductor components advance global solutions in health and safety, water purification, consumer, and industrial applications, and more.



Stand 610 -1 CRITICAL MATRIX



Stand 407 CROMER INDUSTRIES INC City: Seguin, Ontario Country: Canada Web address: www.cromerindustries.com

Representing Sewerin Water Leak Detection products in Canada for sales and service.



Stand 912 CST INDUSTRIES City: Kansas City, Missouri Country: United States of America Web address: www.cstindustries.com LinkedIn: https://www.linkedin.com/company/cstindustries-inc-/ X: https://X.com/CSTIndustries Facebook: https://www.facebook.com/CSTIndustries/ CST Industries is the largest dome and storage tank manufacturer in the world. CST's global network includes manufacturing facilities and technical design centers across North America, Europe, the United Kingdom, and Vietnam which are complemented by a network of global sales offices. With over 130 years of industry experience, CST is dedicated to delivering high-quality solutions to customers worldwide.



Stand 610-1 CWI



#### Stand 610-16

DALHOUSIE UNIVERSITY AND CENTRE FOR WATER RESOURCES STUDIES City: Halifax, Nova Scotia Country: Canada Web Address: https://www.dal.ca/ LinkedIn: https://www.linkedin.com/school/dalhousieuniversity/ X: https://x.com/dalhousieu Facebook: https://www.facebook.com/DalhousieU/

Dalhousie University combines exceptional student experience, high-impact research, and a deep sense of social responsibility in Nova Scotia, Canada.



#### Stand 300

DANISH EXPORT ASSOCIATION

Danish Export - Water Tech gathers Danish suppliers in a large network, making it your shortcut to suppliers with lots of know-how. The Danish suppliers operate within all aspects of the water industry: Ground water, drinking water, process water, wastewater, urban water issues etc



#### Stand 300

DANVA – THE DANISH WATER AND WASTEWATER ASSOCIATION City: Skanderborg / Copenhagen

Country: Denmark Web address: www.danva.dk/waterinfigures2022 Linkedin: https://www.linkedin.com/company/danva/ X: @DANVA1926

DANVA, Danish Water and Wastewater Association, is an industry organization for drinking water and wastewater utilities in Denmark. DANVA is a nonprofit association, funded by its members and commercial activities. DANVA provides secretariat function for the Danish National IWA Committee, reinforcing the link between IWA and the Danish water sector.

### WATERCANADA

### NOW AVAILABLE! TOP 50 WATER PROJECTS REPORT

The annual *Top 50 Water Projects Report* provides a ranking and description of the largest water projects across Canada (by investment). Featured projects include wastewater treatment, stormwater management, conveyance, and conservation. Project descriptions include a comprehensive range of data, from funding and funding models, to key players, timelines, and more.

The *Top 50 Water Projects Report* is a key source of information, for communities and professionals alike, who operate across Canada's diverse water sector. Access the Report today!



**For editorial inquiries**, contact **Toby Gorman**, toby@actualmedia.ca

➡ For advertising inquiries, contact Vanessa Watson, vanessa@actualmedia.ca

## DataStream

Stand 510-10 DATASTREAM





Stand 300 DENMARK PAVILION

Pavilion of Denmark is a joint pavilion for Danish export companies, and it is your direct access to Danish suppliers at international trade fairs. The pavilion gathers Danish suppliers in a large network, making it your shortcut to lots of know-how. The Danish suppliers of the Danish Export – Water Tech network operate within all facets of the water industry: Ground water, drinking water, process water, wastewater, urban water issues etc.



Stand 300 DHI

DHI A/S is a global digitally enabled advisory company innovating new ways to use, manage and live with water and protect water-related ecosystems.



Stand 610-10P DIGITAL WATER SOLUTIONS INC. City: Guelph, ON Country: Canada Web address: digitalwater.solutions LinkedIn: linkedin.com/company/digital-watersolutions-inc X: @digitalwater5

The hydrant.Al device from Digital Water Solutions monitors water distribution networks for pressure, transients and leaks. Using advanced Al/ML algorithms our solution identifies emerging issues in your network before they become significant events thus allowing the utility some time to act before a significant disruption to service occurs.



Stand 740 DIRECTRIK INC - OPERATIONS CHALLENGE

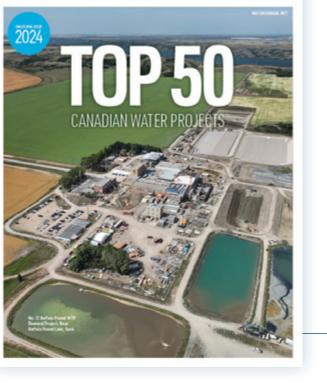


Stand 300 DTU



Stand 710-12 E M FLUIDS INC.

WATERCANADA





#### Stand 910

#### THE EUROPEAN BENCHMARKING CO-OPERATION (EBC FOUNDATION)

Web address: https://www.waterbenchmark.org/

The European Benchmarking Co-operation (EBC Foundation) is a not-for-profit sector initiative to improve drinking water & wastewater services. EBC offers drinking water & wastewater utilities in Europe and beyond a leading improvement- and knowledge exchange programme, in which participants gain insight into potential improvement areas, industry best practices, and innovations through extensive, annual benchmarking exercises and knowledge exchange events. So far, some 250 different water companies have participated in the programme. Next to facilitating a the European programme, EBC is also involved in several Water Operator Partnerships globally with a benchmarking component as a basis for capacity building.

The programme was initiated in 2005 by Dutch- & Nordic water utility associations. EBC Foundation is based in The Hague, The Netherlands, and is governed by partners from the water industry (Aquanet (PL). FIWA (FIN), Norsk Vann (N), Vewin (NL) and EurEau). EBC decided to be a member of NWP because of NWP's large international network in the water sector, the marketing opportunities via international water exhibitions and the possibilities to meet partners in the sector to collaborate with.



#### Stand 710-13 BIZDATA CO., LTD. (ECOAI INNOVATES INC.) City: Seoul

Country: Republic of Korea Web address: https://bizdata.kr/ LinkedIn: https://www.linkedin.com/company/ecoaiinnovates/

Facebook: https://www.facebook.com/bizdataai/

BizData is a company specializing in Al autonomous operations, dedicated to developing sustainable environmental AI platforms. Our main products include the NAIAD Hexa Series and AISCT.

The NAIAD Hexa Series is a smart water treatment platform capable of autonomous operation, while AISCT is a portable soil contamination analysis platform based on Al.



#### Stand 411

ENDRESS+HAUSER City: Burlington Country: Canada Web address: www.ca.endress.com LinkedIn: https://www.linkedin.com/company/endresshauser-group/ X: https://www.X.com/Endress CA Facebook: https://www.facebook.com/EndressHauser

Endress+Hauser is a leading supplier of products, solutions and services for industrial process measurement and automation. We offer comprehensive process solutions for flow, level, pressure, analysis, temperature, recording and digital communications across a wide range of industries, optimizing processes with regards to economic efficiency, safety and environmental protection.



#### **Stand 820**

**ENSPIRED SOLUTIONS** City: Michigan Country: USA Web address: https://www.enspiredsolutions.com/

product . LinkedIn: https://www.linkedin.com/company/ enspired-solutions/?miniCompanyUrn=urn%3Ali%3A fs\_miniCompany%3A79864746&lipi=urn%3Ali%3Apage %3Ad\_flagship3\_company%3BbJIQBnmHTVKQo%2Fasy wpg7w%3D%3D

Enspired solutions have created the The PFASigator™ technology. This technology is an onsite, fully automated, skid-mounted UV batch reactor capable of mineralising PFAS molecules to non-toxic by-products. The PFASigator™ destroys PFAS molecules even in water chemistries of pH 3-12, under aerobic or anaerobic conditions. The equipment is modular, fully automated and operated under atmospheric pressure and temperature.



#### **Stand 1013**

**ENVIRONMENTAL SCIENCE & ENGINEERING** MAGAZINE City: Aurora Web address: www.esemag.com LinkedIn: Environmental Science and Engineering Magazine X: @esemag

Facebook: @esemagazine

We have covered Canada's water, wastewater and environmental protection sectors since 1988.Our expert articles are "must reading" for consulting, municipal and industrial engineers, contractors and key government technical staff across Canada. Articles are written by leading environmental companies, engineers and scientists and cover a wide-range of environmental topics, with an emphasis on water and wastewater.



# Stand 406

ESRI

City: Redlands Country: United States of America Web address: www.esri.com/water-utilities LinkedIn: https://www.linkedin.com/groups/6533227 X: https://X.com/EsriWater

Esri is the global market leader in geographic information system (GIS) software, location intelligence, and mapping. Esri's ArcGIS technology empowers users with solutions that improve collaboration, coordination, and decision-making ArcGIS transforms workflows by providing maps and apps that enable users to collect and map data, perform analysis, and share information.



Stand 610-1 ETA



Stand 510-5 **EXACTBLUE TECHNOLOGIES INC** 



Stand 610-1 FIBRACAST



Stand 710-11 FLEMING COLLEGE



Stand 610-11 FLOWNERGIA

### TE FYLD

#### **Stand 820**

FYLD City: London Country: UK Web address: https://www.fvld.ai/ LinkedIn: https://www.linkedin.com/company/fyldai/ X: https://X.com/fyld\_ai?lang=en Featured by Isle at: W-Lab Safety & Wellbeing Showcase and USA Technology Approval Group 23

Company description/products and services: FYLD has developed an award-winning digital platform that automatically transforms video and audio footage into real-time workflows, video risk assessments and analytics dashboards. By harnessing the power of machine learning, it eliminates paperwork, saves time and creates safer sites.



Stand 610-11F GEI CONSULTANTS City: Vaughan. Ontario Country: Canada Web address: www.geiconsultants.com LinkedIn: https://www.linkedin.com/company/geiconsultants-inc-/ X: https://X.com/i/flow/login?redirect\_after\_ login=%2Fgeiconsultants Facebook: https://www.facebook.com/GEIConsultants/

GEI Consultants is a consulting engineering and environmental firm that delivers value by providing professional services to improve our world's built environments. With more than 1,400 staff and 56 offices nationwide, GEI provides multi-disciplined engineering and technical services to a range of private and public sector clients domestically and abroad.



**Stand 1000** GHD

GHD is a global professional services company that leads through engineering, construction and architectural expertise. Our forward-looking and innovative approaches connect and sustain communities around the world. Delivering extraordinary social and economic outcomes, we are focused on building lasting relationships with our partners and clients

#### GEMÜ

#### Stand 630

GEMÜ VALVES CANADA INC. City: Laval, Quebec Country: Canada Web address: https://www.gemu-group.com/en\_CA/ LinkedIn: https://www.linkedin.com/company/ gemuvalves X: https://X.com/GemuUsa Facebook: https://www.facebook.com/GEMUValves/

The GEMÜ Group is a leading manufacturer of valves, measurement and control systems for liquids, vapors and gases. GEMÜ is a global market leader when it comes to solutions for sterile applications.



#### Stand 421 GREATARIO

City: Innerkip Ontario Country: Canada Web address: https://greatario.com LinkedIn: https://www.linkedin.com/company/ greatario

Since 1986, Greatario has supplied Canadian municipal and industrial customers with turn-key, liquid storage tanks and covers. Our commitment to build the very best has led us to partner with Balmoral Tanks as their exclusive sales and service provider in Canada. With decades of experience and hundreds of installations, you can trust us for your next project.



#### Stand 400

GRUNDFOS HOLDING A/S City: Bjerringbro Country: Denmark Web address: grundfos.com Linkedln: https://www.linkedin.com/company/grundfos X: https://X.com/grundfos Facebook: https://www.facebook.com/Grundfos

Grundfos pioneers solutions to the world's water and climate challenges and improves quality of life for people. We develop, produce and sell pump solutions which help reduce water-related challenges. We create research and product development based solutions to meet growing demands for minimising the consumption of resources and emission of CO2. We provide expertise in energy- and water efficient solutions and systems for a wide range of applications, including water supply, water treatment and waste water, industries and buildings. An annual production of over 15 million units positions

An annual production of over 15 million units positions the Grundfos Group as one of the world's largest pump manufacturers with 20,000 employees in 56 countries.

#### HARMSCO MUNICIPAL

#### Stand 926 HARMSCO

Harmsco Filtration Products manufactures innovative and cost-effective solutions for liquid filtration challenges provides Proven Value Added products for 3 divisions; Harmsco Industrial Products, Harmsco Swimming Pool Products and Harmsco Municipal Products. As a pioneer in the filtration industry, Harmsco holds numerous U.S. and International Patents for innovative filtration technologies committed to quality and value for the end user.



#### Stand 407

#### HERMANN SEWERIN GMBH City: Gütersloh

Country: Germany Web address: www.sewerin.com Linkedin: https://www.linkedin.com/company/ hermann-sewerin-gmbh X: https://X.com/SewerinNews Facebook: https://www.facebook.com/seweringmbh/

Technology leader for gas and water leak detection equipment

The Sewerin group of companies is an internationally successful group with its headquarters in Gütersloh, Germany. Core business is the development, production and global distribution of electronic measuring equipment for the gas and water supply and distribution industry.



#### Stand 510-12 HETEK SOLUTIONS

HETEK SOLUTIONS Stand 510-4 High Sense Solutions Inc. City: Richmond Hill Country: Canada Web address: www.highsensesolutions.ca LinkedIn: https://www.linkedin.com/company/ highsensesolutions X: https://X.com/sense\_inc Facebook: https://www.facebook.com/ HighSenseSolutions

High Sense Solutions is an innovative manufacturer of water leak detection systems, underground detection equipment, and utility instrumentation, especially for Gas & Oil, water and wastewater, refineries, power, power plants, and a wide range of other industries. The pioneering PERIJA® Series systems represented a major shift from conventional current water Leak detectors and opened opportunities for acoustic detection in a wide variety of areas not previously deemed practically. Water pipe locating and water leak detecting both has been combined in one device and made a revolution named LT-SONIC®.





Stand Room 803 HUBER TECHNOLOGY LTD. CANADA.

HUBER Technology provides state-of-the-art equipment for municipal and industrial water and wastewater treatment. Our main focus is liquid/solid separation in general and headworks equipment in particular. We offer a comprehensive line of stainless-steel equipment. The HUBER Group is successfully operating in the environmental engineering sector and with its more than 60 subsidiaries, representative offices and agents, the HUBER Group is among the worldwide leading suppliers in the field of wastewater/sludge treatment and process engineering. With more than 175 years of commitment to drinking water and wastewater treatment, HUBER has always been an innovator in this field with a continuous focus on the development of new solutions to conserve one of our most valuable resources: water. HUBER Technology, Inc. began production in the US in January 2024 with the inauguration of its 203,000 sq. ft., state-of-theart manufacturing facility in Denver, North Carolina. This investment empowers HUBER Technology, Inc. to enhance production efficiency and meet growing demands of the US & Canadian markets.



### Stand 910

HYDRALOOP INC. City: Leeuwarden Country: The Netherlands Web address: www.hydraloop.com LinkedIn: (1) Hydraloop: Overview | LinkedIn Facebook: Facebook

Hydraloop is used to recycle greywater from shower/ bath & laundry. This allows you to save up to 45% on tap water use and wastewater without losing comfort. The reuse water is used for toilet flushing, washing machines, garden irrigation, and topping up swimming pools.



#### Stand 510-6

INCTRL SOLUTIONS City: Toronto, ON Country: Canada Web address: https://www.inctrl.com/ Linkedin: https://www.linkedin.com/company/inctrlsolutions-inc-X:https://X.com/inCTRL10 Facebook: https://www.facebook.com/profile. php?id=100092507841167&sk=about&view as=100000686899395

Understand. Manage. Optimize. inCTRL's process experts provide tailored recommendations to improve efficiency and reduce costs by gaining insights from your data to deliver intelligent digital platforms for your water, wastewater, and biogas treatment needs.



Stand 810 INDIA PAVILION



Stand 820 INNOVATION PAVILION



Stand 610-7P INRS-ETE City: Quebec, Quebec Country: Canada Web Adress: https://inrs.ca/en/linrs/centres-derecherche/eau-terre-environnement-research-centre/ LinkedIn: https://www.linkedin.com/school/institutnational-recherche-scientifique-inrs/ X: https://x.com/i/flow/login?redirect\_after\_ login=%2Finrsciences Facebook: https://www.facebook.com/inrsciences/

The INRS Eau Terre Environnement Research Centre contributes to the advancement of knowledge to better protect, preserve, and develop natural, water, and land resources.



#### Stand 610-2 IPEX INC.

City: Oakville Country: Canada Web address: https://ipexna.com/ LinkedIn: https://www.linkedin.com/company/ ipexbyaliaxis

For over 50 years, IPEX has led in thermoplastic piping systems, offering unmatched engineering expertise for complex municipal needs. IPEX's piping systems boast proven strength, flexibility, and exceptional resistance to corrosion and chemical attack, providing quality assurance that surpasses the industry's toughest standards



#### Stand 740

**IPEX - OPERATIONS CHALLENGE** City: Mississauga Country: Canada Web address: www inexna com LinkedIn: IPEXbyAliaxis Facebook: IPEX by Aliaxis

IPEX companies design and manufacture the largest, most recognized and diverse range of integrated piping products for today's municipal, industrial, commercial and residential needs. Backed by the industry's most comprehensive and experienced sales and distribution network. It's what has made IPEX the responsible choice in North America for over fifty years.



#### Stand 820 IQ ENERGY

City: Alberta

Country: Canada (with an office in Australia) Web address: https://iqenergy.ca/ (https://iq-energy. com.au/)

LinkedIn: https://www.linkedin.com/company/iqenergy-inc/ (https://www.linkedin.com/company/ iq-energy-au/)

Featured by Isle at: W-Lab Nature Based Solutions Showcase

IQ Energy designs, builds, and markets clean energy products focused on converting otherwise underutilized waste streams into valuable clean energy. IQ Energy's principal products are the patented Indirect Gasification Systems, Counter-flow Bio-Mass Gasification Systems; Boundary Generator Inc – Let-Down Expander Generator Systems and WET-ORC heat recovery generators.



Stand 820 **ISLE UTILITIES** 

City: Multiple – London, Sydney Country: Global Company servicing regions - Europe, North America, Latin America, Asia Pacific, Africa and the Middle East

Web address: https://www.isleutilities.com/ LinkedIn: https://www.linkedin.com/company/isle-ut ilities/?miniCompanyUrn=urn%3Ali%3Afsd\_compar v%3A1386453&lipi=urn%3Ali%3Apage%3Acompan ies\_company\_posts\_index%3B1ca1900b-cfdf-4a72a440-f7bf1d30a56b

Passionate about technology and innovation, we care

about making the world a better place. A global team of scientists, engineers, business and regulatory experts, with a common drive to make a positive social, economic, and environmental impact through the advancement of innovation, benchmarking, technologies and best practices. We advise our clients to Solve the problems of today, Navigate emerging sector issues and Discover the possibilities of tomorrow.



#### Stand 734

INTERNATIONAL ULTRAVIOLET ASSOCIATION City: Chevy Chase, MD Country: USA

Web address: www.iuva.org https://www.linkedin.com/company/internationalultraviolet-association-inc/

The International Ultraviolet Association is a 501c-3 non-profit dedicated to the advancement of ultraviolet (UV) technologies for public health and the environment. Our efforts include education, research and participation in public policy forums worldwide. We also publish a quarterly magazine, UV Solutions.



#### Stand 600

INTERNATIONAL WATER ASSOCIATION (IWA) Country: United Kingdom

Wed address: https://iwa-network.org/

As the largest membership association for the global water sector, and with members in more than 140 countries, the International Water Association (IWA) brings together scientists, researchers, technology companies, water and wastewater utilities, and wider stakeholders involved in water

management to promote a world in which water is wisely, sustainably and equitably managed.



#### **Stand 1015** ITRON

City: Liberty Lake, WA Country: USA Web address: www.itron.com LinkedIn: https://www.linkedin.com/company/7550 X: https://X.com/itroninc Facebook: https://www.facebook.com/ltronInc/

Itron is a proven global leader in energy, water, smart city, IIoT and intelligent infrastructure services. For utilities, cities and society, we build innovative systems, create new efficiencies, connect communities, encourage conservation and increase resourcefulness. By safeguarding our invaluable natural resources today and tomorrow, we improve the quality of life for people around the world.



#### Stand 600

IWA CITIES OF THE FUTURE RESEARCH CENTRE (XI'AN) City: Xi'an

Country: China

This Centre is co-established between IWA and Xi'an University of Architecture and Technology in 2023 in Xi'an, China, which aims to gather researchers from the IWA members and partners within and outside China, as well as researchers interested in the Cities of the Future topics, to carry out initiatives on building water-wise cities and integrated water management for sustainable urban development



#### Stand 600

IWA WWCE 2026 HOST Country: Scotland City: Glasgow



Stand 600 IWA WWCE 2028 HOST Country: Malaysia

Malaysian Water Association (Sarawak Branch) is and NGO formed in 2019. We strive to be the platform where policy makers, stake holders, industry practitioners and academia can freely exchange ideas and formulate solutions to ensure a sustainable water and wastewater infrastructure for Sarawak. Malavsia.



Stand 610-13 IWA YWP CANADA

# Jacobs

Stand 402 JACOBS - SPONSOR LOUNGE Web address: jacobs.com LinkedIn: https://www.linkedin.com/company/ yorkshire-water?originalSubdomain=uk

At Jacobs, we're challenging today to reinvent tomorrow by solving the world's most critical problems for thriving cities, resilient environments, mission critical outcomes, operational advancement, scientific discovery and cutting-edge manufacturing, turning abstract ideas into realities that transform the world for good. With approximately \$16 billion in annual revenue and a talent force of more than 60,000, Jacobs provides a full spectrum of professional services including consulting, technical, scientific and project delivery for the government and private sector. Visit jacobs. com and connect with Jacobs on Facebook, Instagram, LinkedIn and X

# Jacobs

#### Stand 740

JACOBS - OPERATIONS CHALLENGE



#### Stand 740

JOHN BROOKS - OPERATIONS CHALLENGE City: Mississauga, ON Country: Canada Web address: https://www.johnbrooks.ca/ LinkedIn: https://www.linkedin.com/company/johnbrooks-company/

John Brooks Company has been creating fluid handling solutions for the people that keep our world flowing since 1938. Their portfolio includes pumps, spraying equipment, filtration products, valves, and custom-engineered systems for the simplest and most complicated industrial and municipal applications.



Stand 310 JIANGSU TAIYUAN ENVIRONMENTAL PROTECTION TECHNOLOGY CO., LTD City: Yixing City, Jiangsu Province Country: China Web address: www.ty-hb.com

Taiyuan E.P. established in 2004 and listed in 2016, is an environmental protection enterprise that integrates investment, construction, design, equipment manufacturing, installation, operation & maintenance, and water reclaimed resource utilization services for water environment treatment projects. The main product is TIMP assembled & prefabricated sewage (water purification) plant.



Stand 931 K&K INTERNATIONAL TRADING COMPANY Country: Nepal

Goal: Trading business (Export & Import of Any product as per customer demand nationally and internationally). Product for exhibition: water related products like wastewater management tool, sanitation, quality control and environmental products.

# kamstrup

#### Stand 300 KAMSTRUP

Kamstrup is a leading supplier of intelligent metering solutions and services.

We help utilities all over the world reduce waste and optimize their production and distribution of clean water and energy. We are headquartered in Denmark with production facilities in Denmark and in Georgia, USA.

# KWR

#### Stand 907

KWR WATER RESEARCH INSTITUTE City: Nieuwegein Country: The Netherlands Web address: www.kwrwater.nl

LinkedIn: https://nl.linkedin.com/company/kwr-waterresearch-institute X: X.com/KWR\_Water

KWR's guiding motto is "Bridging Science to Practice". KWR-researchers work at the interface of science, business and society. Our strength lies in the ability to translate scientific knowledge into practical and implementable solutions for end-users in the Dutch and international water sectors. KWR has developed a solid reputation as a top-level innovation accelerator and international network builder. Our shareholders are the 10 Dutch water companies and the Belgian De Watergroep.



#### Stand 910 LG SONIC

City: Zoetermeer Country: Netherlands Web address: https://www.lgsonic.com LinkedIn: https://www.linkedin.com/company/lg-sonic X: https://x.com/lgsonic\_nl Facebook: https://www.facebook.com/lgsonicbv LG Sonic offers sustainable, cutting-edge technologies to monitor water quality and control algal blooms. With our solar-powered ultrasonic algae control technology, we remediate large reservoirs and restore aquatic ecosystems without the use of chemicals. We also offer remote sensing, water quality monitoring, vertical profiling, multi-parameter sensors, consulting and watershed management.



#### Stand 710-6 LOFTY PERCH INC.

LOFTY PERCH INC. City: Toronto Country: Canada Web address:www.loftyperch.com LinkedIn: lofty perch inc. X: @loftyperch/X

Lofty Perch Inc. is the global leader in providing cyber security services for water/wastewater operational technology (OT) and SCADA systems. Leveraging decades of real-world SCADA and control systems security engineering experience, and operating globally. LPI provides unparalleled capability delivering cyber security risk management services that meet unique water sector requirements.



#### Stand 420

LOVIBOND® WATER TESTING - TINTOMETER City: Dortmund Country: Germany

Web address: https://www.lovibond.com LinkedIn: https://www.linkedin.com/company/ Iovibond%C2%AE-water-testing/mycompany/ Facebook: https://www.facebook.com/profile. php?id=61552040277950

Lovibond<sup>®</sup> Tintometer is a global leading supplier of water analysis equipment to the leisure, environmental and industrial sectors for the precise determination of different types of water: from pools & spas; drinking, waste, ground water and effluents, through to cooling and boiler water.



#### Stand Room 705

MALAYSIAN WATER ASSOCIATION City: Kuala Lumpur Country: Malaysia

Web address: Home - Malaysian Water Association (mwa.org.my)

The Malaysian Water Association (MWA) unites diverse water industry stakeholders to enhance knowledge, raise public awareness, and advocate for sustainable water management. It engages with authorities on strategic issues and maintains international connections, including membership with the International Water Association (IWA), to support global water industry goals.



#### Stand: Room 705 MALAYSIAN WATER ASSOCIATION (SARAWAK BRANCH) MWASB City: Kuching Country: Malaysia

Malaysian Water Association (Sarawak Branch) is and NGO formed in 2019. We strive to be the platform where policy makers, stake holders, industry practitioners and academia can freely exchange ideas and formulate solutions to ensure a sustainable water and wastewater infrastructure for Sarawak, Malaysia.

### MANTECH

#### **Stand 510-3**

MANTECH City: Guelph Country: Canada Web address: https://mantech-inc.com/ LinkedIn: https://www.linkedin.com/company/ mantech-inc-X: https://X.com/MANTECH\_INC

Trusted worldwide, MANTECH manufactures water quality analyzers that help industrial facilities, laboratories and utilities deliver clean and safe water. Manufacturer of the PeCOD® analyzer for 10-minute, safe & green BOD/COD results and analyzers for pH, EC, alkalinity, TOC, fluoride, hardness, turbidity and more. Available in benchtop, autosampler or online configurations.



#### Stand 736

MICROBIAL DISCOVERY GROUP (MDG) City: Oak Creek Country: United States Web address: https://www.mdgbio.com/ Linkedin: https://www.linkedin.com/company/ microbial-discovery-group/ X: https://X.com/MDG\_bio Facebook: https://www.facebook.com/ MicrobialDiscoveryGroup/

Microbial Discovery Group is an R&D-driven product development, large-scale Bacillus fermentation company. MDG supplies distributors with bioaugmentation products to treat challenges in municipal and industrial wastewater such as FOG, H2S, sludge, and odors. MDG's Biotifx® Program supplies distributors with high-end products, tools, and a supportive team to get started quickly using bioaugmentation.



Stand 1204 MDPI AG City: Basel Country: Switzerland Web address: https://www.indpi. com/?name=IWA2024&\_utm\_from=d38cbb34f8 LinkedIn: https://www.linkedin.com/company/ mdpi?name=IWA2024-linkedin&\_utm\_ from=c11ceba91e X: https://X.com/ MDPIOpenAccess?name=IWA2024-X&\_utm\_ from=2eRoom 803a6237 Facebook: https://www.facebook.com/MDPIOpenA ccessPublishing?name=IWA2024-FACEBOOK& utm from=aa7949184a

A pioneer in scholarly, open access publishing, MDPI has supported academic communities since 1996. Based in Basel, Switzerland, MDPI has the mission to foster open scientific exchange in all forms, across all disciplines. Our 439 diverse and open access journals are supported by more than 295,000 academic experts.



#### Stand 610-7P

MEMORIAL UNIVERSITY City: Saint John's, Newfoundland and Labrador Country: Canada Web Adress: https://www.mun.ca/ LinkedIn: https://www.linkedin.com/school/memorialuniversity-of-newfoundland/ X: https://x.com/MemorialU Facebook: https://www.facebook.com/ MemorialUniversity

As Newfoundland and Labrador's only university, Memorial has a special obligation to the people of this province. Established as a memorial to the Newfoundlanders who lost their lives on active service during the First World War and subsequent conflicts, Memorial University draws inspiration from these sacrifices of the past as we help to build a better future for our province, our country and our world.

#### Morrison 🥏 Construction

#### Stand 1000

MORRISON CONSTRUCTION City: Edinburgh Country: Scotland Web address: www.morrisonconstruction.co.uk LinkedIn: www.linkedin.com/company/morrisonconstruction X: @morrisonbuilds

Morrison Construction is one of Scotland's leading construction businesses, working to improve the built environment and delivering lasting change for the communities we work in. We have a longstanding partnership with Scottish Water, through our ESD joint venture, assisting with the long-term asset management plans, collaborating with our partners to ensure we offer a multi-disciplined approach able to deal with the significant challenges the sector poses.



#### Stand 510-13

MS FILTER SYSTEMS INC. City: Kawartha Lakes Country: Canada Web address: www.msfilter.com LinkedIn: linkedin.com/company/ms-filter-systems-inc Facebook: facebook.com/msfiltersystems

MS Filter Systems Inc. provides practical and sustainable water treatment solutions for small systems. With 25 years of operations and over 40 successful slow-sand water treatment plants across Canada and the U.S., MS Filter Systems is simply a better solution.



#### Stand 300

MUCH MORE WATER City: Roskilde , Country: Denmark Web address: www.MuchMoreWater.com LinkedIn: www.linkedin.com/company/ muchmorewater-a-s/

Much More Water is an innovative Danish company that produces small, compact, robust water purification systems named BlueBoxes, which are easy to transport, move, and set up. The system can run on different energy sources, like solar or wave energy. Tailormade to any water source and situation.

## MUELLER

Stand 805 MUELLER WATER PRODUCTS City: Atlanta, Georgia , Country: US Web address: http://www.muellerwaterproducts.com LinkedIn: https://www.linkedin.com/company/muellerwater-products X: @ MuellerWaterPro https://x.com/MuellerWaterPro

Mueller Water Products is a leading manufacturer and marketer of products and services used in the transmission, distribution and measurement of water in North America. Our broad product and service

portfolio includes engineered valves, fire hydrants, pipe connection and repair products, metering products, leak detection, pipe condition assessment, pressure management products, and software technology that provides critical water system data. We help municipalities increase operational efficiencies, improve customer service, and prioritize capital spending.

### NYP 南元泵业

#### Stand 310

NANYUAN PUMP INDUSTRY CO., LTD. City: Zhejiang

Country: China

Web address: https://www.teskpump.com/ LinkedIn: https://www.teskpump.com/public/img/ share-linkedin.png

X: https://www.teskpump.com/public/img/share-X.png Facebook: https://www.teskpump.com/public/img/ share-facebook.png

TESK is a oversea brand name of Zhejiang Nanyuan Pump Industry Co.,Ltd. We are located in Leidian industry area, Huzhou city, Zhejiang, China. We are specialised in the research, development and large scale production of stainless steel centrifugal pumps.



NATIONAL MISSION FOR CLEAN GANGA (NMCG)



Stand 425 NATIONAL WATER AND SEWERAGE CORPORATION City: KAMPALA Country: UGANDA Web address: www.nwsc.co.ug X: @nwscug Facebook: @waterug

National Water and Sewerage Corporation is Uganda's largest government owned urban water authority providing potable water and sewerage services The principal business of the Corporation is to operate and provide water and sewerage services in areas entrusted to it by the Government, on a commercial and financially viable basis.



#### Stand 710-14 NEPTUNE TECHNOLOGY GROUP CANADA



#### Stand 910 NETHERLANDS PAVILION

The Netherlands Pavilion, organized by the Netherlands Water Partnership and Water Alliance. NWP is a network of 180 of innovative companies, knowledge institutes, NGOs and governmental organisations from the Netherlands. NWP's members are involved in projects all over the world relating to water management, water governance, flood prevention, engineering, reliable supply, and safe drinking water and sanitation



#### Stand 910

NETHERLANDS WATER PARTNERSHIP (NWP) www.nwp.nl

www.dutchwatersector.com

The Netherlands Pavilion, organized by the Netherlands Water Partnership and Water Alliance, NWP is a network of 180 of innovative companies, knowledge institutes, NGOs and governmental organisations from the Netherlands. NWP's members are involved in projects all over the world relating to water management, water governance, flood prevention, engineering, reliable supply, and safe drinking water and sanitation.

Water Alliance is a unique partnership of public and private companies, government agencies and knowledge institutes involved in Dutch watertech Water Alliance is partner in business at WaterCampus Leeuwarden, www.wateralliance.nl



#### Stand 825 NICKEL INSTITUTE/TEAM STAINLESS City: Toronto Country: Canada

Web address: www.nickelinstitute.org

Team Stainless is an industry association partnership promoting the proper use of stainless steel in the water industry. Stainless Partially Corrugated Tubes (SPCT) for service water lines has widespread use in Japan, Chinese Taipei, Korea and China and has now been introduced in Europe, Australasia and North America.



#### Stand 409 NIVUS GMBH

NIVUS GMBH City: Eppingen Country: Germany Web address: www.nivus.com Linkedin: https://www.linkedin.com/company/nivus/ mycompany/?viewAsMember=true Facebook: https://www.facebook.com/nivusgroup

The NIVUS Group is a worldwide leader for measurement technology in potable and wastewater. Apart from developing, manufacturing and supplying the complete range of products for flow and level as well as the corresponding communication interfaces, we are also experts in the field of consulting and engineering.



#### Stand 1000

NORTHUMBRIAN WATER GROUP

City: Durham

Web address: Northumbrian Water | Supplying Water and Sewerage Services in the North East of England (nwl.co.uk)

LinkedIn: NWG (Northumbrian Water Group) X: @NorthumbrianH2O

Facebook: Northumbrian Water

Northumbrian Water Limited supplies 2.7 million customers in the North East with both water and sewerage services, trading as Northumbrian Water. In 2024, Northumbrian Water Group was named the world's most ethical water company for the 13th time and received accreditation for the third time to the Good Business Charter. The company was also recognised as one the UK's Best Workplaces (Super Large) by the Great Places to Work Institute for the fourth consecutive year and awarded Centre of Excellence in Wellbeing status.



#### Stand Room 803 NOVENTA ENERGY PARTNERS

As the exclusive distributor of HUBER's ThermWin® equipment for sewer heat recovery across North America and the United Kingdom, Noventa is able to offer a full range of products and services; from behind the meter equipment installations to the design, building, financing, owning, operation and maintenance of large scale, low carbon, district energy systems. Centred around our Wastewater Energy Transfer™ (WET™) sewer heat recovery system and proprietary technology, Noventa's Energy-as-a-Service (EaaS) model and operational guarantee allows us to provide our clients with low carbon heating and cooling, energy, and operational cost savings, avoided capital costs, added resiliency and redundancy for their HVAC systems and transfer of operational risk.



#### Stand 1000 OFWAT INNOVATION FUND

Ofwat, the Water Services Regulation Authority for England and Wales, has established a £200 million Innovation Fund to grow the water sector's capacity to innovate, enabling it to better meet the evolving needs of customers, society and the environment. Learn about the solutions underway: https:// waterinnovation.challenges.org/



#### Stand 610 -1

ONTARIO GOVERNMENT OF ONTARIO City: Ontario Country: Canada Web address: https://www.sourcefromontario.com/

Ontario dives deep when it comes to water technology. Our water companies have made clean water a reality in some of the world's toughest industrial and urban environments. The province has plenty of fresh water over 250,000 lakes, 100,000 kilometres of rivers, and our Great Lakes contain 20% of the world's freshwater supply. With that abundance, Ontario has developed vital technology to address water needs, making us a world leader in innovation.

# OCWA

#### Stand 510-11

ONTARIO CLEAN WATER AGENCY (OCWA) For more than 30 years, municipalities, First Nations communities, institutions and businesses across the province have chosen the Ontario Clean Water Agency (OCWA) as their trusted provider of safe, reliable and cost-effective water and wastewater services. Today, we operate over 1,000 water and wastewater facilities – more than any other operator in Canada. Established as a provincial crown Agency in 1993, OCWA operations, engineering, and technical services provide clean water expertise to businesses and communities all across Ontario. The Agency is committed to partnering with municipalities and First Nations communities. www. ocwa.com



#### Stand 510-14 ONTARIO FIRST NATIONS TECHNICAL SERVICES CORPORATION

City: Mississaugas of the Credit First Nation (Head Office) with service centres in Thunder Bay, Brantford, and Atikameksheng Anishnabek. Country: Canada Web address: https://ofntsc.org/

LinkedIn: https://www.linkedin.com/ company/10051345/admin/feed/posts/ X: https://X.com/OFNTSC Facebook: https://www.facebook.com/ofntsc

The OFNTSC provides technical advisory services to First Nations in Ontario in the areas of Environment, Engineering, Fuel Management, Fire and Safety, Housing, Infrastructure, Operations and Maintenance, and Water & Wastewater. These core services are at the heart and soul of our mission to help First Nations communities achieve technical self-reliance.



Stand: 610 ONTARIO TRADES



#### Stand 929

ONTARIO WATER WORKS ASSOCIATION City: Mississauga, ON Country: Canada Web address: www.owwa.ca LinkedIn: Ontario Water Works Association X: @owwa1

The Ontario Water Works Association – A Section of AWWA, is a leader in the delivery of safe drinking water. OWWA, with the support of its parent organization, the American Water Works Association (AWWA), is at the forefront of research, technology and policy development with respect to safe, sufficient, and sustainable drinking water.



Stand 740 OPERATION CHALLENGE

# Operators

Stand 708-8 OPERATORS WITHOUT BORDERS City: Vancouver Country: Canada Web address: https://operatorswithoutborders.org/ LinkedIn: Operators Without Borders Facebook: Operators Without Borders

Operators Without Borders is the only charity globally with a mandate to support water and wastewater utilities in developing countries. by providing volunteer operators and water professionals following disaster situations to ensure that water and wastewater services are quickly resumed and providing expert volunteers to mentor and train utility operators.



#### Stand 710-9

PEEL REGION City: Brampton, Ontario Country: Canada Web address: https://www.peelregion.ca/ LinkedIn: https://ca.linkedin.com/company/ regionofpeel X: @regionofpeel Facebook: https://www.facebook.com/regionofpeel Instagram: @peelregion.ca

Peel Region's water and wastewater mission is simple... Deliver Clean Water for Life to residents and businesses. We provide clean, safe and reliable drinking water and collect and treat wastewater, while also protecting the environment.



Stand 740 PEEL REGION - OPERATIONS CHALLENGE



#### **Stand 610-7P**

POLYTECHNIQUE MONTREAL City: Montreal, Quebec Country: Canada Web Adress: https://www.polymtl.ca/en/ LinkedIn: https://www.linkedin.com/school/ polytechnique-montreal/mycompany/verification/ X: https://x.com/polymtl Facebook: https://www.facebook.com/polymtl

Polytechnique Montréal is a flagship of engineering in Québec, and is also one of Canada's leading engineering educational and research institutions. Since its establishment in 1873, Polytechnique Montréal has trained nearly 50,000 engineers, specialists, and researchers. Polytechnique is a key player in Québec's engineering and innovation sector, in addition to being a partner of choice for a number of innovative businesses in Québec, elsewhere in Canada and all over the world.



#### Stand 510-2

#### PR'EAUTECH, INSTRUMENTATION & ODORS INC City: Richelieu, Quebec Country: Canada

Web address: www.preautech.com LinkedIn: PR'eautech

PR'eautech is 2 divisions.

First is Odor control: Our speciality is the treatment of industrial and municipal malodorous problems. We give you access to a comple te range of technical and particular processes as well as to a diversified series of patented molecules capable of neutralizing the smells and having no character of toxicity. Our job is based on EFFICIENCY, RELIABILITY and SERVICES. Second is instrumentation for water treatment plant:

Second is instrumentation for water treatment plant: Our specialty for this division is to provide the best and most advanced technologies for measurement, analysis, control and detection of all the equipment that we find in a wastewater and drinking water treatment plant. We are the leader in overflow equipment in Canada



#### Stand 510-7

PUROXI PURE WATER GLOBAL INC. City: Victoria Country: Canada Web address: www.puroxi.com Linkedin: www.linkedin.com/in/zak-motala-a6547a33 X: https://X.com/puroxi\_watersol Facebook: https://www.facebook.com/puroxi1 Instagram: https://www.instagram.com/puroxi. watersolution/

Puroxi Pure Water Global Inc. provides effective, customized water treatment and purification solutions. We specialize in Ultrasonic Algae Treatment, Ultrasonic Descalers, Nano Bubble Technology, UV-C LED Air/ water disinfection, and aeration. Our industries of expertise include agriculture, livestock, well water, ponds and lagoons, industrial, municipal, wastewater and commercial operations.



### Stand 910

PWNT City: Amsterdam Country: The Netherlands Web address: www.pwnt.com X: x.com/pwntechnologies Facebook: www.facebook.com/PWNTechnologies

PWNT, owned by Nijhuis Saur Industries, leverages 100 years of experience to develop innovative water treatment technologies. Our initiatives focus on suspended ion exchange, ceramic membranes, and advanced oxidation for various water sources. We offer efficient, sustainable solutions with lower costs and environmental impact, partnering with leading universities and companies.

### Comcore

#### Stand 505

QINGDAO COMCORE TECHNOLOGIES CO.,LTD. City: Shandong province—Qing Dao Country: China Web address: https://www.techen.cn/ LinkedIn: https://www.linkedin.com/company/ comcore-technology/?viewAsMember=true X: https://X.com/ComcoreTech Facebook: https://www.facebook.com/profile. php?id=100092996884510

Comcore focuses on providing accurate and efficient smart water solutions for water supply enterprises. Through the research and development of ultrasonic metering and the in-depth application of AI technology, it realizes accurate identification and effective control of leakage, so that water supply management is more intelligent, green and low-carbon!

# QMC<sup>°</sup>

#### Stand 710-5 QMC METERING SOLUTIONS City: North York Country: Canada Web address: https://qmeters.com Linkedin: https://www.linkedin.com/co

LinkedIn: https://www.linkedin.com/company/qmcmetering-solutions QMC enables building portfolios, utilities and institutions to ontimize their energy and water use h

institutions to optimize their energy and water use by utilizing best-in-class submetering hardware, software, and communications. Improve building performance, utility conservation and achieve your sustainability goals in partnership with QMC.

## RAETTS®

#### Stand 1010

RAETTS

City: New Jersey Country:America Web address: https://www.raettsgroup.com Linkedin: Official:https://www.linkedin.com/ company/14566355/admin/inbox/thread/2-N2Q3MW MzMDYtOWI1Zi00MjdilTkwMmYtNjdkYTM1MmNIMm MZXZAXMA==/ X : https://x.com/i/flow/login?redirect\_after\_

X : https://x.com/i/flow/login?redirect\_after\_ login=%2FRAETTSOFFICIAL Facebook:https://www.facebook.com/profile. ph/?id=61557206497Room 717&name=xhp\_

nt\_fb\_action\_\_open\_user&paipv=0&eav=Afb5 5z24pDswl9JpdLiitnwnglYXWU3tSQ1ASFz3rYhLi9\_ xAxCMIXxQskU6ZICqDTr0&\_rdr

RAETTS is a global manufacturing company specializing in energy-saving products like blowers and compressors. Their advanced technologies, including

air and magnetic levitation, deliver efficient and costeffective solutions for various industries, especially in sewage treatment by changing your aeration blowers. RAETTS blower can help you gain 30% power consumption less and cut your maintenance cost into half.

### RAMBOLL

#### Stand 402 RAMBOLL - SPONSOR LOUNGE

Ramboll is a global engineering, architecture, and consultancy company with more than 18,000 experts that create sustainable solutions for governments and companies all over the world. We combine insights with the power to drive positive change to our clients, in the form of ideas that can be realised and implemented.



#### Stand 740

RAPID ASSESSMENT TECHNOLOGY SERVICES (RATS) INC. - OPERATIONS CHALLENGE City: Vaughan Country: Canada Web address: www.ratsinc.ca Linkedin. https://www.linkedin.com/company/ratsinc/

RATS, Inc, provides a high-level sewer assessment service that allows municipalities and utilities to transition from high-cost, resource intensive, timebased maintenance to a condition-based program, saving time, money and resources while dramatically reducing the risk of SSO and basement flooding events.



#### Stand: 740

REGIONAL MUNICIPALITY OF DURHAM -OPERATIONS CHALLENGE City: Whitby Country: Canada Web address: https://www.durham.ca/ LinkedIn: @RegionofDurham X: @RegionofDurham Facebook: @RegionofDurham

Durham Region is one of Canada's fastest growing communities. It has eight unique area municipalities and is a community where talented, smart and ambitious people bring access to world markets, insights, invention and traditions. Durham offers a thriving agriculture sector, urban development and a diverse employment base.



Stand 928 RLS WACON ANALYTICS GMBH City: Hildesheim Country: Germany Web address: www.rls-wacon.de LinkedIn: https://www.linkedin.com/company/rls-wacon-gmbh/?viewAsMember=true

Germany based company with in-house development and production of automatic water analysis devices, the associated chemicals and manual testing solutions. The focus is on monitoring process water. We are open to individual requests and offer our customers OEM production



#### **Stand 1000 RSE(ROSS-SHIRE ENGINEERING)**

City: Inverness Country: United Kingdom Web address: www@ross-eng.com LinkedIn: @Ross-shire Engineering Facebook: @RossshireEngineering Instagram: @rossshire\_engineering

RSE is a Trusted Water Technology Solutions company - Disrupting the water industry through Products and Solutions for purifying drinking water, recycling effluent and cleaning water in industrial processes. RSE's products and modular solutions reduce construction schedules, enhance quality, provide greater cost certainty and have a positive impact on the environment.



#### **Stand 1100** RSE (ROSS-SHIRE ENGINEERING) City: Inverness Country: United Kingdom

Web address: www@ross-eng.com LinkedIn: @Ross-shire Engineering Facebook: @RossshireEngineering Instagram: @rossshire\_engineering

RSE is a Trusted Water Technology Solutions company Disrupting the water industry through Products and Solutions for purifying drinking water, recycling effluent and cleaning water in industrial processes. RSE's products and modular solutions reduce construction schedules, enhance quality, provide greater cost certainty and have a positive impact on the environment.



**Stand 1203 ROYAL SOCIETY OF CHEMISTRY** City: London Country: United Kingdom Web address: www.rsc.org LinkedIn: https://www.linkedin.com/company/ roysocchem X: https://X.com/RoySocChem Facebook: https://www.facebook.com/ RoyalSocietyofChemistry

The Royal Society of Chemistry publishes over 50 world-leading journals that span the core chemical sciences and related fields. Known for rigorous, fair peer review and fast publication times, our journals publish the best science, from original research articles to authoritative reviews



#### Stand 510-1

SCICORP INTERNATIONAL, CORP City: Mississauga, Ontario

Country: Canada Web address: https://scicorp.net/ LinkedIn: https://www.linkedin.com/in/ scicorpinternational/

SciCorp with its BIOLOGIC<sup>™</sup> SR2 technology is revolutionizing the wastewater and solid waste industry with their transformative and innovative solutions that are reducing the carbon footprint and environmental impact on a global scale assisting plants to achieve net zero carbon emission objectives



Scottish Government gov.scot

### **Stand 1000**

SCOTTISH GOVERNMENT City: Edinburgh Country: Scotland Web address: www.gov.scot



#### **Stand 1000**

SCOTTISH WATER City: Scottish Water Registered Office is: Stepps, Glasgow Country: Scotland Web address: www.scottishwater.co.uk LinkedIn: @scottish-water X: @scottish\_water Facebook: @scottishwater

Scottish Water - Trusted to care for the water on which Scotland depends

We deliver essential water and waste water services to over 2.6 million households and more than 160,000 business premises to support a flourishing Scotland. Publicly owned, we deliver excellent service to customers and communities, providing value for money and reducing our effect on the environment.



#### Stand 510-12

SEBAKMT/MEGGER City: Phoenixville Pennsylvania Country: United States Web address: https://www.sebakmt.us/en\_US/homeus.html LinkedIn: https://www.linkedin.com/company/Room 71741262/

SebaKMT has representatives in 130 countries worldwide, with excellently trained staff and the most modern technology. With that we have the most comprehensive service and consulting network in the industry. We have from A-Z in equipment from Monitoring flow and pressure to hand held devices.



#### **Stand 1000**

SEVERN TRENT

Severn Trent is the UK's second biggest water company. It serves 4.8m homes and business in England and Wales. The company delivers almost two billion litres of water every day through 50,000km of pipes and a further 93,000km of sewer pipes take waste water away to more than 1,000 sewage treatment works.



Stand 710-3 SGS NORTH AMERICA



#### Stand 310

SHANGHAI BEIFU INVERTER TECHNOLOGY CO.,

LTD. City: Shanghai Country: China Web address:http://shbfbp.com/ LinkedIn:http://shbfbp.com/ X:inverter, soft start, controller, protector Facebook:http://shbfbp.com/

Located in Jiading District, shangha, Haibei fuer is mainly engaged in the research and production of various types of automaticcontrol systems and equipment, such as frequency converters, soft starters, large project control cabinets, etc,



#### Stand 610-14

SHARC ENERGY City: Port Coguitlam Country: Canada Web address:www.sharcenergy.com LinkedIn: www.linkedin.com/company/sharcenergy X: @SHARCEnergy Facebook:www.facebook.com/SHARCEnergySystems/

SHARC Energy is a world leader in energy recovery from the wastewater we send down the drain every day. SHARC Energy's systems recycle thermal energy from wastewater, generating one of the most energy efficient and economical systems for heating, cooling & hot water production for commercial, residential and industrial buildings.



#### Stand 103

SKYJUICE FOUNDATION INC. City: Sydney Country: Australia Web address: www.skyjuice.org.au LinkedIn: @Skyjuice Foundation Inc X: @SkyJuiceInd Facebook: @skyjuicefoundation

SkyJuice manufactures and supplies patented passive membrane filtration systems for safe drinking water. SkyHydrant ultrafiltration units are used globally for small communities, NGO's and emergency water response. SkyHydrant systems are sustainable and use no chemical or electricity for water production in over 74 countries.



#### Stand 510-9

SkyTEM CANADA INC. City: Toronto, ON Country: Canada Web address: www.skytem.com LinkedIn: https://www.linkedin.com/company/skytem X: https://X.com/SkyTEMsurveys Facebook: https://www.facebook.com/SkyTEMsurveys

SkyTEM is a leading airborne geophysical survey company offering the acquisition and advanced processing of transient electromagnetic (TEM) and magnetic data for characterization of aquifers around the world, recently participating in statewide programs across the USA including critical surveys in California, Nebraska, Delaware, Illinois as well as many others.



Water

#### **Stand 1000**

SOUTH WEST WATER South West Water supplies drinking water and treats wastewater for around 1.8 million customers in the South West of England across Devon, Cornwall, Somerset and the Isles of Scilly. As a water company it sits alongside Bristol Water, Bournemouth Water and Sutton East Surrey Water under the umbrella group Pennon.



Stand 740 **SPD SALES LIMITED - OPERATIONS CHALLENGE** 



Stand 300 STATE OF GREEN



**Stand 402 STANTEC - SPONSOR LOUNGE** 



**Stand 710-8** STELIS ENVIRONMENTAL SOLUTIONS

### SulfiLogger

#### Stand 300

SulfiLogger A/S City: Aarhus Country: Denmark Web address: www.sulfilogger.com LinkedIn: www.linkedin.com/company/12662317/ X: www.x.com/sulfilogger

SulfiLogger<sup>™</sup> is an innovative Danish company that produces H2S sensors for continuous, liquid-phase H2S measurements in sewers and wastewater treatment plants

# SWEL

Stand 740 SWEL - OPERATIONS CHALLENGE City: Toronto Country: Canada Web address: LinkedIn: SWEL (Sahely Water Engineering Ltd.)

SWEL offers services of Class EAs support, preliminary and detailed design, Contractor engagement, contract administration, commissioning, Facility Manual preparation, training, process studies and optimization, RFP support, value engineering, courtesy ("peer") reviews and project management. SWEL is a certified minority business enterprise under the Canadian Aboriginal and Minority Supplier Council (CAMSC).

### **M** Symbient

Stand 610-1 Symbiant

# SYNIEC

#### Stand 740

Syntec Process Equipment – Operations Challenge City: Bolton, Ontario Country: Canada Web address: www.syntecpe.com LinkedIn: https://ca.linkedin.com/company/syntec-

process-equipment-ltd-

Founded in 1993, Syntec is one of Ontario's fastest growing manufacturers' representatives in both the municipal and industrial sectors. The combined expertise of Syntec and our manufacturing partners enables our team of professionals to provide solutions in all aspects of valving controls and Instruments.



#### Stand 710-7

TCI CARBON FIBRE TECHNOLOGIES City: Mississauga Country: Canada Web address: www.tcicarbonfibre.com

At TCI Carbon Fibre Technologies, we have pioneered a ground-breaking range of Carbon Fibre Reinforced Polymer (CFRP) products, Thermoset Epoxy Products and techniques that have revolutionized the construction, repair, and rehabilitation of vital infrastructures that supports our communities. With unparalleled expertise and industry knowledge, TCI has established design and detail standards poised to reshape the entire industry





City: Aarhus C Country: Denmark Web address: www.temcompany.com LinkedIn: linkedin.com/company/temcompany

TEMcompany develops, produces and sells geoscanners for imagining of groundwater resources and managed aquifer recharge. We aim to make instruments easy-to-use and to cover depths from the surface to hundreds of meters. The growing TEMcompany range of instruments makes surveying for groundwater affordable and available to everybody.



#### Stand 820 TERRA15 TECHNOLOGIES PTY LTD City: Perth

Country: Australia Web address: https://terra15.com.au/ LinkedIn: https://www.linkedin.com/company/terra15/ Featured by Isle at: W-Lab Webinar

Terra15 specialises in Distributed Acoustic Sensing (DAS) using fiber optics, providing solutions for pipeline monitoring and leak detection for utilities and industrial applications. The solution uses standard fibre optic cables that run in parallel and within metres of the pipeline, including cable that may already exist (e.g. for telecommunications) for 24/7, live, continuous monitoring at all locations along a pipeline, locating leaks and detecting other risk factors such as tampering, hydrant usage, construction activity and pressure transients.



#### **Stand 730**

TOKYO METROPOLITAN SEWERAGE SERVICE CORPORATION City: Tokyo Country: Japan Web address: https://www.tgs-sw.co.jp/

Tokyo Metropolitan Sewerage Service Corporation performs a wide range of sewerage services as a policy collaboration organization of the Bureau of Sewerage, Tokyo Metropolitan Government. In addition, this corporation is not limited in Tokyo, but is also expanding its technologies internationally and participating in overseas projects.



**Stand 730** TOKYO WATER CO., LTD. City: Tokyo Country: Japan Web address: https://www.tokyowater.co.jp/en/

Tokyo Water Co., Ltd., a largest comprehensive provider of water supply services in Japan, has carried out projects utilizing Non-Revenue Water reduction technology around the world (Africa, Middle East, South East Asia etc.). TS Leak Checker is designed to detect the leakage in 2 seconds to boost the efficiency.



Stand: 730 TOKYO PAVILION



Stand 708-6P THE WATER TOWER GLOBAL INNOVATION CENTER



#### Stand 915 Toray Membrane USA, Inc. City: Poway, CA Country: USA Web address: www.water.toray LinkedIn: https://www.linkedin.com/company/toraymembrane-usa-inc-/

Toray Membrane USA, Inc. manufactures membrane elements for various membrane technologies (RO, NF, UF, MF, MBR). Toray offers membrane configurations in spiral-wound, hollow-fiber, and flat sheet or plate and frame membrane bioreactor units used in many industries, namely water, wastewater, pharma, dairy, and food and beverage processing.



#### **Stand 610-7P**

Toronto Metropolitan University City: Toronto, Ontario Country: Canada Web adress: https://www.torontomu.ca/ LinkedIn: https://www.linkedin.com/school/ torontometropolitanuniversity/ X: https://x.com/torontomet Facebook: https://www.facebook.com/torontomet

Toronto Metropolitan University is at the intersection of mind and action. What our students learn in the classroom is enhanced by real-world knowledge and experience. We champion diversity, entrepreneurship and innovation.



#### Stand 610-1

TRADEWORKS Stand 608 Trojan Technologies Company/organization name: Trojan Technologies City: London, ON Country: Canada Web address: www.trojantechnologies.com LinkedIn: Trojan Technologies

Trojan Technologies ensures greater water confidence and environmental stewardship for people, industries and municipalities, improving the lives of over one billion people globally. The products and services provided by Trojan play vital roles in making various stages of the water treatment process more effective, efficient and sustainable.



Stand 1000 UK PAVILION City: UK Country: UK Web address: https://theukpavilion.co.uk/

The UK Pavilion represents the best of the UK water industry from utilities to suppliers, academia to associations. Here, we will exhibit and showcase world class practices and innovations, ahead of welcoming you to the IWA World Water Congress in Glasgow in 2026.



#### Stand 300 UNISENSE

The Microsensor Company: Unisense offers microsensors for studying sediments, biofilm, mats, and many more biological matrices. We provide full systems for lab, field and underwater. Measure oxygen, pH, hydrogen sulfide, nitrous oxide, hydrogen, redox and more on a micrometer scale. Visit us to learn more about our systems and products.

# UNISENSE :

#### Stand 300 UNISENSE ENVIRONMENT

Wastewater's biggest CO2 problem is N2O. Unisense Environment manufactures the world's only liquid-phase sensor for measurement of nitrous oxide emissions. You can apply the sensor data to optimize your wastewater treatment process, reduce greenhouse gas emissions, and for reliable input to your sustainability accounting. Measure to kN2Ow



#### **Stand 1000** UNITED UTILITIES

We provide water and wastewater services to more than seven million people and businesses in the North West of England. We care about delivering great customer service, protecting and enhancing the environment, contributing to our communities, and investing in the region to support future growth and address climate change.



#### **Stand 610-7P**

UNIVERSITY OF BRITISH COLUMBIA City: Vancouver, British Columbia Country: Canada Web address: https://www.ubc.ca/ LinkedIn: https://www.linkedin.com/school/ universityofbc/ X: https://x.com/ubc Faceook: https://www.facebook.com/ universityofbc?fref=ts

The University of British Columbia is a global centre for teaching, learning and research, consistently ranked among the top public universities in the world. UBC embraces innovation and transforms ideas into action. Since 1915, UBC has been opening doors of opportunity for people with the curiosity, drive and vision to shape a better world.



#### Stand 610-7P

UNIVERSITÉ LAVAL City: Quebec, Quebec Country: Canada Web address: https://www.ulaval.ca/en LinkedIn: https://www.linkedin.com/school/universitelaval/ X: https://x.com/universitelaval Facebook: https://www.facebook.com/ulaval.ca/ New ideas and excellence are the core values of Université Laval, which over the years has educated and graduated over 342,000 individuals, each of whom in their own way has contributed to the progress of their community and of society as a whole



Stand 610-7P UNIVERSITY OF CALGARY City: Calgary, Alberta Country: Canada Web address: https://www.ucalgary.ca/ LinkedIn: https://www.linkedin.com/school/ucalgary/ X: https://x.com/ucalgary Facebook: https://www.facebook.com/ universityofcalgary

A community of pioneers and discoverers - We've been ranked amongst the world's top universities and we've done it by pushing our limits, challenging ourselves to do better, and seeking knowledge – wherever that journey takes us. We're never afraid to question conventional wisdom, and we share what we find openly and eagerly. It's an approach that's led to exponential growth since we were founded in 1966.



#### **Stand 610-7P UNIVERSITY OF CALGARY - ACWA** City: Calgary, Alberta Country: Canada Web address: https://research.ucalgary.ca/acwa/acwa LinkedIn: https://www.linkedin.com/school/ucalgary/ X: https://x.com/ucalgary Facebook: https://www.facebook.com/ universityofcalgary

ACWA is a partnership between The City of Calgary and the University of Calgary that supports research and development, knowledge transfer, de-risking and piloting of leading-edge water, stormwater and wastewater treatment technologies. ACWA's mandate is to facilitate the transformation of today's water and wastewater research into tomorrow's innovative technologies to recover resources, improve process efficiencies and protect receiving environments to benefit local and global communities. ACWA is an initiative of the Urban Alliance, a strategic partnership between The City of Calgary and the University of Calgary.



#### Stand 610-7P

UNIVERSITY OF NEW BRUNSWICK City: Fredericton, New Brunswick Country: Canada Web address: https://www.unb.ca/ LinkedIn: https://www.linkedin.com/school/universityof-new-brunswick/?originalSubdomain=ca X: https://x.com/UNB

Facebook: https://www.facebook.com/uofnb

The University of New Brunswick (UNB) is Canada's oldest English-language university and one of the first public universities established in North America. Founded in 1785, the multi-campus institution is home to over 60 research centres and institutes, groups and ongoing projects. As the largest research institution in New Brunswick, UNB conducts more than 70 per cent of the province's university research.



#### **Stand 610-7P**

UNIVERSITY OF VICTORIA City: Victoria, British Columbia Country: Canada Web address: https://www.uvic.ca/ LinkedIn: https://www.linkedin.com/school/universityof-victoria/ X: https://x.com/uvic Facebook: https://www.facebook.com/ universityofvictoria

As a top-ranked university on Canada's West Coast, we're driven by our curiosity, engagement and innovative spirit to help solve the world's biggest problems. We're guided by our principles, our extraordinary natural and cultural environment and our deep respect for learning that has come before.



#### Stand 610-7P UNIVERSITY OF WATERLOO – THE WATER

INSTITUTE City: Waterloo, Ontario Country: Canada Web address: https://uwaterloo.ca/ LinkedIn: https://www.linkedin.com/school/uwaterloo/ X: https://x.com/uWaterloo Facebook: https://www.facebook.com/university. waterloo

University of Waterloo is a leader in innovation that drives economic and social prosperity for Canada and the world. We are home to a renowned talent pipeline, game-changing research and technology, and unmatched entrepreneurial culture, that together create solutions to tackle today's and tomorrow's challenges. Our greatest impact happens together. A strategic integration of research and teaching excellence, the world's largest co-operative education program, entrepreneurship-intensive programs, and creator-owned IP, has resulted in extensive industry collaboration, the generation of thousands of commercial and social enterprises, and a dynamic learning experience for more than 41,000 undergraduate and graduate students.



Stand 708 USA PAVILION

The U.S. Pavilion is your gateway to cutting-edge innovations and industry leadership in the water sector. As the premier showcase of American expertise and ingenuity, the U.S. Pavilion brings together a dynamic array of exhibitors, representing the forefront of technology, sustainability, and solutions-driven approaches to water challenges.

From groundbreaking innovations to proven best practices, the Pavilion offers a comprehensive platform for networking, collaboration, and knowledge exchange. Explore the latest advancements in water treatment, management, and conservation, and engage with industry leaders shaping the future of water worldwide. Join us at the U.S. Pavilion and discover the limitless possibilities for advancing water resilience and sustainability.

## **UV**Solutions

#### Stand 734

UV SOLUTIONS MAGAZINE City: Chevy Chase, MD Country: USA Web address: www.uvsolutionsmag.com https://www.linkedin.com/company/uv-solutions-mag

UV Solutions brings targeted content through print, digital and mobile distribution for individuals involved with UV disinfection and purification applications. UV Solutions is the official publication of the International Ultraviolet Association (IUVA).



Stand 610-1 UVPURE



Stand 740 VAUGHAN COMPANY, INC - OPERATIONS CHALLENGE City: Montesano, WA Country: USA Web address: https://chopperpumps.com/ LinkedIn: https://www.linkedin.com/company/ vaughan-company-inc-/ X: @companyvaughan Facebook: https://www.facebook.com/ vaughancompany

Established in 1960, Vaughan Company is the industry leader in reliable chopper pumps and mechanical hydraulic mixing systems. With more than 63 years of experience, Vaughan Company remains committed to giving their customers outstanding service and the most dependable product solutions in the world.

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Stand 305 VEOLIA

City: Boston Country: United States Web address: https://www.veolianorthamerica.com/ Linkedin: https://www.linkedin.com/company/veoliaenvironnement/ X: @Veolia\_NA Facebook: https://www.facebook.com/ veolianorthamerica/

For more than 170 years, Veolia has been by the side of cities, industries and communities to help them manage, recycle and protect their critical resources in the face of environmental challenges. A global leader in optimized resource management, we provide water, waste and energy solutions, promoting a circular economy.



#### Stand 710-16

VERIFIGLOBAL/CSA GROUP City: Copenhagen / Toronto Country: Denmark / Canada Web address: https://www.verifiglobal.com/en

VerifiGlobal provides quality-assured technology performance testing and verification through competent third-party organizations. VerifiGlobal recognizes that credible technology performance information supports decisions made by public and private sector organizations to reduce investment risk and enhance the potential for sustainable solutions. The VerifiGlobal Secretariat is located in Copenhagen.



Stand 910 VEWIN





#### Stand 820

VORTECH WATER SOLUTIONS City: Galway Country: Ireland Web address: https://vortechws.com/vortex-poweredaeration/ LinkedIn: https://www.linkedin.com/company/vortechwater-solutions

Featured by Isle at: W-Lab Net Zero Showcase and EU Wastewater Technology Approval Group Company description/products and services: The Vortex Power Aerator (VPA) provides high-efficiency oxygen transfer and mixing for aeration applications in wastewater treatment without the need for a complex, costly retrofit



Stand 1000 VYNTELLIGENCE



708-4P WASHINGTON UNIVERSITY IN ST. LOUIS



### Stand 740

WASTECORP PUMPS - OPERATIONS CHALLENGE

### wateralliance

Stand 910

WATER ALLIANCE City: Leeuwarden Country: the Netherlands Web address: www.wateralliance.nl X: https://x.com/waterallianceNL

The Water Alliance is a unique partnership of public and private companies, government agencies and knowledge institutes involved in water technology in the Netherlands. The Water Alliance focuses on innovative and sustainable water technology that can be used worldwide. It brings together a complete chain of innovation for water technology, from first idea, research & development, specialized laboratories, a water application centre, various demosites, launching customers to international applications with commercial companies. Indeed from knowledge to business.



Stand 634 WATER CANADA



**Stand 825** WATER PROJECT



Stand 300 WATER VALLEY DENMARK



Stand 910 WATER4ALL

Water4All brings together a wide and cohesive group of 90 partners from 33 countries in the European Union and beyond. This partnership is committed to ensuring the provision of water for all. It will boost systemic transformations and changes across the entire water R&I pipeline, fostering the matchmaking between problem owners and solution providers for ensuring water security for all in the long term.



#### **Stand 310**

WATERTECH, SHANGHAI HERUI EXHIBITION SERVICE (GROUP) CO., LTD. City: Shanghai Country: China Web address: https://www.watertechsh.com/ LinkedIn: WATERTECH CHINA Facebook: Watertech China

WATERTECH CHINA 2025, Asia's premier trade show for water treatment, environmental protection, and energy-saving solutions, will be held from June 3-5 at NECC, Shanghai. With 2,571 exhibitors and 102,689 visitors in 2024, the 2025 event promises to be an unparalleled opportunity for those looking to enter or expand in the Chinese market.



#### Stand 740

WATER ENVIRONMENT ASSOCIATION OF **ONTARIO (WEAO) - OPERATIONS CHALLENGE** City: Mississauga Country: Canada Web address: weao@weao.org

Water Environment Association of Ontario (WEAO) is a diverse group of technical and professional individuals working to ensure the future of our water and environment industries. As Ontario's water sector leader, we connect members, the industry, and the public through education, training and networking to collectively ensure a resilient water environment.



#### Stand 631

WATER ENVIRONMENT FEDERATION (WEF) City: Alexandria, Virginia Country: United States of America Web address: www.wef.org LinkedIn: https://www.linkedin.com/company/water-environment-federation/ X: https://x.com/WEForg Facebook: https://www.facebook.com/ WaterEnvironmentFederation

The Water Environment Federation (WEF) is a not-forprofit technical and educational organization of more than 30,000 individual members and 75 affiliated Member Associations (MAs) representing water quality professionals around the world. WEF is the host of . WEFTEC, the largest annual water quality exhibition in the world.



Stand 740

WEF - OPERATIONS CHALLENGE



#### **Stand 1000**

WESSEX WATER City: BATH Country: ENGLAND Web address: wessexwater.co.uk LinkedIn: https://www.linkedin.com/company/ wessexwater X: @wessexwater Facebook: www.facebook.com/wessexwater

Wessex water is one of the leading water and sewerage companies in England and Wales. We play a critical role that goes beyond providing an essential public service. We aim to help tackle the climate emergency, support the communities we serve and contribute to the growth of the UK economy.



Stand 610-1 WELLMASTER



Stand 310 WIETEC



#### Stand Room 703-3

WPI - WATER PROFESSIONALS INTERNATIONAL



Stand 1000 WRC- WATER RESEARCH CENTRE City: Swindon , Country: United Kingdom Web address: www.wrcgroup.com LinkedIn: WRc Group X: @WRcGroup (https://X.com/WRcGroup) Facebook: WRc Group (https://www.facebook.com/ WaterResearchCentreWRcGroup)

Water Research Centre (WRc) is a trusted provider of consultancy, technical services, accreditation schemes, research, innovation and training to customers in the water, waste and environment sectors around the globe. Our priority is creating a better tomorrow through helping to solve problems with technical expertise and innovative sustainable solutions.



#### Stand 708

WWEMA - WATER AND WASTEWATER EQUIPMENT MANUFACTURERS ASSOCIATION City: Leesburg, VA Country: USA Web address: www.wwema.org Linkedln: https://www.linkedin.com/ company/3886825/admin/dashboard/ X (X): https://x.com/WWEMAtweets Facebook: https://www.facebook.com/people/ Water-Wastewater-Equipment-Manufacturers-Association/100078863522296/

The Water and Wastewater Equipment Manufacturers Association (WWEMA) is a Washington DC-based non-profit trade association representing water and wastewater technology and service providers since 1908. We advocate, inform, and connect our members with key policy and decision-makers and help our members increase their competitiveness and profitability in the U.S. and abroad.

# xylem

#### Stand 800

XYLEM Web address: www.xylem.com

Xylem (XYL) is a leading global water technology company committed to solving the world's critical water, wastewater, and water-related challenges with innovation and expertise. Our 23,000 diverse employees delivered combined pro forma revenue of \$8.1 billion in 2023. We are creating a more sustainable world by enabling our customers to optimize water and resource management and helping communities in more than 150 countries become water-secure. Join us at www.xylem.com and Let's Solve Water.



#### Stand 740

YORK REGION - OPERATIONS CHALLENGE Stand 610-7P York University City: Toronto, Ontario Country: Canada Web address: https://www.yorku.ca/ LinkedIn: https://www.linkedin.com/school/yorkuniversity/ X: https://x.com/yorkuniversity Facebook: https://www.facebook.com/yorkuniversity/

York is a top international teaching and research university and a driving force for positive change. Located in Toronto, Canada, York is empowered by a welcoming and diverse community with a uniquely global perspective, we are preparing our students for their long-term career and personal success. Together we are making things right for our communities, our planet, and our future.



#### Stand 1000

YORKSHIRE WATER SERVICES LTD City: Bradford Country: UK Web address: www.yorkshirewater.com LinkedIn: Yorkshire Water | LinkedIn X: @yorkshirewater Facebook: facebook.com/yorkshirewater

Yorkshire Water is a UK water and waste company, providing 5.7m customers with essential water

services. With a focus on sustainability and community, they manage 72,000 acres and operate 671 treatment works, ensuring the region's water needs are met responsibly. Their strategy is for a thriving Yorkshire – Right for customers and right for the environment.



#### Stand 710-10

ZERO ENERGY WATER City: Toronto Country: Canada Web address: www.zeroenergywater.com Facebook: N/A

We are a graphene R&D company who have created a molecular sieve for H2O molecules that has 99.9% rejection and over 10 times the flux of any polyamidebased Sea Water Reverse Osmosis membrane when operating at 800 psi.