Creating possibilities to untap water’s full potential
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

xylem.com
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 decision-making 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.

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
Sponsors, Organisers, Partners, Programme Committee, Reviewers
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 and systems, which help solve water-related tasks and challenges, and develop research- and product-based solutions to meet the growing demand to minimise the consumption of resources and CO₂ emissions.

We provide expertise in energy and water efficient solutions and systems for a wide range of applications, including water supply, water reuse, water treatment and wastewater, servicing public customers, industry and domestic users, as well as commercial buildings.

An annual production of over 17 million units positions the Grundfos Group as one of the world’s largest pump manufacturers, with 20,000 employees in 56 countries.

Learn more at www.grundfos.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 optimise 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.

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 km² 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 world-renowned universities and internationally recognised colleges.

Safe travels, and have a great time in Toronto!

Learn more at www.toronto.ca
Silver Sponsors

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.

www.bv.com

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, geexchage, energy from waste, clean biomass, energy from sewage, thermal ice batteries, ambient loops, and combined heat and power.

www.enwave.com

As the exclusive distributor of HUBER’s ThermWin® equipment for sewer heat recovery across North America and the UK, 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, reducing capital costs, and adding resiliency, and redundancy of heating, ventilation and air conditioning systems, transferring operational risk.

www.noventaenergy.com

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.

www.ramboll.com

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.
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.

www.comcore.com.sg

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.

www.stantec.com

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 wastewater treatment plants, guided by the Expert Committee of China Urban Concept Plant, aiming to explore a green and low-carbon development path for new urban sewage facilities.

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
A OneWater future, today.

At Jacobs, we think differently about water. We view all water as a valuable resource and work with clients to tackle the issues that impact communities: climate, safety, reliability, flooding and scarcity.

By looking at water through a OneWater lens we move beyond traditional silos, bringing an inclusive approach to developing a sustainable and equitable water future for all.

We integrate planning, implementation, and operations to develop local solutions that optimize the global water cycle and maximize synergies across markets.

Let us show you how our OneWater approach provides our clients and communities the foundations they need to flourish and grow.
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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’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.

**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

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

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.
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website: https://www.comcore.com.sg
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 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 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 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 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 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

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Monday 12 August

**SCHEDULE**

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<th>ROOM 801A</th>
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<tr>
<td>WORKSHOP</td>
<td>1.3 Progress of gender-inclusive leadership in the water and sanitation sector</td>
<td>WORKSHOP</td>
<td>2.31 Pharmaceuticals in wastewater</td>
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<td>1.17 Utility-wide transformations</td>
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<td>1.17 Utility-wide transformations</td>
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<td>WORKSHOP</td>
<td>2.3 Moving towards equitable climate-focused regulation</td>
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<td>2.3 Navigating the ever-changing PFAS developments and best practices</td>
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<td>1.6 Global perspectives on water utility service delivery</td>
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<td>1.6 Key success of any water sector initiative: Societal change, policy, finance and water governance – triple bottom line – digitalization, decarbonisation and diversity</td>
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<td>4.1 Decision support tools in urban water management</td>
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<td>1.4 Priming what we know about PFAS hotspots: What water practitioners want to know</td>
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<td>TECHNICAL</td>
<td>1.20 Advancements in Great Lakes science from Canada’s largest water research program</td>
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**KEYNOTE PLenary**

**Tuesday 13 August**

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<tr>
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<th>ROOM 713</th>
<th>ROOM 714</th>
<th>ROOM 715A</th>
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<th>ROOM 716A</th>
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**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**
### Wednesday 14 August

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<tr>
<th>Schedule</th>
<th>Room 801A</th>
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<th>Room 803A</th>
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<tr>
<td><strong>Break</strong></td>
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<td>KEYNOTE PLenary</td>
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**Keynote Plenary**

- **10:30-10:45**  
  1.3.8 Governance and removal of emerging contaminants — Session 2

**Technical Workshops**

- **10:45 - 12:00**  
  1.3.12 Disinfection methods
  1.5.1.3 Water challenges and optimisation
  2.3.9 Large WWTP operation
  4.4.14 Nature-based Solutions — Session 3: Streamlining efforts to promote NbS

### Thursday 15 August

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<th>Schedule</th>
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**Keynote Plenary**

- **10:30-10:45**  
  1.3.8 Governance and removal of emerging contaminants — Session 3

**Technical Workshops**

- **10:45 - 12:00**  
  1.3.12 Disinfection methods
  1.5.1.3 Water challenges and optimisation
  2.3.9 Large WWTP operation
  4.4.14 Nature-based Solutions — Session 3: Streamlining efforts to promote NbS

**Closing Ceremony**

- **17:15**  
  CONGRESS GALA DINNER - MTC 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 12 August**

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<tr>
<th>Time</th>
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<td>Puroxi Pure Water Global Inc</td>
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<td>12:15 – 13:00</td>
<td>Government of Ontario</td>
<td>Grundfos</td>
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<td>13:30 – 14:15</td>
<td>Bureau of Waterworks, Tokyo Metropolitan Government</td>
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**Tuesday 13 August**

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**Thursday 15 August**

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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

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**Practical information**

**CONGRESS MOBILE APP & PROCEEDINGS**

Want the IWA World Water Congress & Exhibition at your fingertips? Download the official mobile app. The app offers a comprehensive guide to every workshop, technical session, presentation, sponsor and exhibitor. Connect with other delegates using the in-built networking tool, navigate your way around using the interactive floor plan, and share your thoughts and insights using the social media widgets. Access the app here: https://builder.guidebook.com/g/iwa2024wwce/ or download it on your mobile by scanning the QR code below.

To access the app, enter passphrase: 2024wwce

**SOCIAL MEDIA**

Are you planning to use social media while at the conference?

Join the conversation:

- [https://X.com/IWAHQ](https://X.com/IWAHQ)
- [www.facebook.com/internationalwaterassociation](http://www.facebook.com/internationalwaterassociation)
- [www.linkedin.com/company/international-water-association](http://www.linkedin.com/company/international-water-association)
- [@iwa_network](https://twitter.com/iwa_network)

Official Hashtags:

- #WorldWaterCongress
- #iwacongress

**CONTACTS**

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**Technical Programme**

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**Press and media**

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**Exhibition**

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**Congress Director**

Kizito Masinde
*International Water Association*
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Venue:
Metro Toronto Convention Centre,
MTCC, South Building

Gala Dinner location*
MTCC, North Building, Hall A, Level 300

Floor Plan
IWA Digital Water Summit 2024

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www.digitalwatersummit.org

BILBAO SPAIN
12-14 NOVEMBER 2024

Organised by
Co-organisers

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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

Paul Brown
President, Paul Redvers Brown Inc.

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.

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
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.

Smart and AI-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.

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
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

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.
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 10th recipient of the Foreign Affairs Decoration of Honor in Gold for his unique and outstanding water diplomacy work and leadership.

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
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 utility-led solutions for water scarcity, utility breakthroughs on climate adaptation, and utilities working to improve the circular economy.
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.

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.
Thanks to IWA Publishing’s Subscribe to Open (S2O) Model, our portfolio is available Open Access, sharing the latest research on water, our most valuable resource. With the help of subscribing libraries and institutions, IWA Publishing has published all research fully Open Access since 2021.

S2O is increasing the impact of water and wastewater publishing around the world.
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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 2024 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


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

Stantec is leading the industry in advanced water treatment and cost-effective brine management strategies for water reuse programs.

With every community, we redefine what's possible.
Monday, 12 August

Track 1
WATER UTILITY MANAGEMENT

Track 2
WASTEWATER TREATMENT AND RESOURCE RECOVERY

Track 3
DRINKING WATER AND POTABLE REUSE

Track 4
CITY-SCALE PLANNING AND OPERATIONS

Track 5
COMMUNITIES, COMMUNICATION AND PARTNERSHIPS

Track 6
WATER RESOURCES AND LARGE-SCALE WATER MANAGEMENT
### Monday | Programme

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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>09:00 - 09:45</td>
<td>Keynote Plenary</td>
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<td>09:45 - 10:30</td>
<td>Coffee Break</td>
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<td>10:30 - 12:00</td>
<td>Session 1</td>
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<td>Lunch 12:00 - 13:30</td>
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<td>13:30 - 15:00</td>
<td>Session 2</td>
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<tr>
<td>SO.6 WATER 2050 – VISION FOR A SUSTAINABLE &amp; RESILIENT WATER FUTURE - SESSION 1</td>
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<td>Heather Collins, Metropolitan Water District of Southern California</td>
<td>Joe Jacangelo, Stantec</td>
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<td>David LaFrance, AWWA</td>
<td>Barb Martin, AWWA - Moderator</td>
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<td>This session provides an in-depth look at AWWA’s Water 2050 initiative, highlighting its vision and activities aimed at ensuring a sustainable and resilient water future. There will be an overview presentation, a moderated panel discussion on the biggest challenges and solutions in the water community, and opportunities for audience engagement.</td>
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<tr>
<td>15:00 - 15:30</td>
<td>Coffee Break</td>
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<tr>
<td>15:30 - 17:00</td>
<td>Session 3</td>
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<td>WOMEN’S LEADERSHIP NETWORK – SETTING THE AGENDA</td>
<td>SO.6 WATER 2050 – VISION FOR A SUSTAINABLE &amp; RESILIENT WATER FUTURE - SESSION 2</td>
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<td>David LaFrance, AWWA</td>
<td>Barb Martin, AWWA</td>
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<td>This interactive session will kick off with an overview of the Water 2050 initiative before diving into a World Café discussion. Participants will engage in small group discussions to tackle key questions about the future of water, focusing on challenges, strategic priorities, and actionable steps. The session will conclude with group reports and a collaborative discussion.</td>
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<td>17:00 - 17:15</td>
<td>Break</td>
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<td>17:15 - 18:00</td>
<td>Keynote Plenary</td>
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Monday | Programme

**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**

**Strengths and Weaknesses of a Groundwater-Based Water Supply**
Chair: Ida Holm Olsen, Danish Water Forum, Denmark
Co-chair: Simon Gautrey, WSP Canada

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 Guelph, Canada

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**

**GROUNDWATER FORUM – SESSION 2**

**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-Paine, Operations Water, Canada

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

**Coffee Break | 15:00 - 15:30**

**Session 3 | 15:30 - 17:00**

**GROUNDWATER FORUM – SESSION 3**

**Imminent Threats of a Groundwater-Based Water Supply**
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 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 Denmark

**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
### Monday | Programme

#### Keynote Plenary | 09:00 - 09:45

**Keynote:** Resilience in practice: Avoiding planning traps, Paul Brown, President, Paul Rodgers 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

**5.1 PROGRESS OF GENDER-INCLUSIVE LEADERSHIP IN THE WATER AND SANITATION SECTOR**  
**Chair:** Leticia Ackoum, Ivory Coast  
**Co-chair:** Florence Laker, UK  
This session will explore practical strategies for breaking down gender barriers and 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 efficiency.  
**Speakers:** Juliet Willets, Australia; Dr Yuan Yang, China; Faustina Boachie, Ghana; Mara Ramos, Brazil; Geraldine Mpowa Logmo, Cameroon; Julie Perkins, Germany

**Panel Moderator:** Adam Lovell  
**Panel:** Dragan Savic, Mike McGann, Cecilia Wennberg, Rosemary Campbell

**in developing more citizen-focused governance and regulation.**

#### Room 701 A | Workshop

**2.33 PFAS IN WASTEWATER**  
**Chair:** Prithviraj Chavan, United States  
**Co-chair:** Linda Müller, Germany  
**Adsortion Of Per-And Polyfluoroalkyl Substances (PFAS) On Activated Carbon In The Low Ng/L Range, Bert Van der Wal, Netherlands**  
**Successful Removal Of PFAS, And Heavy Metals In Landfill Leachate, Caroline Kragelund, Denmark**  
**An Emerging Challenge: Microplastics And Their Journey Through Anaerobic Digesters, Irem Simsek, Canada**  
**PFAS – Danish Experiences And Challenges, Hansen Anders, Denmark**

#### Room 701 B | Technical

#### Lunch | 12:00 - 13:30

#### Session 2 | 13:30 - 15:00

**5.2 MOVING TOWARDS EQUITABLE CITIZEN-FOCUSED REGULATION**  
**Chair:** Dr Heather Smith, UK  
**Co-chair:** Julian Jacobs, UK  
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 a cooperation agenda, looking at the role that communication and engagement can play in developing more citizen-focused governance and regulation.

**Panel Moderator:** Dr. Angela Savickis  
**Panel:** Vanessa Akinsoga, UK; Tysi és Sano, Ghana; Peter Stuchbury, UK; Isha Benyam Asfaw, Ethiopia; Rosemary Campbell, UK; Debbie J. Smith, UK

**Keynote Plenary | 17:00 - 17:15

**Keynote:** Smart and AI-enabled PUB, Ong Teo-Chin, Chief Executive, PUB, Singapore’s National Water Agency  
**Panel Moderator:** Deepa Karthykeyan  
**Panel:** Dragan Savic, Mike McGann, Cecilia Wennberg, Rosemary Campbell

**5.4 SCALING-UP AND MAKING WAVES: UNPACKING FINANCE ACCESSIBILITY FOR WASH STARTUPS**  
**Chair:** Jacob Amengor, Ghana  
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 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.

**Speakers:** Yang Villa, Philippines; Akan Odon, UK; Beth Koigi, Kenya; Walid Khoury, UAE; Leonietha Barreto, Switzerland

#### Room 701 A | Workshop

**1.12 TRANSLATING WHAT WE KNOW ABOUT PFAS INTO ACTION: WHAT WATER PRACTITIONERS WANT TO KNOW**  
**Chair:** Rasha Maal-Bared, Canada  
**Co-chair:** Bipro Dhar, Canada  
**Despite the growing number of PFAS publications, many utilities and water professionals 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 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.**

**Speakers:** Miriam Hacker, USA; Greta Zornes, USA; Cresten Mandsfeldt, USA; Dan Gerrity, USA; Sofia Mordojevich, USA; Jonathan Sheets, USA; Banu Ormeci, Canada; Saff Mola, Canada; Ian Ross, USA; Jason Morrison, USA

#### Room 701 B | Workshop

#### Coffee Break | 15:00 - 15:30

#### Session 3 | 15:30 - 17:00

**2.3 NAVIGATING THE EVER-CHANGING PFAS LANDSCAPE: LATEST DEVELOPMENTS AND BEST PRACTICES**  
**Chair:** Martha Dagnew, Canada  
**Co-chair:** Anh Pham, Canada; Madhumita Roy, Canada  
The workshop will bring together scientists, engineers, policymakers, and industry professionals to delve into the pressing challenges surrounding PFAS contamination. It 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 Maly, Canada; Richard Nei; Viraj Desilva, USA; Omar Mohamed, Canada.

#### Room 701 A | Workshop

**An Emerging Challenge: Microplastics And Their Journey Through Anaerobic Digesters, Irem Simsek, Canada**

#### Room 701 B | Technical

## Break | 17:00 - 17:15

## Keynote Plenary | 17:15 - 18:00

**Keynote:** Smart and AI-enabled PUB, Ong Teo-Chin, Chief Executive, PUB, Singapore’s National Water Agency  
**Panel Moderator:** Deepa Karthykeyan  
**Panel:** Dragan Savic, Mike McGann, Cecilia Wennberg, Rosemary Campbell
### Monday Programme

**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 LaFranco, Nerina Di Lorenzo, Peter Simpson, Sangeeta Chopra

**Coffee Break** 09:45 - 10:30

**Session 1** 10:30 - 12:00

**1.17 Utility Wide Transformations**

Chair: Ed Smeets, Netherlands Co-chair: Nick Copeland, Canada
 Integrating GHG Evaluation And Reduction Into Water & Wastewater Infrastructure Capital Delivery, Jeremy Kraemer, Canada
 The importance of the Triple Bottom Line 3Ds: Decarbonization, Digitization and Diversity key success of canadian utilities, Vanessa Chau, Canada
 Establishing, Implementing And Coordinating A Holistic Asset Management System To A Water Utility, Henna Luukkonen, Finland
 Reengineering Of Wastewater Systems – A Portuguese Case Study, Maria de Fátima Pereira, Portugal

**POSTERS**

Lessons Learned From Disconnects Between Design And Operations That Can Lead To Process And Compliance Challenges At Wastewater Treatment Plants, Yaldah Azimi, Sweden
 Decarbonization Strategies In The Water Sector: The Regulatory Landscape And Collaborative Imperative, Alexis de Kerchove

**Lunch** 12:00 - 13:30

**Session 2** 13:30 - 15:00

**1.6 Global Perspectives on Water Utility Service Delivery**

Chair: Nancy Kodousek, Canada Co-chair: Flávio Oliveira, Portugal
 Working Towards Becoming A Utility Of The Future – Case Study: The Gambia, Joe Dalton, Ireland
 The Power Of Benchmarking - Experiences With Benchmarking And Improving European Water Services, Peter Dane, Netherlands
 Performance Evaluation Of 17 Town Water Utilities In Ethiopia, 2021, Lulu Gebre, Ethiopia
 Impact Of Digital Transformation On Water And Sewerage Services Delivery, Jane Mthamo, Kenya

**POSTERS**

Porto’s New Water Supply Master Plan: A Resilient And Sustainable Path To The Future, Flávio Oliveira, Portugal
 The Secrets To Incentivising And Achieving Great Customer Service, Julian Jacobs, United Kingdom

**Coffee Break** 15:00 - 15:30

**Session 3** 15:30 - 17:00

**1.8 Vancouver’s One Water Journey**

Chair: Michelle Revez, Canada Co-chair: Sylvie Spraakman, Canada
 We look to engage in deep discussion about current challenges and future opportunities with actors across the water space from one case study – the City of Vancouver.

**Speakers:** Michelle Revez, Canada; Andrea Becker, Canada; Angela Steward, Canada; Jamie Huang, Canada; Dr Sylvie Spraakman, Canada

**1.9 Leveraging Public Private Partnerships To Improve Utility Efficiency**

Chair: Darryl Day, Australia Co-chair: Höllvör Stefán Borgalsson, Iceland
 Entering The Second Decade Of Successful Innovation Through A Public-Private Partnership, Terence Reid, United States
 Human Resource Development: Key To The Effective Public-Private Partnership For Waterworks In Tokyo, Yoshiko Murakami, Japan
 Promoting Entrepreneurial Mindset To Utility-wide Performance Management And Optimization, Hosborn Odongo, Kenya

**POSTERS**

Unconventional Hydropower The Hidden Opportunity – Case Studies From South Africa, Jay Bhogwun, South Africa

**1.9 Responsible Industrial Water Management In A Changing Climate--Breakthroughs And Innovations**

Chair: Eric Rosenblum, USA Co-chair: Val Frenkel, USA
 Following the publication of “Guidelines for Responsible Industrial Water Use in a Changing Climate” (IWA Publishing, 2024) the co-authors will moderate a live panel discussion with some of the speakers whose work is featured in the book. These speakers will represent industry, utilities, environmental advocacy groups, and indigenous populations impacted by industrial water use.

**Speakers:** Michelle Revez, Canada; Derrick Dunkley, UK; Imran Motala, Canada; Rhonda Harris, USA

**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
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Monday | Programme

Keynote Plenary  09:00 - 09:45

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

Coffee Break  09:45 - 10:30

Session 1  10:30 - 12:00

1.13 EVALUATING COMMUNITIES FOR WATER INFRASTRUCTURE PROJECTS THROUGH SUSTAINABLE LIVELIHOODS APPROACH METHODOLOGY

Chair: Carlos Aguilera, Ecuador  
Co-chair: Felipe Vasquez, Ecuador

This session focuses on evaluating communities about water infrastructure projects using the Sustainable Livelihoods Approach (SLA) Methodology. Participants will delve 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 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.

Speakers: Carlos Aguilera, Ecuador; Felipe Vasquez, Ecuador; Wilmer Santacruz, Ecuador

Room 707 Workshop  Room 709 Technical

Lunch  12:00 - 13:30

Session 2  13:30 - 15:00

4.1 DECISION SUPPORT TOOLS IN URBAN WATER MANAGEMENT

Chair: Dewi Rogers, Italy  Co-chair: Tatiana Estevez, Canada

Assessing The Needed Supply Buffer For Copenhagen's Water Supply, Martin Rygjard, Denmark

Improved Hydrological Modelling Of Infiltration Swales In Cold Climates Using Underground Water Levels, Tone Muthanna, Norway

Into The Wild: Calibrating A Large-Scale Water Quality Model In The City Of Markham's Distribution System, Bradley Jenkins, United Kingdom

Planning Water Supply From A Viewpoint Of The Possibility Of Depopulation In The Future In A Developing Country, Suzahiko Itoh, Japan

POSTERS

Digital Decision Support Tools To Tackle Water Planning Challenges: Two Success Stories In Angola, Maria de Fátima Pereira, Portugal

Expert Choice And Graph-Informed Engineering Solutions For Efficiency Enhancement In The Evolutionary Optimization Of A Real-World Water-Distribution Network, Amin Minaei, Austria

Room 707 Technical  Room 709 Technical

Coffee Break  15:00 - 15:30

Session 3  15:30 - 17:00

4.6 DECISION SUPPORT TOOLS IN WASTEWATER MANAGEMENT

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

BOD: And COD Soft Sensors Application For WWTP Organic Load Monitoring, Sofiane Mazeghrane, France

Implications Of Population Density Variations On The Design Of Sewer Networks: Case Study Of Dahanu City In India, Shweta Lokhande, India

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

Monitoring And Optimization Of Wastewater Networks Using Adaptive Pump Flow Estimation And IOT Data With A Machine Learning Approach, Reza Pourmoayed, Denmark

POSTERS

JaViSha 1.0 - A Tool For Wastewater Treatment Technology Selection Based On Multiple Attribute Decision Making, Pradip Kolbe, India

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

Room 707 Technical  Room 709 Technical

Break  17:00 - 17:15

Keynote Plenary  17:15 - 18:00

Keynote: Smart and AI-enabled PUB, Ong Tee-Chin, Chief Executive, PUB, Singapore's National Water Agency  
Panel Moderator: Deepa Karythkeyan  Panel: Dragan Savić, Mike McGann, Cecilia Wennberg, Rosemary Campbell
Monday Programme

Keynote Plenary 09:00 - 09:45

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

Coffee Break 09:45 - 10:30

Session 1 10:30 - 12:00

2.1 ANAMMOX / DENITRIFICATION
Chair: Yves Comeau, Canada Co-chair: Yi Cao, United States
Enhancing Denitrification Without External Carbon Source - Full-scale Operation, Sofia Branzetti, Sweden
Modelling Mainstream Nitrate/nitrite-dependent Anaerobic Methane Oxidation And Anamox Process In an Membrane Granular Sludge Reactor At Low Temperature, Shi Chen, China
HRSD’s Journey From Pilot To Full-scale Implementation Of Mainstream Partial Denitrification/Anamox (PRANAn) IFAS, Megan Bachmann, United States
C-N Coupling In An Anaerobic, Sulfide-based Partial Denitrification And Anamox (SPDA) Reactor System For Treating Real Domestic Wastewater, Owall Maqray, South Africa
POSTERS
Partial Denitrification Success Factors: Understanding The Fundamentals Behind NO2 Accumulation, Parin Ijadi, Canada
Elemental Sulfur-based Autotrophic Denitrification Coupled With Anamox Process Realized Stable Mainstream Nitrogen Removal, Yuanjun Liu, Hong Kong

Lunch 12:00 - 13:30

Session 2 13:30 - 15:00

2.2 PHOSPHORUS REMOVAL
Chair: Bruce Johnson, United States Co-chair: Salima Hendy, Canada
Synthesis And Characterization Of Fe(OH)3-modified Yellow Birch Woodchips Sorbent For Phosphorus Adsorption In Wastewaters, Soureyatou Hamidou, Canada
Propioniclava, A Potential Polyphosphate Accumulating Organism Without Denitrifying Phosphorus Uptake Function In An Enhanced Biological Phosphorus Removal Process, Yongmei Li, China
Identifying Potential Process Enhancements In Phosphorus Removal On WWTPs By Phosphorus Fractionation In The Effluent, Ling Xiang, China
Simultaneous Phosphorus Removal And Nitrogen Recovery Using The CANDO®P, Emily Kin, United States
POSTERS
Enlarged Anaerobic Zone - Evolution Of EBPR Design In MBR, Soubhagya Pattanayak, United States

Coffee Break 15:00 - 15:30

Session 3 15:30 - 17:00

2.3 PARTIAL NITRIFICATION
Chair: Liu Ye, Australia Co-chair: Brett Wagner, United States
Exploration And Verification Of The Potential Of Partial Nitrification Achieved By Sulfide Inhibition For Sewage Treatment, Yuan Li, Hong Kong, China
Autotrophic Biological Nitrogen Removal In An Algal-bacterial Symbiosis System: Formation And Structure Of Integrated Algae|partial-nitrification|anamox Biofilm, Zuoqiong Liu, China
Superior Mainstream Partial Nitrification In Membrane Aerated Biofilm Reactor, Chenkai Ni, Australia
Microbial Entrainment Of Nitrifiers, Denitrifiers And Polyphosphate Accumulating Organisms For Treatment Of Domestic And Industrial Wastewater, Koko Kawara, Australia
POSTERS
Advanced Nitrogen Removal From Wastewater By Coupling Nitrification, Partial Nitrification And Denitrification With Anamox In Membrane-aerated Biofilm Reactor Integrated Fixed-film Activated Sludge, Baoshan Xing, China

Break 17:00 - 17:15

Keynote Plenary 17:15 - 18:00

Keynote: Smart and AI-enabled PUB, Ong Tee-Chin, Chief Executive, PUB Singapore’s National Water Agency
Panel Moderator: Deepa Karthykeyan Panel: Dragan Savic, Mike McGann, Cecilia Wennberg, Rosemary Campbell
### Monday Programme

#### Keynote Plenary 09:00 - 09:45
**Keynote:** Resilience in practice: Avoiding planning traps, Paul Brown, President, Paul Redvers Brown Inc.
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**Panel:** David LaFranco, Norrina Di Lorenzo, Peter Simpson, Sangeeta Chopra

#### Coffee Break 09:45 - 10:30

#### Session 1 10:30 - 12:00

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<tr>
<td>10:30</td>
<td>3.2 GROUNDWATER BASED DRINKING WATER TREATMENT</td>
<td>3.1 UNIT OPERATIONS (COAGULATION, (BIO) FILTRATION, MEMBRANE PROCESSES, OZONATION)</td>
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<td>Chair: Sujithra Weragoda, Sri Lanka Co-chair: Katy Koepsel, United States</td>
<td>Chair: Stephen Katz, Canada Co-chair: Haojie Ding, China</td>
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<td>Impact Of Fe On The Biofiltration Of Mn In Groundwater, Jerôme Ducret, Canada</td>
<td>Modification Of Commercial Polyaluminium Chloride To Prevent Irreversible Fouling In Coagulation-Membrane Filtration For Drinking Water Treatment, Qing Ding, Japan</td>
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<td>Reducing Methane Emission And Optimizing Sand Filtration Performance By Membrane Degassing And Controlling Oxidation-Reduction Potential, Frank Schoonenberg, Netherlands</td>
<td>Exploring Carbon Dynamics In Slow Sand Filters Using Stable Isotope Probing, Bayan Khojah, Netherlands</td>
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<td>Can Solar-powered UV-LED Provide Sustainable RO-treated Drinking Water For Remote Communities?, Noshin Karim, Canada</td>
<td>Biological Ion Exchange: A Tale Of Three Mechanisms To Remove NOM From Drinking Water, Karl Zimmerman, Canada</td>
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<td>De-scaling Of Water Using Sound And Magnetic Methods, Michael Bache, Denmark</td>
<td>Predicting Particulate Fouling In The Reverse Osmosis Using MFI UF Method, Nirajam Dhakal, Netherlands</td>
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<td>Fluoride Contamination In Southern Brazil Groundwater: Identifying Risks And Strategies For Public Health Improvement, Elvis Cerissimi, Brazil</td>
<td>High Performance Of Chloride-enhanced Heat-activated Peroxymonosulfate (PMS) Pretreatment Toward Zero Liquid Discharge (ZLD) System In Seawater Desalination, Jaewon Lee, Korea</td>
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<td>Bacterial Co-culture As A Sustainable Tool For Benzene-Toluene-Ethylbenzene And Xylene (BTEX) Biodegradation, Diego Hernandez, Canada</td>
<td>Better Protozoa Removal With Direct Filtration?, Kalani Sackintha Kalani, Canada</td>
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#### Lunch 12:00 - 13:30

#### Session 2 13:30 - 15:00

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<tr>
<td>13:30</td>
<td>3.16 WATER AND ENERGY ECONOMICS IN LOCAL &amp; GLOBAL CONTEXTS</td>
<td>5.3 POLICY AND REGULATION</td>
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<td>Chair: Annalisa Contos, Australia Co-chair: Nitish Ranjan Sarker, Canada</td>
<td>Chair: Armando Silva-Afonso, Portugal Co-chair: Miriam Hacker, United States</td>
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<td>Water-Energy-Smart Future: Leveraging Day-Ahead Electricity Pricing For Cost-Efficient Water Distribution, Kristian Munk Rall, Denmark</td>
<td>Mapping Governance To Link Global Goals With Local Action: Process Tracing Methodologies For Urban Water Management Across Urban South Asia, Faisal Shaheen, Canada</td>
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<td>Assessing The Impact Of Water Price Reform And Water Use Efficiency On Domestic Water Demand In Saudi Arabia, Muhammad Javid, Saudi Arabia</td>
<td>Affordability And Equitable Water Services Provision, Paul Jeffrey, UK</td>
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<td>Leak Detection ROI Sensitivity Analysis, Brian Harwood, USA</td>
<td>The Unintended Inequities Of Rural Piped Water Supply, Samantha LeValley, Canada</td>
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<td>Adaptive IoT system for continuous dynamic pressure control IN water distribution networks, Jose Dario Luis Delgado, Spain</td>
<td>Legal Personhood For Waterways And Innovative Projects - Help Or Hindrance?, Aaron Alcheson, Canada</td>
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<td>Water Supply System Optimization Reducing The Energy Costs And Withdrawal Of Surface Water Resources, Farid Zahir, Canada</td>
<td>Sustainable And Transformative Partnerships In The Water Sector, Elisabete Vale, Portugal</td>
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#### Coffee Break 15:00 - 15:30

#### Session 3 15:30 - 17:00

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<th>Time</th>
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<tr>
<td>15:30</td>
<td>1.19 REUSE AND RECYCLE WATERWORKS SLUDGE</td>
<td>6.2 DECADES OF EVOLVING WATER GOVERNANCE – WHAT HAVE WE LEARNT</td>
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<td>Chair: Susan Andrews, Canada Co-chair: Kenneth Persson, Sweden</td>
<td>Chair: Michael Rouse, United Kingdom Co-chair: Juiyha Mathew, Canada</td>
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<td>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</td>
<td>Evolving Water Governance In Japan: Lessons For Inclusive Decision-making And Sustainability, Ishiwatari Miki, Japan</td>
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<td>Speakers: Olaf van der Kolk, Netherlands; Krister Hagström, Sweden; Jenny Åström, Sweden</td>
<td>Legitimation Strategies For Water Related Reuse, Sandra Sikkema, Netherlands</td>
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<td>WHAT HAVE WE LEARNT</td>
<td>Drinking Water Scarcity In Cameroon The Need For More Effective Management Of Water Supply Facilities, Moh Oued Sama, Cameroon</td>
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<td>Navigating The Waters Of Cooperation: Federated Learning Machine Learning And The Federated Collaborative Governance Framework, Elizabeth Taylor, USA</td>
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#### Break 17:00 - 17:15

#### Keynote Plenary 17:15 - 18:00
**Keynote:** Smart and AI-enabled PUB, Ong Tze-Chin, Chief Executive, PUB Singapore’s National Water Agency
**Panel Moderator:** Deepa Karthykeyan
**Panel:** Dragan Savic, Mike McGann, Cecilia Wennberg, Rosemary Campbell
### Monday | Programme

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<td>Resilience in practice: Avoiding planning traps</td>
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<td>10:30</td>
<td>Session 1</td>
<td>2.34 WASTEWATER-BASED EPIDEMIOLOGY</td>
<td>Rasha Maal-Bared, Canada  Co-chair: Catherine Hoar, United States</td>
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<td>Development Of A Novel Method For Concentrating, Monitoring And Sequencing Of SARS-CoV-2 In Large Volumes Of Wastewater, China</td>
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<td>Variations Of Relative Sequencing Depths Along The SARS-CoV-2 Genome For Wastewater Samples: Are They Characterizing Decay?, Sukriye Celikkol, Canada</td>
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<td>Wastewater-Based Epidemiology In Wales - From COVID-19 To One Health Monitoring, Bhavik Barochia, United Kingdom</td>
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<td>Evaluation Of Weather Dependent Sample Collection And Data Interpretation For Effective Wastewater-based Epidemiology In Combined Sewer Systems, Emily Garner, United States</td>
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<td>Lunch</td>
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<td>15:30</td>
<td>Session 2</td>
<td>2.35 CONTAMINANTS OF EMERGING CONCERN IN SEWERS</td>
<td>Jennifer Weidhaas, United States Co-chair: Daneish Despot, Germany</td>
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<td>H2S Formation In A Sewer Physical Twin: Understanding Process Dynamics And Control Strategies, Mingu Kim, Korea</td>
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<td>Fate And Interactions Of Tepinonem In Wastewater: Assessing Stability And Environmental Impact, Pratishtha Khurana, Canada</td>
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<td>Pharmacetically Active Compounds In Wastewater: A Review Of Occurrence, Regulatory Framework And Removal Methods, Shahab Minaei, Iran</td>
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<td>From Sewers To Solutions: Wastewater-based Epidemiology And The Future Of TB, Ngamiwe Mshweta, South Africa</td>
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<td>POSTERS: Profiles Of Antibiotic Resistant Bacteria And Their Resistance Genes In The Influent And The Effluent Of Wastewater Treatment Plants In Kanagawa, Japan, Mikul Kanazashi, Japan</td>
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<td>Methods For Surveillance Of Antibiotic-Resistant Bacteria In Wastewater From Healthcare Facilities, Fan Warren, United States</td>
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<td>17:00</td>
<td>Break</td>
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<td>17:45</td>
<td>Session 3</td>
<td>5.4 CROSS-SECTORAL GOVERNANCE</td>
<td>Simon A. Aley, United Kingdom Co-chair: Kala Shriram, Australia</td>
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<td>Developing A Wastewater Surveillance System To Accurately Detect Influenza A Prevalence In Communities With Different Populations And Sewer Infrastructure, Timothy Garnett, Canada</td>
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<td>Accelerating Cross-institutional Collaboration And Coordination In The Context Of Devolution In Kenya, Dorris Kiri, Kenya</td>
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<td>Redefining Priorities: The Imperative Of Addressing Chronic Diseases In The Developing World Through Wastewater-Based Epidemiology, Patrick D’Aoust, Canada</td>
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<td>Follow The Drop: An Innovative Public-Private-Philanthropic Approach To Stormwater Management In Honolulu, Hawaii, Lauren Roth Venn, USA</td>
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<td>POSTERS: Design Thinking Processes In Águas E Energia Do Porto, Neves Moises, Portugal</td>
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<td>Holistic Approach To Assessing Investments In Drinking Water Infrastructure Maximises Impact And Efficiency, Carl Heyman, Belgium</td>
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<td>17:45</td>
<td>Keynote Plenary</td>
<td>1.13 NEW PERSPECTIVES ON NET ZERO UTILITIES</td>
<td>Sudhir Murthy, United States Co-chair: Francisca Braga, Denmark</td>
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<td>Wider Opportunities For Low-carbon Urban Water Systems, Ka Leung Lam, China</td>
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<td>Breaking Down “Decarbonization” For The Water</td>
<td>WasteWater Sector, Melissa Harlander, United States</td>
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<td>The Oversimplification Of Greenhouse Gas Emissions From The Wastewater Sector, Jason Ren, United States</td>
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<td>Examples Of Scope 4 Emission Reduction In The Water Sector, Marette Zwamborn, Netherlands</td>
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<td>POSTERS: Greenhouse Gas Emission Reductions As A Result Of Infrastructure Intensification In Water Resource Recovery Facilities, Daniel Andres Mendoza Grubert, Canada</td>
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<td>The Road Towards A Nordic Climate Neutral Water Sector, Jeanette Agerved Moelsen, Denmark</td>
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<td>18:00</td>
<td>Keynote Plenary</td>
<td>1.15 CIRCULAR ECONOMY INITIATIVES ON UTILITY LEVEL</td>
<td>Linda Ámánd, Sweden Co-chair: Ruoobin Dai, China</td>
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<td>Advancing Towards A Circular Economy In Membrane Technology, Kelly Hill, Australia</td>
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<td>Towards Phosphorus Circularity: Biofilm EBPR With Subsequent Sruvite Production At Hias WWTP - Insights From Full-Scale, Lab Testing, Sandre Elds, Norway</td>
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<td>Risk Analysis Of Water Recovery From Waste Water Based On The MBR Technology - Case Study Poland, Kaira Ramen, Poland</td>
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<td>A Full Scale Advanced Anaerobic Digestion Case Study At Tarnow Wwtp, Poland, Ashish Sahu, Norway</td>
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<td>POSTERS: Wider Opportunities For Low-carbon Urban Water Systems, Ka Leung Lam, China</td>
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<td>The Road Towards A Nordic Climate Neutral Water Sector, Jeanette Agerved Moelsen, Denmark</td>
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### POSTERS

- Smart and AI-enabled PUB, Ong Tze-Chin, Chief Executive, PUB, Singapore’s National Water Agency
- Following the Drop: An Innovative Public-Private-Philanthropic Approach To Stormwater Management In Honolulu, Hawaii, Lauren Roth Venn, USA
- Design Thinking Processes In Águas E Energia Do Porto, Neves Moises, Portugal
- Holistic Approach To Assessing Investments In Drinking Water Infrastructure Maximises Impact And Efficiency, Carl Heyman, Belgium
- The water industry is facing many challenges and opportunities in the transition from construction to production, with the aim to improve productivity. Standardisation is seen as a key enabler in an industry with a history of bespoke infrastructure projects, often relying on traditional carbon intensive engineering solutions. This workshop aims to provide a platform for water professionals, researchers, and stakeholders to share their experiences, insights, and best practices on how to manage this transition effectively.
- The workshop will cover topics such as: modular construction, quality and safety, innovation and technology, transition to 3D digital designs and BIM.
- Speakers: Simon Parsons, Scotland; Shaunna Berendsen, England; Rachel Fox, Scotland
Monday | Programme

Keynote Plenary | 09:00 - 09:45

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

Coffee Break | 09:45 - 10:30

Session 1 | 10:30 - 12:00

2.8 ACTIVATED SLUDGE PROCESSES - SESSION 1
Chair: Tom Arnot, United Kingdom
Co-chair: Jacqueline Sampah-Adjie, Ghana
Appropriate Technologies For Secondary Wastewater Treatment At High Elevations, Gustavo Andres Baquero Rodriguez, Colombia
Influence Of PH On Microbial Communities During Ammonia Retention From Simulated Industrial Wastewater By Microaerobic Activated Sludge Process, Xinyi Zhou, Japan
Sensitivity Analysis Of Anaerobic Zone Mass Fraction and Hydrolytic/Fermentation rate, Parmian Isai, Canada

2.36 DIGITAL WATER & MODELLING – SESSION 1
Chair: Jeremy Kraemer, Canada Co-chair: Aquistin Landaburu, Argentina
Dynamic Prediction Of Nitrous Oxide Emissions In A Full-scale Industrial Wastewater Treatment Plant Using A Plant-wide Model Approach, Thanyu Lei, Denmark
Towards Development Of System-Wide Digital Twins For Water And Resource Recovery Facilities, Shalongo Angula, South Africa
When Wastewater Treatment Processes Meet Machine Learning: Improving Predictive Performance Through Optimization Of Dataset Construction, Jiayuan Ji, Japan
Mechanistic Modelling Insights Into Fermentative And Conventional Polyphosphate Accumulating Organisms, Rhys Thomson, Australia

Lunch | 12:00 - 13:30

Session 2 | 13:30 - 15:00

2.9 ACTIVATED SLUDGE PROCESSES - SESSION 2
Chair: Leiv Rieger, Canada Co-chair: Jan Ruppelt, Germany
Activated Sludge Models Aeration Control System For Energy Conservation In WWTP, Hisashi Kishimoto, Japan
Biokinetic Modelling To Predict Seasonal Variations Of Nitrous Oxide Emissions From A Full-scale Wastewater Treatment Plant, Siddharth Seshan, Netherlands
Evaluation Of Combined Control Scheme For Better Effluent Quality And Reducing Cost In Wastewater Treatment Plants, Wim Audenaert, Belgium
The Key Of Mechanistic Understanding For Effective Mitigation Of Nitrous Oxide Emissions In Wastewater Treatment Plants, Wie Audenaert, Belgium

2.37 DIGITAL WATER & MODELLING – SESSION 2
Chair: Prabhu Chandrasekeran, United States Co-chair: Jiayuan Ji, Japan
Characterizing Accumulated Sludge: A Key Factor In Understanding And Modelling Aerated Lagoons, Ali Reza Dehghani Tafti, Canada
Data-driven Prediction Of N2O 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

Coffee Break | 15:00 - 15:30

Session 3 | 15:30 - 17:00

2.26 TREATMENT AND RECOVERY OF INDUSTRIAL WASTEWATER
Chair: Awny Adin, Israel Co-chair: Hayat Raza, Canada
Influence Of The Wastewater Quality On The Performance Of Chlorella Vulgaris, Hussein Ziad, 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 Couteau-Taylor Flow Method, Chasnui Lin, Republic of Korea

2.38 DIGITAL WATER & MODELLING – SESSION 3
Chair: Ong Tze-Chin, Chief Executive, PUB, Singapore’s National Water Agency
Panel Moderator: Deepa Karthykeyan, Panel: Dragan Savic, Mike McGann, Cecilia Wennberg, Rosemary Campbell

Break | 17:00 - 17:15

Keynote Plenary | 17:15 - 18:00

Keynote: Smart and AI-enabled PUB, Ong Tze-Chin, Chief Executive, PUB, Singapore’s National Water Agency
Panel Moderator: Deepa Karthykeyan Panel: Dragan Savic, Mike McGann, Cecilia Wennberg, Rosemary Campbell
### Monday Programme

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<th>Time</th>
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| 09:00 - 09:45 | Keynote Plenary: Resilience in practice: Avoiding planning traps, Paul Brown, President, Paul Rodgers Brown Inc.  
Panel Moderator: Adam Lovell  
Panel: David LaFrance, Nerina Di Lorenzo, Peter Simpson, Sangeeta Chopra |
| 09:45 - 10:30 | Session 1  
**4.7 NATURE BASED SOLUTIONS**  
Chair: Marion Savill, New Zealand  
Co-chair: Nancy Lilly, United States  
Nature-based Solutions: Future Research Needs To Meet The Challenges Of Water Management, Bénédicte Rulleau, France  
Practical Synthetic Osgoodguidance For Decision Makers On Nature-Based Solutions In North America, Jennifer Ogodnick, USA  
Integrated Sustainability Assessment Of Nature-based Solutions For Water Management, Herman H nelleus, Norway  
Evaluation Of Urban Constructed Wetlands Application For Enhanced Ecosystem Services, Lee-Hyung Kim, Republic of Korea  
**POSTERS**  
Documentation Of The Degradation Potential In Rain Gardens, Majbritt Deichgraber Lund, Denmark |
| 10:30 - 12:00 | Coffee Break  
**Lunch**  
12:00 - 13:30  
**Session 2**  
**5.11 THE WORKFORCE OF TOMORROW – SUSTAINABILITY IN ATTRACTION AND RETAINING TALENT**  
Chair: Dr Nerea Uri Carreño  
Co-chair: Melle Karina 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 Ris, USA; Jabouille Mishwama, Estonia; Beverly Sismon, USA; Elena Tor, Canada; Inês Breda, Denmark; Dana Daniela Cristina, Denmark |
| 13:30 - 15:00 | Coffee Break  
**Session 3**  
**4.7 PRACTICAL APPLICATION OF NATURE-BASED SOLUTIONS FOR WATER UTILITIES**  
Chair: Daniel Shemie, USA  
Historically, water utilities rely on grey infrastructure to address their water security challenges. However, this end-of-pipe approach is no longer sufficient to address current challenges, including to manage natural resources sustainably, restore biodiversity, and cope with climate change. 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 Andrea, France; Mara Ramos, Brazil; Paul Hunt, USA |
| 15:30 - 17:00 | Coffee Break  
**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-Related Water Microbiology Specialist Group, the Global Water Pathogen Project (GWPP) and the Austrian Interuniversity Cooperation Centre for Water & Health (ICC Water & Health). The survey is supported by a global support team of experts. The workshop will present the survey outcomes and will invite participants to reflect on the most striking insights offered by the survey. The focus will be on how the field may / should move forward.  
**Speakers:** Regina Sommer, Austria; Roxana Girones, Spain; Katalin Demeter, Austria; Ricardo Santos, Portugal; Kwanawee Sirikanchana, Thailand |
| 17:00 - 17:15 | Break |
| 17:15 - 18:00 | Keynote Plenary: Smart and AI-enabled PUB, Ong Tze-Chin, Chief Executive, PUB, Singapore's National Water Agency  
Panel Moderator: Deepa Karthykeyan Panel: Dragan Savić, Mike McGann, Cecilia Wennberg, Rosemary Campbell |
Monday | Programme

Keynote Plenary 09:00 - 09:45

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<tr>
<td>10:30 — 11:15</td>
<td>REATTS</td>
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<td>Air Turbo &amp; Magnetic Levitation Aeration Blowers Technology, Application and Cost-saving Case Study.</td>
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<td>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. REATTS has implemented over 50 renovated projects and accumulated contrasted data to prove the result. We want to introduce the working principle of magnetic levitation. REATTS will offer the 1-3 project(s) for free trial selected from the attendees.</td>
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<td>10:30 — 11:15</td>
<td>XYLEM, INC.</td>
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<td>Overcoming the Data Deluge</td>
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<td>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 insights 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.</td>
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| 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 savings but also environmentally responsible, making it the ideal choice for those who prioritize sustainability in their purification processes.  |
| 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.  |

| 12:15 — 13:00 | GOVERNMENT OF ONTARIO  |
| Innovating the Future of Water Management  |
|  |
| 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 | BUREAU OF WATERWORKS, TOKYO METROPOLITAN GOVERNMENT  |
| Technology in Tokyo Waterworks and Sewerage Business for future sustainability  |
| The Waterworks and Sewerage Bureau have important lifetime 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.  |
| 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.  |

| 14:15 — 15:00 | QINGDAO COMCORE TECHNOLOGIES CO., LTD.  |
| The Symbolic AI algorithm solution  |
| Symbolic AI 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.  |
| 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 electric-ty used. In our session we will share the per-formance characteristics of our membrane, product availability and our roadmap.  |

| 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.  |
| 15:45 — 16:30 | MS FILTER SYSTEMS INC.  |
| Sustainable high quality treatment for Small Systems  |

| 16:30 — 17:15 | BLACK & VEATCH  |
|  |
| 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.  |
Tuesday, 13 August

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<td>WATER UTILITY MANAGEMENT</td>
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<td>DRINKING WATER AND POTABLE REUSE</td>
<td>CITY-SCALE PLANNING AND OPERATIONS</td>
<td>COMMUNITIES, COMMUNICATION AND PARTNERSHIPS</td>
<td>WATER RESOURCES AND LARGE-SCALE WATER MANAGEMENT</td>
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Tuesday | Programme

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 Greve
Panelists: Ralph Exton, Rasha Maal-Bared, Corinne Cheeseman, Jennifer Mohanty

Coffee Break 09:45 - 10:30

Session 1 10:30 - 12:00

INDUSTRIAL WATER FORUM – SESSION 1

Corporate water strategy: How industry overcomes challenges when investing in water efficiency
Moderator: Jay Stellmach, Grunfos
Keynote Speaker: How industry, utility and research institutes can innovate and collaborate to overcome the Water and energy nexus, Seth Darling, Chief Science & Technology Officer, Argonne National Lab Industry Best Practice
Case story from end-user: CEO Water Mandate Engagement Opportunities, Jason Morrison, President, Pacific Institute; Head, UN Global Compact CEO Water Mandate
Case story from consultancy: Ramboll Best practice trends in Industry with end-user challenges, Patrick J. Campbell and Rene Hoejmakers, Ramboll

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 use and treatment cycle to maximize value for people, nature, and businesses. As the global water sector transitions to support the circular economy, sharing lessons learned, both positive and negative, is imperative. This panel of leaders will feature both aspirational plans and case studies of successes from utilities and industry.

Speakers: Aimee Killeen, USA; John Ikeda, USA

Lunch 12:00 - 13:30

Session 2 13:30 - 15:00

INDUSTRIAL WATER FORUM – SESSION 2

Corporate water strategy: How industry overcomes challenges when investing in water efficiency
Moderator: Walter Kozlowski, Xylem
Regulator: How to manage challenge of PFAS and emerging contaminants, Mohamed Atela Ibrahim, Environmental engineer & Group Leader, USEPA
New information: Data-Driven Cooling Tower Optimisation: A Comprehensive Analysis of Energy Savings using Micros and Filtration, Alain Silverwood, Technical Director, Xylem
Research institute: Resource recovery from high strength wastewaters: expanding the product spectrum for a circular economy, Christopher Lawson, Assistant Professor, University of Toronto

UTILITY LEADERS FORUM – SESSION 1

Utilities working to improve the Circular Economy
Chairs: Helle Katrine Andersen, DANVI; Joe Jacongelo, President, AWWA
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.
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.

Igniting talks: Bernard Coh, Assistant Chief Executive, PUB Singapore; Dines Thornberg, Head of Development, BIOFOS Copenhagen; Lou Gironimo, General Manager, Toronto Water, Canada
Panel discussion with audience facilitated by the Chairs

Coffee Break 15:00 - 15:30

Session 3 15:30 - 17:00

INDUSTRIAL WATER FORUM – SESSION 3

Corporate water strategy: How industry overcomes challenges when 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.
Panelists: Michael Theodoulou, Veolia; Seth Darling, Argonne National Lab; Mohamed Atela Ibrahim, USEPA; Christopher Lawson, University of Toronto and Michael Skovgaard, Grunfos

UTILITY LEADERS FORUM – SESSION 2

Building Water Security and Resilience
Chair: Adam Lovell, ED, Water Services Association of Australia; Jonathan Clement, Chair ULF
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.
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.

Igniting talks: Doeke Schippers, Director CTO Vitens, Netherlands; John Kmiec, Managing Director, Tucson Water, USA; Pat McCafferty, Managing Director, Yarra Valley Water, Australia
Panel discussion with audience facilitated by the Chairs

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, Ratsiral Majuru, Technical Officer; Water, Sanitation, Hygiene and Health Unit, WHO
Panel Moderator: Yvonne Magawa
Panelists: Silvana Romero, Vida Dutti, Marcel Sanches

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## Tuesday Programme

### 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 Greve**

Panelists: **Ralph Erik Exton**, Hampton Roads Sanitation District, USA; **Rasha Maal-Bared**, University of Queensland, Australia; **Corinne Cheeseman**, University of East Anglia, UK

### Coffee Break 09:45 - 10:30

### Session 1 10:30 - 12:00

**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.

**Panel Discussion and Q&A**

- **Filipe Sampaio**, ANA, Brazil
- **Gillian Blythe**, Water New Zealand, New Zealand

### Lunch 12:00 - 13:30

### Session 2 13:30 - 15:00

**INTERNATIONAL WATER REGULATORS FORUM**

**Moderator:** **Batsirai 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.

**Panel Discussion and Q&A**

- **Mara Ramos**, DAAE, Brazil
- **Loga Sunthri Veeraiah**, SPAN, Malaysia

**Coffee Break 15:00 - 15:30

### Session 3 15:30 - 17:00

**INTERNATIONAL WATER REGULATORS FORUM**

**Moderator:** **Robert Bos**, IWA, Switzerland

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**Panel Discussion and Q&A**

- **Yvonne Magawa**, ESASWAS, Zambia
- **Laueseani Santoni**, ANA, Brazil

### 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, **Ratsirial Majuru**, Technical Officer, Water, Sanitation, Hygiene and Health Unit, WHO

Panel Moderator: **Yvonne Magawa**

Panelists: **Silvana Romero**, Vida Dut, Marcel Sanches
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<tr>
<td>09:00 - 09:45</td>
<td><strong>Keynote Plenary</strong>&lt;br&gt;Chair: Prof. Amy Pruden, Virginia Tech, USA&lt;br&gt;Panelists: Peter Greaves, Rasha Maal-Bared, Corinne Cheeseman, Jennifer Molwantwa</td>
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<td>09:45 - 10:30</td>
<td><strong>Coffee Break</strong></td>
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<td>10:30 - 12:00</td>
<td><strong>Session 1</strong>&lt;br&gt;<strong>6.3 WHAT THE WATER INDUSTRY CAN LEARN FROM THE INDIGENOUS PERSPECTIVE</strong>&lt;br&gt;Chair: Liudmyla Odul, Ukraine&lt;br&gt;Co-chair: Titisha Bright-Olani, Nigeria&lt;br&gt;Water is a basic need for different forms of life in all communities. It plays a significant role for economic, environmental and cultural purposes. Differences associated with 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. Indigenous peoples' knowledge and practices are often very different from water management approaches in the modern world, which tend to focus on technical measurements, and water's value as a commodity. A deeper understanding of the value and importance of water is necessary for the water industries to deal adequately with its current challenges in relation to water quality, water quantity, and climate change.&lt;br&gt;Speakers: Dawn Martin-Hill, Canada; Bradley Moggridge, Kamilari, Australia; Dave Archambault, USA; Douglas Atikien, Chile; Leticia Liseth Tituha Picvasi, Ecuador</td>
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<td>12:00 - 13:30</td>
<td><strong>Lunch</strong></td>
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<td>13:30 - 15:00</td>
<td><strong>Session 2</strong>&lt;br&gt;<strong>5.3 WATER IS A HUMAN RIGHT: LABOUR MOVEMENTS ROLE IN ADDRESSING THE INDIGENOUS WATER CRISIS</strong>&lt;br&gt;Chair: Krista Maracle, Canada&lt;br&gt;Co-chair: Paige Malcolm, Canada&lt;br&gt;Identify and understand the Indigenous water crisis in Canada and how it impacts the movement. Will learn ways in which the Labour movement can become a partner in the fight for clean safe drinking water for all.&lt;br&gt;Speakers: OPSEU, Layla Staats, Turtle Island; Chris Koptie, Turtle Island; Jordyn Playne, Métis Nation of Ontario</td>
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<td>15:00 - 17:00</td>
<td><strong>Coffee Break</strong></td>
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<td>17:00 - 17:15</td>
<td><strong>Keynote Plenary</strong>&lt;br&gt;Chair: Carla Pimentel-Rodrigues, Portugal&lt;br&gt;Co-chair: Xose Doe-Bansah, Ghana&lt;br&gt;Growing The Water Industry: Pidpa's Path To Sustainable Drinking Water Provision, David Gyesen, Belgium&lt;br&gt;Be Ambitious - Net-Zero GHG Roadmap For Durham Region’s Water And Wastewater Systems, Emma Shen, Canada&lt;br&gt;Navigating Uncertainty And Circular Economy Drivers In Wastewater Using An Adaptive Pathways Approach, Ryan Brotchie, Canada&lt;br&gt;Establishing A Standard Carbon Balance For Drinking Water Utilities: A Key Initiative In Addressing Water Leaksages, Alexis de Kerhove, Sweden&lt;br&gt;PoSTERS&lt;br&gt;Fugitive Methane Emissions At A Water Resource Recovery Facility: Preliminary Results From A Top-Down/Bottom-Up Field Campaign, Embrey Bronstad, USA&lt;br&gt;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, Raimo Hayakawa, Japan</td>
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<td>17:15 - 18:00</td>
<td><strong>Keynote Plenary</strong>&lt;br&gt;Chair: Helena Algore, Portugal&lt;br&gt;Co-chair: Rowen Xu, Canada&lt;br&gt;Towards Sustainable Wastewater Facilities: Embracing The Cradle To Cradle (C2C) Principle For Wastewater Buildings, Jan Ruppelt, Germany&lt;br&gt;Strategy For Restructuring Water Treatment Plants Against To Coming Aging Society, Hinchhi Yamamura, Japan&lt;br&gt;Carbon Footprint In Water Infrastructure Projects – Where Are The Potential Savings, Methodology For Defining Them And Experience From Implementing Them, Jenny Åström, Sweden&lt;br&gt;Climate Resilient Utility – Low Carbon, High Water Quality Through Modular Off Site Build Of Ceramic Membrane Plants, Clement Pierart, Netherlands&lt;br&gt;PoSTERS&lt;br&gt;Carbon Footprint Reduction Through Advanced Imaging And Wastewater Tank Cleaning, Megan Ross, United States</td>
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<td>18:00 - 19:30</td>
<td><strong>Coffee Break</strong></td>
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<td>19:30 - 21:00</td>
<td><strong>Session 3</strong>&lt;br&gt;<strong>5.9 WASTEWATER SURVEILLANCE TO ENSURE SUSTAINABLE, INCLUSIVE AND EQUAL ACCESS TO PUBLIC HEALTH AND RESOURCE RECOVERY: SMALL PIECES, BIG PICTURE</strong>&lt;br&gt;Chair: Cresten Mansfeldt, USA&lt;br&gt;Co-chair: Rasha Maal-Bared, Canada; Mark Knight, Canada&lt;br&gt;Session Description: The chair will provide opening comments (8 min). Presenters will 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 provided 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 ).&lt;br&gt;Speakers: Miriam Hacker, USA; Carol Martinson, USA; Mark Knight, Canada; Lola Obasade, USA</td>
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<td>21:00 - 21:30</td>
<td><strong>Keynote Plenary</strong>&lt;br&gt;Chair: David Millar, Scotland&lt;br&gt;Co-chair: Ania Escudero, Scotland&lt;br&gt;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 circular 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.&lt;br&gt;Speakers: David Millar, Scotland; Ania Escudero, Scotland</td>
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Tuesday Programme

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 Grevest Panellists: Ralph Erik Exton, Rasha Maal-Bared, Corinne Cheesman, Jennifer Molwantwa

Coffee Break 09:45 - 10:30

Session 1 10:30 - 12:00
2.21 ADVANCED OXIDATION PROCESSES - SESSION 1
Chair: Satinder Kaur Brar, Canada Co-chair: Jacob Amengor, Ghana
Tandem PEC Device With Perovskite And Phosphorene AI The Electrode Materials For Hydrogen Evolution And Cylcone 5 Oxidation From Wastewater, Tzu-Heng Wang, Chinese Taipei
A Novel Chloride And Persulfate Oxidation Pathway: Enhancement Of Urea Oxidation In Ultrapure Water Production, Taegu Park, Republic Of Korea
Unraveling The Reaction Characteristics Of Widespread Organic Pollutants In Micro-polluted Surface Water Based On Pilot UV/H2O2 System From Compound To Molecular Level, Wenjun Sun, China
Green And Risk-free Disinfection Of Real Sewage: Using Magnetically Recyclable TiO2 based Photocatalyst Driven By Solar Energy, Irene Lo, China

Chair: Peter Dene, Netherlands Co-chair: Yang Villa, Philippines
A Natural Solution To A Complex Delta Issue: The Climate Buffer For Ecological And Climate-resilient Drinking Water Provision, Roen Zuurbier, Netherlands
The Effects Of Climate Change: Are The Water Systems Ready?, Shakawat Chowdhury, Saudi Arabia
Papakura Water Treatment Plant: A Phoenix Rises, Chris Aspinall, Australia
Water Use Amidst The Climate Crisis: Challenges In Delivering Basic Sanitation Services - A Case Study Of Rio De Janeiro, Brazil, Nazila Rodrigues Costa Fischer, Brazil

POSTERS
Strategic Planning To Address Climate Change Impacts On Wastewater Infrastructures From Aguas Do Tejo Atlantico, Rita Lourinho, Portugal

Lunch 12:00 - 13:30

Session 2 13:30 - 15:00
2.22 ADVANCED OXIDATION PROCESSES - SESSION 2
Chair: Jiangyong Hu, Singapore Co-chair: Patrick D’Aoust, Canada
Combined Ozonation And Granular Activated Carbon In Pilot Plant Scale For The Removal Of Organic Micropollutants In Municipal Wastewater Treatment Effluent In Germany, Linda Müller, Germany
Ozonation For Micropollutant Treatment: Best Practices And Key Learnings From Switzerland And Europe, Amanda Murillo, Switzerland
Tuning The Selectivity Of Catalytic Ozonation Towards Wastewater Purification By Atomically Dispersed Fe Catalysts, Xiaoqiang Zhang, China
Comparison Of Different Advanced Oxidation Processes For Marine Oily Wastewater Treatment, Guohua Dong, Canada

Chair: Marie Whaley, UK Co-chair: Helle Katrine Andersen, Denmark
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 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 particular related to governance models.
Speakers: Helena Alegre, Portugal; Brian Hansen, Denmark; Kevin Tudhope, Canada; Pat McCafferty, Australia; Matthew Whaley, UK; Ching Tho A/F Kim, Malaysia; Marie Whaley; Helle Katrine Andersen; Adam Lovell; Robin Price; Norhayati Abdullah; Jacob Amengor

Coffee Break 15:00 - 15:30

Session 3 15:30 - 17:00
2.23 ADVANCED OXIDATION PROCESSES - SESSION 3
Chair: Abdellahat Nasser, Israel Co-chair: Xiaoyuan Zhang, China
Sustainable Strategies For PFAS Contamination: Regeneration And Electrochemical Processes For Ion-Exchange Resin Management, Fatemeh Asadi Zeidabadi, Canada
Viral inactivation in UV/H2O2: Advanced Oxidation Treatment: A More Energy Efficient Alternative To UV/H2O2 Treatment, Aleksandra Szczuka, United States
Removal Of PPCPs In Hospital Wastewater Through Advanced Oxidation Processes, Gen-Shuh Wang, Chinese Taipei
Optimisation Of Advanced Oxidation Processes In View Of Micro-pollutant Removal From (waste) Water With Different (natural) Organic Matter Content, Stijn Van Hulle, Belgium

Chair: Satinder Kaur Brar, Canada Co-chair: Harsha Ratnaweera, Norway
The purpose of this session is to empower broader stakeholder groups with knowledge of the climate change impact on the fate of contaminants of emerging concern (CECs) and their complex formation and to discuss innovative strategies for managing CECs in the context of climate change. The participants will share and gain insights into innovative approaches, technologies, and policy considerations related to CEC management. We hope attendees will leave with a renewed commitment to addressing CEC challenges, armed with practical ideas and the inspiration to adapt and apply these solutions in their own contexts including vulnerable communities.
Speakers: Shirley Anne Smyth, ECCC; Charles De Lannoy, Canada; Rama Pulicherla, USA; Hanha Rasuweera, Norway; Satinder Kaur Brar, Canada

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. Ratsirai Majuru, Technical Officer, Water, Sanitation, Hygiene and Health Unit, WHO
Panel Moderator: Yvonne Magawa Panellists: Silvana Romero, Vida Dutra, Marcel Sanchez
Tuesday | Programme

**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 Greerst, Panellists: Ralph Erik Exton, Rasha Maal-Bared, Corinne Cheesman, Jennifer Molwantwa

Coffee Break 09:45 - 10:30

**Session 1** 10:30 - 12:00

1.2 REAL WORLD DIGITAL TWIN APPLICATIONS

Chair: Zheng Yi Wu, United States Co-chair: Leo Huan
Creating Value With Digital Twins: Case Studies And Real World Examples, Diana Tao, Canada
Evergreen Digital Twin As Paradigm Shift For Smart Water Grid Operational Management, Zheng Wu, United States
Flexible Digital Twin Platform Supporting Water Utility Digital Transformation -- Zhangjiagang As Case Study, Michael Yu, Canada
An Online Receiving Environment Digital Twin Supporting Whole Of Catchment Planning In Brisbane, Australia, Mein Hulban, Canada

POSTERS
A Building Information Modelling (BIM) And Common Data Environment (CDE) Pilot For Toronto Water Capital Projects And Asset Management, Alonzo Hurtado, Canada

1.8 INNOVATIONS IN POLLUTANT MANAGEMENT

Chair: Michael Storey, Australia Co-chair: Isih Keenum, United States
Characterization Of Snow Deposits And Development Of Passive Methods Of Meltwater Desalination, Rachida Hamidou, Canada
Assessment Of Hydrodynamic Separators As Stormwater Treatment Option, Moritz Gesterding, Germany
Use Of Atmospheric Dissolved Air Flotation (DAF) In Removal Of Surfactants, Elnaz Zehht Loffi, Iran
GAC Reactors Optimization For Micropollutants Removal In Wastewater Reuse, Mathieu DELAHAYE, France

POSTERS
Demonstration Plant For Past-treatment Options For Ozonation In Tertiary Municipal Wastewater Treatment, Regina Gnriss, Germany
Purification Of Phenolic Compounds From Segmenter Mandarin Wastewater By Ultrafiltration And Nanofiltration, Pablo Alonso Vazquez, Spain

Lunch 12:00 - 13:30

**Session 2** 13:30 - 15:00

1.1 HOW TO GO DIGITAL AS A WATER UTILITY - SESSION 1

Chair: Dragan Savic, Netherlands Co-chair: Ricardo Ferreira, Portugal
Louisville MSD’s Data Driven Digital Transformation Journey Over 20 Years, Diana Tao, Canada
Radar Data Applied – Optimizing Decision-making In Planning, Operations And Customer Service In Aalborg Utility, Katrine Møller, Denmark
Center – A Human-centric Data Management Platform For The Water Sector, Ingemar Clementson, Sweden
Valuing Data – Adopting Transformative Digital Solutions For The Water Sector, Janelcy Alferes, Belgium

POSTERS
Mechanistic And Data driven Models: From Confusion To Synergies And Opportunities, Audeeinc Wim, Belgium
Seven Steps Towards Digitalizing Sludge Management, Puja Doshi, Germany

1.20 SEWER OVERFLOW MANAGEMENT

Chair: Jo Burgess, South Africa Co-chair: Will Dubin, Canada
Designing An Effective Stormwater Treatment System: A Case Study In South East Queensland Using PCSWMM And MUSIC Tools, Xiul Meng, Australia
Managing Smart For The Future: How Toronto Water Is Reducing CSOs With Phased Implementation Through Digital And Automation Technology, Jane Zou, Canada
Prediction Of Combined Sewer Overflows Using A Data Driven Solution And Machine Learning Approach, Reza Pourmoayyed, Denmark
Willow Trunk Feasibility Assessment And Design – A Watershed-wide Solution For CSO Reduction With The Use Of InfoWorks ICM Modelling, Angela Steward, Canada

POSTERS
Psysewer: A Simple Tool For Sewer Network Generation In Data-scarce Regions, Danish Despot, 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 COLLECTION AND ORGANIZATION: WHAT, WHEN, AND WHY?

Chair: Kris Villez, USA Co-chair: Emily Zegers, Canada
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.

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

1.20 TORONTO SPONGE CITY WORKSHOP

Chair: Charles Ormsby, Canada Co-chair: Anishia Patel, Canada
This session will build on the successful format we adopted at a similar charrette during COP25 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, Belgium

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. Ratsirai Majuru, Technical Officer, Water, Sanitation, Hygiene and Health Unit, WHO
Panel Moderator: Yvonne Magawa, Panellists: Silvana Romero, Vida Dutti, Marcel Sanches

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### Tuesday Programme

#### 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 Greve
Panellists: Ralph Erik Exton, Rasha Maal-Bared, Corinne Cheeseman, Jennifer Molwantwa

#### Coffee Break 09:45 - 10:30

#### Session 1 10:30 - 12:00

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<td>Continuous Filtration For The Removal Of Micropollutants By Biologically Granular Activated Carbon (Bio-GAC)</td>
<td>Borisio Denti, Belgium</td>
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<td>Evaluation Of WWTP Impact On A Recipient Regarding Emerging Contaminants And The Motivation For Advanced Treatment To Achieve EQS</td>
<td>Aleksandra Lazic, Sweden</td>
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<td>Application Of Granulated Mineral-based Materials To Remove Organic Contamination From Wastewater</td>
<td>Agnieszka Sellinska, Poland</td>
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<td>Removal Of Contaminants Of Emerging Concern-CECs- Using an Environmental-friend Approach</td>
<td>Sara Cunha, Portugal</td>
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<td>Nanofiltration Removes Organic Micropollutants And Enhances Biostability Of Drinking Water Produced From Surface Water</td>
<td>Rinki Schuster, Netherlands</td>
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<td>Accelerating UV Advanced Oxidation Using 222 Nm KrCl* Excimer Lamps</td>
<td>Karl Linden, USA</td>
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<td>Ozone And Biologically Activated Filter For Potable Water Reuse Treatment: Design, Performance &amp; Case Studies</td>
<td>Adriano Vieira, United States</td>
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<td>Advancements In Achieving Disinfection-free Drinking Water Treatment Plants: A Case Study From Pidpa, Belgium</td>
<td>Koen Joris, Belgium</td>
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#### Lunch 12:00 - 13:30

#### Session 2 13:30 - 15:00

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<td>Quantification Of Carbon Emissions In Reverse Osmosis And Carbon-Based Potable Reuse Treatment Configurations</td>
<td>Brett Wagner, USA</td>
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<td>Social Perceptions And Legitimacy Of Potable Water Reuse</td>
<td>Heather Smith, UK</td>
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<td>How A Partnership Between Physicians And Utilities To Promote Potable Water Reuse In Silicon Valley Launched A National Initiative</td>
<td>Eric Rosenblum, USA</td>
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<td>Adoption Of Nature-Based Solutions For Sewage Treatment: Quantifying Environmental Benefits From A Life-cycle Perspective</td>
<td>Sheetto Lokhande, India</td>
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#### Coffee Break 15:00 - 15:30

#### Session 3 15:30 - 17:00

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<td>Interplay Of Nitrification, Temperature, And Chloramine Decay Affect Opportunistic Pathogen Growth In Premise Plumbing, Darel Sneed, USA</td>
<td>Josep Lahnsteiner, Austria</td>
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<td>Legionella Pneumohina: Hidden In Plain Water, Atreisha Singh, South Africa</td>
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<td>Knowledge Gaps To Predict Legionella Within Building Water Systems, Catarina Ortiz, Canada</td>
<td>Ciprian Mihai, Canada</td>
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<td>Novel Control Of Legionella Pneumohina In Premise Plumbing Through Probiotics And Nutrient Limitation, Madeleine Deck, USA</td>
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<td>Insulation As An Economical And Effective Means Of Limiting Legionella Growth In Water Heaters, Fernando Roman Jr, United States</td>
<td>Ciprian Mihai, USA</td>
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<td>Drinking Water And Meeting Canada’s Housing Shortage, Aaron Atcheson, Canada</td>
<td>Ciprian Mihai, USA</td>
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#### Break

#### Keynote Plenary 17:00 - 17:15

**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: Yvonne Magawa
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Panel Moderator: **Peter Greve**  
Panelists: Ralph Erik Exton, Rasha Maal-Bared, Corinne Cheeseman, Jennifer Molwantwa

#### Coffee Break 09:45 - 10:30

#### Session 1 10:30 - 12:00

**3.14 EMERGING CONTAMINANTS/PATHOGENS AND ANTIBIOTIC RESISTANT BACTERIA/RESISTANCE GENES**

**Chair:** Nareesh Singhal, New Zealand  
**Co-chair:** Sudipti Arora, India  

- Unveiling E. Coli: A Looming Crisis of Resistance, Zakriah 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 Liu, Australia  
- Stream Contamination With Emerging Pathogens And Antibiotic Resistance From Point And Non-point Pollution Sources, Abdalnasser Nasser, Israel  

**POSTERS**

- South Africa’s Recreational Waterscape: Analysing The Potential Risks And Impact On Public Health In The Gauteng Province, Zakriah Delair, South Africa  
- Characterization of Antibiotic Resistance Genes in Drinking Water Sources of the Douhe River, Tangshan, Northern China: The Correlation with Bacterial Communities and Environmental Factors, Sheng Chang, China

#### Lunch 12:00 - 13:30

#### Session 2 13:30 - 15:00

**2.12 MICROBIAL ECOLOGY**

**Chair:** Adrian Oehmen, Australia  
**Co-chair:** Gaurav Bhardwaj, Canada  

- The Structure and Composition of Ozone-Dosed Biofilm Revealed By Multi-omics, Gang Liu, China  
- Characterizing Microbial Communities Across Ozone-Biofiltration Operations, Kara Cunningham, United States  
- Pathogen Potential Exposure By Determining Microbial Ecology In An Amazonian Indigenous Tribe’s Drinking Water, Caroline Reed, United States  
- Interrogating The Effects Of Operating Conditions On Microbial Community Structure And Function Related To Simultaneous Nitrogen And Phosphorus Removal From Wastewater, Catherine Hoar, United States  

**POSTERS**

- Identification And Environmental Behavior Of Bacteria-Associated Enteric Viruses In Wastewater, Kloom Kung, USA

#### Coffee Break 15:00 - 15:30

#### Session 3 15:30 - 17:00

**6.10 CIRCULAR ECONOMY INITIATIVES AND APPROACHES**

**Chair:** Ka Leung Lam, China  
**Co-chair:** Alonso Hurtado, Canada  

- Addressing Circularity Assessment Boundary Challenges Through A Novel Classification Of Wastewater Resources, David Renfew, UK  
- Assessing Indicators Of Circularity Of Wastewater Treatment Systems, Caroline Sambenger, UK  
- Activated Carbon From Hydrothermal Carbonization And Chemical Activation Of Corn Fiber And Its Performance In Contaminant Adsorption Using Rapid Small-Scale Column Testing, Mitchell Ubene, Canada  
- Hydrogen Economy Based Treatment Of Manufactured Water, Arash Zamyadi, Australia  

**POSTERS**

- Global Sanitation Transformation: Bridging Circular Economy And Climate Resilience, Sumeet Pawar, Netherlands  
- Urban Water Consumption – Prioritizing Reduce Strategy From Circular Economy Framework, Nikita Kakwani, India

#### 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. **Ratna Majuru**, Technical Officer, Water, Sanitation, Hygiene and Health Unit, WHO  
Panel Moderator: **Yvonne Magawa**  
Panelists: Silvana Romero, Vida Dutti, Marcel Sánchez
Tuesday | Programme

**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 Greve; Panellists: Ralph Eric Extón, Rasha Maal-Bared, Corinne Cheeseman, Jennifer Molwantwa

**Coffee Break | 09:45 - 10:30**

**Session 1 | 10:30 - 12:00**

**2.38 DECENTRALISED TREATMENT AND NON-SEWERED SANITATION FACILITIES**

Chair: Pedro Carvalho, Denmark Co-chair: Abishek Sankara Narayan, Switzerland

- Realizing The Beneficial Integration Of Upstream Non-sewered Sanitation (NESS) Implementation On Downstream Sewered Wastewater Treatment Through A Process Modeling Approach, Kirtik Chandran, United States
- Seasonal Performance Dynamics For Subsurface Treatment Wetlands In Cold Climates, Erik Groenenberg, Canada
- Greenhouse Gas Emissions And Climate Adaptation Of Non-Sewer Sanitation: A Case Study Of Solar Septic Tank And Conventional Septic Tank, Tatchai Pussayavath, Thailand
- Advanced Insights Into Biodegradation And Greenhouse Gas Dynamics In Non-Sewered Sanitation Systems, Caetano Dorea, Canada

**POSTERS**

- Investigating Greenhouse Gases (GHGs) Emissions From Non-sewered Sanitation Systems And Climate Change Mitigation In Ghana, India, Shirth Singh, Netherlands
- An Urgent Call For Using Real Human Urine In Research On Developing Decentralised Sanitation Technologies, Caitlin Courtney, Sweden

**Lunch | 12:00 - 13:30**

**Session 2 | 13:30 - 15:00**

**5.5 WAS WASH AND COMMUNITY-SCALE WATER MANAGEMENT - SESSION 1**

Chair: Lina Taing, Canada Co-chair: Matthew MacKorlie, United Kingdom

- Community Resilience In The Face Of Climate Challenges: A Study Of Water Resource Diversification In Indonesia’s Flood-Prone Urban Informal Settlements, Wika Maulany Fatimah, Netherlands
- Stakeholder Perceptions On Best Available Technologies For Decentralised Wastewater Management In India, Markus Starkl, Austria
- From Insight To Impact: A Ground-Up Approach For Strengthening Decentralized Water Technology Adoption And Regulation, Nitish Ranjan Sarker, Canada
- Application Of The Behaviour Change Communication Adoption Staircases To Influence Knowledge, Attitude And Practices (KAP) Towards WASH In Two Local Government Areas In Nigerian States, Jane Adiaze, Nigeria

**POSTERS**

- Perceptions And Awareness Of Climate Change Impacts On Water Resources In A Rural Community In Limpopo, South Africa, Lee-Anne Mudiny, South Africa
- Our Water, Together (Documentary Film), Karl Zimmermann, Canada

**Coffee Break | 15:00 - 15:30**

**Session 3 | 15:30 - 17:00**

**5.7 WAS WASH AND COMMUNITY-SCALE WATER MANAGEMENT - SESSION 2**

Chair: Abdul Majeed Osman, Ghana Co-chair: Ananya Mohanty, Canada

- Community ARP For Combating Arsenic Contamination In Remote Rural Char Areas Of Bangladesh, Md Azizur Rahman, Bangladesh
- Easing Access To Safe Water With Nature-based Solution In Hard-to-reach Areas Of Bangladesh, Md Tahmidul Islam, Bangladesh
- 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
- Tools For Water Partnerships: Lessons For Community-led Water Management, Karl Zimmermann, Canada

**POSTERS**

- Sustainable Achievement In WASH Implementations In Lunugala Division Of Sri Lanka Through Context Specific Sustainable Community Approach, Sothan Kumara, Sri Lanka
- Improvement Of The Quality Of Water Used In The Pulping Of Açaí (Euterpe Oleracea) In The Municipality Of Mazagão-AP, Brazil, Alba Lemos, Brazil

**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, Ratsirai Majuru, Technical Officer, Water, Sanitation, Hygiene and Health Unit, WHO

Panel Moderator: Yvonne Magawa; Panellists: Silvana Romero, Vida Dutí, Marcel Sanches

**Keynote Plenary | 18:00 - 18:45**

Keynote: How Can Laurentian Great Lakes Youth-Inclusive Watershed Governance Improve Collaboration?<br>**Chair:** Laina Timber, Canada<br>Co-chair: Lauren Lawson, Canada<br>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 driven work accessible by workshop attendees within the NAYPW’s Young Professionals program. The NAYPW Young Professionals program focuses on transboundary basins to provide recommendations for nations from a youth and young professional perspective that will promote water as an opportunity for enhancing peace globally.

*Speakers: Laina Timber, Canada; Lauren Lawson, Canada*

**Break | 18:45 - 19:00**

**Keynote Plenary | 19:00 - 20:00**

Keynote: How Can Laurentian Great Lakes Youth-Inclusive Watershed Governance Improve Collaboration?**

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 driven work accessible by workshop attendees within the NAYPW’s Young Professionals program. The NAYPW Young Professionals program focuses on transboundary basins to provide recommendations for nations from a youth and young professional perspective that will promote water as an opportunity for enhancing peace globally.

*Speakers: Laina Timber, Canada; Lauren Lawson, Canada*
Tuesday | Programme

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 Greve
Panellists: Ralph Erik Exton, Rasha Maal-Bared, Corinne Cheeseman, Jennifer Molwantwa

Coffee Break  | 09:45 - 10:00

Session 1  | 10:30 - 12:00
2.4 GREENHOUSE GAS EMISSIONS AND MITIGATION
Chair: Yongmei Li, China Co-chair: Frances Okoye
Reducing CO₂ Emissions By Catalytic Treatment Of NO₂, Jeanette Madsen, Denmark
Enhanced Nitrogen Removal And Mitigated N₂O Emission By Algal-Bacterial Consortium, Lai Peng, China
N₂O Control – Complete Control And Documented Effect, Mikkel Stokholm-Bjerregaard, Denmark
Basic Study On Operation Planning System Towards Carbon Neutrality Of A Sewage Treatment Plant, Toshiki Fukushima, Japan
POSTERS
Unveiling N₂O Emissions In A Pilot Hybrid Membrane-Aerated Biofilm Reactor (MABR) System, Ziping Wu, Australia
Next-generation Technology - In-situ Reuse Of Dissolved Methane To Support Nitrogen Removal In Anaerobically Treated Mainstream Wastewater, Nianhua Guo, Australia

3.4 RESPONSE TO FLOOD AND SEA LEVEL RISE
Chair: John Riddiford, Australia Co-chair: Marina Macedo, Brazil
IEA - Operational Platform For Forecasting And Decision Support For Undue Coastal Occurrences, Nuno Pimentel, Portugal
The Advantage Of 2D Modelling Downtown Toronto To Alleviate Basement And Surface Flooding, Philip Gray, Canada
Modelling Of Flood Protection Facilities On A Highly Urbanised Area In São Paulo Metropolitan Region – Brazil, Debora Santos, Brazil
Planning For Sea Level Rise - Understanding Of Future Challenges, Deystein Rapp, Norway
POSTERS
Multiple Overland Flow Paths To Enhance 1 D-1D Flooding Modelling Of Compound Road Corridor, Julian Li, Canada
Critical Analysis To Evaluate Uncertainty Of The Regional Scale Key Climate Data Depending On Bias And Strategic Location Of The Meteorological Stations, Md Monirul Islam, Canada

Lunch  | 12:00 - 13:30

Session 2  | 13:30 - 15:00
2.27 FOOD WASTE BIOSOLIDS MANAGEMENT & REUSE - SESSION 1
Chair: Kwok-Wai Tsang, United States Co-chair: Andrea Curranza, Sweden
Halton Region’s Journey To Develop The First Biosolids Composting Program In Ontario, Jared Philipott, Canada
Potential For Co-disposal And Treatment Of Food Waste With Wastewater: A Case Study For South Africa, Shalongo Angula, South Africa
Dewaterability Enhanced For Anaerobically Digested Food Waste Through Fe(II)-activated Peroxulfate Oxidation In Filter-press System, Su Jin Lee, Republic Of Korea
Aerobic Granular Sludge For Sustainability, Paula Dorn, United States
POSTERS
Improving Dewaterability Of Digested Food Waste Sludge By Microwave-activated Peroxulfate Oxidation, Su Jin Lee, Republic Of Korea
A Comprehensive Evaluation Of Chemical Conditioning For Anaerobic Digestate Post-Treatment, Umme Sharmeen Hyder, Canada

4.8 WATER SENSITIVE URBAN DESIGN
Chair: Florian Kretschmer, Austria Co-chair: Mendy Shozi, South Africa
Smart Blue Roof Implementation Project, James Cowan, Canada
Co-designing Water-sensitive Suburbs Through Blue-green Infrastructure Planning By Research, Municipality, And Housing Association Partners, Jan Fiesen, Germany
Creating A Water Sensitive City Strategy For Fishermans Bend Urban Renewal Area In Melbourne, Australia, Ryan Brotchie, Canada
Development Of Agro-Industrial Biofilters For Urban Stormwater Runoff Reduction And Diffuse Pollution Mitigation, Lee-Hyung Kim, Philippines
POSTERS
Understanding Adoption And Performance Of Rainwater Harvesting Systems Using Sensors: A Pilot Study, Eren Rudy, Canada
Generation Of Planning Scenarios For Stormwater Management In European Cities, Mario Chiara Lippera, Germany

Coffee Break  | 15:00 - 15:30

Session 3  | 15:30 - 17:00
2.32 PHARMACEUTICALS IN WASTEWATER
Chair: Amy Prudens, United States Co-chair: Koji Matsunaga, Japan
An Innovative And Energy-efficient Radio Frequency Pretreatment For Anaerobic Sludge Digestion To Boost The Removal Of Antimicrobials, Golce Kor Bicakci, Turkey
Designing Tools To Optimize Community-based Wastewater Remediation Of Pharmaceutical Contaminants, Vanessa Maybruck, United States
Cobalt-magnetite Pine Bark Biomonomocomposites For Antibiotic Degradation By Activating Peracetylated Peroxynitrite Acid In Aqueous Solution, Tiina Leiviskä, Finland
The Interaction Between Disposable Face Masks And Polybrominated Diphenyl Ethers, Xing Song, China

4.4 ADVANCES IN RAINFALL AND STORMWATER MANAGEMENT
Chair: Chia Lucia Tregnago, Italy Co-chair: Chiara Lucia Tregnago, Italy
Splitting Rainfall For Sewer Modelling, An Innovative Method Solving Problems Out Of Box, U Julian, Canada
Runoff Of Stormwater Runoff Estimates From Opportunistic Flow Measurements And Weather Radar, Janne Mouekke Nielsen, Denmark
Revolutionizing Control Systems: Unleashing The Power Of Real-time Adaptive Control (RTAC) In Stormwater Management, Kalli Merk, Australia
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 Osko, Canada
Source Water Protection In Quebec City: Using An Integrated 3D Hydrological Model To Investigate Groundwater Pathways And Travel Times, Benjamin Fret, Canada

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, Ratsirial Majuru, Technical Officer, Water, Sanitation, Hygiene and Health Unit, WHO
Panel Moderator: Yvonne Magawa Panellists: Silvana Romero, Vida Duti, Marcel Sanches
Tuesday | Programme

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 Grevitt Panellists: Ralph Erik Exton, Rasha Maal-Bared, Corinne Cheeseman, Jennifer Molwantwa

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
Chair: Lee-Ann Modley, South Africa
Co-chair: Ines Breda, Denmark; Jacob Amenorg, Ghana
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 Cervantos, Mexico; Dr Jennifer Balatedi Molwantwa, South Africa; Rechukwu Okuzu, Nigeria

4.4 WATER SECURITY FOR FUTURE GENERATIONS
Chair: Jan Hofman, UK
Co-chair: Bianza Antizar, UK
In this session we will develop a World Café with different round tables discussing different aspects of Water Security: 1 Water Security at different scales 2 The use of assessment frameworks for water security 3 Water security and equality and inclusivity 4 The influence of the energy transition on water security 5 Water security and economic development 6 Water security and innovation 7 Water governance. Capacity building across generations The outcome of these tables will be summarized in a policy brief containing a roadmap for achieving Water Security.
Speakers: Chad Staddon, UK; Juliana Marçal, UK/Brazil; Berta Machave, World Bank; Alex Godoy, Chile; Yang Villa, Philippines; Oria Romano, France; Inês Breda, Denmark

Lunch  12:00 - 13:30

Session 2  13:30 - 15:00
3.3 UV LIGHT: PROTECTING PUBLIC HEALTH AROUND THE WORLD
Chair: Karl Linden, USA
Co-chair: Todd Elliott, USA; Natalie Hull, USA; Phyllis Posy, Israel
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.
Speakers: Karl Linden, USA; Todd Elliott, USA; Erin Mackey, USA; Roberta Hofman, Netherlands; Hadas Mamane, Israel; Natalie Hull, USA; Phyllis Posy, Israel; Karlye Wong, Canada; Candise Bernardy, USA; Ted Miao, IUVA.

Coffee Break  15:00 - 15:30

Session 3  15:30 - 17:00
5.8 REDESIGNING MENTORSHIP FOR CROSS-GENERATIONAL (ICROSSGEN) 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 cross-gen 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 units.
Speakers: Chelsea Hayward, Australia; Mr Yang Villa, Philippines; Tom Mollenkopf OR Kata Vairavamoorthy, IWA; Dr. Andre Taylor, Australia; Dr. Sudipti Arora, India; Utrike Kelm, France

3.4 POSITIONING WATER SCARCITY AT CENTRE OF CLIMATE CHANGE
Chair: Christian Juul, Denmark
Co-chair: Rechukwu 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; Mireiam Hacker, USA; Cresten Mansfeldt, USA; Alex Chik, Canada; Rasha Maal-Bared, Canada; Scott Beslje, 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. Ratsirai Majuru, Technical Officer, Water, Sanitation, Hygiene and Health Unit, WHO
Panel Moderator: Yvonne Magawa Panelists: Silvana Romero, Vida Dutti, Marcel Sanches
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 Mission Foundation-commissioned feasibility study, this session will dive into the opportunities and challenges for PPPs. The session will concentrate on strategies for constructing partnerships to ensure sustained impact and advance the water access agenda, while acknowledging the risks associated with small-town water systems.

Tuesday | Programme

**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 Mission Foundation-commissioned feasibility study, this session will dive into the opportunities and challenges for PPPs. The session will concentrate on strategies for constructing partnerships to ensure sustained impact and advance the water access agenda, while acknowledging the risks associated with small-town water systems.

Anita 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 using cutting-edge technologies, 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 ever-changing patterns of our climate, and how as an industry leader in water management, we’re committed to helping prevent floods, recharge 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 magic drop structure insert that dissipates energy and suppresses odors Discover the innovative Vortex Flow, a drop structure design intended to revolutionize sanitary and storm drop systems. This cutting-edge solution dissipates energy efficiently and suppresses odors in sanitary drop structures, all without any moving parts or maintenance requirements. Our Sales Engineer, Alex Sandovski, will be presenting this groundbreaking 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 Stratech, 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 future water challenges Government of the Netherlands Vision from the Netherlands: Water van der Schoor, Sr. Sales Consultant Aquatech Global Events; Melissa Lubit B.Sc., CET, Director Business Development North America; Melissa Lubit B.Sc., CET, Director Business Development North America; Melke van Ginniken

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 is leading the low-carbon and green energy revolution with innovation and practice. As an emission peak & carbon neutrality leader in wastewater treatment industry, BDS will achieve carbon neutrality ahead of schedule. In June 2023, To clarify the timetable and pathway of carbon neutrality, BDS released the “Beijing Drainage Group Carbon Neutrality Plan”, which is the first enterprise-level carbon neutrality report in China’s wastewater treatment industry.

17:15 — 18:00

**BUSINESS FORUM ROOM 2**

10:30 — 11:15 | ITRON

Enhancing Water Utility Data Management with TetraNet Water 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.

Shiela 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), REE, and Cogemex-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 (CEO) REE; Martin Crawford, Global Client Partner Water & Tetrapyke; Simon Apilay, 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 planners.

Thomas Brown, ETA-Danemark / VerifiGlobal; Michael Learning, CSA Group, Environment & Business Excellence Selection of other two panellists to be confirmed John Neate, VerifiGlobal (Moderator) Co-Managing Director, VerifiGlobal, Canada

13:30 — 14:15 | STELIS ENVIRONMENTAL SOLUTIONS

Revolutionizing Water Safety: Introducing ColMinder for Rapid Pathogen Detection Dr. Soad Asim, 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 Valorization: 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 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 radio systems like LoRa, eMTC, or NB-IoT are enabling wireless 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, looking forward to have 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
Wednesday, 14 August

Track 1
WATER UTILITY MANAGEMENT

Track 2
WASTEWATER TREATMENT AND RESOURCE RECOVERY

Track 3
DRINKING WATER AND POTABLE REUSE

Track 4
CITY-SCALE PLANNING AND OPERATIONS

Track 5
COMMUNITIES, COMMUNICATION AND PARTNERSHIPS

Track 6
WATER RESOURCES AND LARGE-SCALE WATER MANAGEMENT
### Wednesday | Programme

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**Keynote Plenary 09:00 - 09:45**

- **Keynote:** Financing water solutions for climate resilience, Sanj 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**

**EMERGING WATER LEADERS FORUM – SESSION 1**

The 6th Emerging Water Leaders Forum (EWLF) will emphasise the 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.

Opening, Welcome, Chapter of the Year, Chapter Updates & Keynote

- **Keynote:** Stakeholders Evaluating AI and Data: Pros and Cons from a Young Professional’s Perspective, Dongjian Xu, Lead discussion: Integrating Data and AI in the Water Sector: Identifying Disruptions and Innovations, ANA, Brazil

**Lead Discussion:** Preparing for the Digital Age: Essential Skills and Experiences

- Panel Discussion: Jackie Fortin Flefil, Is digitalisation creating career opportunities for YWP? if so, how?

**Coffee Break 10:30 - 10:35**

**Session 2 13:30 - 15:00**

**EMERGING WATER LEADERS FORUM – SESSION 2**

The 6th Emerging Water Leaders Forum (EWLF) will emphasise the 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.

**Utility Breakthroughs on Climate Adaptation**

- Chair: Simon Parsons, Director of Environment, Scottish Water; Peter Nicol, Canada

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.

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.

**Igniting talks:** Alex Plant, CEO, Scottish Water; Imran Hashemi, President & CEO, Ontario Clean Water Agency, Canada; Debashree Mukherjee IAS, Secretary of the Ministry of Jal Shakti (Water), India

Panel discussion with audience facilitated by the Chairs

**Break 15:00 - 15:20**

**Session 3 15:30 - 17:00**

**EMERGING WATER LEADERS FORUM – SESSION 3**

The 6th Emerging Water Leaders Forum (EWLF) will emphasise the 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.

**Utility Leaders Forum – Session 4**

- Chair: Jonathan Clement, Chair ULF
- Co-chair: Nancy Kodousek

**Short Reactions:** Sangpeta Chopra, Director of Innovations, Process Optimization and Technical Services, GCHA Canada; Jennifer Cruzy, Director, Project Management Office, Metro Vancouver, Canada; Vicki Campbell, Director, Water Treatment Plants, EPCOR Canada; Tom Mollenkopf, Chairman, Gippsland Water, Australia; Nerina di Lorenzo, Managing Director, Melbourne Water, Australia; Daniel Ducknick, General Manager, Waukeisha Water Utility, USA; Rob van Dongen, Managing Director, Bradport Water, Netherlands; Chris Rockey, Head of Water Quality, Southwest Water, England

Break 17:00 - 17:15

Keynote Plenary 17:15 - 18:00

- **Keynote:** Youth, technology and water, Farookh Kakar, Environmental Engineer, Brown and Caldwell Consultants
- Panel Moderator: Astrid Nørgaard Friis Panelists: Marina Jimenez Galindo, Abishek Narayan, Sabrina Rashid Sheonty, Saba Daneshgar
### Keynote Plenary | 09:00 - 09:45

**Keynote:** Financing water solutions for climate resilience, Soroj 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  

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<th>Session 1</th>
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<tr>
<td><strong>50.7. GOVERNANCE MODELS ADDRESSING INDIGENOUS COMMUNITIES’ NEEDS FOR SUSTAINABLE AND AFFORDABLE WATER SUPPLY AND SANITATION SERVICES – SESSION 1</strong></td>
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<td><strong>Co-chair:</strong> Robert Bos, Switzerland; Marion Savill, New Zealand</td>
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| 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 possess 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 |

| Lunch | 12:00 - 13:30 |

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<tr>
<th>Session 2</th>
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<tr>
<td><strong>1.3 DIGITAL LEAK DETECTION</strong></td>
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<td><strong>Chair:</strong> Adesola Adedugbe, Nigeria</td>
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| 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 Arsenio, Portugal  
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, Kristian Mark Ball, Denmark |

| Coffee Break | 15:00 - 15:30 |

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<tr>
<td><strong>2.19 MEMBRANE APPLICATIONS IN WASTEWATER MANAGEMENT - SESSION 1</strong></td>
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<td><strong>Chair:</strong> Glen Daigger, United States</td>
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| Boosting Water Efficiency Of Reverse Osmosis Desalination Using A Smart Brine Controller, Lorenzo Villacorta, Denmark  
Visible Light Guided Cleaning Of Membranes To Mitigate Fouling In Water And Wastewater Treatment, Pritam Das, UK  
Understanding Rejection Mechanisms Of Trace Organic Contaminants By Polyamide Membranes Via Data-Knowledge Co-Driven Machine Learning, Ruobin Dai, China  
3D Printed Membranes For Water And Wastewater Treatment, Cejna Anna Quist-Jensen, Denmark |

| POSTERS |
| Direct Membrane Filtration Of Municipal Wastewater Assisted By A Tannin-based Coagulant For An Energy-efficient Water Resource Recovery Facility, Eduordo Subtil, Brazil |

| Coffee Break | 17:00 - 17:15 |

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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

6.8 WATER RESOURCES MANAGEMENT TOWARDS SUSTAINABLE DEVELOPMENT GOALS (SDG): WATER SAVING, REUSE AND ALTERNATIVE SOURCES
Chair: Jenny Aström, Sweden
Improving Sustainable And Resilient Coastal Cities By Integrating Seawater Into Urban Systems, Zhi Zhang, Hong Kong, China
Making Water Reuse A Reality: Strategies For Forging Utility Partnerships, San Francisco Bay Area (California) Utilities Collaborate To Reuse Water, Eric Rosenblum, USA
Sponge Cities: A New Strategy In Water Resources Management, Hassan Radmand, Iran
Spatial-temporal Analysis Of Human Access To Green And Blue Infrastructure In Two Metropolises South Of The Equator, Deivid Rosa, Brazil
POSTERS
The Management Of Urban Storm Water At Block-level (MUST-B): A New Approach For Potential Analysis Of Decentralized Storm Water Management Systems, Ganbaata Khurelbaatar, Germany
Advanced Recovery And Reuse Of Beverage Facility Wastewater, Craig Duvall, Canada
Germany

Lunch 12:00 - 13:30

Session 2

5.5 CLIMATE CHANGE IMPACTS ON WATER SOURCES AND WATER INFRASTRUCTURE IN ARCTIC COMMUNITIES
Chair: Dr Stephanie Gora, Canada
Co-chair: Stephanie Guillerme, Canada
The workshop will bring together water researchers, water professionals, and Northerners from different Arctic regions with different skills and experiences related to drinking water in Arctic communities to learn about current practices in different regions, the known and likely future impacts of climate change on water management in Arctic communities, and how different stakeholders can contribute to the development of technical and policy solutions to these challenges that are inclusive, effective, and sustainable over time.
Speakers: Chris Marvin, Canada; Bing Chen, Canada; Caroline Duncan, Canada

Coffee Break 15:00 - 15:30

Session 3

5.7 SOLVING CALIFORNIA’S WATER CRISIS: BOLD SOLUTIONS TRANSFORMING WATER MANAGEMENT
Chair: Craig Miller, USA
Co-chair: Heather Dyer, USA
California hydrologic conditions have shifted, transitioning from severe drought to historic flooding—climate change is here. This workshop addresses the state’s pressing challenges, including water scarcity, climate change, diverse needs, and population growth. It assesses California’s readiness for a future marked by water abundance. Water is fundamentally a shared, statewide resource requiring strategic thinking and partnerships, yet in California, it’s marked by decades-long battles—north vs. south, inland vs. coastal, and agriculture vs. urban vs. environmental interests.
Speakers: Deven Upadhyay, USA; Heather Dyer, USA; Craig Miller; Eddie Ocampo, USA; Jason Phillips, USA

Break 17:00 - 17:15

Keynote Plenary 17:15 - 18:00

Keynote: Youth, technology and water, Farokh Kakar, Environmental Engineer, Brown and Caldwell Consultants
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Wednesday | Programme

Keynote Plenary | 09:00 - 09:45

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Coffee Break | 09:45 - 10:30

Session 1 | 10:30 - 12:00

1.19 EXPERIENCE OF PIPELINE ASSET MANAGEMENT
Chair: Joe Dalton, Ireland
The Multiple Benefits Of Asset Management For Pipelines – Global Case Studies And Review Of Best Practices, Mike Wigglesworth, Ireland
Repairing A 110-year Old Treated Water Tunnel Below Lake Ontario For The Toronto Island WTP, Allan Choi, Canada
High Risk Cluster Selection For Pipeline Replacement And Renewal Planning – A Multi-Year Case Study With Raleigh NC, Thomas Chen, United States
Machine Learning Application For Prioritising Replacement Of Urban Infrastructure Mains, Mohamed Ahmed, Canada

POSTERS
Development Of An Unmanned Cleaning Robot For Sewer Pipes- Efficient Cleaning Of Sewer Pipes By A Robot Enables Human Workers To Avoid Danger, Hiroyuki Motoyoshi, Japan
Applied Research For Multi-scale Asset Management Of The Walloon Water Company's Drinking Water Supply Network, Eric Smit, Belgium

Lunch | 12:00 - 13:30

Session 2 | 13:30 - 15:00

1.2 BE THE LEAD INVESTIGATOR! RESPONDING TO THE IQALUIT WATER CRISIS
Chair: Michelle Albert, Canada
Co-chair: Angus English, Canada
YOU are going to lead the on-the-ground investigation into the Iqaluit Water Crisis including uncovering the mysteries of the Void, addressing the severely eroded consumer confidence, and implementing critical repairs and upgrades to reinstate the water treatment plant back into safe and sustainable facility. Where do you start investigation start? What do you find? How will you navigate the complex stakeholder landscape?
Speakers: Mr Ian J Moran, Canada; Justin Rak-Barville, Canada; Dr. Charles Goss, Canada

1.3 FROM DATA TO DECISION MAKING, AND BACK – DIGITAL TRANSFORMATION AND AI FOR THE RESILIENT WATER SECTOR
Chair: Ina Verstomme, Netherlands
Co-chair: Suzie van der Meulen, Netherlands
In today’s information era, the water sector is generating an ever-growing amount of data. The questions that now arise are: do we actually have the data we need for informed decision-making? Or should we focus on improving how to collect data? How can we integrate data with each other? And finally, how can we overcome the data-rich/ information-poor paradox afflicting the water industry?
Speakers: Ricardo Taormina, Netherlands; Pilar Conejos, Spain; Dragan Savic, Netherlands; Alex van der Helm, Netherlands

1.4 DIGITAL MAINTENANCE APPROACHES
Chair: Francisco Javier Fernandez, Spain
Automated Estimation Of Pump Characteristics And Their Use Within Engineering, Operations, And Maintenance, Marcelo Cusacovich, Argentina
Research On The Utilization Of Sensing Technologies For The Maintenance And Management Of Water Supply Facilities, Motohiro Kobayashi, Japan
Machine Learning To Support The Monitoring And Optimisation Of Pumping Stations Processes, Rita Lourinho, Portugal
Intelligent Pumps Support Decarbonization In Wastewater Pumping, Stephanie Smith, United Kingdom

POSTERS
Wastewater Network Age Prediction For Critical Assets Identification Using Machine Learning Algorithm Gradient Boosting, Ricardo Ferreira, Portugal
LEAKman: A Danish Demonstration Platform For Integrated Leakage Management Solutions, Gitte Marlene Jansen, Denmark

Coffee Break | 15:00 - 15:30

Session 3 | 15:30 - 17:00

1.7 BOOST ADOPTION OF INNOVATION IN THE WATER SECTOR
Chair: Blanca Antizar, UK
Co-chair: Elvira Serra, UK
The goal of this session is to compile lessons learned and best practices from innovation partnerships and cooperation in and beyond the water sector. We will discuss how to create new partnerships, identify the main barriers and enablers for the adoption of innovation, and knowledge gaps in the journey from concept development to market uptake.
Speakers: Luz Herrero, Spain; Fellu Sempere Nacher, Spain; Yang Villa, Philippines; Natalia Lagayua, USA; Matti Reinkainen, Finland; Doug Atiken, Chile; Jo Burgess, South Africa

1.8 DIGITALISATION OF THE WATER SECTOR: CHALLENGES AND OPPORTUNITIES
Chair: Harsha Ratnaweera, Norway
Co-chair: Arthur Gulschet, Germany
The water sector is undergoing rapid digitalisation. It provides enormous opportunities not only to the industrial countries but also to the developing world. Real-time water quality monitoring, advanced process surveillance and control, and more comprehensive and user-friendly access to water services data for managers, operators, engineers and the general public have become much more accessible than costly and outdated technologies. It also provides a better foundation for decision-makers to get more out of the limited resources. IoTs, advanced modelling tools and SCADA systems are becoming more affordable and integrated in innovations in the water sector.
Speakers: Ramon Vilanova, Spain; Patrick Willems, Belgium; Elena Nikolaoou, Cyprus; Ismail Koyuncu, Turkey; Zakhur Maletskyj, Norway

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 Panelists: Marina Jimenez Galindo, Abishek Narayan, Sabrina Rashid Sheonty, Saba Daneshgar
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<td>1.0 Large Scale Water Reuse and Recycling</td>
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<td>Chair: Paul Jeffrey, United Kingdom</td>
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<td>Ultratfiltration And Reverse Osmosis Testing On Tertiary Wastewater At San Diego’s North City Water Reclamation Plant, Susan Guibert, United States</td>
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<td>Evaluation Of Pathogenic Bacteria In A Pilot-Scale Wastewater Treatment System For Hydroponic Irrigation In Controlled Environment Agriculture, Wellington Arthur, United States</td>
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<td>National Water Regulations And The Future Supply Of Water To A Growing Industrial Symbiosis In Kalundborg, Hasse Miller, Denmark</td>
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<td>Fighting Water Scarcity Through The Reuse Of Wastewater - Porto Case Study, Cecilia Santos, Portugal</td>
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<td>1.4 Unlock The Worldwide Potential Of Water Reuse Innovations</td>
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<td>Chair: Jennifer Khamali, Canada</td>
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<td>Co-chair: Linda Li, Canada</td>
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<td>Join our expert panel for an interactive and engaging session as they highlight global water reuse practices for residential, institutional, and industrial applications. Panelist areas of expertise include governance framework, utilities, industrial, and potable and non-potable reuse. This session will explore the urgent need for global water reuse that goes beyond the issue of water scarcity, such as environmental impacts, sustainable development, nutrient management, and more.</td>
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<td>Speakers: Miriam Hacker, WWF; Charles Bott, HRSD; Melanie Short, Sanofi Pasteur; Kate Polkovsky, ARROW Utility</td>
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<td>1.15 Towards Unified Global Assessment of Disease: Standards for Wastewater Surveillance</td>
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<td>Chair: Dr Ishi Keenum, USA</td>
<td>Room 709 Workshop</td>
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<td>Co-chair: Nancy Lin, USA</td>
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<td>Standards to support wastewater based surveillance (WBS) are needed to increase confidence in and improve comparability of results in order to inform decision-making related to public health and safety. Although the COVID-19 pandemic led to significant and rapid improvements in WBS, challenges remain. In this session, we will convene leading voices in this global field to discuss emerging and ongoing measurement and data quality challenges in WBS and efforts toward standards and controls to address them. The session is expected to derive a clear direction where WBS measurement improvement and standards are still needed. This session output will be applicable to WBS programs globally, informative for standards development efforts, and disseminated via a peer-reviewed viewpoint article.</td>
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<td>Speakers: Alex Ho Shing Chik, Canada; Bernd Manfred Gaedic; Nishita DSouza, USA</td>
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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 - 10:00

Session 1 10:30 - 12:00

3.5 OCCURRENCE AND REMOVAL OF EMERGING CONTAMINANTS - SESSION 2

Chair: Martin Rigaard, Denmark
Multifaceted PFAS Removal In Drinking Water Treatment Using Granular Activated Carbon: Adsorption, Regeneration And Destruction, Martin Van Veggel, Netherlands
Impact Of Different Pollution Sources On Plastisphere Microbiome In Aquatic Ecosystems, Sheena Kumari, Netherlands
Sulphate-Form Anion Exchange Resins: A Novel Approach For Simultaneous Removal Of Natural Organic Matter (NOM) And Per- And Poly-fluoroalkyl Substances (PFAS) From Drinking Water, Hadia Terro, Canada
Long-term Changes In The Removal Of Perfluoroalkyl Substances By Activated Carbon Processes, Yoshifumi Nakazawa, Japan
POSTERS
Exploring Geospatial Environmental Analysis With Large Language Models: A Case Study On Caffeine Occurrences In Global Water Bodies, Qiao Kang, Canada
Responding To The Iqaluit Water Crisis, Ian Moran, Canada

Lunch 12:00 - 13:30

Session 2 13:30 - 15:00

3.6 OCCURRENCE AND REMOVAL OF EMERGING CONTAMINANTS - SESSION 3

Chair: Manuel Kofi Tetteh, Ghana
Does Lake Stratification Affect The Vertical Distribution Of Microplastics In Hamilton Harbor Water?, Behman Nayebi, Canada
Microplastics Enhanced Virus Transport In Satuated Porous Media: A New Concern For Public Health, Ahmad Ameen, Austria
Profile Of Microplastics In Water For Human Consumption By Micro-FTIR: Lisbon Case Study (Portugal), Rui Neves Carneiro, Portugal
Territorial Diagnosis Of Microplastics And Tyre Residues In The Toulon Bay Area (France), Marie-Marie Dessau, France
WATER Quality In Rivers Of North Portugal, Jose Fernandez, Portugal
National-Scale Antimicrobial Resistance Surveillance In Wastewater: A Comparative Analysis Of HT-qPCR And Metagenomics Approaches, Margaret Knight, United Kingdom

Coffee Break 15:00 - 15:30

Session 3 15:30 - 17:00

3.10 INTERMITTENT SUPPLY SYSTEM CHALLENGES AND OPTIMISATION

Chair: Raziyeh Farmani, United Kingdom
Intermittent And Inconvenient: User’s Experiences With Rural Piped Water Supply In Gujarat Suggest New Model For Estimating Water Consumption, Florence Udenoby, Canada
Harnessing Smart Meters To Investigate Household Water Usage Under Intermittent Water Supply (IWS), Matthew MacRorie, Canada
How To Live With Intermittent Water Supply, Dewi Rogers, Italy
A Quantitative Guide And Python Package For SWMM-based Modelling Of Intermittent Networks, Omar Abdelazem, Canada
POSTERS
Pilot Scale Comparison Of Intermittent And Continuously Operated Drinking Water Biofilters Treating Groundwater, Hemant Arora, Canada
Reducing Residential Water Consumption In San Pedro Garza Garcia, Mexico: A Case Study, Susana Guerrero Flores, Mexico

Break 17:00 - 17:15

Keynote Plenary 17:15 - 18:00

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| 09:45 - 10:30 | **Coffee Break**                                                                                                  |
| 10:30 - 12:00 | **Session 1**  
5.1 **COLLABORATION, CAPACITY BUILDING AND COMMUNICATION - SESSION 1**  
Chair: Victor-Lucian Crăciun, Romania  
Unlocking Utility Engagement For Innovative Water Systems: Water Reuse In The United States, Mariam Hakeem, USA.  
Conceptualising Boundary Work Activities To Enhance Credible, Salient And Legitimate Knowledge In Transdisciplinary Research Projects, Lisa Andrews, Netherlands.  
POSTERS  
Collaborative Multi-scale Water Resources Planning in England And Wales, All Leonard, UK.  
School Visits, Guided Tours, Influencers And TikTok - Young People As The Target Audience For Raising Interest Towards Water Management, Leena Mikkonen-Yrjölä, Finland.  
**Lunch**  
12:00 - 13:30  
13:30 - 15:00 |
| 15:00 - 15:30 | **Coffee Break**                                                                                                  |
| 15:30 - 17:00 | **Session 3**  
5.6 **COLLABORATION, CAPACITY BUILDING AND COMMUNICATION - SESSION 2**  
Chair: Natalie DeRoo, United States.  
Ensuring Safe Drinking Water From Private Wells In Florida Through The Florida Well Owner Network, Yihui Zhang, USA.  
Institutions Still Matter: Capacity Building Efforts Across Small And Medium Sized Water Utilities In Pakistan, Pakistan, Faisal Shaheen, Canada.  
Decision-making Factors For Financing Nature-based Solutions For Water Management In Urban Multi-stakeholder Settings: Understanding Financers And Deriving Implications For Collaborative Financing, Maria Wirth, Austria.  
Enabling Safe Practices In Wastewater-irrigated Urban Agriculture, David Galibourg, UK.  
POSTERS  
Application Of Systemic Thinking And Planning In Revitalizing Rural Water Services In Kenya, Abdi Wario, Kenya.  
**Coffee Break**  
15:00 - 15:30  
15:30 - 17:00 |
| 17:00 - 17:15 | **Keynote Plenary**                                                                                               |
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#### Wednesday

**Keynote Plenary | 09:00 - 09:45**

- **Keynote:** Financing water solutions for climate resilience, [Suroj 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 - 10:05**

**Session 1 | 10:30 - 12:00**

- **2.39 LARGE WWTP OPERATION**
  - **Chair:** Joyce Chang, Canada
  - **Designing & Integrating Toronto’s Largest Sanitary Combined Sewer Overflow Pumping Station For Ashbridges Bay Wastewater Treatment Plant (ABTP), Patrick Sifi and Geoff Calo, Canada
  - **Overcoming Diverse Water Challenges On The Ashbridges Bay Treatment Plant Outfall, Kevin Walter, Canada
  - **Optimisation Of Activated Sludge For Odour Control In WWTP: Large-Scale Studies On Berlin’s Wastewater Treatment Plants, Regina Gnirs, Germany
  - **Bionergetic Strategy for Full-Scale Biological Denitrification Operations, Sudong Yin, China**

**Room 716 B | Technical**

**2.4 MEMBRANE AERATED BIOFILM REACTOR – FROM THEORY TO MODELING TO PRACTICE & EMERGING APPLICATIONS**

- **Chair:** Nerea Uri Carreno, Denmark
- **Co-chair:** Rob Nerenberg, USA

MABR is experiencing accelerated adoption due to its ability to offer process intensification in combination with energy savings and N₂O mitigation. At the same time, researchers continue to study the fundamentals and new potential applications for this technology.

- **Speakers:** Rob Nerenberg, USA; Dwight Houweling, Canada; Tim Constantine, Canada; Barry Hefterman / John McGonigey, Ireland; Neri Nathan, Israel; Jeff Peeters, Canada

**Room 716 A | Workshop**

**Lunch | 12:00 - 13:00**

**Session 2 | 13:30 - 15:00**

- **2.18 MICROBIAL ELECTROCHEMISTRY & MICROALGAE**
  - **Chair:** Juan Antonio Baeza, Spain
  - **Fish Processing Wastewater Treatment With Microalgae: Growth, Nutrient Recovery And Biomass Harvesting, Tiina Leiviskä, Finland
  - **Evaluation Of 3D Printed Cathodes For Microbial Electrolysis Cell-assisted Anaerobic Digestor, Tai Hyun (Calvin) Chung, Canada**
  - **Can Microalgae Be Grown In Primary Effluent Of Municipal Wastewater In The Presence Of Bacteria?, Sathasivan Arumugam, Australia**
  - **Water Balance In Higher Education Institution: A Case Study In A Public University In Brazil, Marcelo Antunes Nolasco, Brazil**

**Room 716 B | Technical**

**6.5 THE SECRET LIVES OF WATER PROFESSIONALS: EXPLORING WATER CAREERS IN ACADEMIA, CONSULTING, GOVERNMENT AND UTILITIES**

- **Chair:** Rasha Maal-Bared, Canada
- **Co-chair:** Frances Amoye, Canada

The workshop will be divided into three components. The first involves four panelists highlighting their daily jobs/tasks, in addition to their favorite and least favorite parts of the job. The second part has discussions around hiring in different sectors and what each job requires for success. The third part of the workshop is focused on transitions. The first transition discussion is focused on moving from one career/sector to another (e.g., academic to consultant or government to utility). The second transition discussion focuses on the move from YP to mid-career professional.

- **Speakers:** Dr. Jeff Charrois, Canada; Rasha Maal-Bared, Canada; Teresa Brooks, Canada; Bipro Dhar, University of Alberta

**Room 716 A | Workshop**

**Coffee Break | 15:00 - 15:20**

**Session 3 | 15:30 - 17:00**

- **2.39 LARGE WWTP OPERATION**
  - **Chair:** Joyce Chang, Canada
  - **Designing & Integrating Toronto’s Largest Sanitary Combined Sewer Overflow Pumping Station For Ashbridges Bay Wastewater Treatment Plant (ABTP), Patrick Sifi and Geoff Calo, Canada**
  - **Overcoming Diverse Water Challenges On The Ashbridges Bay Treatment Plant Outfall, Kevin Walter, Canada**
  - **Optimisation Of Activated Sludge For Odour Control In WWTP: Large-Scale Studies On Berlin’s Wastewater Treatment Plants, Regina Gnirs, Germany**
  - **Bionergetic Strategy for Full-Scale Biological Denitrification Operations, Sudong Yin, China**

**Room 716 B | Technical**

**6.7 SUSTAINABLE WATER RESOURCE MANAGEMENT AND LARGE-SCALE DEVELOPMENT IN ETHIOPIA**

- **Chair:** Eshetu Cheru, Ethiopia

This session seeks to present a comprehensive strategy for sustainable water resource management and large-scale development in Ethiopia, highlighting the critical importance of equitable water distribution, environmental sustainability, and long-term socio-economic growth. Desired Output: The desired output is to disseminate a detailed proposal for effective water resource utilization and management, emphasizing the implementation of an integrated water management framework, sustainable water usage practices, capacity-building programs, and strategic partnerships for funding and support.

- **Speakers:** Eshetu Cheru Techebo, Ethiopia

**Room 716 A | Workshop**

**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 Panelists: Marina Jimenez Galindo, Abishek Narayan, Sabrina Rashid Shenton, Saba Daneshgar

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### 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

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### Coffee Break 09:45 - 10:30

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### Session 1 10:30 - 12:00

#### 1.24 NET-ZERO EMISSIONS IN THE WATER INDUSTRY – COLLABORATING FOR CLIMATE ACTION

**Chair:** Nerea Uri Carreño, Denmark

**Co-chair:** Rob Nerenberg, USA

Net Zero Workshop Series - This workshop is proposed as the second in a 4-workshop series at Toronto’s Global Congress. The workshop series has been jointly developed by members of the IWA Climate Smart Utilities Group, the Water Research Foundation, the WEF GHG Focus Group, and Ontario’s WEA/OWA Climate Change Committee, including: GHG Accounting for Water & Wastewater Utilities We NZOw Enough – Mitigating Nitrous Oxide Emissions at WRRFs Today Targeting WRF Methane Emissions A Net zero water industry.

**Speakers:** Seven Trent, UK; Aarhus Vand, Denmark

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#### 4.2 IMPACTS AND MITIGATION OF CLIMATE CHANGE

**Chair:** Amit Chanan, Fiji

Wastewater Management In Urban Areas In Vietnam: Solutions For Sanitation Coverage Improvement And Climate Change Adaptation, Nguyen Viet - Anh, Vietnam

Study Of Rainfall Distributions In The City Of Vancouver To Improve Climate Preparedness, Alyson Bingeman, Canada

Protection And Valorisation Of Urban Water Courses In The Context Of Climatic Changes, Claudia Costa, Portugal

UMIngeni-ufukela Water – Water Security Action Hub For Sustainable Water Supply, Nosibuhlizi Vilakazi, South Africa

**POSTERS**

A New Assessment Tool For Disaster Risks To Water Supply, Masaru Goto, Japan

Water Distribution Systems And Climate Change Design Standards And Research In The Arctic, Audrey Tom, Canada

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### Lunch 12:00 - 13:30

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### Session 2 13:30 - 15:00

#### 1.25 WE NZOw ENOUGH - MITIGATING NITROUS OXIDE EMISSIONS AT WRRFS TODAY

**Chair:** Emily Zegers, Canada

**Co-chair:** Jose Porro, USA

This session will tell the story of NO as we know it in an engaging way, through practical experiences from around the world in order to inspire utilities, practitioners and academic participants to support the urgent work required to mitigate these emissions and play our rightful role as stewards of the nitrogen cycle.

**Speakers:** Nerea Uri, Denmark; Amanda Lake, UK; Mikkel Holmen Andersen, Denmark; Liu Ye, Australia; Giulia Pizzagali, UK; Ellen Vanvoorthuizen, Netherlands; Ana Soanes, UK

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#### 4.2 SUSTAINABILITY FOR URBAN WATER MANAGEMENT

**Chair:** Miriam Feilberg, Denmark

**Co-chair:** Mbali Sibiya, South Africa

Urban water management is imperative to sustainable cities. The workshop will explore risks and challenges and the role of water utilities for providing solutions to sustainability. We will share knowledge on ensuring sustainability for urban water management, and discuss how utilities can contribute directly to the achievement of SDG 6, while also contributing to other goals.

**Speakers:** John Buur, Denmark; Cheryl Davis, USA; Kaia Bing, Norway; Titilola Bright-Orisami, Nigeria; Mohmad Asari Daud, Malaysia; Prasad Kulkarni, India

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### Coffee Break 15:00 - 15:30

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### Session 3 15:30 - 17:00

#### 1.26 TARGETING METHANE GHG EMISSIONS FROM WASTEWATER

**Chair:** John Willis, USA

**Co-chair:** Charlotte Scheutz, Denmark

This two-part Workshop (first identifying likely CH₄ sources; and second on extreme outlier sources and solutions) will engage the audience to develop better industry understanding of CH₄-emissions sources in centralized wastewater treatment. Each part begins with two introductory presentations framing context for related attendee-participation exercises. The speakers and organizers of this session are eager to learn from those exercises: making this an obvious workshop (as opposed to “training”). Because of CH₄’s much higher short-term global warming potential (GWP-20 = ~90 compared to GWP-100 = ~25) and its potential leveraged use for renewable energy make this Session a “must have” for Toronto.

**Speakers:** Emma Shen, Canada; Eveline Volcke, Belgium; Jason Ren, USA; John Willis, USA

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#### 4.5 CHALLENGES IN SEWERAGE AND SEWER MANAGEMENT

**Chair:** Annalaura Carducci, Italy

City Of Toronto Foundation Drainage Policy: Preserving Sewer Design Capacity, Nicole Segal, Canada

Impacts Of Myopic And Panoramic Scheduling On Integrating The Dynamic Rehabilitation Of Urban Water Infrastructure Systems, Amin Minaei, Austria

Sewer Gas Monitoring Pilot To Assess The Impact Of Sealing Perforated Sanitary Sewer Maintenance Hole Covers, Alonso Hurtado, Canada

Increasing Flexibility Of Control In Sewer Management, Rodrigo da Silva Gesser, Luxembourg

**POSTERS**

Sewer Capacity Analysis And Discharge Permit Challenges In The Construction Industry, Ramona Mintorob, Canada

Techno-economic Analysis Of Sewage Conveyance In Scaled Decentralized Systems, Pradip Kailar, India

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### Break 17:00 - 17:15

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

**Keynote:** Youth, technology and water, **Farohk Kakar**, Environmental Engineer, Brown and Caldwell Consultants

Panel Moderator: Astrid Nørgaard Friis Panellists: Marina Jimenez, Abishek Narayan, Sabrina Rashid, Saba Daneshgar
### Programme

#### Keynote Plenary 09:00 - 09:45

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

#### Coffee Break 09:45 - 10:00

#### Session 1 10:30 - 12:00

**2.6 BEYOND AUTOMATION – HOW DIGITAL TOOLS CAN ENABLE BREAKTHROUGH INNOVATION**  
*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. Zahnix 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

**3.5 PARTICLE-ASSOCIATED VIRUSES AS EMERGING PATHOGENS IN WATER AND WASTEWATER**  
*Chair:* Daoweng Shuai, USA  
*Co-chair:* Tiong Gim Aw, 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 cost.  
**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**  
*Chair:* Hein Molenkamp, Netherlands  
*Co-chair:* Alan Shapiro, Canada

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 implementing circular water solutions. Zahnix 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:** Hein Molenkamp, Netherlands; Alan Shapiro, Canada; Maarten den Ouden, Netherlands; Arthur Valkieser, Netherlands

**3.6 IMPROVING EQUITY IN INTERMITTENT WATER SUPPLY NETWORKS: A COLLABORATIVE GAME**  
*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 – among participants. This workshop will form the basis for a roadmap towards overcoming these problems using digital tools.  
**Speakers:** Chaitany Ahuja, Canada; Florence Udeny, Canada; Ashish Nair, India; Pranesh M, India; Gabrielle Marega, Canada; Kevin Kurjakose Joseph, Canada; Omar Abdelaziz, 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 Fleer, 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 wastewater) 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 brings high recovery RO and zero liquid discharge into more widespread technological solutions.  
**Speakers:** Victoria Fleer, Argentina; Ruben Munoz, Chile; Heidi Richards, South Africa; Loreen Ople Villacorte, Denmark; Jannet Al, Denmark

#### 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

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Wednesday Program

Keynote Plenary | 09:00 - 09:45

Business Forum Room 1

10:30 — 11:15 | SGS Canada
SGS will discuss the state of PFAS measurement in Canada 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 fluoroine 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 85 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

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 Kazlowski, Adam Ryder Session Moderator: Stephanie Smith

11:15 — 12:00 | Government of Ontario
Ontario Global Business Showcase: Empowering International Expansion
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.

Cinthya Orza

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 Consultants
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 Brainigan (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 resource. The mass 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

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

Keynote Plenary | 17:15 - 18:00

14:15 — 15:00 | Jiangsu Taiyuan Environmental Science and Technology Corp., Ltd
Water plant in LEGO type low 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 ten different functions steel standardized modules for units. Such as intelligent 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

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Thursday, 15 August

Track 1
WATER UTILITY MANAGEMENT

Track 2
WASTEWATER TREATMENT AND RESOURCE RECOVERY

Track 3
DRINKING WATER AND POTABLE REUSE

Track 4
CITY-SCALE PLANNING AND OPERATIONS

Track 5
COMMUNITIES, COMMUNICATION AND PARTNERSHIPS

Track 6
WATER RESOURCES AND LARGE-SCALE WATER MANAGEMENT
**Thursday | Programme**

### 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

#### 1.30 WATER/WASTEWATER MEASUREMENT AND OPERATIONS EXCELLENCE

**Chair:** Kevin McKinley, Canada

The Workshop will have presentations by leading water industry and government speakers, followed by forum discussions, and an engaging closing panel session. Workshop participants will learn about and discuss risk management approaches to ensure public safety and water facility effectiveness, discussing and exchanging on real-world examples of best practice operation in Canadian municipalities.

**Speakers:** Jennifer Andersen, Canada; Steve Craik, Canada; Ema Gitej, Canada

#### SO.4 IWA CLIMATE SMART UTILITIES RECOGNITION PROGRAMME WORKSHOP

The International Water Association (IWA), with the support of Xylem, is pleased to present the third edition of the IWA Climate Smart Utilities Recognition Programme. Building upon the successes of the 2022 and 2023 editions, this programme provides an excellent opportunity for utilities to reflect on their Climate Smart journeys, present their initiatives to an international audience, and share their aspirations for achieving a climate-smart water sector.

During this workshop, the six most outstanding utilities of the 2024 edition, from Achiever and Entrant categories will showcase the key actions they have undertaken across three interconnected pillars: adaptation, mitigation, and leadership. Additionally, certificates of recognition will be awarded to all utilities recognized in the 2024 IWA Climate Smart Utilities Recognition Programme.

*The 2024 edition is powered by Xylem.*

### Lunch | 12:00 - 13:30

### Session 2 | 13:30 - 15:00

#### 1.29: ADVANCEMENTS IN NON-SEWERED SANITATION

**Chair:** Jay Bhagwan, South Africa; Kartik Chandran, USA

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 management through innovation and smartness.

**Speakers:** Jennifer Molwantwa, South Africa; Doulaye Kone, USA; Kartik Chandran, USA; Marc Dehusses, USA; Srinivas Chari, India

#### 4.10: WATER MANAGEMENT IN STRESSED URBAN AREAS - BRINGING COLLECTIVE UNDERSTANDING OF THE VALUE OF WATER

**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 comprehensive city planning, emphasizing the need for collaborative initiatives across businesses with an impact on the local ecosystem, considering both water footprint and 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
### Thursday

#### Programme

<table>
<thead>
<tr>
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<tr>
<td>09:00 - 09:45</td>
<td><strong>Keynote Plenary</strong>&lt;br/&gt;Keynote: Path-shifting to address global challenges: Transformative adaptation in practice, Prof. Juliet Willetts, Institute for Sustainable Futures, Univ. of Technology Sydney, Australia&lt;br/&gt;Panel Moderator: Annalisa Contos&lt;br/&gt;Panelists: Miriam Feilberg, Dr Jabulile Mashwama, Amit Chanin, Adam Saffian Ghazali</td>
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<td>09:45 - 10:30</td>
<td><strong>Coffee Break</strong></td>
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<td>10:30 - 12:00</td>
<td><strong>Session 1</strong>&lt;br/&gt;<strong>SO.5 Enhancing Utility-Regulators Collaboration for Efficient and Resilient Water Supply and Sanitation (WSS) Services</strong>&lt;br/&gt;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.&lt;br/&gt;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.&lt;br/&gt;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.</td>
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<td>12:00 - 13:30</td>
<td><strong>Lunch</strong></td>
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<td>13:30 - 15:00</td>
<td><strong>Session 2</strong>&lt;br/&gt;<strong>2.8 New Paradigm of Wastewater Treatment in Fast-Urbanizing Region</strong>&lt;br/&gt;Chair: Rong Chen, China&lt;br/&gt;Co-chair: Shuming Liu, China; Zhiwei Wang, China; Yujie Feng, China&lt;br/&gt;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.&lt;br/&gt;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</td>
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<td>1.5 INCORPORATING HYDROGEN INTO BUSINESS AS USUAL, A GLOBAL VIEW</td>
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<td>Chair: Shaunna Berendsen, UK</td>
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<td>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 in greenhouse gas emissions and electricity used in the water treatment process. It simultaneously created a new renewable energy source through green hydrogen production. Now well underway, this workshop and panel looks in more detail at that project and, best practice examples of hydrogen creation and use across the globe.</td>
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<td>Speakers: Blanca Antizar, Spain; Chris Brace, Australia; Jacobs, Canada; Mark Fletcher, UK</td>
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<tr>
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<td>Session 2</td>
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<td>4.8 NAVIGATING THE WAVES: ACHIEVING THE GOALS OF THE UN WATER MINISTERS CONFERENCE 2023</td>
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<td>Chair: Michael Rouse, UK</td>
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<td>Co-chair: Gemma Boag, Canada</td>
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<td>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 than being a threat to life, water must become a catalyst for health and well-being, securing nutrition and energy for all.</td>
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<td>Speakers: Michael Rouse, UK (UK); Gemma Boag, Canada; Representatives from IWM; IWA Strategic council; IWA Regulatory Forum; Oxford graduate from developing country</td>
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## Thursday | Programme

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<td><strong>1.5 HOW TO GO DIGITAL AS A WATER UTILITY - SESSION 2</strong></td>
<td>Room 703 Technical</td>
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<td>Chair: Rosemary Campbell, United Kingdom Co-chair: Boyan Xu, China How GIS Supports Digital Transformation &amp; Sustainable Management, Christa Campbell, United States Low-energy IoT System For Continuous Monitoring Of Water Quality In Drinking Water Distribution Networks, Javier Garcia del Rio, Spain Technology Adoption Across South Asian Utilities: Evidence Of Leapfrogging?, Faisal Shaheen, Canada Water Service Replacement During Watermain Rehabilitation - Data Collection, Analysis, And GIS Visualization To Plan Water Service Replacements For The City Of Toronto, Aditya Dhamorikar, Canada</td>
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<td><strong>Coffee Break</strong></td>
<td>10:45 - 11:30</td>
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<td><strong>Session 2</strong></td>
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<td><strong>1.11 NITROUS OXIDE EMISSIONS IN FULL-SCALE OPERATIONS</strong></td>
<td>Room 705 Technical</td>
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<td>Chair: Mark Van Loosdrecht, Netherlands Co-chair: Nerea Uri Carreno, Denmark AWAIRE - Novel Approaches To Plant-Wide N2O Quantification: Comparative Study Of Four Measurement Methods, Dines Thyboe, Denmark Quantifying Nitrogenous Greenhouse Gas From Emerging Biological Nutrient Removal (BNR) Processes, Kari M. Chandra, United States Assessment And Long-term Monitoring Of N2O Process Emissions At Two Scottish WRRFs, Susan Lee, United States Demonstrating N2O Mitigation In Two Advanced Full-scale WWTPs, Maria Valtari, Finland</td>
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<td><strong>Lunch</strong></td>
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<td><strong>1.16 FROM DRAIN TO DATA: NAVIGATING THE WATERS OF AI IN WASTEWATER ENGINEERING</strong></td>
<td>Room 703 Workshop</td>
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<td>Chair: Mohamed Zaghlool, UAE Co-chair: Ahmed Alsayed, USA This 2-part (90-minute x 2) workshop aims to foster dynamic dialogues surrounding machine learning (ML) applications within the wastewater sector. We aim to explore its limitations and consider hybrid approaches. Our diverse audience, composed of water industry professionals spanning academia, consulting, utilities, and technology providers, will engage in a multi-faceted discourse, generating comprehensive insights. Post-workshop, we will craft a white paper summarizing these discussions and circulate it among participants to gather their ultimate perspectives.</td>
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<td><strong>Coffee Break</strong></td>
<td>15:00 - 15:15</td>
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<td>Evening</td>
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### Thursday | Programme

#### 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
Panelists: Miriam Feilberg, Dr Jabulile Mashwama, Amit Chanan, Adam Saffian Ghazali

#### Coffee Break 09:45 - 10:30

#### Session 1 10:30 - 12:00

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**1.17 WATER TARIFFS IN A CHALLENGING WORLD**

**Chair:** Ed Smeets, The Netherlands
**Co-chair:** Teodor Popa, Romania

The main outcome of the workshop would be to give the participants concrete examples of the finance impact of the mentioned factors; to explore the correlation between the operational, technical and climate mitigation measures with the available funding resources; how this impacts the customers and the public budgets.

**Speakers:** Ann Bijnens, Belgium; David Tipping, Australia; Nishu Fuminori, Japan; Augustin Boer, Romania

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**3.9 BIOFILMS AND PATHOGEN MANAGEMENT IN WATER DISTRIBUTION**

**Chair:** Gertjan Medema, Netherlands
**Co-chair:** Chenwei Zheng, United States

Enhancing Drinking Water Quality: Impact Of Biofilm In Danish PE Pipe Systems, Lone Tang, Denmark

Reconsidering The Impact Of Water Age On Opportunistic Pathogen Growth, Tolulope Odumayomi, USA

Biofilm Structure And Composition Under Varied Flow Conditions: Implications For Drinking Water Distribution, Winta Yasam, USA

Development And Validation Of A Web-based Tool (CaST) For Minimising The Risk Of Nitrification In A Chloraminated System, Anumagam Sathasivan, Australia

**POSTERS**

Composition Of The Microbial Communities Within Sediment And Water In Chlorinated Drinking Water Distribution System Storage Tanks, Eva Bridges, USA

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**Lunch** 12:00 - 13:30

#### Session 2 13:30 - 15:00

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**3.8 NON REVENUE WATER & LEAKAGE MANAGEMENT**

**Chair:** Gary Wyeth, Thailand
**Co-chair:** Thomas Chen, United States

Challenges In Tackling Trunk Loss In Kowloon Region Of Hong Kong Special Administrative Region Of The People’s Republic Of China, Sze Man Chan, Hong Kong, China

Experimental Observations Of The Initial Leaks Formed In Pitted Grey Cast Iron Water Pipes Due To Cyclic Water Pressure Fatigue Loading, Edward John, United Kingdom

Porto’s NRW Management And Reduction Strategy – From 54% To 13% In Less Than 20 Years, Sara Cunha, Portugal

A Collaborative Model To Accelerate And Scale Transformative Solutions To Critical Water Challenges, Victoria Edwards, United Kingdom

**POSTERS**

Scalable District Metering Area Agnostic Leakage Detection, Michel Hoese, Norway

Application Of Internet Of Things In The Management Of Non-Revenue Water In A Water Distribution Network, Patrick Obunga, South Africa

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**3.11 PATHOGEN DETECTION METHODS**

**Chair:** Ricardo Santos, Portugal
**Co-chair:** Bayan Khojah, Netherlands

Development Of A Simple Analytical Method For Legionella Pneumophila Using Novel DNA Aptamer-Gold Nanoparticle Conjugates, Koji Matsunaga, Japan

Using Natural Virus Markers To Safeguard The Integrity Of Membrane Treatment Plants, Emile Cornelissen, Netherlands

Paper-based Microfluidic Device For The Detection Of Bacteria And Antimicrobial Resistance Genes In Drinking Water, Zhugen Yang, United Kingdom

Enhanced Virus Capture And Detection In A Freshwater Lake: Implications For Viral Monitoring And Microbial Risk Assessments, Emalie Hayes, Canada

**POSTERS**

Comparing The Diversity Of Microbial Fungal Communities Found In Different Water Types, Caroline Reed, USA

UVB Direct Photolysis Inactivates Vescicle-cloaked Murine Norovirus Clusters, Jiuhao Chen, USA

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**Coffee Break** 15:00 - 15:15

**Closing Ceremony** 15:15 - 16:45

**Gala Dinner** Evening
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<td>09:45 - 10:30</td>
<td>Coffee Break</td>
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<tr>
<td>10:30 - 12:00</td>
<td><strong>Session 1</strong>&lt;br&gt;<strong>4.3 DEMONSTRATING GLOBAL PRACTICES FOR SMART RESILIENT CITIES</strong>&lt;br&gt;Chair: Tony Wong, Australia&lt;br&gt;Co-chair: Dr Michael Storey, Australia&lt;br&gt;This panel conversation on Demonstrating Global Practices for Smart Resilient Cities will convene city officials that have implemented, in a significant way, initiatives and design and planning principles to meet the increasing challenges of climate change and urbanisation. This is moving from conceptual ideas and implementation one or a few specific initiatives to learning and gaining inspirations from cities that have “actually pulled it off”.&lt;br&gt;Speakers: Tony Wong, Australia; Wang Hao, China; Bernard Koh, Singapore; Nerina Di Lorenzo, Australia</td>
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<tr>
<td>12:00 - 13:30</td>
<td>Lunch</td>
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<td>13:30 - 15:00</td>
<td><strong>Session 2</strong>&lt;br&gt;<strong>1.23 THE PERFECT PAIRING; DATA AND DIGITAL MEET ECOLOGY</strong>&lt;br&gt;Chair: Peter Simpson, UK&lt;br&gt;Co-chair: Simon Parsons, Scotland&lt;br&gt;The solutions to managing water must move away from increasing ‘end of the pipeline’ investments, to solutions developed at the catchment scale, utilising nature based solutions where ever possible. This would allow us to address the challenges at, or closer to, the source. Digital technologies provide the mechanism through which we can inform and transform our relationship with the environment and deliver and optimise these solutions for sustainable water and waste water management.</td>
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<td>15:00 - 15:15</td>
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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: Miriam Feilberg, Dr Jabulile Mashwama, Adam Saffian Ghazali |
| 09:45 - 10:30 | Coffee Break                                    |
| 10:30 - 12:00 | 2.24 NANOMATERIALS AND NANOTECHNOLOGY  
Chair: Wenjun Sun, China Co-chair: Daniel Kamal, Canada  
Influence Of Residual Coagulant On The Dynamic Evolution Of RO Membrane Fouling: Insights From Fouulant Composition And Metagenomic Analysis, Haojie Ding, China  
Floatable ZnO-coated Micro Glass Bubbles For Sustainable And Renewable Solar Light-Driven Photodegradation Of Micropollutants In Wastewater Treatment, Yanan Li, Canada  
From By-product To Resource: An Integrated Approach For The Recovery Of Phosphorous From Industrial Side Stream, Malgorzata Szlachta, Finland  
3D Evaporative Crystallization For Lithium Recovery From Saline Water, Xi Chen, China |
| 12:00 - 13:30 | Lunch                                           |
| 13:30 - 15:00 | 2.25 OTHER PHYSICO-CHEMICAL TREATMENT TECHNIQUES  
Chair: Stijn Van Hulle, Belgium Co-chair: William Amoah, Ghana  
Novel Use Of Ferrous Iron |peroxymonosulfate For High-performance Seawater Desalination Pretreatment Under Harmful Algal Blooms, How Young Ng, China  
Modelling The Chemical Phosphorus Removal Of Peroxide Regenerated Iron, Amr Ismail, Canada  
Catalytic-oxidation Of Mn(II) By Superfine Activated Carbon: Mechanism And Kinetic Analysis, Shun Saito, Japan  
Surface Engineering Of Polyurethane For E.coli Removal From Water, Mina Mahdian, Canada |
| 15:00 - 15:15 | Coffee Break                                    |
| 15:15 - 16:45 | Closing Ceremony                                |
| 17:00 - 19:00 | Gala Dinner                                     |
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<td>Panel Moderator: Miriam Contos Panelists: Annalisa Contos, Miriam Contos, Amit Chanan, Adam Saffian Ghazali</td>
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#### Room 716 B: Technical

**6.6 INTEGRATED WATER RESOURCES MANAGEMENT AND CLIMATE CHANGE**

- Chair: Kay Moeller, Germany Co-chair: Marjolein Vanoppen, Belgium
- Adaptive Pathways Approach To Achieving City Water Resilience, Ryan Brotchie, Canada
- Designing Wastewater Treatment Plant Sites To Deliver Significant Biodiversity Value, Natalie Hackett, Australia
- Reaching Carbon Neutral Water Services In Finland, Suvi Lehtoranta, Finland
- 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, Japan
- 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

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<th><strong>Lunch</strong></th>
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<td><strong>Session 2</strong></td>
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#### Room 716 A: Workshop

**2.9 MEWE-BIOCLUSTER WORKSHOP: ADVANCING THE FRONTIERS OF INTEGRATED ‘OMICs’**

- Chair: Ameet Pinto, USA Co-chair: Cindy Smith, UK
- Advances in ‘omics methods are pushing the boundaries of discovery in the 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 discovery process can be rife with pitfalls and lost opportunities.

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<th><strong>Coffee Break</strong></th>
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<td><strong>Gala Dinner</strong></td>
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| 09:00 - 09:45 | **Keynote Plenary**
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  Panel Moderator: Annalisa Contos
  Panelists: Miriam Feilberg, Dr Jabulile Mashwama, Amit Chanan, Adam Saffian Ghazali |
| 09:45 - 10:30 | **Coffee Break** |
| 10:30 - 12:00 | **Session 1**
  **2.10 Collaborative Solutions to Emerging Contaminants under Climate Change**
  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 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 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 |
| 12:00 - 13:30 | **Lunch** |
| 13:30 - 15:00 | **Session 2**
  **1.31 Women in Water: The Importance of Equity Diversity and Inclusion Across Utility Sectors and Asset Management**
  Chair: Vanessa Chau, Canada
  The Women in Water: Equity Diversity and Inclusion Forum includes interactive panels and presentations by leading water/wastewater/reuse/energy power/transportation industry professionals and utility managers and EDI speakers, followed by forum discussions, and an engaging closing panel session.
  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 through the diverse women in water-leaders across the globe.
  Speakers: Vanessa Chau, Canada; Rhonda Harris, USA; Derrick Dunkley, UK; Beth Weir; Chandra Brown, Canada; Imran Motala; Richard Wong, Canada; Hany Ibrahim |
| 15:00 - 15:15 | **Coffee Break** |
| 15:15 - 16:45 | **Closing Ceremony** |
| Evening     | **Gala Dinner** |
**Thursday | Programme**

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<td>10:30 - 12:00</td>
<td><strong>Session 1</strong>&lt;br&gt;<strong>6.8 BASIN-CONNECTED CITIES: ENABLING URBAN AND RURAL STAKEHOLDERS TO TAKE ACTION IN BASIN MANAGEMENT</strong>&lt;br&gt;Chair: John Riddiford, Australia&lt;br&gt;Co-chair: Jodie Bignall, Australia&lt;br&gt;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 watersheds; 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.&lt;br&gt;Speakers: John Riddiford, Australia; Peifang Wang, China; Philip Weller, Austria/Canada; Walter King, Vienna Waterworks</td>
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<td>12:00 - 13:30</td>
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<td>13:30 - 15:00</td>
<td><strong>Session 2</strong>&lt;br&gt;<strong>6.7 INTEGRATED WATER RESOURCES MANAGEMENT AND CLIMATE RESILIENCE</strong>&lt;br&gt;Chair: Ligia Pinto, Portugal&lt;br&gt;Co-chair: Nidhi Singh, Canada&lt;br&gt;Assessing The Impact Of Climate Change On Conventional Drinking Water Treatment Using 2 Decades Of Historical Data, Ryan Swinamer, Canada&lt;br&gt;Assessing Climate Change Impacts On Water Quality In Montreal’s Natural Water Bodies: A Big Data And Machine Learning Perspective, Bowen Xu, Canada&lt;br&gt;Impact of Climate Change On A Large Regional Watershed, Allyson Bingeman, Canada&lt;br&gt;Climate Change And Groundwater, The Case Of The State Of Chihuahua, Mexico, Miguel Angel Gonzalez-Nuñez, Mexico&lt;br&gt;POSTERS&lt;br&gt;Exploring The Impacts Of Adaptation Strategies For Climate Change On Groundwater Resource Management, Chihhao Fan, Chinese Taipei&lt;br&gt;Flood Risk Mapping And Participatory GIS For Flood Resilience On The Dundee Waterfront, Sarah Crowe, United Kingdom</td>
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<td>09:00 - 09:45</td>
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<td>12:15 — 13:00</td>
<td>CANADIAN WATER AND WASTEWATER ASSOCIATION</td>
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**Thursday** | Programme

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

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WATER UTILITY MANAGEMENT

Track 2
WASTEWATER TREATMENT AND RESOURCE RECOVERY

Track 3
DRINKING WATER AND POTABLE REUSE

Track 4
CITY-SCALE PLANNING AND OPERATIONS

Track 5
COMMUNITIES, COMMUNICATION AND PARTNERSHIPS

Track 6
WATER RESOURCES AND LARGE-SCALE WATER MANAGEMENT
### Posters

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<th>Quassem Bojbarah, Saudi Aramco, Saudi Arabia</th>
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<td>2D Or Not 2D - That Is The Question</td>
<td>Eric Kohnen, Jacobs, Canada</td>
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<td>P1.3</td>
<td>A Building Information Modelling (BIM) And Common Data Environment (CDE) Pilot For Toronto Water Capital Projects And Asset Management.</td>
<td>Alonso Hurtado, City of Toronto, Canada</td>
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<td>A Full Scale Advanced Anaerobic Digestion Case Study At Tarnow Wwtp, Poland</td>
<td>Ashish Sahu, Cambi Group AS, Norway</td>
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<td>P1.5</td>
<td>A Full-scale Operational Digital Twin For A Water Resource Recovery Facility -- The Case Of Eindhoven WRRF</td>
<td>Saba Daneshgar, Ghent University, Belgium</td>
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<td>P1.6</td>
<td>A Low Energy Consumption Wireless Telemetry And Tanks Control Level System For Small Water Distribution Networks In Isolated Remote Population Centres</td>
<td>Javier García Del Río, Canal de Isabel II, Spain</td>
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<td>P1.7</td>
<td>Advancing Towards A Circular Economy In Membrane Technology</td>
<td>Kelly Hill, Isle Utilities, Australia</td>
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<td>P1.8</td>
<td>Aligning Pre-modern Urban Water Distribution Networks Into District Metered Areas: A Modelling And Optimization Approach Adopted In The City Of Lilongwe, Malawi</td>
<td>Kenneth Kuntambila, Lilongwe Waterboard, Malawi</td>
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<td>Carbon Footprint Reduction Through Advanced Imaging And Wastewater Tank Cleaning</td>
<td>Megan Ross, SediVision, LLC, United States</td>
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<td>P1.11</td>
<td>Chances And Barriers Of Heat Extraction From Water Supply Systems</td>
<td>Florian Kretschmer, University of Natural Resources and Life Sciences, Vienna, Austria</td>
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<td>P1.12</td>
<td>Comparison Of Data-driven And Industry Approach On Leak Noise Correlation Using Iterative Computation On Acoustic Signal</td>
<td>Chun Wai Lau, The Hong Kong Polytechnic University, Hong Kong, China</td>
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EXHIBITION
The exhibition will be open from:
Monday 12 Aug — 09:00 / 18:00
Tuesday 13 Aug — 09:00 / 18:00
Wednesday 14 Aug — 09:00 / 18:00
Thursday 15 Aug — 09:00 / 15:45
We look forward to meeting you at the UK Pavilion (Stand 1000)

The events below are open to all:

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<td>Supporting Water Sector Innovation in England &amp; Wales</td>
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Did you know the next IWA World Water Congress & Exhibition will be in Glasgow? We hope to see you there in 2026.
# Exhibitor

## Exhibitor

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### Exhibitor

#### by stand number

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Hermann Sewerin GmbH | Office 888 592 9916
Cell 888 592 9916 ext. 103 | www.sewerin.com | sewerin-usa@sewerin.net

Connecting Every Drop

» Detect leaks  
» Reduce losses  
» Drive sustainability  
» Optimize asset replacement  
» Protect revenue

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| Room 705 | Malaysia Water Association (MWA) - Malaysia
| Room 705 | Malaysia Water Association, Sarawak Branche (MWAS) - Malaysia
| Room 703-3 | WPI - Water Professionals International - USA
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RACE SDG 2030 TARGET


Water and Sanitation for All.

Supporting over 100 Utilities Across 35 Countries in Africa, South East Asia & The Caribbean, over the past 20 years.

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Facebook: www.facebook.com/AarhusVand
LinkedIn: www.linkedin.com/company/AarhusVand

**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__Inc
Facebook: https://www.facebook.com/AdvancedDrainageSystems

**Stand 1000**
**ANGLIAN WATER SERVICES**
Company/organization name: Anglian Water Services
City: Huntingdon
Country: UK
Web address: www.anglianwater.co.uk
LinkedIn: @anglianwater

**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

**Stand 700**
**ARIA FILTRA**
City: Cortland, NY
Country: USA
Web address: www.ariafiltra.com
LinkedIn: Aria Filtra

**Stand 300**
**AECOM - OPERATIONS CHALLENGE**
City: Markham
Country: Canada
Web address: aecom.ca
LinkedIn: https://www.linkedin.com/company/aecom
X: https://X.com/AECOM
Facebook: www.facebook.com/aecom

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

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: www.anglianwater.co.uk
LinkedIn: @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.

**Stand 300**
**APX10**
City: Milwaukee, WI
Country: USA
Web address: www.apx10.com

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

**Stand 910**
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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 70-1**
**AQUA ACTION**
City: Montreal
Country: Canada
Web address: www.aquaaction.org
LinkedIn: https://www.linkedin.com/company/aquaaction/mycompany/
X: https://X.com/flow/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. 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 300**
**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

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**Stand 800**
**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.

**Stand 300**
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**Stand 910**
**AQUATECH GLOBAL**
City: Amsterdam
Country: The Netherlands
Web address: www.aquatechtrade.com
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X: https://X.com/Aquatech
Facebook: https://www.facebook.com/aquatechtrade

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**Stand 910**
**AQUATECH GLOBAL**
City: Amsterdam
Country: The Netherlands
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
ASIAN WATER MAGAZINE
City: Petaling Jaya, Selangor
Country: Malaysia
Web address: www.asianwater.com.my
LinkedIn: www.linkedin.com/company/asian-water-magazine
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.

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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.

BALMORAL TANKS
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.

BISAN
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/bisanincanada
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.

BPC INSTRUMENTS
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.

Bureau of Sewerage, Tokyo Metropolitan Government

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.
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/cambith/
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
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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 610-8
CANADIAN WATER NETWORK
City: Waterloo, Ontario
Country: Canada
Web address: https://canadian-water-network.ca/
LinkedIn: https://www.linkedin.com/company/canadian-water-network/
K: @CdnWaterNetwork
Facebook: https://www.facebook.com/CanadianWaterNetwork

Canadian Water Network supports decision-makers across sectors in addressing nationally relevant water-related 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 510-9
CAPGEMINI UK
City: London
Country: United Kingdom
Web address: https://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-to-end services and solutions leveraging strengths from strategy and design to engineering, all fuelled 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://www.carleton.ca/
LinkedIn: https://www.linkedin.com/school/carleton-university/
K: 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 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 Bofu Inverter technology Co., Ltd., Nanyue pump industry Co., Ltd., WieTe 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/cla-valusa

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
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 reimage 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 610 -1
CRITICAL MATRIX

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 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 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/dalhousie-university/
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 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, project management, and field service personnel provide our customers with high quality solutions and services.

Stand 607
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/cst-industries-inc/
X: https://x.com/CSTIndustries
Facebook: https://www.facebook.com/CSTIndustries/

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 develops and manufactures nanomaterials-based 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.

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.

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.

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

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CrayoNano is 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.
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!

Stand 510-10
DATASTREAM

Stand 610-1
DEEPCHILL

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-water-solutions-inc
X: @digitalwater5

The hydrant.AI device from Digital Water Solutions monitors water distribution networks for pressure, transients and leaks. Using advanced AI/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 710-12
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Stand 740
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For editorial inquiries, contact Toby Gorman, toby@actualmedia.ca
For advertising inquiries, contact Vanessa Watson, vanessa@actualmedia.ca

Access the Report today!

NOW AVAILABLE!
Stand 910
THE EUROPEAN BENCHMARKING CO-OPERATION
(EBCC FOUNDATION)
Web address: https://www.waterbenchmark.org/
The European Benchmarking Co-operation (EBCC 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
European programme, EBC is also involved in
everal 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 (P),
FIWA (FIN), Norsk Vann (NL), Yewin (NL) and EWEA),
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/ecoaai-innovates/
Facebook: https://www.facebook.com/bizdataa/
BizData is a company specializing in AI 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 AI.

Stand 4D1
ENDRESS+HAUSER
City: Burlington
Country: Canada
Web address: www.ca.endress.com
LinkedIn: https://www.linkedin.com/company/endress-
hauser-group/
X: https://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
ENSPRIED SOLUTIONS
City: Michigan
Country: USA
Web address: https://www.enspired-solutions.com/
product
LinkedIn: https://www.linkedin.com/company/
enspired-solutions/5minCompanyUri=urn%3Ali%3A
fs mínimoComp%3A79864746&lipi=urn%3Ali%3Apage
%3Ad_falgi0j3_company%3Bbli2&winhrTVKqo%2Fasy
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EnSPriED 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 408
ESRI
City: Redlands
Country: United States of America
Web address: www.esri.com/water-utilities
LinkedIn: https://www.linkedin.com/groups/6533227
K: https://K.com/EsriWate
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
EXACTBLUE TECHNOLOGIES INC
LinkedIn: @exactblue

Stand 610-5
EXACTBLUE TECHNOLOGIES INC

Stand 610-1
FIBRACAST

FIBRACAST

FLEMMING

FLOWNERGIA

Stand 710-11
FLEMMING COLLEGE

Stand 820
FYLD
City: London
Country: UK
Web address: https://www.fyld.ai/
LinkedIn: https://www.linkedin.com/company/fyldai/
X: https://X.com/fyld_ai/Tangden
Featured by Isle at: W-Lab Safety & Wellbeing
Showcase and USA Technology Approval Group 23
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 1011-F
GEI CONSULTANTS
City: Vaughan, Ontario
Country: Canada
Web address: www.geiconsultants.com
LinkedIn: https://www.linkedin.com/company/gei-
consultants-inc/-
X: https://X.com/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.
Stand 630
GEMU VALVES CANADA INC.
City: Laval, Quebec
Country: Canada
Web address: https://www.gemuv-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

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Stand 400
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City: Bjerringbro
Country: Denmark
Web address: grundfos.com
LinkedIn: 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 the Grundfos Group as one of the world’s largest pump manufacturers with 20,000 employees in 56 countries.

Stand 607
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/sewerinngmbh/

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 510-4
HETEK SOLUTIONS
City: Richmond Hill
Country: Canada
Web address: www.hightensesolutions.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 PERIUA® 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 practicable. Water pipe locating and water leak detecting both has been combined in one device and made a revolution named IT-SONIC®.

Stand 820
INCTRL SOLUTIONS
City: Toronto, ON
Country: Canada
Web address: https://www.inctrl.com/
LinkedIn: https://www.linkedin.com/company/inctrl-solutions-inc/
X: https://X.com/inCTRL10
Facebook: https://www.facebook.com/profile.php?id=100092507841167&sk=rabout&view=10000686899395

INCTRL, also known as inCTRL or inCTRL Solutions Inc, is an independent innovator, providing 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 910
HYDRAULOOF INC.
City: Leeuwarden
Country: The Netherlands
Web address: https://www.hydraulicool.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.

INRS-ETE

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 910
HYDRAULOOF INC.
City: Leeuwarden
Country: The Netherlands
Web address: https://www.hydraulicool.com
LinkedIn: {1} Hydraloop: Overview | LinkedIn
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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 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 810
INDIA PAVILION

Stand 820
INNOVATION PAVILION

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 607-7P
INRS ETE
City: Quebec, Quebec
Country: Canada
Web Address: https://inrs.ca/en/lLlns/centres-de-recherche/eaute-terre-environnement-recherche-centre/LinkedIn: https://www.linkedin.com/school/institut-national-recherche-environnementale-
X: https://X.com/llow/login?redirect_after_login=%2Finsciences
Facebook: https://www.facebook.com/innsiences/

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 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 equipment, and utility instrumentation, especially for water leak detection systems, underground detection equipment, and tap water use. The company has more than 60 subsidiaries, representative offices and agents, the HUBER Group is among the worldwide leaders in the environmental engineering sector and with its 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-the-art 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.
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.

IPEX

Stand 610-2
IPEX INC.
City: Oakville
Country: Canada
Web address: https://ipexna.com/LinkedIn: https://www.linkedin.com/company/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.

IQ Energy

Stand 740
IQ ENERGY - OPERATIONS CHALLENGE
City: Mississauga
Country: Canada
Web address: www.iqenergy.ca/LinkedIn: https://www.linkedin.com/company/iq-energy-inc/ [https://www.linkedin.com/company/iq-energy-ia]/
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.

Itron

Stand 1015
ITRON
City: Liberty Lake, WA
Country: USA

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.

IWA

Stand 734
INTERNATIONAL ULTRAVIOLET ASSOCIATION
City: Chevy Chase, MD
Country: USA
Web address: www.iuva.orgLinkedIn: https://www.linkedin.com/company/international-ultraviolet-association-inc/

The International Ultraviolet Association is a 501-c-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.

IWA YWP CANADA

Stand 600
INTERNATIONAL WATER ASSOCIATION (IWA)
Country: United Kingdom
Web address: https://www.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.

Jacobs

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

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.

John Brooks

Stand 740
JOHN BROOKS - OPERATIONS CHALLENGE
City: Mississauga, ON
Country: Canada
Web address: https://www.johnbrooks.ca/LinkedIn: https://www.linkedin.com/company/john-brooks-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.

John Brooks

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.

IWA World Water Congress & Exhibition 2024 | Toronto | Programme Guide | www.worldwatercongress.org | 129
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.


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.

Kamstrup, Stand 300, Country: Denmark, Web address: www.kamstrup.com

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.

KWR, Stand 907, KWR WATER RESEARCH INSTITUTE, City: Nieuwegein, Country: The Netherlands, Web address: www.kwrwater.nl, LinkedIn: https://nl.linkedin.com/company/kwr-water-research-institute, X: @KWR_Water

Malaysian Water Association (Sarawak Branch) is an 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.

Malaysian Water Association (Sarawak Branch), Stand Room 705, City: Kuching, Country: Malaysia, Web address: https://www.mwasa.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.

Lovibond® 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, water analysis equipment to the leisure, environmental and boiler water.

Lovibond®, Stand 620, LOVIBOND® WATER TESTING - TINTOMETER, City: Dortmund, Country: Germany, Web address: https://www.lovibond.com, LinkedIn: https://www.linkedin.com/company/lovibond/NC2HAE-water-testing/mycompany/facebook, X: @lovyb_andco

MDPI AG, 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: @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 Biostik® Program supplies distributors with high-end products, tools, and a supportive team to get started quickly using bioaugmentation.

MDPI AG, Stand 1204, MDPI AG, City: Basel, Country: Switzerland, Web address: https://www.mdpi.com/

The MDPI Open Access Program name=IWA2024-X_utm_from=2eRoom 803a6237

The MDPI AG, City: Basel, Country: Switzerland, Web address: https://www.mdpi.com/

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.

Malaysian Water Association (Sarawak Branch), Stand Room 705, City: Kuching, Country: Malaysia, Web address: https://www.mwasa.org.my

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Malaysian Water Association (Sarawak Branch), Stand Room 705, City: Kuching, Country: Malaysia, Web address: https://www.mwasa.org.my
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: St. John’s, Newfoundland and Labrador
Country: Canada
Web Address: https://www.mun.ca/
LinkedIn: https://www.linkedin.com/school/memorial-university-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/morrison-construction
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: www.linkedin.com/company/ms-filter-systems-inc
X: 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 610
NATIONAL MISSION FOR CLEAN GANGA (NMCG)
City: Leeuwarden
Country: The Netherlands
Website: www.wateralliance.nl
Water Alliance is partner in business at WaterCampus Leeuwarden. Water Alliance is a unique partnership of public engineering, reliable supply, and safe drinking water and sanitation.

Stand 710-14
NEPTUNE TECHNOLOGY GROUP CANADA

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)
Website: 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 water tech. Water Alliance is partner in business at WaterCampus Leeuwarden. www.wateralliance.nl
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.

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.

Noventa’s Energy-as-a-Service systems. Centred around our Wastewater Energy building, financing, owning, operation and the meter equipment installations to the design, building, planning, 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.

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://waternovation.challenges.org/

Ontario Water Works Association – A Section of AWWA, is at the forefront of research, technology and policy development with respect to safe, sufficient, and sustainable drinking water.

Ontario Trade 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.

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Stand 740
PEEL REGION - OPERATIONS CHALLENGE

Stand 402
RAMBOLL - SPONSOR LOUNGE

Stand 710-5
QMC METERING SOLUTIONS

Stand 50S
QINGDAO COMCORE TECHNOLOGIES CO., LTD.

Stand 1010
RAETTS

Stand 910
PWNT

Stand 740
REGIONAL MUNICIPALITY OF DURHAM - OPERATIONS CHALLENGE

Stand 510-2
PR’EAUTECH, INSTRUMENTATION & ODORS INC

Stand 507
POLYTECHNIQUE MONTREAL

Stand 740
Rapid Assessment Technology Services (RATS) Inc. - Operations Challenge

Stand 510-7
PUROXI PURE WATER GLOBAL INC.

Stand 402
Ramblöll 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.

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.

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 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 enables building portfolios, utilities and 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 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 cost-effective 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.

PR’Eautech is 2 divisions. First is Odor control: Our specialty is the treatment of industrial and municipal malodorous problems. We give you access to a complete 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: 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 flow equipment in Canada

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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.

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.

QMC offers efficient, sustainable solutions with lower costs and environmental impact, partnering with leading universities and companies.

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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 efficient 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
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Stand 1203
ROYAL SOCIETY OF CHEMISTRY
City: London
Country: United Kingdom
Web address: www.rsc.org
LinkedIn: https://www.linkedin.com/company/royoscchem
X: https://X.com/RoyalSocChem
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 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 510-1
SCIICORP INTERNATIONAL, CORP
City: Mississauga, Ontario
Country: Canada
Web address: https://sciicorp.net/
LinkedIn: https://www.linkedin.com/in/sciicorpinternational/

SciCorp with its BIOLOGIC™ 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.

Stand 1000
SCOTTISH GOVERNMENT
City: Edinburgh
Country: Scotland
Web address: www.gov.scot

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 1000
SCIICORP INTERNATIONAL, CORP
City: Mississauga, Ontario
Country: Canada
Web address: https://sciicorp.net/
LinkedIn: https://www.linkedin.com/in/sciicorpinternational/

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Stand 510-12
SEBAKMT/MEGGER
City: Phoenixville Pennsylvania
Country: United States
Web address: https://www.sebakmt.us/en_US/home-us.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 1000
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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: @shbfbp
Inverter, soft start, controller, protector
Facebook: http://shbfbp.com/

Located in Jading District, shanghai, Haibei fuer is mainly engaged in the research and production of various types of automatic control equipment, such as frequency converters, soft starters, large project control cabinets, etc.

Stand 610-14
SHARC ENERGY
City: Port Coquitlam
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: @SkyJuiceInc
Facebook: @skyjuicefoundation

SkyJuice manufactures and supplies patented passive membrane filtration systems for safe drinking water. 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: @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.

*South West 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.

*SWEL*

**Stand 740**

**SWEL - OPERATIONS CHALLENGE**

City: Toronto  
Country: Canada  
Web address: [SWEL](https://www.swel.com)

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).

*Symbient*

**Stand 610-1**

Symbient

*Terra15 Technologies Pty Ltd*

**Stand 820**

**TERRA15 TECHNOLOGIES PTY LTD**

City: Perth  
Country: Australia  
Web address: [Terra15](https://www.terra15.com.au)

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.

*SYNTEC*

**Stand 740**

**SYNTEC Process Equipment – Operations Challenge**

City: Bolton, Ontario  
Country: Canada  
Web address: [synotec.com](https://www.synotec.com)

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.

*Terra15 Technologies Pty Ltd*

**Stand 820**

**TERRA15 TECHNOLOGIES PTY LTD**

City: Perth  
Country: Australia  
Web address: [Terra15](https://www.terra15.com.au)

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*TCI Carbon Fibre Technologies*

**Stand 710-7**

**TCI CARBON FIBRE TECHNOLOGIES**

City: Mississauga  
Country: Canada  
Web address: [tcicarbonfibre.com](https://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.

*TeM Company*

**Stand 300**

**TEM COMPANY**

City: Aarhus C.  
Country: Denmark  
Web address: [temcompany.com](https://www.temcompany.com)

TEM公司将开发和销售地面检测器，用于矿山和地面应用。我们正在开发工具，用于检测和量化地下水的资源，以及管理泉水的再充。我们致力于将仪器开发成易于使用和覆盖数百米范围的工具。这种方法使得地面TEM公司能够通过工具为地面用户提供丰富的资源，以供世界各地的人们使用。

*Symbient*

**Stand 610-1**

Symbient

*SkyTEM*

**Stand 740**

**SWEL - OPERATIONS CHALLENGE**

City: Toronto  
Country: Canada  
Web address: [SWEL](https://www.swel.com)

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*Syntec Process Equipment – Operations Challenge*

**Stand 740**

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City: Bolton, Ontario  
Country: Canada  
Web address: [syntec.com](https://www.syntec.com)

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**Stand 610-1**

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**Stand 610-1**

Symbiant
Stand 610-7P
Toronto Metropolitan University
City: Toronto, Ontario
Country: Canada
Web address: https://www.torontometropolitantutoronto.ca
Facebook: https://www.facebook.com/torontomet
LinkedIn: https://www.linkedin.com/company/torontometropolitanuniversity

Stand 610-7P
UNIVERSITY OF CALGARY - ACWA
City: Calgary, Alberta
Country: Canada
Web address: https://research.ucalgary.ca/acwa/acwa
Facebook: https://www.facebook.com/universityofcalgary
LinkedIn: https://www.linkedin.com/school/ucalgary/

UNIVERSITY OF CALGARY
City: Calgary, Alberta
Country: Canada
Web address: https://www.ucalgary.ca/
Facebook: https://www.facebook.com/ucalgary
X: https://x.com/ucalgary
LinkedIn: https://www.linkedin.com/school/ucalgary/

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.

UNIVERSITY OF NEW BRUNSWICK
City: Fredericton, New Brunswick
Country: Canada
Web address: https://www.unb.ca/
LinkedIn: https://www.linkedin.com/school/university-of-new-brunswick
X: https://x.com/UNB
Facebook: https://www.facebook.com/universityofnewbrunswick

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.
University of Victoria

Stand 610-7P

UNIVERSITY OF VICTORIA – THE WATER INSTITUTE
City: Windsor, Ontario
Country: Canada
Web address: https://www.uwindsor.ca/
LinkedIn: https://www.linkedin.com/company/university-of-victoria/
X: https://x.com/uwaterloo
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.

University of Waterloo

Stand 610-7P

UNIVERSITY OF WATERLOO – THE WATER INSTITUTE
City: Waterloo, Ontario
Country: Canada
Web address: https://uwwaterloo.ca/
LinkedIn: https://www.linkedin.com/school/uwaterloo/
X: https://x.com/uWaterloo
Facebook: https://www.facebook.com/universityofwaterloo

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 spells out 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.

Washington University in St. Louis

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: https://www.uvsolutionsmag.com
LinkedIn: 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

UV PURE

Veolia

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.

Stand 305

VEOLIA
City: Boston
Country: United States
Web address: https://www.veolianorthamerica.com/
LinkedIn: https://www.linkedin.com/company/veolia-environment/
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
LinkedIn: https://www.linkedin.com/company/verifiglobal

VeriGlobal provides quality-assured technology performance testing and verification through competent third-party organizations. VeriGlobal 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 VeriGlobal Secretariat is located in Copenhagen.

Stand 910

VEWIN

VisitBritain

Stand 1000

VISIT BRITAIN

VorTech Water Solutions

Stand 820

VORTECH WATER SOLUTIONS
City: Galway
Country: Ireland
Web address: https://vortechws.com/vortex-powered-aeration/
LinkedIn: https://www.linkedin.com/company/vortech-water-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

Washington University in St. Louis

Stand 1000

VYNTelligence

708-4P

WASHINGTON UNIVERSITY IN ST. LOUIS
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.

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.

The Water Environment Federation (WEF) is a not-for-profit 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.

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.
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 (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.

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.

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 polyamide-based Sea Water Reverse Osmosis membrane when operating at 800 psi.