

# CONFERENCE PROGRAM



WEF  
**Circular Water  
Economy Summit**  
shaping the business of water



July 15-17, 2024 | Dallas, TX

**#CWESummit**

[wef.org/CWESummit](https://wef.org/CWESummit)

All events for the CWE Summit will be held at the [Hyatt Regency Dallas](#) hotel.

Presenter bios are available on the [CWE Summit Featured Speaker website](#).

## PROGRAM

### Monday, July 15, 2024 Pre-Summit Deep Dives

*Deep Dives A and B are available to add on free-of-charge to all Summit registrants. Deep Dives run from 1:00pm – 4:00 pm, followed by the Evening Welcome Reception open to all Summit registrants from 5:00 pm – 6:30 pm.*

#### Deep Dive A

#### **The Relationship Between Circular Water Economy and Oil & Gas Industry**

**1:00 pm – 4:00 pm**

**Room: Cumberland GH**

*(Limit 25 participants – Sold Out)*

This program focuses on the Circular Water Economy (CWE) for upstream, midstream, and downstream end users, solution providers, technology equipment suppliers, and other water related professionals to better define CWE and its relation to the Oil & Gas (O&G) Industry. Key elements for the O&G Industry will consider water access, use and drivers to move from linear to circular approaches for water management. An overview of the industry will be provided to enable active participation of all attendees. A variety of breakout upstream, midstream, and downstream case studies will be provided for group breakouts to discuss and brainstorm ways to improve circularity of water to eliminate wastewater, preservation of water resources, sustainability, and resiliency. The current state of practice, opportunities for improvement, challenges, and barriers will be discussed. Exploration of topics includes how to minimize by-products and waste, minimize consumption, include opportunities for carbon capture, maximize reuse best practices, and alternative delivery/finance approaches.

- |         |   |
|---------|---|
| 1:00 pm | Welcome   |
| 1:10 pm | Introductions (at individual tables)  |
| 1:20 pm | Setting the Stage: What Does WEF Mean by “Circular Water Economy”?<br>Aimeé R. Killeen, President, WEF Board of Trustees  |
| 1:30 pm | State of Circular Water Economy for the Oil & Gas Industry <ul style="list-style-type: none"><li>▪ Relevant Elements</li><li>▪ Key Considerations for Water</li><li>▪ Strategic Enablers</li><li>▪ Drivers to and from Water Circularity</li><li>▪ Foundational Elements of the O&amp;G Industry</li></ul> Facilitated by Tom Sandy, Brown and Caldwell<br>and Rusty Smith, Texas Produced Water Consortium |
| 1:50 pm | Breakouts to discuss in relation to the Circular Water Economy<br>Overview of Breakout Case Studies   |

2:00 pm	Whole Group Breakout Case Study Example Key Consideration and Report Out Discussion <ul style="list-style-type: none"> <li>• State of practice (linear and circular)</li> <li>• Opportunities for improvement</li> <li>• Challenges</li> <li>• Barriers</li> <li>• Advancement solutions</li> </ul>
2:15 pm	Break
2:30 pm	Small Group Breakouts
3:30 pm	Reporting
3:50 pm	Wrap Up
4:00 pm	Deep Dive Concludes

## **Deep Dive B**

### **Introducing the ESG Game Experience: Ignite Sustainability and Collaboration**

**1:00 pm – 4:00 pm**

**Room: Cumberland EF**

*(Limit 20 participants)*

Are you ready to embark on a transformative journey towards a more sustainable future? Introducing the ESG Game Experience – a dynamic and immersive simulation designed to empower your team with the knowledge, skills, and strategies to implement impactful Environmental, Social, and Governance (ESG) practices.

A simulation game for four teams of up to 5 people, the ESG Game Experience sets the stage with a carefully curated selection of ESG themes, each forming a gateway to a realm of innovation and responsible business practices. Your team will dive into captivating topics such as Employee Relations, Community Engagement, Climate Change, etc. Every theme begins a remarkable adventure, leading your team toward sustainable success.

Empower your team to lead the way in environmental stewardship, social responsibility, and sound governance. Join us to embark on your ESG Game Experience and become a catalyst for a brighter, more sustainable future.

The game will guide you along the following path of discovery:

#### **Unveil the Path to ESG Excellence**

The ESG Game Experience sets the stage with a carefully curated selection of ESG themes, each forming a gateway to a realm of innovation and responsible business practices. Your team will dive into captivating topics such as Employee Relations, Community Engagement, Climate Change, and many more. Every theme sparks the beginning of a remarkable adventure, leading your team toward sustainable success.

### **A World of Choices and Action**

Your journey continues as your team selects a theme in Phase 1, igniting a cascade of choices and decisions that mirror the real-world challenges faced by today's businesses. Will you embrace Circular Economy principles? Champion Gender Diversity? Promote Safe Working Conditions? You hold the reins, and your choices shape the path to progress.

### **Empowerment Through Learning**

In Phase 2, knowledge becomes power. Teams explore their chosen ESG domain, crafting strategies and solutions that breathe life into their aspirations. This is where theory meets action, where teams forge alliances, and where innovation takes center stage. Engaging tasks and challenges guide your team, enhancing collaboration and transforming concepts into tangible impact.

### **Navigating the Unexpected**

Phase 3 introduces a twist – the unpredictable. Teams will encounter unexpected challenges, mirroring the ever-evolving landscape of sustainable business. Adaptability, resourcefulness, and strategic thinking will guide you through these uncharted waters, ensuring your ESG initiatives stand strong against any tide.

### **Victory of Transformation**

In the end, one team emerges victorious, having achieved the most remarkable transformation on their ESG journey. But in the ESG Game Experience, every participant wins. The wisdom gained, the bonds forged, and the strategies uncovered are shared triumphs that empower your entire team to make a positive impact, both individually and collectively.

## **Monday Evening Welcome Reception**

**5:00 pm – 6:30 pm**

**Reunion Foyer**

To kick off the Circular Water Economy Summit, join us for a welcome reception with sustainability executives, decision-makers, and thought leaders from companies and municipalities that are successfully turning waste streams into value streams.

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The logo for Xylem, featuring the word "xylem" in a lowercase, blue, sans-serif font.

## Day 1: Tuesday, July 16, 2024

8:00 am – 6:30 pm

### Reunion Ballroom

*A breakfast buffet will be available near badge pickup, 7:00 am – 8:00 am, with morning programming running from 8:00 am-Noon, followed by a luncheon Noon – 1:00 pm. Afternoon programming runs from 1:30 pm – 5:00 pm followed by the networking reception 5:00 pm – 6:30 pm.*

### Opening Session

8:00 am – 10:00 am

Early circular water principles can be found in indigenous practices that embraced a respectful approach to water and to nature as a whole. Water was and continues to be revered by many of these cultures. A special screening of *Our Blue World* and accompanying panel discussion will open the Summit and further “explore humanity’s profound relationship with water.”

View the [Our Blue World - A Water Odyssey](#) trailer.

- 8:00 am Welcome to the Circular Water Economy Summit  
Aimeé R. Killeen, President, WEF Board of Trustees  
Ralph Exton, Executive Director, WEF  
John Ikeda, Chief Mission Officer, WEF
- 8:15 am Biosphere 2: Ecotechnic Laboratory for Circular Economy Air Purification,  
Wastewater Recycling and Food Production  
Mark Nelson, Institute of Ecotechnics
- 8:45 am Water and the Sacred Circle  
Travis Numan, University of Nevada-Reno
- 9:15 am Our Blue World Vignettes and Panel  
Facilitated by Aoife Kelleher, BlueTech Research

### World Café / Small Group Roundtable Discussions

10:00 am – 10:30 am

Connect in small groups with other CWE Summit participants to learn what brought them to the Summit and what they hope to take away from this experience.

**10:30 am – 11:00 am Networking Break**

**Session 1**  
**Future Forward – AI in Circular Water Economy**  
**11:00 am – Noon**

Fast-forward to the present day, Artificial Intelligence (AI) has become a part of the common vernacular. People in various industries are already tapping into the power of this new tool to improve and inform systems. A second-panel discussion hosted by thought leaders and practitioners will help uncover the power of AI and the potential behind this tool for water circularity.

The following speakers will discuss the traditional ancestral ways of integrating circularity into water practices and how, with the tools available to us, we can enhance our processes.

- 11:00 am      Introductions  
                  John Ikeda, Chief Mission Officer, WEF
- 11:05 am      Future Forward – AI in CWE Panel  
                  Robert Bornhofen, DC Water  
                  Gigi Karmous-Edwards, Karmous-Edwards Consultants  
                  Edmundo Ortega, Machine & Partners  
                  Facilitated by Barry Liner, The Water Council

**12:00 pm – 1:00 pm Luncheon**

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**Innovation Showcase I**

**1:00 pm – 1:30 pm**

Discover how Imagine H2O's portfolio companies are driving the transition towards a more circular water economy through their innovation and technological advancements. During these 30 minutes, you will hear from the following companies who promote a more resilient and resource-efficient future. Additionally, during the networking break at 3pm you can get an in-depth look into their technology and progress so far.

Max Gangestad, GWT  
Roger Berry, Sudoc  
Orianna Bretschger, Aquacycl  
Facilitated by Nidhi Menon, Imagine H2O

**Session 2**  
**The Intersection of Innovation & Funding**  
**1:30 pm – 3:00 pm**

Innovation and funding are critical spokes in the circular water wheel and are often identified as both opportunities and barriers. Their interdependency can make or break impactful movements. We've invited four prominent organizations in this space to showcase how they work to propel more sustainable technologies forward.

- 1:30 pm      Introductions  
John Ikeda, Chief Mission Officer, WEF
- 1:35 pm      Intersection of Innovation & Funding Presentations and Panel  
Lauren Greenlee, XPRIZE  
Charles Werth, Department of Energy (DOE) Advanced Research Projects  
Agency- Energy  
Earl Jones, DCVC  
Facilitated by Gregory Madden, H2O Innovation

**3:00 pm – 3:30 pm    Networking Break**

**Session 3**  
**Circular Flow Modeling**  
**3:30 pm – 5:00 pm**

Lean in to learn from top researchers versed in circular flow modeling for nutrients and decarbonization. This micro-course will give participants a high-level overview of the science-backed knowledge surrounding why it is critical to understand flow models and how they can inform circular opportunities across various industrial verticals.

- 3:30 pm      Introductions  
John Ikeda, Chief Mission Officer, WEF
- 3:35 pm      Moving to Capture vs. Dispose  
Sally Brown, University of Washington
- 4:00 pm      Realizing Carbon’s Potential  
Angela Fasnacht, Princeton University
- 4:30 pm      Small Group Exercise  
During the last half-hour participants will put circular flow modeling into practice together as a group.

**Tuesday Networking Reception**  
**5:00 pm – 6:30 pm**  
**Reunion Foyer**

Grab a drink and snacks and connect with other participants and speakers met earlier today. Or, if the vignettes shown in the Opening Session wasn’t enough, come watch the full-length film, *Our Blue World*, discussing themes together with other Summit guests.

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## **Day 2: Wednesday, July 17, 2024**

**8:00 am – 4:30 pm**

### **Reunion Ballroom**

*A breakfast buffet will be available near badge pickup, 7:00 am – 8:00 am, with morning programming running from 8:00 am-noon, followed by a luncheon Noon – 1:00 pm, and afternoon programming 1:30 pm – 4:30 pm.*

### **Welcome and Keynote Speaker**

#### **Technology Spotlight: Meta’s Journey to Water Positive**

**8:00 am – 8:30 am**

Learn how Meta is making water the undercurrent of their sustainability strategy. Meta will highlight how water is moving through their organization with data centers, water restoration projects, and utility partnerships.

8:00 am        Welcome to CWE Summit Day 2  
                  Howard Carter, Incoming President, WEF Board of Trustees  
                  John Ikeda, Chief Mission Officer, WEF

8:10 am        Meta’s Pathway to Water Positive  
                  Tom Birmingham, Meta

### **Session 4**

#### **Industrial Symbiosis: From Policy to Practice**

**8:35 am – 10:05 am**

Adaptation has become a necessity in planning for circularity in industrial processes. Learn from trailblazing organizations that have found that power in numbers across non-traditional partners has created opportunities beyond the status quo. You will gain perspectives from policymakers, sustainable infrastructure experts, and municipal and industrial leaders.

8:35 am        Industrial Symbiosis: From Policy to Practice Panel  
                  Benedikte Borg Pedersen, Embassy of Denmark in Washington, DC  
                  Rep. Mike Chapman, Washington State Legislature  
                  Steve Worley, City of Vancouver, Washington  
                  Facilitated by Rhys Roth, Center for Sustainable Infrastructure

9:35 am        Small Group Exercise  
                  During the last half-hour of the session, participants will have the opportunity to conduct a simulated industrial symbiosis exercise.

**10:05 am – 10:30 am    Networking Break**



**Session 5**  
**Circular Water in Agriculture & Food Processing**  
**10:30 am – 12:00 pm**

Water is required by nature to grow the food we depend on. This session will spotlight how circular water approaches inform best practices across various companies, from vertical agriculture to intelligent irrigation, food production, and distribution.

- 10:30 am      Introductions  
                  John Ikeda, Chief Mission Officer, WEF
- 10:35 am      Circular Water in Agriculture & Food Processing Presentations and Panel  
                  Gopi Sandhu, Nestle-Purina  
                  Morgan Welch, U.S. Department of State (formerly at Bowery Farming)  
                  Daniel Baker, Manulife Investment Management  
                  Paul Bowen, GHD & Beverage Industry Environmental Roundtable  
                  Facilitated by Tracy Ekola, Brown and Caldwell

**12:00 pm – 1:00 pm Luncheon**

**Innovation Showcase II**  
**1:00 pm – 1:30 pm**

Discover how Imagine H2O's portfolio companies are driving the transition towards a more circular water economy through their innovation and technological advancements. During these 30 minutes, you will hear from the following companies who promote a more resilient and resource-efficient future. Additionally, during the networking break at 3pm you can get an in-depth look into their technology and progress so far.

- Thomas Fudge, WASE  
                  Kevin Vu, CREW Carbon  
                  Armando Lopez, FTD Solutions  
                  Facilitated by Nidhi Menon, Imagine H2O

**Session 6**  
**Drivers for Circular Water Strategies**  
**1:30 pm – 3:00 pm**

Circular water strategies continue to infiltrate the dialogue across multiple sectors. From companies to utilities, institutions to governments, learn what drivers are guiding these decisions, where impacts are taking shape, and the potential of embedding these strategies into business as usual.

- 1:30 pm      Introductions  
                  John Ikeda, Chief Mission Officer, WEF

1:35 pm Drivers for Circular Water Strategies Presentations and Panel  
Pradipta Parhi J.P. Morgan  
Betsy Hickman, Anthesis Group  
Kathleen Shaver, Alliance for Water Stewardship  
Matthew Jalbert, Trinity River Authority  
Facilitated by Lucy Pugh, AECOM

**3:00 pm – 3:30 pm Networking Break**

**Closing Keynote and Remarks**

**3:30 pm – 4:30 pm**

3:30 pm Closing Keynote  
Elizabeth Fazio Hale, Gulf Coast Authority

4:15 pm Closing Remarks  
Ralph Exton, Executive Director, WEF

The CWE Summit concludes at 4:30 pm.

**ADVISORY PANEL**

Brian Arntsen, Veolia  
Omer Bab, Israeli Embassy to the US  
Charles Bott, Hampton Roads Sanitation District  
Lorene Bruns, Duperon  
Rob Eddy, Resource Innovation Institute  
Ralph Exton, Grundfos (until 7/15)  
Haley Falconer, City of Boise, Idaho  
Max Gangestad, Gross-Wen Technologies  
Jeff Guild, BlueTech Research  
Matt Howard, The Water Council  
Heather Jennings, Probiotic Solutions  
Paul Kadota, Metro Vancouver  
Bob Kimball, WSP  
Walt Kozlowski, Xylem  
Matt Magruder, Milwaukee Metropolitan Sewerage District

Toni McCrory, Walmart Sustainability  
Nihdi Menon, Imagine H2O  
Brian Moore, Arcadis  
Julie Nahrgang, Water Environment Assoc of Texas  
Mark Philbrick, US Dept of Energy  
Caleb Powers, Ember Infrastructure  
Lucy Pugh, AECOM  
Tanja Rauch-Williams, Metro Water Recovery  
Darcy Sachs, Carollo  
Rob Simm, Stantec  
Michael Skovgaard Jensen, Grundfos  
Michelle Stockness, Freshwater  
Melanie Tan, Black & Veatch  
Karri Ving, Brown & Caldwell  
Jeff Weido, Xylem

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## SAFETY AND SECURITY

### At the Hyatt Regency Dallas:

- **Call “55” from a hotel landline** if you either experience or see a medical emergency, fire, or other safety concern to alert the in-house Safety & Security personnel. They will coordinate a response with paramedics and emergency services. **DO NOT CALL 911!**
- **Safeguard your hotel room.** Lock and deadbolt the door. Place the Do Not Disturb sign outside your door and keep the blinds or curtains closed. Don't let strangers into your room, even if they say they work for the hotel. You can call the front desk to check if in-room dining, an engineer, or other hotel employee was ordered to come to your room.

### Outside of the Hotel:

- **Protect your identity.** Remove and secure your Summit name badge when you leave Summit events and/or when you leave the Hotel to explore Dallas.

## SOCIAL MEDIA POLICY

WEF strongly encourages the use of social media to share your experiences at our event. This includes sharing interesting quotes or information, taking pictures with colleagues, and using the event hashtag: #CWESummit. However, to protect intellectual property, videotaping, filming, or live-streaming of any technical session is prohibited. Any participant violating this policy must relinquish the media and may be removed from the conference. Also, promotional or commercial use of photographs taken at WEFTEC and other WEF conferences is strictly prohibited. If you are interested in content, materials, or products, please consider talking to the speaker who may provide the information or grant permission.

## CODE OF CONDUCT

WEF is committed to providing a professional, safe, and welcoming environment during its in-person and virtual events for all participants. WEF expects all attendees, moderators, panelists, and speakers to uphold our commitment to diversity and inclusion by helping us provide a positive environment for everyone.

As a participant you agree to the following:

- To treat all individuals with respect and create a collegial, inclusive, and professional environment.
- To value a diversity of views and opinions by communicating openly with respect for others.
- Not to verbally abuse any individual or to discriminate, harass, or intimidate on the basis of gender, race, gender identity and expression, sexual orientation, physical or mental disability, physical appearance, age, religion, national origin, veteran status, citizenship, or professional rank.

Anyone requested to stop unacceptable behavior is expected to comply immediately. WEF management may take any action deemed necessary and appropriate, including removal from the event (and any remaining portions thereof) without warning and without refund of registration fee.

Additionally, if you are a WEF member, you agree to uphold the WEF Member Code of Conduct while attending WEF events.

[WEF Member Code of Conduct](#)

[WEF Events Code of Conduct](#)

### **Reporting Concerns**

To report a Code of Conduct violation, you may email the WEF Executive Director, at: [executivedirector@wef.org](mailto:executivedirector@wef.org).

**THANK YOU FOR JOINING WEF AT THE CWE SUMMIT 2024**

# Life Free of Water Challenges

## WEF Strategic Plan

### Our Mission

Inspiring the water community in pursuit of human and environmental well-being

### Our Vision

Life free of water challenges

### Our Three-Year Outcome Statement

Amplify the stories of water to grow, strengthen, and diversify the water community



### Our Strategic Goals

#### Goal 1

Attract and develop a diverse and passionate water workforce

##### Goal 1 Strategies

1. Raise public awareness about the importance of water and the water workforce
2. Reduce barriers to workforce entry and retention
3. Provide extraordinary opportunities for connection, growth, and education
4. Cultivate strategic partnerships

#### Goal 2

Cultivate a purpose-driven community to sustainably solve water challenges for all

##### Goal 2 Strategies

1. Drive connection and collaboration for the development of innovative solutions
2. Deliver best-in-class member experience
3. Creatively develop and deliver content and programming

#### Goal 3

Lead the transformation to the Circular Water Economy

##### Goal 3 Strategies

1. Convene stakeholders to craft WEF's Circular Water Economy framework and best practices
2. Proliferate WEF's Circular Water Economy framework and best practices
3. Champion adoption of Circular Water Economy
4. Eliminate barriers to Circular Water Economy adoption

### Our Core Values



Lead boldly with purpose and agility



Focus on our customers through empathy and service



Collaborate for collective impact



Integrate Diversity, Equity, and Inclusion in all we do