



**NORTHWEST  
BIOSOLIDS**

**BIOFEST 2023**



**9.26.23 - 9.28.23**

**PROGRAM**

# WELCOME TO BIOFEST 2023: MESSAGE FROM PRESIDENT

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This year Northwest Biosolids is celebrating our 35th annual BioFest...the longest-running association gathering in our unique industry. I doubt many (any?) of you were around for our first Biofest. If you were not at that original event, no need to worry. We have some historians to share their past experiences with you. And being that we are at Biofest, you'll hear about PFAS (that would be Present and Future Advancements for Solutions) in biosolids management and research. The NWB Board of Directors thanks you for your attendance and participation.



A handwritten signature in black ink that reads "Jim Dunbar". The signature is fluid and cursive, written in a professional style.

**Jim Dunbar**  
Northwest Biosolids President

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## Thank you to our 2023 Biofest Planning Committee!

Rebecca Singer, Biofest Chair

JR Inman

Sally Brown

Cat Gowan

Dave Keeney

Karla Guevarra

Jim Dunbar

Amy Ohlinger

# THANK YOU TO OUR 2023 SPONSORS

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# NORTHWEST BIOSOLIDS AMBASSADORS

The Board of Directors created a Northwest Biosolids Ambassadors group in 2022 to recognize the hard work and dedication to NWB over the years. In 2022, the NWB Board identified some integral contributors to our association. These Ambassadors were inducted in 2022 and will be invited to our annual Biofest events to share their personal stories with NWB and give their perspectives on preset topics, especially as issues have evolved over the years.



**Chuck  
Henry**



**Kyle  
Dorsey**



**Maile  
Lono-Batura**



**Steve  
Thompson**

## MEET OUR NEWEST AMBASSADORS:



### **Dan Thompson**

Dan has been working in the environmental field for over 40 years. He has worked as a forester, forest researcher, wetland biologist, Environmental scientist, Biosolids manager, wastewater facility manager, and business operations manager. Dan is a past president of Northwest Biosolids and was the long-time chair of the regulations committee. He recently retired from the City of Tacoma. He holds a B.S in Forest Management from Washington State University and a Masters and Ph.D. in Silviculture from the University of Washington.



### **Steve Wilson**

Steve Wilson is a soil scientist with a long history in biosolids management and beneficial use. He earned a master's degree from WSU in soils with a thesis titled "Nitrogen mineralization from sewage sludge-amended soils" before the word "biosolids" had been conceived (1977). His first professional job was with the Oregon DEQ, where he spent half of his time developing experimental on-site sewage treatment systems and the other half developing guidance policy for biosolids in the state. After a few years, he became a consultant focused on land application and still works part-time for Brown and Caldwell (32 years and counting). During his career, he has assisted many clients with biosolids facility planning and reuse. He chaired two national WEF residuals conferences and has long been active with NW Biosolids, serving as a Board member for many years. He is married and has two adult sons. He and his wife Rachel enjoy spending time at their cabin on the Klickitat River, where fishing is a major attraction. His late-in-life ambition is to become a more accomplished bluegrass/american musician, and he plays his dobro every day!

# AGENDA AT A GLANCE

SEPT. 26- SEPT. 28, 2023

CAMPBELL'S RESORT IN CHELAN, WA

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## Tues., Sept. 26, 2023

- 11:00AM **Boulder Park Tour (Pre-registered attendees only) | Meet outside Campbell's Lobby**
- 4:30PM **Biofest 2023 Registration | Centennial Ballroom Foyer**
- 5:00PM **Biofest Kickoff & NWB Annual Membership Meeting | Stehekin Ballroom**
- 6:00PM **Biofest Welcome - Sponsor/Vendor Social Hour | Centennial Ballroom**

## Wed., Sept. 27, 2023

- 7:00AM **Breakfast & Registration | Centennial Ballroom**
- 8:00AM **Biofest Welcome | Stehekin Ballroom**
- 8:50AM **Northwest Biosolids Historical Panel | Stehekin Ballroom**
- 10:05AM **Historical Panel & Ambassadors Breakout Session | Centennial Ballroom**
- 11:20AM **Keynote Presented by Maile Lono-Batura, WEF | Stehekin Ballroom**
- 12:00PM **Lunch | Terrace**
- 1:00PM **PFAS Section | Stehekin Ballroom**
- 3:15PM **Circular Economy | Stehekin Ballroom**
- 5:00PM **Fun Run/River Walk | Meet by stairs across the street**
- 6:00PM **Northwest Biosolids Biofest Banquet | Beach Lodge 5 Landing**
- 7:30PM **Campfire**

## Thurs., Sept. 28, 2023

- 7:30AM **Breakfast | Centennial Ballroom**
- 8:30AM **Regional Regulatory Updates | Stehekin Ballroom**
- 10:40AM **Research | Stehekin Ballroom**
- 12:15PM **Lunch | Terrace**
- 1:15PM **Knowing Your Audience - Correspondence Workshop**  
**Learning to Talk the Talk: Communication Best Practices | Stehekin Ballroom**
- 3:00PM **Adjourn**

# 2023 Biofest Agenda

WED. 9.27

7:00AM-8:00AM: **BREAKFAST** | *CENTENNIAL BALLROOM*

8:00AM-8:40AM: **BIOFEST WELCOME** | *STEHEKIN BALLROOM*

The Northwest Biosolids Biofest Chairs and Board President welcome you to the 2023 Biofest!



**REBECCA SINGER** *OPERATIONS AND MAINTENANCE MANAGER | KING COUNTY'S WASTEWATER TREATMENT DIVISION*

Rebecca Singer manages the Operations and Maintenance Section for King County's Wastewater Treatment Division (WTD). WTD is an industry leader in clean water management and beneficial use products and services such as recycled water, biogas, Loop® biosolids, and sewer heat recovery. Rebecca oversees five treatment plants and 101 facilities that support more than 420 square miles of sewer pipes in King and parts of Snohomish and Pierce counties. Her plant management team provides leadership to over 350 employees in 5 locations. Rebecca has extensive experience in wastewater processing, strategic planning, and regulatory compliance, including policy development, educating colleagues and the public on technical topics, and building cross-functional teams. Rebecca played key roles in multiple state and federally funded projects that used biosolids and recycled water. Before her position with King County, she worked for the Washington State Department of Ecology, providing technical assistance to nearly 300 biosolids-permitted facilities. Rebecca holds a Master of Science in Environmental and Forest Resources from the University of Washington.



**J.R. INMAN** *CO-OWNER, VP | M&J CONSULTING*

J.R. worked with Northwest Cascade Inc / FloHawks Plumbing & Septic for over 42+ years as GM / VP for 30 Years. Also Worked with Liquid Environmental Solution for 2+ Years as Regional VP and GM over all Septic and DrainCleaning in the company. Last 2+ years is co-owner and VP of M&J Consulting, doing Business Consulting, Sales Training along with other Industry Training Services. JR has performed work and managed the service plumbing, septic pumping & portable toilet industry for 40 years. JR is licensed in a dozen counties in Washington State as a Pumper, Operation and Maintenance Specialist and Septic Installer. JR has served on boards including National On-Site Wastewater Recycling Association & Northwest Bio-Solids Management Association, Electrical Review committee, and WAC Review / re-write for State of Washington. JR is also Past President of Washington On-Site Sewage Association and is a certified instructor for On-Site Industry.



**JIM DUNBAR, P.E** *GENERAL MANAGER | LYSTEK INTERNATIONAL*

Jim Dunbar is the General Manager for California operations at Lystek International. Jim is a graduate of the University of Notre Dame (BSCE) and St. Xavier University (MBA) and a Professional Engineer with more than 25 years' experience in the management of solid waste and treatment of liquid wastes in the United States and Europe. Jim's involvement with biosolids has led him to develop a northern California regional organics management facility which opened in 2016. This facility also has a successful land application program that utilizes a Class A liquid fertilizer program. Jim has been on the Northwest Biosolids Board of Directors since 2017, and the Board President since 2021.

# 2023 Biofest Agenda

WED. 9.27

8:40AM-8:50AM: **BREAK**

8:50AM-9:50AM: **NORTHWEST BIOSOLIDS HISTORICAL PANEL | STEHEKIN BALLROOM - MODERATED BY REBECCA SINGER**

This panel represents just a few of the folks who played an integral role in developing the biosolids program that we see today; from research, to policy, to implementation, to use. This panel looks at the history of biosolids over the last 35 years, Northwest Biosolids Management Association, and more.



**CHUCK HENRY** *INTERNATIONAL CONSULTANT*

Currently, working on numerous USAID projects as an environmental advisor. Former faculty at the University of Washington, I have been involved in research and development, planning, design and implementation, and education of innovative environmental solutions to the numerous challenges facing marginalized communities through the world. I have authored/co-authored over 75 articles, edited 10 books/proceedings, and written and published 2 books. I have extensive expertise in sanitation, water systems, renewable energy, and composting, solid waste management, and the use of organic amendments as fertilizers. I have designed and implemented sustainable projects in India, Ecuador, Mexico, Cambodia, Costa Rica, and Afghanistan, including development and commercialization of a urine diverting dry (composting) toilet.



**KYLE DORSEY** *EXECUTIVE DIRECTOR | COALITION FOR CLEAN WATER*

Kyle Dorsey is the Executive Director at the Coalition for Clean Water, a nonprofit representing local governments focusing on wastewater, biosolids, and stormwater issues. Kyle came to the Coalition after more than thirty years with the Washington State Department of Ecology and has also worked in the private sector as the environmental services manager for a small business. Kyle has experience in legislative analysis, rulemaking, and permitting. While at Ecology he served as the state biosolids program coordinator as well as a regional program coordinator, is the original author of the state biosolids program rules, and oversaw development of the state biosolids program permit system. Kyle was an active participant in national program development and traces his biosolids roots back to before the federal rules in 40 CFR Part 503. He is a 1981 graduate of Washington State University. Kyle is an umpire and volleyball referee and likes to fish, work with wood, and spend time with his children and grandchildren.



**DAN THOMPSON**

Dan has been working in the environmental field for over 40 years. He has worked as a forester, forest researcher, wetland biologist Environmental scientist, Biosolids manager, wastewater faculty manager and business operations manager. Dan is a past president of Northwest Biosolids and was the long-time chair of the regulations committee. He recently retired from the City of Tacoma. He holds a B.S in forest Management from Washington State University and a Masters and PhD in Silviculture from the University of Washington.



**PETE MACHINO**

King County-1972 -1998 - Three assignments-Environmental Manager for Wastewater and Public Transportation planning, Salmon Enhancement/Water Quality Manager and Biosolids Program Manager.  
Region Sludge Committee-Chair 1988-1991  
Helped the Biosolids Profession embraced the term Biosolids-1990's  
National Biosolids Partnership 1998-2013-Manged the Environmental Management Program that helped wastewater organizations around the world manage biosolids programs in an environmental and systematic manner.

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WED. 9.27

9:50AM-10:05AM: **BREAK**

10:05AM-11:05AM: **HISTORICAL PANEL & AMBASSADOR  
BREAKOUT SESSION | CENTENNIAL BALLROOM -  
MODERATED BY REBECCA SINGER**

Joining the panel will be some of Northwest Biosolids Ambassadors Steve Wilson and Maile Lono-Batura in our 2023 breakout discussions, facilitated by Rebecca Singer.

11:05AM-11:20AM: **BREAK**

11:20AM-12:00PM: **KEYNOTE | STEHEKIN BALLROOM -  
MODERATED BY JIM DUNBAR**

## **GETTING SCHOOLED: MUSINGS FROM A BIOSOLIDS NETWORK PLAYBOOK**

Maile Lono-Batura, Director of Sustainable Biosolids, Water Environment Federation

Great Scott! Northwest Biosolids is turning 35! In honor of this landmark year, a commemorative dedication to the regional biosolids network that set out to boldly go where no one had ventured before.



**MAILE LONO-BATURA** *DIRECTOR OF SUSTAINABLE BIOSOLIDS PROGRAMS | WATER ENVIRONMENT FEDERATION*

Maile Lono-Batura is the Director of Sustainable Biosolids Programs at the Water Environment Federation. Maile joined WEF in 2021 after serving as Executive Director of Northwest Biosolids for 22 years. She serves as a central coordinator and network leader for WEF's biosolids programs, finding synergies across organizations to elevate impactful movements. Maile earned her Bachelor's in Community & Environmental Planning with an Environmental Studies Minor from the Univ. of WA. She received her Master's in Nonprofit Leadership from Seattle Univ. and is a Board-Certified Env. Scientist with the American Academy of Environmental Engineers and Scientists Board (AAEES). She was recently recognized as a AAEES 40 Under 40 Rising Stars Class of 2022.

12:00PM-12:55PM: **LUNCH ON THE TERRACE**



# 2023 Biofest Agenda

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## 1:00PM–3:00PM: **PFAS SECTION** | *STEHEKIN BALLROOM* – *MODERATED BY KARLA GUEVARRA*

### **"THE JOURNEY FROM PARTS PER MILLION TO PARTS PER TRILLION":** 1:00–1:15PM

PFAS seems like the contaminant that could be the end of land application as we know it. But so did pharmaceuticals and personal care products. And molybdenum and way back in the day cadmium. This presentation will give a brief review of contaminants and their end points over the decades.



#### **SALLY BROWN** *PROFESSOR | UNIVERSITY OF WASHINGTON*

Sally Brown is a Professor at the University of Washington. Sally Brown received her MS and PhD under Dr. Rufus Chaney in 1996 at the University of Maryland. Her dissertation was on the Long-term effects of biosolids application on agricultural soils. Her work with biosolids started there and hasn't stopped since. She is a Fellow in the Soil Science Society of America and was a two term member of the National Academy of Science Committee on Soil Science. She writes a monthly column for BioCycle Magazine and Northwest Biosolids. <https://nwbiosolids.org/whats-happening/resource-library>

### **IS LAND APPLICATION OF BIOSOLIDS A SIGNIFICANT SOURCE OF HUMAN PFAS EXPOSURE VIA GROUNDWATER CONTAMINATION:** 1:20–1:50PM

Presentation will evaluate incidence and mobility of PFAS in soil following land application of biosolids and the potential for groundwater contamination.

Learning objectives:

- To fully understand the ubiquitous nature and global distributions of PFAS in soil and groundwater
- To be exposed to the modelling approach to determining the risk of PFAS contamination of groundwater, following land application of groundwater



#### **IAN PEPPER** *REGENTS PROFESSOR, DIRECTOR OF THE WATER AND ENERGY SUSTAINABLE TECHNOLOGY CENTER | UNIVERSITY OF ARIZONA*

Dr. Pepper is a Regents Professor at the University of Arizona, where he is the Director of the Water and Energy Sustainable Technology Center. He is currently conducting a variety of research studies including wastewater-based epidemiology monitoring of SARS-CoV-2 and issues related to the land application of biosolids.

# 2023 Biofest Agenda

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## **PFAS - BIOSOLIDS REGULATION AND RESEARCH NEXUS: 1:55-2:15PM**

This session will discuss how regulators and researchers work together to develop science-based regulations and best practices. This will address how research informed regulations.



### **KYLE DORSEY** EXECUTIVE DIRECTOR | COALITION FOR CLEAN WATER

Kyle Dorsey is the Executive Director at the Coalition for Clean Water, a nonprofit representing local governments focusing on wastewater, biosolids, and stormwater issues. Kyle came to the Coalition after more than thirty years with the Washington State Department of Ecology and has also worked in the private sector as the environmental services manager for a small business. Kyle has experience in legislative analysis, rulemaking, and permitting. While at Ecology he served as the state biosolids program coordinator as well as a regional program coordinator, is the original author of the state biosolids program rules, and oversaw development of the state biosolids program permit system. Kyle was an active participant in national program development and traces his biosolids roots back to before the federal rules in 40 CFR Part 503. He is a 1981 graduate of Washington State University. Kyle is an umpire and volleyball referee and likes to fish, work with wood, and spend time with his children and grandchildren.



### **CHUCK HENRY** INTERNATIONAL CONSULTANT

Currently, working on numerous USAID projects as an environmental advisor. Former faculty at the University of Washington, I have been involved in research and development, planning, design and implementation, and education of innovative environmental solutions to the numerous challenges facing marginalized communities through the world. I have authored/co-authored over 75 articles, edited 10 books/proceedings, and written and published 2 books. I have extensive expertise in sanitation, water systems, renewable energy, and composting, solid waste management, and the use of organic amendments as fertilizers. I have designed and implemented sustainable projects in India, Ecuador, Mexico, Cambodia, Costa Rica, and Afghanistan, including development and commercialization of a urine diverting dry (composting) toilet.

## **THE STATE OF THE UNION: UTILITY AND LEGISLATIVE ACTIONS REGARDING PFAS IN THE PNW: 2:20-3:00PM**

This talk will give an overview of how NW Biosolids utility members are responding to the PFAS issue and what legislative actions are being taken or proposed in the region.



### **CAT GOWAN** RESEARCH COORDINATOR | KING COUNTY WASTEWATER TREATMENT DIVISION

Cat Gowan is an experienced community engagement professional, skilled in stakeholder research (quantitative and qualitative), social psychology, and outreach. She earned her Master's degree in the Human Dimensions of Natural Resource Management from the University of Washington. Cat currently works for the King County Wastewater Treatment Division (WTD). In October, she will be taking over the role of Research Coordinator for WTD's Resource Recovery section, but for the last five years she has been a member of the biosolids team.

# 2023 Biofest Agenda

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3:00PM–3:15PM: **BREAK IN THE STEHEKIN BALLROOM**

3:15–4:35PM: **CIRCULAR ECONOMY | STEHEKIN BALLROOM – MODERATED BY REBECCA SINGER**

**SCORECARD FOR CIRCULARITY- A LOOK AT NUTRIENT RECOVERY IN SEATTLE AND TACOMA:** 3:15–3:45PM

Seattle and Tacoma (and most of the Northwest) are dream cities for biosolids and composting. But how close are we to actually recovering and reusing the nutrients in our cities? And can we really grow our own? Here we use data to track nutrient flows in both cities and the potential for gardens in each city to feed ourselves.



**SALLY BROWN** PROFESSOR | UNIVERSITY OF WASHINGTON

Sally Brown is a Professor at the University of Washington. Sally Brown received her MS and PhD under Dr. Rufus Chaney in 1996 at the University of Maryland. Her dissertation was on the Long-term effects of biosolids application on agricultural soils. Her work with biosolids started there and hasn't stopped since. She is a Fellow in the Soil Science Society of America and was a two term member of the National Academy of Science Committee on Soil Science. She writes a monthly column for BioCycle Magazine and Northwest Biosolids. <https://nwbiosolids.org/whats-happening/resource-library>

**SOIL CARBON SEQUESTRATION FROM LONG-TERM BIOSOLIDS APPLICATION IN CENTRAL WA:** 3:50–4:10PM

When biosolids are applied to agricultural lands, they add not only nutrients but also carbon to the soil. By increasing plant growth, the biosolids may increase soil carbon storage beyond the carbon applied in the biosolids. This talk discusses research quantifying soil carbon stocks after long-term biosolids applications in central WA in the context of soil carbon markets.



**DEIRDRE GRIFFIN-LAHUE, PHD** ASSISTANT PROFESSOR | WASHINGTON STATE UNIVERSITY

Since January 2019, Deirdre Griffin LaHue is an assistant professor of soil quality and sustainable soil management at WSU's Northwest Washington Research & Extension Center (NWREC) in Mount Vernon. Her research focuses on the impacts of agricultural practices on soil health, microbial communities, and the functions they provide. She takes a systems approach to understanding dynamics of soil organic matter, microbes, and nutrients in agriculture to help improve the resilience of cropping systems. Deirdre received her M.S. and Ph.D. in Soils & Biogeochemistry from UC Davis, where she studied the effects of soil amendments and irrigation management on soil carbon and nitrogen dynamics, soil health, and system productivity and profitability. Originally from Maryland, Deirdre earned her B.S. at the University of Maryland in Environmental Science and Policy.

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## **ECOSYSTEM SERVICES VALUATION OF BIOSOLIDS:** 4:15-4:35PM

This talk will explain how we can show the value our biosolids beyond nitrogen content, waste diversion, or even carbon sequestration. King County and Seattle Public Utilities have been working with a consultant to put a dollar value on benefits like water supply, soil health, and soil formation to give a real sense of the value of biosolids.



### **CAT GOWAN** RESEARCH COORDINATOR | KING COUNTY WASTEWATER TREATMENT DIVISION

Cat Gowan is an experienced community engagement professional, skilled in stakeholder research (quantitative and qualitative), social psychology, and outreach. She earned her Master's degree in the Human Dimensions of Natural Resource Management from the University of Washington.

Cat currently works for the King County Wastewater Treatment Division (WTD). In October, she will be taking over the role of Research Coordinator for WTD's Resource Recovery section, but for the last five years she has been a member of the biosolids team.



### **DAVE KEENEY** BIOSOLIDS COMPOSTING PROJECT MANAGER | KING COUNTY

Dave is the Biosolids Composting project manager for King County. He has spent the past 9 years beneficially using biosolids, first at Metro Vancouver and for the past 2 years at King County. Prior to that he spent 10 years in research and consulting for the removal of underground contamination from fuel spills.

4:35PM: **ADJOURN**

5:00PM: **FUN RUN/RIVER WALK | MEET BY STAIRS ACROSS STREET**

6:00PM: **NORTHWEST BIOSOLIDS BANQUET | BEACH LODGE 5**

7:30PM: **NORTHWEST BIOSOLIDS CAMPFIRE**

# 2023 Biofest Agenda

THURS. 9.28

7:30AM-8:30AM: **BREAKFAST** | *CENTENNIAL BALLROOM*

8:30AM-10:25AM: **REGIONAL REGULATORY UPDATES** |  
*STEHEKIN BALLROOM - MODERATED BY CAT GOWAN*

THIS SECTION WILL FEATURE REPRESENTATIVES FROM AROUND OUR REGION TO PROVIDE ESSENTIAL UPDATES FROM AROUND THE REGION FOR STATES AND PROVINCES, AND REGULATIONS.



**MAILE LONO-BATURA** *DIRECTOR OF SUSTAINABLE BIOSOLIDS PROGRAMS | WATER ENVIRONMENT FEDERATION*

Maile Lono-Batura is the Director of Sustainable Biosolids Programs at the Water Environment Federation. Maile joined WEF in 2021 after serving as Executive Director of Northwest Biosolids for 22 years. She serves as a central coordinator and network leader for WEF's biosolids programs, finding synergies across organizations to elevate impactful movements. Maile earned her Bachelor's in Community & Environmental Planning with an Environmental Studies Minor from the Univ. of WA. She received her Master's in Nonprofit Leadership from Seattle Univ. and is a Board-Certified Env. Scientist with the American Academy of Environmental Engineers and Scientists Board (AAEES). She was recently recognized as a AAEES 40 Under 40 Rising Stars Class of 2022.



**RUBY IRVING-HEWEY** *CENTRAL REGION BIOSOLIDS COORDINATOR | SOLID WASTE DIVISION OF ECOLOGY*

My name is Ruby Irving and having joined the Solid Waste Division of Ecology as the Central Region Biosolids Coordinator in August of 2022, I am the newest addition to the States Biosolids program. Having received my MS in Biological Sciences, I am a true at heart Biologist nerd with hands on experience ranging from wildlife ecology, aquatic restoration, and macroinvertebrate identification to the more background work of the water quality policy and compliance side of things. In short, I am a small town country girl with combined big city experience. I currently live in Goldendale Wa with my husband Frank, 2 horses (Bill and Koselig), 3 dogs (Floki, Odyn, and Penelope) and 9 cats.



**Mike Gates**

*Clean Water Services Biosolids and Dewatering Program*

Mike is the Operations Analyst for the dewatering and biosolids program at Clean Water Services. He specializes in dewatering and biosolids program optimization. Mike has been with Clean Water Services for 16 years with his main focus on the optimization of dewatering centrifuges with the last 5 years focused on optimizing the biosolids program. Mike currently oversees the land application of approximately 11000 dry tons of biosolids beneficially used in the Willamette Valley and several counties in Eastern Oregon.

# 2023 Biofest Agenda

THURS. 9.28

## 8:30AM-10:25AM: **REGIONAL REGULATORY UPDATES** | *STEHEKIN BALLROOM - MODERATED BY CAT GOWAN*



**TERRY ALBER** *PRETREATMENT PROGRAM COORDINATOR | CITY OF BOISE*

Terry Alber has spent over two decades involved in water quality, including operations, inspections, data and sample collection and analysis, and regulatory analysis, interpretation, compliance, and enforcement. He started his fifteen years with the City of Boise as an Environmental Technician and rose through Senior Environmental Specialist to the Pretreatment Program Coordinator position. In the last three and a half years, he has tackled the challenge of book-ending the wastewater treatment process as DEQ's Biosolids and Pretreatment Coordinator, providing compliance assistance and guidance to Idaho's POTWs. In Idaho, if you have a Biosolids or Pretreatment question, Terry will have an answer (even if he has to make one up).



**GREG KESTER**

Greg serves as both the technical and programmatic contact for CASA members and conduit for emerging issues on the state and federal levels on all biosolids, renewable energy, and related issues. He works closely with local, state and federal authorities as well as the private sector on biosolids management, climate change mitigation, and energy optimization. Prior to joining CASA in June 2007, he served as the state biosolids coordinator for the Wisconsin Department of Natural Resources, where he represented all states in the nation, by their election, to the USEPA on all biosolids issues. He has a BS in Civil and Environmental Engineering from the University of Wisconsin and is a Registered Professional Engineer.



**JASON DUFFIN** *COMPOST FACILITY IN MISSOULA*

Jason has been working at the Compost Facility in Missoula since 2005 for a Private Company. In 2017 the City of Missoula was able to purchase the Facility now known as Garden City Compost which is a Division of the Resource Recovery Center. Since that happened, he has been lucky enough to see the full potential of their facility and also learn a lot more about the science of Composting and working with various growing mediums. A large portion of that is his boss Gene Connell and himself being a part of this organization, Northwest Biosolids.



**MIKE VAN HAM** *PRESIDENT & FOUNDER | SYLVIS ENVIRONMENTAL*

Mike Van Ham is the President and founder of SYLVIS Environmental. Mike has been involved in biosolids research and the land application of organic residuals for 35 years and is considered an international scientific authority in this field. Mike has participated in biosolids projects, product development, and marketing around the world as a Registered Professional Forester, Professional Biologist, and Professional Agrologist. His strong will and passion for researching, recommending, and implementing beneficial uses of residuals to solve environmental challenges has led SYLVIS to manage residuals in mine reclamation, marginal land improvement, biomass development, agricultural and forest fertilization, landfill reclamation and soil product development.

# 2023 Biofest Agenda

THURS. 9.28

## 8:30AM-10:25AM: **REGIONAL REGULATORY UPDATES** | *STEHEKIN BALLROOM - MODERATED BY CAT GOWAN*



### **JASMINE QURESHI** *REGULATORY PROGRAM SPECIALIST | CITY OF CALGARY*

Jasmine Qureshi is an agrologist and horticulturist and has been the Regulatory Program Specialist for the City of Calgary's biosolids land application program, called Calgro for 10.5 years. She is responsible for the regulatory components of Calgro. This primarily includes: working with the agricultural community to select and manage the annual land base, overseeing the annual soil sampling program and working closely with Calgro Operations to ensure that all the regulatory components associated with the biosolids applications are met. She also has been part of the Alberta working group helping the AEPA Regulator to develop the updated Alberta biosolids guidelines and assists when time permits, with Calgary's other biosolids programs: composting and the willow/marginal land demonstration projects. Prior to working at the City of Calgary, she was an environmental consultant and the Project Manager for the Calgro Soil Sampling Program for 5 years. She is a proud member of the City of Calgary's biosolids management team and very happy to have the opportunity to connect with all of you Biofest!

## 10:25AM-10:40AM: **BREAK**

## 10:40AM-12:15PM: **RESEARCH SECTION** | *STEHEKIN BALLROOM - MODERATED BY JR INMAN*

### **RESEARCH UPDATES: PFAS | INTO THE WEEDS:** 10:40-11:00AM

This talk will feature a summary of current research on PFAS in biosolids amended soils. Complexity of analysis, transformations of compounds and other issues will be discussed. The talk will focus on work out of Linda Lee's lab at Purdue.



### **SALLY BROWN** *PROFESSOR | UNIVERSITY OF WASHINGTON*

Sally Brown is a Professor at the University of Washington. Sally Brown received her MS and PhD under Dr. Rufus Chaney in 1996 at the University of Maryland. Her dissertation was on the Long-term effects of biosolids application on agricultural soils. Her work with biosolids started there and hasn't stopped since. She is a Fellow in the Soil Science Society of America and was a two term member of the National Academy of Science Committee on Soil Science. She writes a monthly column for BioCycle Magazine and Northwest Biosolids. <https://nwbiosolids.org/whats-happening/resource-library>

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THURS. 9.28

10:40AM-12:15PM: **RESEARCH SECTION** | STEHEKIN BALLROOM

**SOIL HEALTH EFFECTS FROM SHORT- AND LONG-TERM BIOSOLIDS APPLICATION HISTORY:** 11:05-11:25AM

Biosolids applications can improve physical, biological, and chemical soil health properties, by incorporating organic matter and nutrients into agricultural systems. In a long-term trial located in a semi-arid, dryland system, biosolids increased available water holding capacity in the soil compared with synthetic fertilizers. Improvements in water holding capacity in moisture limited systems could allow farmers to integrate other soil health practices like cover cropping and grazing. This talk discusses research exploring soil health and yield impacts of biosolids in cover cropped and grazed systems.



**MADELINE DESJARDINS** STUDENT | WASHINGTON STATE UNIVERSITY

Madeline Desjardins is a PhD student studying soil science at Washington State University in Dr. Deirdre Griffin LaHue's Soil Health Lab at the Northwestern Washing Research and Extension Center (NWREC). Her research at the NWREC focuses on the impacts of long-term biosolids applications and cover crop grazing on soil health and sustainable crop productivity in dryland grain systems.

**FOREST SOIL NITRATE:** 11:30-11:50AM

Forest application of biosolids is a tried and true way to make trees grow bigger and faster. Application rates are limited by concerns over increasing nitrogen in groundwater. We took the full history of the King County Forest application program to evaluate the potential for nitrate movement to groundwater.



**SALLY BROWN** PROFESSOR | UNIVERSITY OF WASHINGTON

Sally Brown is a Professor at the University of Washington. Sally Brown received her MS and PhD under Dr. Rufus Chaney in 1996 at the University of Maryland. Her dissertation was on the Long-term effects of biosolids application on agricultural soils. Her work with biosolids started there and hasn't stopped since. She is a Fellow in the Soil Science Society of America and was a two term member of the National Academy of Science Committee on Soil Science. She writes a monthly column for BioCycle Magazine and Northwest Biosolids. <https://nwbiosolids.org/whats-happening/resource-library>

**THE CITY OF ALBANY'S JOURNEY TO SUSTAINABLE BIOSOLIDS MANAGEMENT:** 11:55AM-12:15PM

Forest application of biosolids is a tried and true way to make trees grow bigger and faster. Application rates are limited by concerns over increasing nitrogen in groundwater. We took the full history of the King County Forest application program to evaluate the potential for nitrate movement to groundwater.



**BARAKA POULIN** DIRECTOR OF BUSINESS DEVELOPMENT | ENGINEERED COMPOST SYSTEM

Mr. Poulin serves as Engineered Compost System's Director of Business Development. He joined ECS in 2019 and develops ideas and opportunities into successful compost projects. Prior to joining ECS, Mr. Poulin developed industrial scale biomass energy projects with both pyrolysis and gasification technology. He also brings an extensive background developing energy efficiency projects with public sector clients through energy service performance contracting.



# 2023 Biofest Agenda

THURS. 9.28

12:15PM–1:15PM: **LUNCH ON THE TERRACE**

1:15–3:00PM: **WORKSHOP | STEHEKIN BALLROOM**

## **LEARNING TO TALK THE TALK: COMMUNICATION BEST PRACTICES**

Sally Brown and Cat Gowan will be providing communication techniques and examples to help attendees clearly articulate the value of biosolids, even when the biosolids have hit the fan. Attendees will get the chance to practice responding to realistic scenarios and brainstorm actions to help their organization communicate effectively.



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**CAT GOWAN** RESEARCH COORDINATOR | KING COUNTY WASTEWATER TREATMENT DIVISION

Cat Gowan is an experienced community engagement professional, skilled in stakeholder research (quantitative and qualitative), social psychology, and outreach. She earned her Master's degree in the Human Dimensions of Natural Resource Management from the University of Washington. Cat currently works for the King County Wastewater Treatment Division (WTD). In October, she will be taking over the role of Research Coordinator for WTD's Resource Recovery section, but for the last five years she has been a member of the biosolids team.

3:00PM: **ADJOURN - WE HOPE TO SEE YOU FALL OF 2024!**

# THANK YOU TO OUR MODERATORS

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**SALLY BROWN** *PROFESSOR | UNIVERSITY OF WASHINGTON*

Sally Brown is a Professor at the University of Washington. Sally Brown received her MS and PhD under Dr. Rufus Chaney in 1996 at the University of Maryland. Her dissertation was on the Long-term effects of biosolids application on agricultural soils. Her work with biosolids started there and hasn't stopped since. She is a Fellow in the Soil Science Society of America and was a two term member of the National Academy of Science Committee on Soil Science. She writes a monthly column for BioCycle Magazine and Northwest Biosolids. <https://nwbiosolids.org/whats-happening/resource-library>



**JIM DUNBAR, P.E.** *GENERAL MANAGER | LYTEK INTERNATIONAL*

Jim Dunbar is the General Manager for California operations at Lystek International. Jim is a graduate of the University of Notre Dame (BSCE) and St. Xavier University (MBA) and a Professional Engineer with more than 25 years' experience in the management of solid waste and treatment of liquid wastes in the United States and Europe. Jim's involvement with biosolids has led him to develop a northern California regional organics management facility which opened in 2016. This facility also has a successful land application program that utilizes a Class A liquid fertilizer program. Jim has been on the Northwest Biosolids Board of Directors since 2017, and the Board President since 2021.



**CAT GOWAN** *RESEARCH COORDINATOR | KING COUNTY WASTEWATER TREATMENT DIVISION*

Cat Gowan is an experienced community engagement professional, skilled in stakeholder research (quantitative and qualitative), social psychology, and outreach. She earned her Master's degree in the Human Dimensions of Natural Resource Management from the University of Washington. Cat currently works for the King County Wastewater Treatment Division (WTD). In October, she will be taking over the role of Research Coordinator for WTD's Resource Recovery section, but for the last five years she has been a member of the biosolids team.



**KARLA GUEVARRA** *OPERATIONS PROGRAM MANAGER | PIERCE COUNTY'S CHAMBERS CREEK WWTP*

Currently Karla is the Operations Program Manager for Pierce County's Chambers Creek WWTP. Karla was previously a wastewater process engineer at King County's Brightwater WWTP and San Francisco's Oceanside Plant. Karla has twenty years of experience in water and wastewater Operations. Karla earned a M.S. in Environmental Engineering from Stanford University and a B.S. in Environmental Engineering Science from UC Berkeley.

# THANK YOU TO OUR MODERATORS

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**J.R. INMAN** CO-OWNER, VP | M&J CONSULTING

J.R. worked with Northwest Cascade Inc / FloHawks Plumbing & Septic for over 42+ years as GM / VP for 30 Years. Also Worked with Liquid Environmental Solution for 2+ Years as Regional VP and GM over all Septic and DrainCleaning in the company. Last 2+ years is co-owner and VP of M&J Consulting, doing Business Consulting, Sales Training along with other Industry Training Services. JR has performed work and managed the service plumbing, septic pumping & portable toilet industry for 40 years. JR is licensed in a dozen counties in Washington State as a Pumper, Operation and Maintenance Specialist and Septic Installer. JR has served on boards including National On-Site Wastewater Recycling Association & Northwest Bio-Solids Management Association, Electrical Review committee, and WAC Review / re-write for State of Washington. JR is also Past President of Washington On-Site Sewage Association and is a certified instructor for On-Site Industry.



**REBECCA SINGER** OPERATIONS AND MAINTENANCE MANAGER | KING COUNTY'S WASTEWATER TREATMENT DIVISION

Rebecca Singer manages the Operations and Maintenance Section for King County's Wastewater Treatment Division (WTD). WTD is an industry leader in clean water management and beneficial use products and services such as recycled water, biogas, Loop® biosolids, and sewer heat recovery. Rebecca oversees five treatment plants and 101 facilities that support more than 420 square miles of sewer pipes in King and parts of Snohomish and Pierce counties. Her plant management team provides leadership to over 350 employees in 5 locations. Rebecca has extensive experience in wastewater processing, strategic planning, and regulatory compliance, including policy development, educating colleagues and the public on technical topics, and building cross-functional teams. Rebecca played key roles in multiple state and federally funded projects that used biosolids and recycled water. Before her position with King County, she worked for the Washington State Department of Ecology, providing technical assistance to nearly 300 biosolids-permitted facilities. Rebecca holds a Master of Science in Environmental and Forest Resources from the University of Washington.

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## CONTINUING EDUCATION

Do you have a license # for continuing education? If so, please provide it at registration. All conference registrants will be provided a Certificate of Attendance upon exiting the conference. This can be used for tracking your continuing education credits.

If you have any questions about how to get your continuing education, please talk with Amy Ohlinger, Northwest Biosolids Executive Director at registration, or by emailing [amy@nwbiosolids.org](mailto:amy@nwbiosolids.org).



# NORTHWEST BIOSOLIDS

Unearthing Sustainable Solutions

## MISSION STATEMENT

To advance environmental sustainability through the beneficial use of biosolids.

We strive to:

- Be the Pacific Northwest regional voice for biosolids.
- Share historic and current knowledge.
- Advance the knowledge of biosolids recycling through collaboration with research institutions.
- Increase the use of biosolids products and broaden beneficial use markets by understanding community needs.

## NWB MEMBERSHIP

Northwest Biosolids exists because of you, our members. We provide our member utilities and companies with essential biosolids management information, resources, and opportunities.

- Find answers to your technical questions.
- Develop and improve your own biosolids management program.
- Keep current on the latest biosolids policy and technology.

For more information about becoming a member, please check out our website at [nwbiosolids.org](http://nwbiosolids.org) or email [info@nwbiosolids.org](mailto:info@nwbiosolids.org).

## WANT TO GET INVOLVED?

Northwest Biosolids is looking for committee volunteers! This is a great opportunity to get involved. Whether you have 30 minutes to spare a month, or a couple hours, we have opportunities for you! Here is a list of the Northwest Biosolids Committees:

- Education
- Membership
- Outreach
- Research

Please speak with a Northwest Board Member at Biofest or email [info@nwbiosolids.org](mailto:info@nwbiosolids.org) for more information about how to get involved with a committee.

BIDFEST 2023



# CAMPBELL'S MAP



Front Desk - 0  
 Bungalow Cafe - 7614  
 Veranda - 7616

- L** Laundry
- P** Pool
- H** Hot Tub
- E** Elevator
- I** Ice/Soda Machine
- R** Recycle
- F** Fitness Center

- 1. Front Desk & Lobby
- 2. Terrace
- 3. 2nd Floor Pub & Veranda
- 4. Bungalow Cafe
- 5. Conference Center
- 6. River Room
- 7. Park Room
- 8. Lakeside Room
- 9. Beach Bar
- 10. 5423
- 11. Cabin 175
- 12. Cabin 176
- 13. Auxiliary Parking

