2026 BIOFEST
Nuts and Bolts: Taking Care of Business

Course Summary or Brochure w/course summaries: Biofest 2026

Monday, 9.28.2026

1:00 - 4:45 PM

Boulder Park Tour - Jake Finlinson, King County & Dave Ruud, Boulder Park

- Join us for an exciting afternoon exploring the unique geology of the Waterville-Mansfield Plateau while learning how biosolids are beneficially used to improve soils and grow crops for farmers at the Boulder Park Project! There are 45 participating utilities that deliver biosolids to Boulder Park Project, and each year approximately 10,000 acres of farmland are agronomically land applied to grow dryland winter wheat and canola. Our field trip will begin at 1:00 PM, with plenty of time to immerse yourself in the stunning landscape and learn from knowledgeable guides.
- The site is located approximately 30 minutes from Chelan to Mansfield, though exact drive times may vary slightly depending on the specific field locations. Bring your curiosity, your questions, and your sense of adventure. Be sure to dress in layers and wear shoes that can get dirty—this is a Biofest experience you won't want to miss!

3:30 - 5:00 PM

Workshop: Effective Communication in High-Stress, High- Concern Situations and Environments. - Benjamin Morgan, M.A, Senior Fellow, Center for Risk Communications

- Join Benjamin Morgan from the Center for Risk Communications as he explores key principles and theories that support effective communications in high-stress, high-concern situations and environments. In this interactive presentation, you will be introduced to core principles, theories, and tools aimed at increasing your communication effectiveness when engaging with audiences and stakeholders who are feeling stress or concern. This is a perfect development opportunity for those in

leadership roles and those who may be communicating in stressful and concerning situations.

Tuesday, 9.29.2026

8:35-8:55 AM

Discussing Disgust – Dr. Sally Brown

- Biosolids managers have traditionally tried to distance themselves and their products from source material. It may start out as feces but the final product is a nutrient rich....., you know the rest. Here we'll talk about the basis for fecal phobia and whether it still makes sense to downplay that connection.

9:00 -9:20 am

Oak Harbor Banana Tree - Cory Prusha

- Overview of the new Oak Harbor Clean Water Facility (a membrane ultrafiltration plant), our process, our biosolids program, and the banana plants grown using our own biosolids and effluent

9:35 – 10:35 am

Key Note - Human Remains Composting, Terramation, Jake Miller

- Return Home is honored and excited to present to everyone attending Biofest 2026! Return Home is a funeral home specializing in Natural Organic Reduction (Human Composting, Terramation), an alternative to traditional burial and cremation. Founded in Washington state, it was among the first facilities in the world offering this green option to families across the United States. The presentation will cover the history of NOR's start here in Washington, the process and science behind the service, and the implications of returning our bodies to the earth. We will also share information regarding regulations on what can be done with a person's remains. Additional discussions will cover the local, national and global outlook for this service as more people seek new options.

2026 BIOFEST

Nuts and Bolts: Taking Care of Business

10:50 - 11:10 am

A Tale from the Other Side: Regulatory Reflections from the Sunshine State, Landon Reigelman

- This session is a case study from a regulatory perspective on biosolids processing facilities with operational and infrastructure issues in Florida with juxtaposition to practices in the PNW.

11:15-11:35 am

Better Together: When Biosolids Meet Water Treatment Residuals, Will Hausa & Dan Eberhardt

- This session provides an overview of TAGRO's ongoing work to blend biosolids with water treatment residuals (WTRs) to produce high-quality soil amendments. The presentation covers the objectives behind the material integration, the operational process for mixing and curing, regulatory considerations, product performance benefits, and early lessons learned. Attendees will gain insight into how TAGRO is leveraging WTRs to enhance product structure, reduce phosphorus mobility, and support environmentally responsible reuse strategies.

11:40-11:55 PM

When 120,000 Pounds Went Wrong: Lessons from a Biosolids Loading Incident - Mike Gates

- What started as a routine loading operation quickly turned into a serious incident when approximately 110,000 pounds of biosolids overflowed a truck. This presentation will walk through the events leading up to the incident, the response, the root causes, and the operational and safety improvements that followed. Attendees will leave with practical lessons learned and takeaways they can apply to improve safety and prevent similar incidents at their own facilities.

1:00 - 1:20 PM

Kennewick, Washington: Utilizing Solar-Thermal Pasteurization to Produce a Sustainable, Marketable Class A Biosolids Product, Ted Merrell, Co-Founder of Merrell Bros., Inc.

- The City of Kennewick, Washington partnered with Merrell Bros., Inc. to implement a Solar-Thermal Pasteurization system that transforms wastewater solids into a Class A, marketable biosolids product. This presentation will explore the technology, project development, startup, and operational performance, while demonstrating how solar-assisted treatment can provide a sustainable approach to biosolids management and beneficial reuse.

1:25 - 1:40 PM

Evaluating Soil Health and Carbon Dynamics under Dryland Wheat-Pea Rotations with Biosolids-Based Compost Application, Ava E. Heathman, WSU-LDRS, Agricultural Research Tech., Graduate Student

- This presentation focuses on the combined effects of winter pea inclusion and biosolids-based compost in dryland cropping systems. The research study on this focuses on assessing the long-term impacts of integrating winter peas and compost amendments into dryland wheat-fallow systems on soil carbon sequestration, carbon emissions, and soil health indicators at low and intermediate rainfall zones of eastern Washington.

1:45 - 2:00 PM

Nine Years Later: How Biosolids Still Shape Soil Microbial Communities and Impact Soil Health in Dryland Cropping Systems, Asmita Bhandari, Graduate Student, Washington State University

- This presentation focuses on the legacy effects of biosolids on soil health and microbial communities. Biosolids were last applied in 2016, and now, nine years later, we are evaluating whether those past applications are still influencing soil properties and microbial activity. The study will prove beneficial in understanding the long-term role of biosolids in improving soil health and supporting more sustainable soil management.

2:05-2:35 PM

2026 BIOFEST

Nuts and Bolts: Taking Care of Business

Farmer Panel: Nuts & Bolts - Facilitator: Brian Campbell, Panelists: Will Bowdish, Kurt Carstens, Ryan Thodes, David Godley

- This panel will focus on the real-world experiences of farmers using biosolids as part of their nutrient management and farming operations. Panelists will discuss how they first adopted biosolids, how they incorporate them into their fertilizer programs, and any equipment modifications or operational changes they have made to support land application.
- The conversation will also explore practical challenges and opportunities, including working with neighbors and the public, the impact biosolids have had on day-to-day operations, and areas where the process could be improved. Farmers will share whether biosolids have delivered cost savings, improved profitability, and contributed positively to their bottom line.
- Additionally, the panel will examine how biosolids influence broader crop management decisions, including changes in the use of commercial fertilizers, soil amendments, and other agricultural inputs. Overall, the discussion will provide insight into the agronomic, economic, operational, and community aspects of integrating biosolids into modern farming practices.

2:50 - 3:20 PM

Ask an Expert - Table Talks – Deidre Bartlett, Dr. Ian Pepper, Mike Gates, Dr. Sally Brown, Dr. Chuck Henry, Dan Eberhardt, Dr. Deirdre Griffin LaHue

- Get facetime with experts on real world issues common to just about every program. We will be discussing: Agronomic Advice, Determining Application Rates/Soil Testing, Pathogens, Dewatering, Science History, Urban Markets, Compost, Legislation, and pumping.

3:30-3:50 PM

Long-Term Biosolids Research at WSU: What We've Learned and Where We're Going – Dr. Deirdre Griffin LaHue

- This session will provide an overview of key findings from two ongoing long-term field trials investigating biosolids use in dryland agricultural systems. We will discuss how biosolids contribute to soil health and productive cropping systems, as

well as future research priorities and opportunities for biosolids management in agriculture.

3:55-4:15 pm

Nutrient Circularity and Public Health, Katie Webb

- The session will share preliminary results from a study assessing the long-term effect on the micronutrient content of grain crops grown in biosolids amended fields at a long-term experimental site in Douglas County, WA. Learning objective: Understand how biosolids may strengthen food systems from a public health perspective.

4:20 - 4:40 PM

Long-Term Accumulation of Microplastics in Soils due to Land-Application of Biosolids, Dr. Markus Flury

- Land-applied biosolids can be a considerable source of microplastics in soils. We quantified and characterized microplastics in soils that have been amended with biosolids over the past 23 years. We found that biosolids indeed increase the amounts of microplastics found in soils, but atmospheric deposition also contributes to microplastic accumulation.

Wednesday, 9.30.2026

8:30-8:50 am

Micronized Calcium Carbonate Pilot leads to Pleasant Surprises in Biosolids Production, Chris Maher, Clean Water Services, OR

- Clean Water Services' Rock Creek Advanced Water Resource Recovery Facility has engaged in a pilot project over the past year involving replacing hydrated lime with micronized calcium carbonate for supplemental alkalinity in a nitrifying activated sludge facility. The calcium carbonate pilot was executed for cost and climate

reasons but at one point resulted in a 12% increase in cake dryness and a 22% reduction in polymer dose. The anaerobic digester alkalinity increased from 5,000 mg/L to 10,000 mg/L and the biosolids calcium content from 2% to 6%. Technology, pilot logistics, and results and analysis are presented, and possibilities are up for discussion.

- Participants will learn the concept of; enhanced rock weathering, carbon cycle, carbon sequestration, monovalent/divalent theory of sludge dewaterability, and modeling of dewatering centrifuge operation.

8:55-9:15 am

Wastewater Polymer Fundamentals - Ed Fritz, P.E. BCEE

- Understand how and why polymer is used for thickening and dewatering processes. Know polymer characteristics and how those can be used in polymer selection. Learn how to optimize and troubleshoot polymer used in the solids handling processes.

9:20-9:40 am

SOLAR Dryer: the Good, the bad, and the Ugly! - Ken Windram

- The Hayden Area Regional Sewer Board (HARSB) installed a solar biosolids dryer to increase the final disposal options. The biosolids dryer has been in service for 3 years. This presentation will provide an update on the dryer's success and issues as well as provide the audience with information they can use in consideration of a biosolids solar dryer option.

9:45-10:05 am

Pima's Plural Purposes for PONDUS - Adam Parmenter

- Pima County Arizona's Tres Rios WRF evaluated the implementation of PONDUS, a thermochemical hydrolysis process. The factors that supported moving the project into design and construction will be presented. It highlights the technology basis, operational and financial benefits, implementation risks, and effects on digestion, biogas production, dewatering, and polymer consumption.

2026 BIOFEST
Nuts and Bolts: Taking Care of Business

10:10-10:30 am

Beyond the Burn: Evaluating Sustainable Alternatives to Biosolids Incineration - Brian Walker & Corrin Hamburg

- Understand Driver for Change. Understand the challenges unique to Anacortes, how are treatment technologies evaluated and how MDCA (Multi Criteria Decision Analysis) was applied.

10:45-11:15 am

From paper to the plant… Does it really get the phosphorus out? Real life stories about struvite removal. - Dan Freedman, Deidre Bartlett & Ben Nydegger

- Depending on your perspective, struvite is either a nuisance or an opportunity. Struvite formation in digesters can clog pipes. Different technologies promise to get rid of the clogs, either through dissolution or by collection of the crystals. Different plants will share their experiences and approaches on ways to deal with struvite.

11:25-11:40 am

National Collaborative PFAS Project Update - Dr. Ian Pepper

- National concern over indirect exposure to PFAS from land application of biosolids has led to a ban of land application in multiple states. Our project involves the evaluation of indirect exposure from two indirect exposures to determine whether or not land application is a significant source of PFAS exposure. Phase 1 of the project evaluated the potential for groundwater contamination following leaching of PFAS through soil and vadose zone. Ingestion of contaminated groundwater as a a potable drinking source would be one route of indirect exposure. Phase 2 evaluates uptake of PFAS by crops grown on land application sites. Ingestion of these foodstuffs would be another indirect route of exposure. Together PHASE 1and 2 have stablished a national network of land application sites where soil PFAS concentrations are known. By growing crops on these sites we have established a national network of crop uptake data. Together the paired data sets of soil and plant PFAS concentrations provide an evaluation of indirect exposure.

2026 BIOFEST
Nuts and Bolts: Taking Care of Business

11:45-12:05 pm

Biosolids and Public Health - Holly Davies, DOH & Shirlee Tan: King County

- Description: This panel will provide attendees with a public health perspective on biosolids - what to consider, how to think about risk, and how to communicate human health risks to the public. Topics covered will include how public health practitioners use risk assessment, where public health concerns around biosolids are focused (e.g., crop/animal uptake and food chain accumulation of PFAS through biosolids, drinking water, other exposure routes), recommendations for reducing harmful exposures, and why partnerships between public health practitioners and the biosolids community are so important.
- Learning Objectives:
- Gain an understanding of what public health risk assessment does and does not do
- Learn about human health concerns for contaminants in biosolids
- Discover actions that can reduce exposures

12:10 -12:30 PM

Biosolids PFAS Sampling Law Update from Ecology - Emily Kijowski & Eddie Simons, Washington State Department of Ecology

- Ecology will provide an update on the biosolids PFAS sampling law focusing on what permittees can expect during the sampling period from January 1, 2027 through June 30, 2028.

1:30-2:45pm

Workshop: Know the Answer Before You Ask the Question – Manon Fisher

- This workshop will go over working with Consultants and tips, tricks & tools for doing the internal work first. We will discuss how to figure out if your treatment train works for you or if changes are needed.