

SUMMER
2022

The Official Publication of the Water Environment Association of Utah

DIGESTED news

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22

Annual Conference Summary

April 12 to April 15, 2022

INSIDE:

Finding Balance: Workforce Scarcity Conundrum and Digitalization



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Schoonover Case Study

The Schoonover Plumbing ACO Stormbrixx project was brought to Mountain Supply out of a need to find a cost-effective way to eliminate an on-site drainage pond, while staying in compliance with the current State of Utah Stormwater Requirements. In order to eliminate the pond, it was determined that an underground stormwater detention system would be necessary. Working with Mustang Design and ACO an appropriately sized below ground retention system was designed for the site that included two access and maintenance points. Once approved, the system was installed with on-site assistance from Mountainland Supply.

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On behalf of the WEAU



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www.kelmanonline.com

Managing Editor, **Katie Woychyshyn**
Design/Layout, **Dia Chea**
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Sarah Ward

Thanks for Your Support

Dear WEAU Friends,
 As we begin the 65th anniversary year of the establishment of WEAU, I would like to thank you for being a member. Without your membership and support, we would not be an organization. I want to encourage you to become involved in a committee. I have included the WEAU organizational chart so you can see the committees. Please get in touch with me if you are willing to get involved. Committees are a great way to build friendships, network, and learn from each other. Through my committee involvement, I have gained leadership skills and have had the opportunity to meet many of you.


After a two-year hiatus, it was nice to have the Annual Conference in person at the Dixie Center in St. George. I enjoyed being with you and seeing your smiling faces. I want to thank the many individuals who helped coordinate the events associated with the conference.

I want to give a big shout-out to Trevor Lindley for his presidential year. He led us out of the COVID-19 craziness and back into in-person meetings and helped us make improvements within the organization along the way. Thank you, Trevor, for your many years of service.

As well, I am excited to share some exciting news with you. The WEAU Board is expanding the organization's vision statement to include that we are "dedicated to developing leaders within the organization." The first step we are taking to achieve this is to change the organizational structure to enhance training and mentorship. The next step is to host leadership training. The first such training will be held in June with the committee chairs, and a follow-up training session will be held on October 27, 2022 for all committee members. The leadership trainings will encompass leadership styles, team building, communication skills, and personal development skills. Each skill is essential not only to WEAU but each facility. The goal is to expand the leadership training into committee organized trainings and conferences.

The third step is to recognize mentors from within the organization. Over the past 17 years, I have seen individuals who have reached out to those new to their role by providing a helping hand, a word of advice, and being kind and understanding. These individuals take time with new employees at their facilities and even reach out to those who work for different employers. Although they may not have realized it at the time, these individuals have become a mentor. WEAU wants to begin recognizing them at the Mid-Year and Annual Conferences, and we need your help. Please submit your mentor names through an online form at <https://forms.gle/X7r4srnBDQjcGWkeA> or by scanning the QR code included on this page.

WEAU is a people-serving and environment-protecting organization. Thank you for being a member. We are great because of each of you.

Sincerely,
 Sarah Ward 




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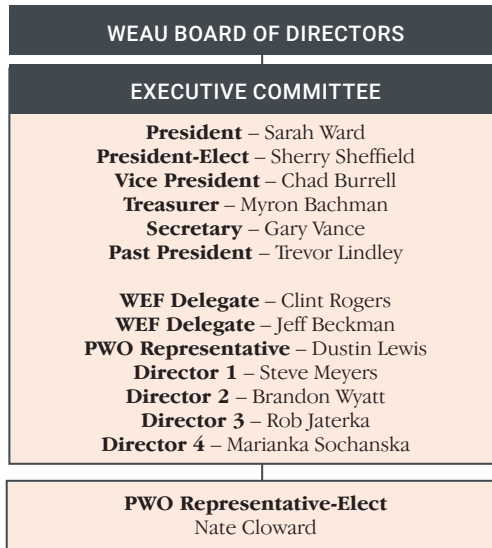
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2022-2023 ORGANIZATION CHART



COUNCIL (MENTOR PRESIDENT)
<p>Board Liaison: Director – Steve Meyers</p> <p>COMMITTEES Industrial Pretreatment Skyler Tulley Engineering Symposium Randy Zollinger Annual Conference Coordinator Ben Skousen Technical Program Meagan O'Hare Pre-Conference Workshop OPEN Exhibitors Mike Chambers Publications Bryan Mansell Mentor Awards Current President</p>

COUNCIL (MENTOR PRESIDENT-ELECT)
<p>Board Liaison: Director – Marianka Sochanska</p> <p>COMMITTEES Biosolids James Goldhardt Mid Year Conference Coordinator James Dixon Technical Program Meagan O'Hare Operator Awards Matt Wiest (with two co-chairs) Membership Jared O'Brien Social Media Aimee Matthies Website Korey Walsh</p>

COUNCIL (MENTOR VICE-PRESIDENT)
<p>Board Liaison: Director 3 – Rob Jaterka</p> <p>COMMITTEES Collection System Todd Perry Operator Training & Certification Brian Lamar PWO Dustin Lewis and Nate Cloward Operations Challenge Tom Anderson and Hadley Gunn Water Quality Calendar Sarah Ward Operator & Professional Scholarship Sarah Ward Okey Student Scholarship Jen Robinson</p>

COUNCIL (MENTOR PAST PRESIDENT)
<p>Board Liaison: Director – Gary Vance</p> <p>COMMITTEES Digital Water Navneet Prasad Collections Training & Certification Lonni Rasmussen Southern Utah Outreach Mike Chandler Annual Golf Tournament Jeff Beckman Public Relations Ken Burgener Student Activities Ryan Bench Young Professionals Amanda Stoudt Past President Club Past President</p>





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OUR VALUES

The core to the company culture lies in our values:

- Accountability
- Family and Life Balance
- Safety
- Teamwork
- Integrity
- Fun
- Trust
- Quality

Although accolades through the years and perseverance through tough times are certainly a credit to Sunrise's strength, neither defines the company's success nor feeds the company's future. It's the many engineers, technicians, and supporting staff who have embraced the entrepreneurial spirit of the company's founders. And it's the values that have permeated the Sunrise staff over decades of growth and expansion, along with their commitment to creating solutions that work and relationships that last.

OUR SERVICES

Sunrise has 20 offices in Utah, Wyoming, Arizona, Colorado, California, and Nevada,

with active project work happening throughout the western US. Sunrise Engineering is committed to producing quality work and lasting relationships. Our clients have deep confidence in our skilled professionals, which has led to long-term relationships and years of successful projects.

We collaborate with clients to deliver solutions that balance cost and performance. As a regional leader for professional engineering and consulting services, our disciplines serve a diverse range of public and private projects. We work together to ensure successful projects and to help strengthen our communities.

For the past 44 years, Sunrise has been led by an Executive Management Team who share responsibility for the vision and operation of the firm. Their leadership and vision, together with the hard work of hundreds of dedicated employees, has brought continued success. Sunrise is organized into 19 geographically diverse business units we call Service Centers. These Service Centers provide a wide range of services that can be categorized into six major disciplines – Engineering, Natural Gas Services, Community Development, Survey, GIS, and Building Code Services.



ENGINEERING

- Wastewater
- Water
- Drainage/
Flood Control
- Irrigation
- Land Development
- Renewable Energy
- Electrical
- Structural
- Transportation
- Construction Engineering
- Environmental
- City Engineering
- Community Facilities



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- Community Planning
- Economic Development
- Environmental Planning
- Public Engagement and Outreach
- Regional Visioning/Planning



NATURAL GAS

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- 3rd Party Inspection and Audit
- Compliance
- Documentation
- Planning and Studies
- As-Built/Mapping
- Training and Qualification Services



SURVEY

- Precision Construction Layout
- Land Boundary, Easements, Right-of-Way
- Topographic Survey and ALTA
- 3D Imaging



GIS

- Utility Systems Management
- Arts, Parks, and Trails Management
- Cemetery Management
- Transportation System Management
- Resource Management Plans
- Facility Asset Management
- Zoning and Land Use Management
- Parcel Management



BUILDING CODE SERVICES

- Building Inspection
- Plan Review
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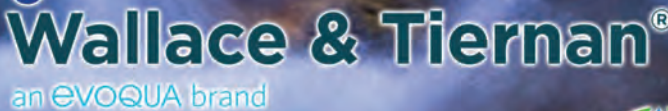
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Man Cold Mayhem

Bryan Mansell

Recently, I endured a terrible illness that knocked me down for nearly a week. My head drained like a leaky faucet and I had very little strength. The first two days, I slept nearly constantly, interrupted only by Kleenex raids and bathroom breaks, and the chaotic waves of noise from my wife and kids (some of whom experienced mild symptoms for a meager 12-hours) continuing their diurnal dance of modern life. The next two days were worse because I wasn't as sleepy and felt the demands of life pulling at me, but still without relief from symptoms, clarity of thought, or physical stamina. Every time I tried to buck up and work through it, I quickly ran out of steam. After two more days and two negative COVID-19 tests, I determined that I was enduring a bonified "man cold."

Is a "man cold" simply a psychological phenomenon about how men respond to viral infections? Is there scientific evidence that the effects are in fact more debilitating? Well, my extensive 15 minutes of research led me to conclude that the jury is still out. There is some evidence of testosterone amplifying symptoms and estrogen slowing virility, but not enough to be conclusive. It's widely accepted that historic gender roles play a key role, but it's not consistent across men and women. So, all I can really conclude at this point is that my wife is healthier and much tougher than I am in most ways and that I hope it's at least a year or more before I go through that again.

In our industry, there's suspicion that we have robust immune systems due to

the nature of our being #1 in line in a #2 world. There have been periods where I've felt proud of this theory. Then my kids bring home a virus from their snot-sleeved friends at school and it knocks me out. Perhaps teachers are the real immune champions. Someone should turn this whole idea into a game show to see who has the best immune system. I'm picturing titles such as Infection Ninja Warrior, America's Got T Cells, or You Got It From a 5th Grader. The moral of the story is... wait, where was I going with that? If this all seems incoherent, it may be because I'm actually still fighting through the remaining brain fog of my man cold as I'm sitting here writing this. Hey, at least I could sit up long enough to finish. #Winning! [DM](#)

FIND THE HIDDEN GOLDEN SLUDGE SHOVEL!*

Each quarter, *Digested News* has this golden sludge shovel icon hidden somewhere in the content of its pages.

Be the first to find it and email the editor (digestednews@weau.org) the correct page number to **win a \$25 Amazon Gift Card.**

Emails should include:

- Subject: I found the golden shovel
- Correct page number
- Your name and work address

Winners will be notified directly and named in the next issue of *Digested News*.

*For those of you new to WEAU, volunteers who give notable time and service to WEAU are awarded a "5S" golden lapel pin shovel. With that award, they become members of the **Select Society of Sanitary Sludge Shovelers**. WEAU is always looking for volunteers and maybe one day, you too can become a 5S member. [DM](#)



CONGRATS

to Brandon Heidelberger of Central Valley Water Reclamation Facility for finding the golden shovel on Page 19 of *Digested News* Spring 2022! Enjoy your gift card!!

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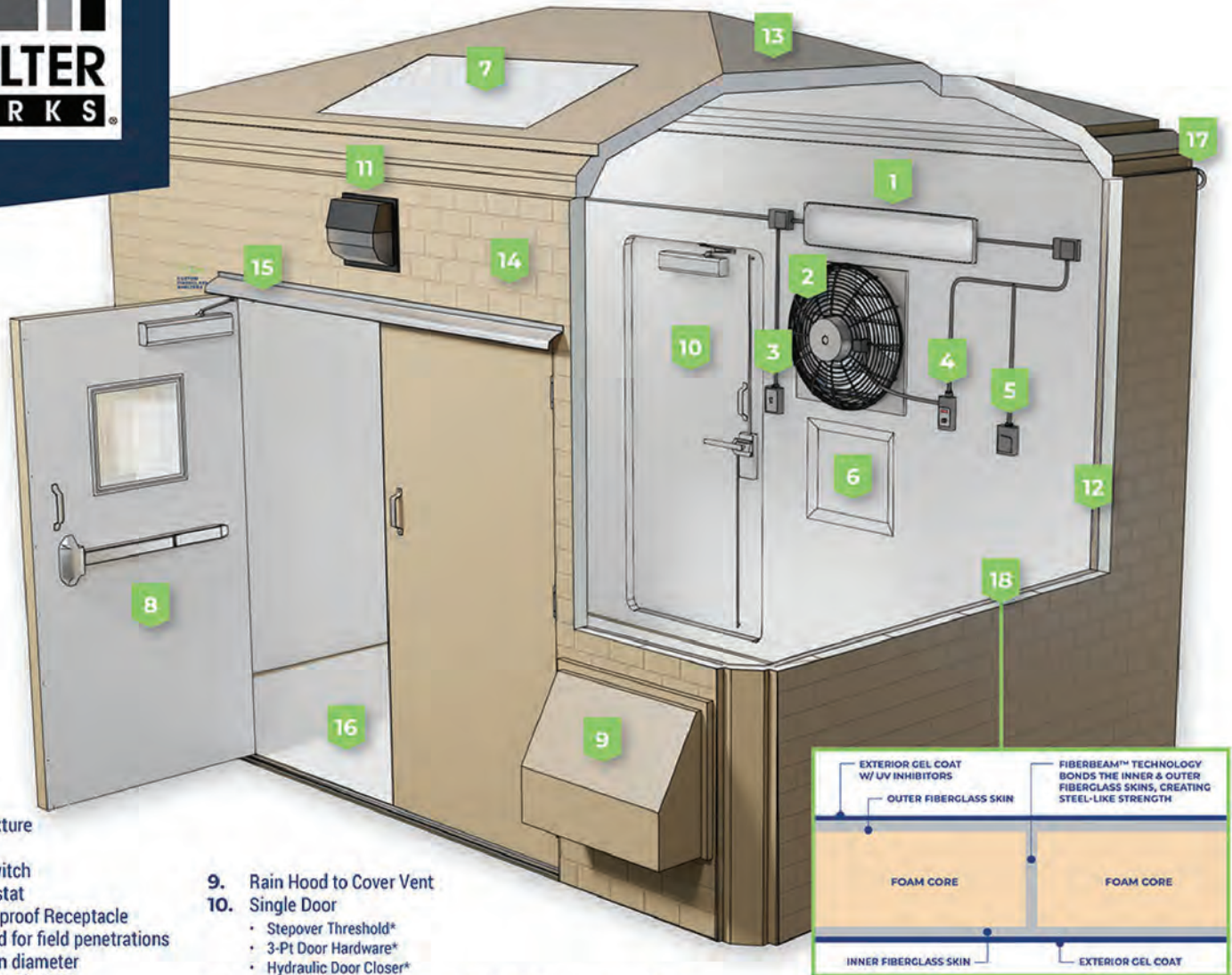
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WEAU Collections College Fall 2022 Tentative Class Schedule

Date	Chapter	Tests
August 10		Math Review Packet
August 18 (Thursday)	1 & 2	Ch. 1 & 2 B Math 1, A Math 2
August 24	3 & 11	Ch. 3 & 11 B Math 2, A Math 4
August 31	4	Ch. 4 & B Math 4, A Math 5
September 7	5 & 6	Ch. 5 & 6, B Math 5, A Math 6
September 14	8	Ch. 8, B Math 6, A Math 7
September 21		FALL BREAK – NO CLASS
September 28	9	Ch. 9, B Math 7, A Math 8 Turn in test application to DEQ
October 5	10	Ch. 10, B Math 8, Mini Review
October 12		
October 20 (Thursday)	12	Ch. 12, Adv. practice problems
October 26	13 & 14	Ch. 13 & 14, 100 question test Ch.14 and Review items
November 2		Last minute review
November 3 (Thursday)		Test (Good Luck!)

Read the Sacramento, Ken Kerri manuals titled Operation and Maintenance of Wastewater Collection Systems, 7th or 8th Edition, Volume 1 & 7th Edition, Volume 2. The manuals can be purchased at www.owp.csus.edu/courses/wastewater.php.

Do the chapter tests as you read. For example, by the August 18 class, should

have read chapters 1 & 2 and finished the test. Classes start at 12:30 PM and go until 3:30 PM. Along with the chapter test you will get two sets of math sheets each week. The B (beginning) math series is for people just starting out and taking the grade 1 or 2 test. The A (advanced) math is for people who have taken the grade 1 or 2 test and need training for the grade 3 or 4 test.

There is **no cost** for the class, but a contribution of a ream of paper per student is appreciated, and will be given back as handouts.

Taking this class does not guarantee you will pass the test. The more you study outside of class, the better your chances are of passing. Call Lonni at 801-943-7671 to RSVP.

A Summer Jumble

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Is it safe to enter this manhole? We need a...



Answers

1) Harness, 2) Extricate, 3) Pressured, 4) Tripod, 5) Cable, 6) Air detector

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Certification Quiz

By Dan Olson

Collections

1. A flow of 1 000 000 gpd is approximately _____.
 - A. 500 gpm
 - B. 700 gpm
 - C. 1000 gpm
 - D. 60 000 gph
2. What should be considered as the scouring velocity of sanitary sewers?
 - A. 1 ft/sec
 - B. 2 ft/sec
 - C. 4 ft/sec
 - D. 4.5 ft/sec
3. A manhole barrel is referred to as _____.
 - A. An object with flashing lights placed next to a manhole for safety
 - B. The entrance to the manhole
 - C. The cylindrical section between the cone and the shelf
 - D. The cover support around the rim
4. Of the following, which does not lead to roots entering a collection system?
 - A. Improper pipe bedding
 - B. Misaligned pipe joints
 - C. Differential settling
 - D. Manhole walls properly sealed
5. Of the following abbreviations listed, which is not used in computing or expressing flow rates?
 - A. ft/sec
 - B. gpm
 - C. MGD
 - D. psi
6. Sewer lines can move after years in place due to _____.
 - A. Settlement
 - B. Frost action
 - C. Nearby activities
 - D. All of the above
7. The end of a sewer pipe that is formed to fit into the bell of the next pipe is called _____.
 - A. Clamp
 - B. Spigot
 - C. Invert
 - D. Housing
8. Which of the following is a component of a manhole?
 - A. Cone
 - B. Barrel
 - C. Shelf
 - D. All of the above
9. When the velocity of flow in a collection system is 2 ft/sec or greater, _____.
 - A. A hydraulic jump will occur
 - B. A scouring action will develop
 - C. Dissolved solids will separate causing a drop in pH
 - D. Solids will settle out and cause blockage in the sewer line
10. Inflow can best be defined as _____.
 - A. Flow into a treatment facility
 - B. Direct discharge of stormwater to a sewer
 - C. Storm flow plus wastewater flow
 - D. None of the above
11. Solids that may settle to the bottom of a wet well are called _____.
 - A. Colloidal solids
 - B. Scum
 - C. Suspended solids
 - D. Settleable solids
12. Odors encountered in manholes at the end of force-mains are usually caused by _____.
 - A. Scavengers
 - B. Chemicals in the wastewater
 - C. Aerobic bacteria
 - D. Anaerobic conditions
13. _____ is a disease which can be caused by the ingestion of wastewater.
 - A. Influenza
 - B. Tetanus
 - C. Typhoid
 - D. Legionnaire's disease
14. The gas most typically associated with septic wastewater is _____.
 - A. Carbon monoxide
 - B. Carbon dioxide
 - C. Hydrogen sulfide
 - D. Methane
15. The recommended maximum allowable velocity in sewers is _____.
 - A. 1 ft/sec
 - B. 5 ft/sec
 - C. 8 ft/sec
 - D. 10 ft/sec
16. In addition to being poisonous, hydrogen sulfide can also cause which of the following to happen in a collection system?
 - A. Vapor locks in manholes
 - B. Stoppages in sewer lines
 - C. Crown corrosion
 - D. All of the above
17. Infiltration can best be defined as _____.
 - A. The flow of groundwater into a sewer through faulty joints
 - B. Industrial waste discharge into a sanitary sewer
 - C. Stormwater discharged into a sanitary sewer
 - D. All of the above
18. A lift station O&M manual should include _____.
 - A. Names and emergency telephone numbers of collection system operators, vendors, and contractors
 - B. An agency budget
 - C. Instructions for preserving BOD samples
 - D. None of the above
19. The purpose of an air-gap device is to _____.
 - A. Eliminate the need for check valves in lift stations
 - B. Prevent any water of questionable quality from contaminating potable water sources
 - C. Allow storm flows to bypass the collection system and allow storm water to flow over outfalls
 - D. Reduce corrosion of manhole covers and rungs
20. In a collection system that serves mainly residential customers, at what time of day would lowest flows generally occur?
 - A. Midmorning
 - B. Afternoon
 - C. Evening
 - D. Late night

Answers

1) B, 2) B, 3) C, 4) D, 5) D, 6) D, 7) B, 8) D, 9) B, 10) B, 11) D, 12) D, 13) C, 14) C, 15) D, 16) C, 17) A, 18) A, 19) B, 20) D

Certification Quiz

By Dan Olson

Solids Handling

1. **Natural treatment systems typically treat liquids and solids in the same processes.**
 - A. True
 - B. False
2. **Scum removed from the surface of a primary clarifier may be combined with primary sludge removed from the bottom of the clarifier before being transferred to the solids handling site of the WRRF.**
 - A. True
 - B. False
3. **Secondary sludge tends to have higher total suspended solids concentrations than primary sludge.**
 - A. True
 - B. False
4. **This term may be used to describe solid material removed from wastewater during treatment.**
 - A. Scum
 - B. Residuals
 - C. Clink
 - D. Volatiles
5. **Chemical sludge may be produced at all of the following locations EXCEPT _____.**
 - A. Primary clarifier
 - B. Secondary clarifier
 - C. Tertiary filter
 - D. Chlorine contact chamber
6. **An example of biological, secondary sludge would be _____.**
 - A. Solids removed during primary clarification
 - B. Solids generated during phosphorus precipitation
 - C. Solids removed from the activated sludge process
 - D. Solids removed during screening and grit removal
7. **This type of residual is typically sent to a landfill.**
 - A. Grit
 - B. Primary sludge
 - C. Secondary sludge
 - D. Chemical sludge
8. **Primary sludge consists primarily of _____.**
 - A. Sand, gravel, fruit rinds, and seeds
 - B. Fibrous materials, cellulose, and organic and inorganic solids
 - C. Microorganisms produced in the treatment process
 - D. Precipitated iron or aluminum compounds
9. **This type of sludge tends to have a higher percentage of volatile solids than other types of sludge.**
 - A. Grit
 - B. Secondary
 - C. Chemical
 - D. Dewatered
10. **Chemical sludge generated by adding ferric for odor control, to enhance clarifier performance, or precipitate phosphorus tends to contain more _____ than other types of sludge.**
 - A. Inert material
 - B. Microorganisms
 - C. Cellulose
 - D. Pathogens
11. **Match the return stream to the process that produced it.**
 - A) Filtrate
 - B) Centrate
 - C) Drummate
 - D) Supernatant
 - E) Backwash
 - I) Rotary drum thickener
 - II) Digesters and gravity thickeners
 - III) Belt filter pressor plate-and-frame press
 - IV) Tertiary filters
 - V) Centrifuge
12. **Return flows from solids handling processes must be managed to _____.**
 - A. Maximize return flows in the middle of the day.
 - B. Reduce opportunities for ammonia pass-through.
 - C. Minimize capture of fine solids.
 - D. Ensure smooth operation of solids handling equipment
13. **Once solids have been separated from the treated wastewater, treatment is complete.**
 - A. True
 - B. False
14. **Some sources of contaminants in sludge include homes, businesses, industrial users, and the drinking water supply.**
 - A. True
 - B. False
15. **Contaminant concentrations in sludge are often high enough to be harmful to operators.**
 - A. True
 - B. False
16. **Trace amounts of heavy metals in sludge come from all of the following sources EXCEPT _____.**
 - A. Homes and offices
 - B. Settleable solids
 - C. Drinking water supply
 - D. Dissolved solids
17. **An example of a vector would be _____.**
 - A. Virus
 - B. Bacteria
 - C. Insect
 - D. Parasite
18. **Another term for land application of biosolids is _____.**
 - A. Beneficial reuse
 - B. Surface disposal
 - C. Landfilling
 - D. Discing or plowing
19. **Before biosolids can be land applied, they must meet the requirements of this important regulation.**
 - A. 40 CFR Part 258
 - B. Resource Conservation and Recovery Act (RCRA)
 - C. 40 CFR Part 503
 - D. Occupational Safety and Health Act (OSHA)
20. **List the goals of solids handling.**
 - A. _____
 - B. _____
 - C. _____
 - D. _____

Answers

1-A, 2-A, 3-B, 4-B, 5-D, 6-C, 7-A, 8-B, 9-B, 10-A, 11-A < III > B, 12-B, 13-B, 14-A, 15-B, 16-D, 17-C, 18-A, 19-C, 20-Reduce volume, reduce mass, reduce percentage of organic material, inactivate or reduce the number of pathogens to meet regulatory requirements

Spotlight on Jace Woodrow

By Nate Cloward



Jace Woodrow began working for Central Davis Sewer District part-time in 2007. After a few hot summers learning the ropes, he was officially hired on as an Operator in 2010. His duties began with biosolids in the dewatering department. Jace has excelled in his work and has grown to acquire many responsibilities over the years. He is now the Plant Operator and Biosolids Coordinator for Central Davis and is in charge of a large part of the plant maintenance and operations. Jace takes pride in his work. He has Grade IV Treatment certification as well as Grade IV Collections certification. He has been awarded the Outstanding Water Reclamation Operator Award in 2018 and completed the Biosolids Land Applier Certification through Cache Environmental Laboratories.

Jace is a husband and Father of three (going on four) sons. When Jace isn't training hunting dogs or working (playing) with his tractor on his small farm in the city, he is hunting, fishing, or enjoying the great outdoors with his family. [@jace](#)

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Archer Western Welcomes Justin Thorne to the Team

Archer Western Construction LLC (Archer Western) is excited for the recent addition in the Utah market of Area Manager Justin Thorne to the Archer Western family. Justin is a Utah native and is a proud Bingham High Miner. He graduated from the University of Utah with a degree in Civil Engineering and began his engineering career with an internship in 1995 with Eckhoff, Watson, and Preator (EWP) (later purchased by Stantec). Most of his engineering career was spent with Stantec and focused on water resources throughout Utah and Northern California. As fate would have it, Justin jumped at an opportunity to move from engineering to construction with a position as a Project Engineer with Flatiron Construction in their water treatment plant division. They had recently acquired the Ellsworth Paulsen Construction Company, a top performer in the water and wastewater treatment plant construction industry in Utah. At Flatiron, he was able to work on numerous treatment plant projects located in Utah, Nevada, and California. Justin has spent the last several years as a Regional Manager at Brahma Group working in heavy industrial construction at facilities such as refineries, mines, and power plants. He joined Archer Western early last year and is thrilled to return to the water/wastewater industry.

As Archer Western's new Utah Area Manager, Justin wears many hats, including overseeing all business development, client relations, managing project execution, overseeing recruiting and maintaining team members. Justin has a vision of developing a strong presence for Archer Western in Utah and becoming a major contributor in the construction of the critical water/wastewater infrastructure in the state.

Archer Western has recently completed a successful blower replacement project for Timpanogos Special Service District as well as replacing the flocculator mixing equipment in the sedimentation basins at the Big Cottonwood Water Treatment Plant. Justin has helped translate these successes into forward momentum, most recently kicking off a new construction project building a new sludge thickening/straining building at the Central Valley Water Reclamation Facility.



Justin Thorne, P.E.
Archer Western Area Manager



Archer Western installing new blowers at Timpanogos



Justin in his early engineering days kayaking the Alta Drain Tunnel at Solitude Resort to study the tunnel's storage capacity

We are excited to have Justin on the Archer Western team. He has a proven track record of participating on successful projects, building and establishing long term relationships with owners and subcontractors, and is a team leader to everyone involved on his projects. His diverse background in engineering and construction allows him to provide unique approaches to the many challenges that face our industry. Our growing Archer Western Utah office has a friendly and inclusive culture that is excited for a bright future ahead.

Archer Western is part of The Walsh Group, a 121-year-old family-owned company providing design, build, finance, operation and activation services. The Walsh Group operates as Archer Western, Walsh Construction, and Walsh Canada across 18 regional offices, and serves the building, transportation, and water markets. The Walsh Group is continuously ranked as one of the top Water and Wastewater Treatment Plant Contractors by Engineering News-Record.



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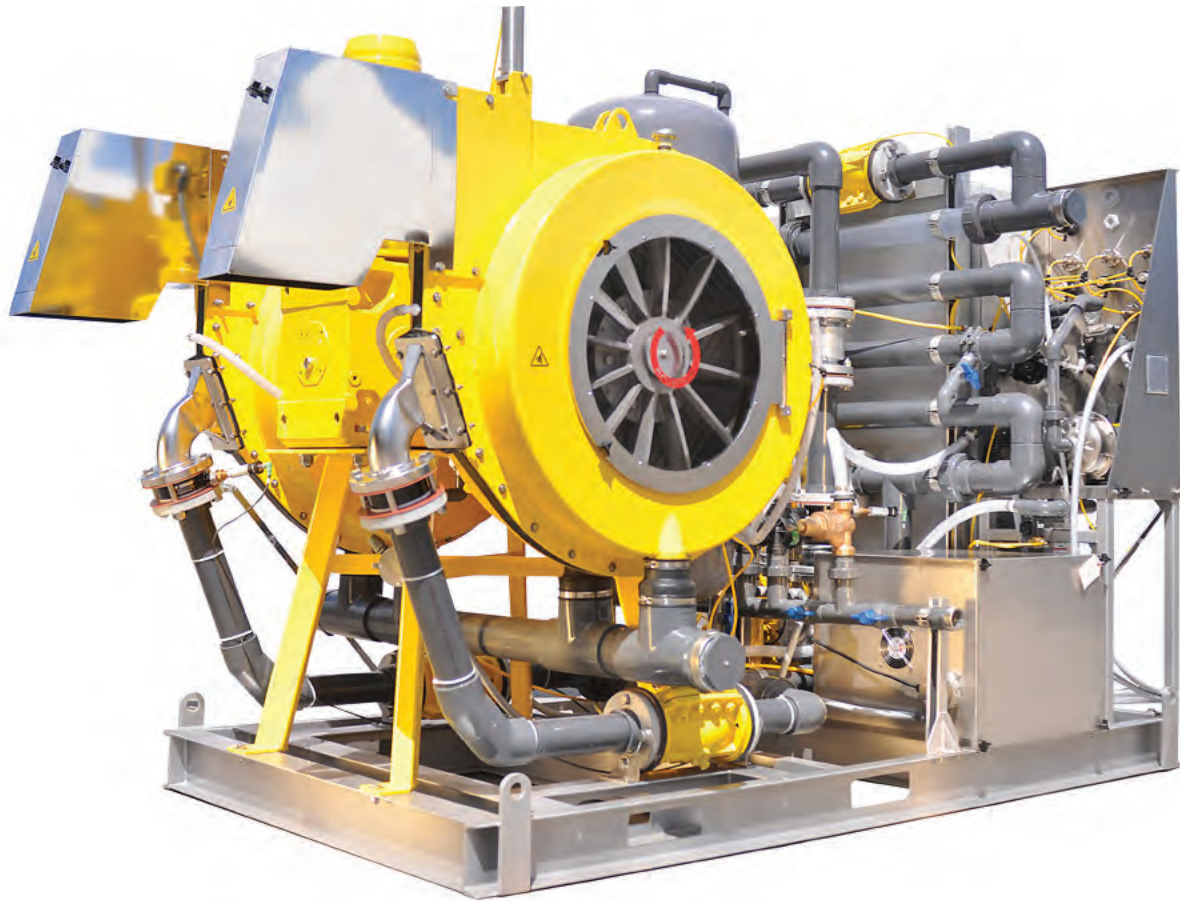
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2022



Annual Conference Summary

April 12 to April 15, 2022

Welcome to Our New 2022-2023 WEAU Board

President	Sarah Ward	WEF Delegate	Jeff Beckman
President-Elect	Sherry Sheffield	WEF Delegate	Clint Rogers
Vice President	Chad Burrell	Director	Marianka Sochanska
Secretary	Gary Vance	Director	Steve Myers
Treasurer	Myron Bachman	Director	Rob Jaterka
Past President	Trevor Lindley	Director	Brandon Wyatt
PWO Rep	Dustin Lewis	PWO Rep-Elect	Nate Cloward



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Leadership Transition



Outgoing President Trevor Lindley Kicks Off the Conference



Outgoing WEAU President Trevor Lindley Passes the Presidential Shovel to Incoming WEAU President Sarah Ward.



WEAU Presidents (Left to Right) Chris Reilley (2020-2021), Giles Demke (2019-2020), Trevor Lindley (2021-2022), and Sarah Ward (2022-2023).

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Golf Tournament Winners



Golf winners: (Left to Right) Joy Petro, Spence Felsted, Justin Atkinson, Chris Tschirki, Reed Price, Manuel de los Santos, Missy Willes, and Mike Kohn.

Team Winners

1st Place

Paul Mora
Manuel De los Santos
Mike Chandler
Aaron Anderson

2nd Place

Larry Ratherford
Ken Nelson
Mike Riding
Llyod Pehrson

3rd Place

Justin Atkinson
Chris Tschirki
Reed Price
Dustin Shaffer

Individual Winners

Long Drive

Dustyn Shaffer
Joy Petro
Angie Duke

Closest to the Pin

Mike Kohn
Spence Felsted
Missy Willes

NASTT Sporting Clay Winners



Sporting Clays Event Winners (Left to Right) Kevin Cowan, Steve C. Lamb, Brandon Wyatt, Van Bond, and Mike Kobe (NASTT Rep).

1st Place

Brandon Wyatt, 38

2nd Place

Van Bond, 33

3rd Place

Steve Lamb, 32
AJ Mitchel, 32

Honorable Mention

Kevin Cowin, 4

1600 rounds fired | 567 targets broken

Event Highlights



Myron Bachman Shares Financial Report.



Big Trucks in the Vendor Hall.



Darin Morris ('The Peach').



The Man, the Myth, the Legend.



Drawing Prizes at the Final Raffle.



WEAU Young Professional Blood Drive.



Attendees at the Final Raffle.

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Central Weber Sewer Improvement District



Cottonwood Improvement District



North Davis Sewer District



Salt Lake City



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Operations Challenge

Winners

Collections Challenge



1st Place
Snyderville Basin Water Reclamation District



2nd Place
Salt Lake City



3rd Place
Central Weber Sewer Improvement District

Laboratory Challenge



1st Place
Central Valley Water Reclamation Facility



2nd Place
Salt Lake City



3rd Place
Central Weber Sewer Improvement District

Maintenance Challenge



1st Place
Central Valley Water Reclamation Facility



2nd Place
Salt Lake City



3rd Place
Central Weber Sewer Improvement District

Safety Challenge



1st Place

Central Valley Water Reclamation Facility



2nd Place

Salt Lake City



3rd Place

Snyderville Basin Water Reclamation District

Process Challenge



1st Place

Central Valley Water Reclamation Facility



2nd Place

Central Weber Sewer Improvement District



3rd Place

Snyderville Basin Water Reclamation District

Overall Operations Challenge Winners



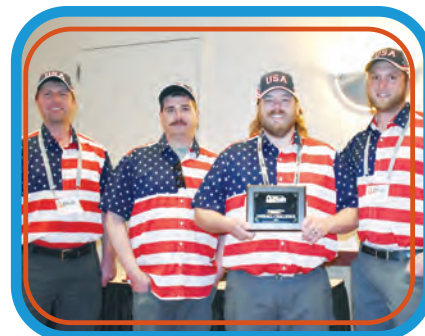
1st Place

Central Valley Water Reclamation Facility



2nd Place

Salt Lake City



3rd Place

Snyderville Basin Water Reclamation District



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WEAU Annual Conference 2021-2022 Awards List

Individual Awards



Presenter
Matt Wiest



Outstanding Collections Operator (over 5 MGD)
Jared Pratt – Logan City



Outstanding Collections Operator (under 5 MGD)
Collin Child – Midvalley Improvement District



Outstanding Maintenance Specialist
Chet Cloward – Central Weber Sewer Improvement District, received by Kevin Hall (center)



Outstanding Water Reclamation Operator (over 5 MGD)
Zac Staheli – Spanish Fork City



Outstanding Water Reclamation Operator (under 5 MGD)
Loren Willes – Salem City



Outstanding Pretreatment Specialist
Skyler Tully – Provo City Water Reclamation Facility



Outstanding Young Professional
Manjot Masson – Central Davis Sewer District



Outstanding Supervisor
Kyle Dean – Granger-Hunter Improvement District



Outstanding Supervisor
Jamey West – Salt Lake City Water Reclamation Facility

Facility/Program Awards



Outstanding Collections System (Over 5 MGD)

Central Davis Sewer District



Outstanding Collections System (Under 5 MGD)

Midvalley Improvement District



Outstanding Lagoon System, Non-Discharging

Roosevelt City



Outstanding Biosolids Program Award

Central Davis Sewer District



Outstanding Laboratory Award

Snyderville Basin Water Reclamation District



Outstanding Pretreatment Program Award

Central Valley Water Reclamation Facility



Outstanding Safety Program Award

North Davis Sewer District



Outstanding Water Reclamation Facility Award (Over 5 MGD)

St. George Regional Water Reclamation Facility



Outstanding Water Reclamation Facility Award (Under 5 MGD)

Snyderville Basin Water Reclamation District – Silver Creek Water Reclamation Facility



WEAU Excellence Award

Central Davis Sewer District

Official WEF Guest WEF Awards



Howard Carter, WEF Board of Trustees



WEF Trustee, Howard Carter, presents WEF Member Association Awards

25-year WEF Quarter Century Operators Club

- Myron Bachman, North Davis SD
- Eric Bonzo, Cedar City
- Dale Choules, Snyderville Basin WRD
- Kevin Cowan, North Davis SD
- Ken Burgener, North Davis SD
- Chris Reilley, Central Valley WRF
- Steve Lamb, North Davis SD
- Bill Patterson, Cottonwood ID
- Sharon Burton, Central Valley WRF



Quarter Century Award Winners: (Left to Right) Chris Reilley, Myron Bachman, Dale Choules, Howard Carter (WEF), Sharon Burton, Steve Lamb, Kevin Cowan



WEF Delegate Service Award

Sherry Sheffield, South Valley Sewer District



WEF Lab Analyst Award

Missy Willes, Central Valley WRF



Hatfield Award

Rich Mickelsen, Timpanogos Special Service District



Bedell Award

Clint Rogers, Stantec



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Ben Skousen



Brian Lamar



Dan Watts



Korey Walsh



Spencer Parkinson



Tyler Barfuss



"Man, you look ridiculous!"



Honor Guard Members Giggle.



Emcee Chris Reilley Fakes a Moment of Sobriety.



Ritualistic Head Plunge.



Thank you to the Annual Conference Committee!

Brandon Wyatt, Chair
Steve Myers, Director
Ben Skousen, Tech Program
Tiffini Adams, Front Desk/Badges
Mike Kobe, NASTT
Jeff Beckman, Golf
Dustin Lewis, PWO

Daniel Watts, PWO
Hadley Gunn, Ops Challenge
Amanda Stoudt, YPs
Ryan Bench, Student Outreach
Korey Walsh, Website
Meagan O'Hare, Facilitators
Cory Christiansen, Pre-Con

Andrew Hobson, Front Desk
Mike Chambers, Exhibits
Ken Burgener
Matt Wiest, Awards
Jared O'Brien, Membership

2022



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WEAU OPERATOR AND PROFESSIONAL SCHOLARSHIP RECIPIENTS



The WEAU Scholarship Award is available to individuals serving in Utah's Wastewater field. All applications are reviewed by a WEAU Board appointed panel. The scholarship funds are intended to be used towards the applicant's education, trade school classes, education books or student loans. Below are three profiles of recent recipients of the scholarship's funds.



Benjamin Ford

Benjamin Ford has been happily employed at Murray City for 20 years. He has been married to his wife, Tami, for 19 years and they have a 12-year-old daughter named Layla. Benjamin's hobbies include camping, fishing, golfing, and playing the guitar. He is currently the Wastewater Superintendent

for Murray City. During his 20 years at Murray City, he has had experience working in the Streets Division, Storm Water Division, and, for the last eight years, in the Wastewater Division. He is currently attending Western Governors University and working towards his Bachelor of Science Business Administration, Management degree.

The WEAU scholarship has been extremely beneficial in helping Benjamin go back to school to finally work toward finishing his degree. He would encourage everyone who is wanting to further their education and knowledge to apply for WEAU scholarship. Every little bit helps! WEAU and the wastewater community as a whole are such great organizations and communities to be a part of. Benjamin would like to thank the WEAU for the scholarship and he looks forward to being a part of the wastewater community for many years.



Josh Donegan, PE

Josh Donegan, PE received the WEAU Operator and Professional Scholarship in 2021. Josh is a water and wastewater engineer with AECOM in Salt Lake City where he supported the SLCDPU with the design of their new water reclamation facility. He is passionate about protecting the natural

environmental and improving quality of life for all species, specifically related to our dependence on clean air and water. Josh highly encourages all operators and professionals to take the time to apply for the WEAU scholarship; the work that water

industry professionals do is quintessential to human existence. The WEAU is eager to support those efforts.

Josh is also a Returned Peace Corps Volunteer (Panama WaSH 2013-2016); he served as a Water and Sanitation Hygiene (WaSH) engineer in the Panamanian highlands. Josh is an active member of member of WEF, and served as the chair for the WEF Service Project in 2021. Alongside working and volunteering, Josh is a music and nature lover, avid rock climber, mountain biker, snowboarder, hiker, adventurer, and life-long learner.



Sam Odd

Sam Odd started his career at Logan City working in the sewer collections division helping to keep the City's sewers flowing. He quickly gained an appreciation for the behind the scenes work of a city. After working in the sewers, Sam interned with the Logan City Engineering Division. Upon graduation from Utah State University with

a Civil Engineering degree, Sam was offered a full-time position with the City. As an engineer and project manager Sam oversaw the construction of numerous sewer, water, storm drain, and traffic infrastructure projects. Favorite among these projects has been his overseeing the construction of the new 48-inch sewer trunkline that serves all of North Logan City.

Currently Sam serves as the Logan City Public Works Department Program Manager where he oversees all capital planning and project administration. In this role Sam enjoys the opportunity to help administer projects that will serve the citizens of Logan for decades to come.

Sam is currently finishing a master's degree in construction management from Arizona State University which he plans to use to better help the administration of construction projects throughout his career. Sam loves working for Logan City and sees himself spending his career working for local or state government overseeing capital projects. The generous scholarship provided by the WEAU has helped Sam pay for his Spring 2022 tuition.

Congrats recipients, good luck with your studies! 🎓



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Goble Sampson Associates is a 65-year-old privately held manufacturer's representative company with 50 of those years in the Intermountain Area. Our company covers the 12 western states of the US with 12 salesmen located throughout five offices. Those offices are in Colorado, Utah, Arizona, Washington, and California. We represent many of the leading manufacturers in our industry. We enjoy working with the wastewater treatment plant operators, engineers, and general contractors to supply quality equipment and support it for the working life of that equipment.

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- **WesTech Engineering** – Anaerobic Digestion; Clarifiers; Dissolved Air Flotation; Oxidation Ditch; Trident Packaged Water Treatment Plants; Disk Filters, Solids Contact Clarifiers, and Traveling Sand Filters.
- **Kubota** – Flat Sheet MBR Systems
- **INVENT** – Hyperbolic Mixer and Mixer Aerator for BNR Systems
- **Watson Marlow** – Peristaltic Chemical Metering Pumps
- **Aquarius** – Fine Bubble Aeration Systems
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- **Lakeside** – Headworks Screens and Screw Pumps
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- **Boerger** – Rotary Lobe Sludge Pumps
- **Glasco** – Vertical Lamp UV Systems
- **Aero-Mod** – Modular Wastewater Treatment Plants
- **Penn Valley Pump** – Dual Disk Sludge Pump
- **Golden Harvest** – Sluice and Slide Gates
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- **Landia** – Submersible mixers, wall pumps, and chopper pumps
- **Brentwood** – Chain and flight Clarifiers and Trickling Filter Media
- **Putzmeister** – Sliding Floor Bin Systems; High Pressure Sludge Pumps

We have five people in our Salt Lake City office involved with sales and support of our equipment supplied on Utah projects. They

are Cameo Park, Jed Jenkins, Mike Charnholm, Ryan Spanton, and Dave Ritter. We'd like to share some specific information regarding each of us.

Cameo Park provides support to our Salt Lake City salesmen from order entry to travel, marketing, and convention assistance. She helps us with any task we ask very enthusiastically. Cameo lives in Bountiful with her husband and four children. She is integral to all that we do.

Jed Jenkins has been in the wastewater industry for five years with all of those five years at Goble Sampson Associates. Previously, he was in the environmental sector for 10 years as a laboratory geologist. He received a bachelor's degree in geology from Weber State University. Jed lives in Plain City with his wife and two children. Jed is a jack of all trades for Goble Sampson Associates UT. He does sales, startup and troubleshooting service, and support of the office for bidding projects.

Mike Charnholm graduated in Mechanical Engineering from the University of Utah and started working at Goble Sampson Utah office in 1992. He helped start the Goble Sampson Washington office shortly after and then returned to the Utah office in 2003. Mike's main focus is on Hach Flodar sales and support, and also works with several engineers and treatment plants throughout Utah. He also works with many of our industrial customers on pretreatment of their waste flows. Mike lives in Draper with his wife and three children.

Ryan Spanton covers Southern Idaho. Some Utah projects have been engineered by Idaho Engineers. This is how Ryan interfaces with Utah work. Ryan has a Bachelor of Science in Chemistry from the University of Utah with 21 years in the industry with 15 of those at WesTech Engineering as a project manager and regional sales manager and six years at Goble Sampson Associates. Ryan lives in South Jordan with his wife and four children. He is one of the owners of our company. Some of the Utah projects Ryan has been involved are the new Aero-Mod treatment system in Garland UT, Moroni Feed Company, and North Fork/Sundance SSD.

Dave Ritter is the office manager of the Salt Lake City office, President, and majority owner of Goble Sampson Associates. He has a Bachelor of Science degree and Master of Science degree of Civil Engineering (Drexel University and Villanova University). He has worked as a wastewater treatment plant operator and design engineer prior to starting with Goble Sampson in 1995. He works with the larger treatment plants and engineers along the front range. He is also responsible for Goble Sampson's expansion into Nevada and California for more than 20 years. Dave lives in Salt Lake City with his wife and daughter.

We all enjoy outdoor activities such as fishing, hunting, skiing (downhill and cross country), mountain biking, and camping.

We appreciate being able to serve the wastewater treatment industry in Utah. We've been fortunate to work with many great customers, engineers, and general contractors for the last 50 years in Utah. We look forward to many more.



FINDING BALANCE: Workforce Scarcity Conundrum and Digitalization

By Navneet Prasad, Central Valley Water Reclamation Facility,
Chair, WEAU Digital Water Committee

Are you hiring right now but are you struggling to find talented people or even get enough people to apply for a position? The human resources problem in the wastewater industry is a reality we are facing right now. There is a critical staffing shortage within the operation and maintenance of essential drinking water and wastewater infrastructure in cities and communities across the country. In the next 10 years, approximately 1/3 of drinking water and wastewater operators in the US will be eligible to retire, and in today's high-tech environment, the water sector has been facing challenges with the recruitment and retention of skilled workers. This has led



the US Environmental Protection Agency (EPA) to launch America's Water Sector Workforce Initiative (the initiative) as they identified these challenges and the consequent implications.

Can we help this cause? I feel we can. I think we, as a wastewater industry,

and similar entities should also take steps to address these growing human resource challenges. My conclusion is that proper implementation of smart systems and treatment technologies, steps towards digitalization, and training our existing workforce to use digital tools will allow those in the industry to make smarter and more informed decisions. Let's talk about changes a lot of treatment facilities are experiencing and how those facilities are aiming to meet the Smart Utility Goal (like CVWRF) in the coming years. This change will correlate with how we build a roadmap to coordinate the proper training and development of the current and next generation of the wastewater workforce.

With aging water infrastructure, extreme weather events, water shortages, rising costs, increasing customer demands, and cybersecurity risks, water service providers tackle complex challenges every day. We, wastewater utilities, serve as "anchor institutions" in communities and need to start implementing new and exciting technologies to address these pressing challenges. For the overall resilience and sustainability of wastewater collection and treatment utilities, as well as the water workforce of the future, these advancements are critical. Advanced treatment technologies, monitoring, and sophisticated information management systems are the need of the hour and are required to run today's utilities.

Smart instruments, control systems, and electrical systems (including a variety of monitoring technologies) have started making their way into our industries which allows utilities to collect, manage, and analyze data to make accurate and optimal decisions to better serve the community. They provide important real-time information that allows utility



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managers to make important decisions to minimize potential service disruptions, enhance economic efficiencies, better manage assets, respond to emergencies, and protect public health.

Treatment technologies and processes that help treat wastewater to protect our rivers, lakes, and streams have seen major advancements in recent years. Some advancements like nutrient recovery are already making their way into a lot of treatment facilities like ours (CVWRF) due to changes in EPA regulations. Other examples include the development of biogas generators, net-zero systems, and green infrastructure. Net-zero systems aim to achieve a sustainable balance between water availability and demand and eliminate solid waste sent to landfills by consuming only as much energy as is produced.

Plant operations, asset management, and cybersecurity, supported by a robust information system management program, is now more important than ever in the water sector to protect against service disruption and the leaking of sensitive operational, employee, or customer

information. The cybersecurity threat is real, and it causes a significant disruption to critical utility process operations and business operations. The onus is on today's workforce to understand this threat and learn to establish a secure information system and implement cybersecurity best practices which are critical for water and wastewater utilities. This is crucial to safeguarding the integrity of process control systems and sensitive utility information.

So, while making this move towards a smarter future for operations and maintenance of treatment facilities, we can clearly see that there is a growing need to train and employ water protection specialists with a high degree of technical competence to make data-driven decisions and to track all aspects of utility operations based on up-to-date and accurate information. This will not be limited to just the operators but technological shifts in day-to-day operations will lead to expansion in the roles of engineers, information technology (IT), and security specialists, which should help in attracting

technologically competent workers. We certainly need to make substantial investments in education through training, operator certification, apprentice programs, and other means. This should focus on the use of digital tools such as digital sampling based on current conditions, asset management, and gap assessments to help utility managers improve worker competence. To meet the challenges and opportunities of the 21st century water economy, investing in these workforce skills of the future will build a more resilient and adaptable workforce.

References

(2019). (rep.). *America's Water Sector Workforce Initiative: A Call to Action*. Retrieved from www.epa.gov/sites/default/files/2020-11/documents/americas_water_sector_workforce_initiative_final.pdf.
 Water and Wastewater Workforce: Recruiting Approaches Helped Industry Hire Operators, but Additional EPA Guidance Could Help Identify Future Needs. (2018). Retrieved from www.gao.gov/products/gao-18-102.

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Effective Utility Management Workshop:

Your Path to Sustainability

August 25, 2022 | 8:00 am-4:30 pm | Provo, UT

Take a 360-degree look at your utility and set priorities that work for your utility and community.

Move from reacting to the “hot priorities” of the day to proactively planning for the future.

Protect your current and future infrastructure investments and ensure that your workforce is motivated and able to address the challenges they face every day.

This workshop will help utilities address a full range of challenges and move toward sustainable management of their operations and infrastructure.

- Conduct the EUM Self-Assessment the results from which participants can use to spark and support further dialog within their utility about areas for potential improvement and further use of the EUM framework.
- Equip participants to create an internal team and utilize the EUM framework to assess utility conditions and create a plan for improving.
- Create an opportunity to learn from utility peers about their challenges, successes, and plans for improving in the future.

🔧 Utilities will learn how to make improvements in the Ten Attributes and Five Keys to Management Success, at a pace consistent with their most pressing challenges.

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Workshop Agenda

Registration/Sign-in (8:00 am-8:30 am)	
Segment 1: Welcome and Introductory Session	
(30 minutes)	• Welcome
	• Workshop Objectives
	• Jim Horne, US EPA
	• Sarah Ward, President, WEAU
	• Participant Introductions
Segment 2: EUM Workshop Overview	
(30 minutes)	• Workshop Schedule
	• Introduction to EUM
	• Description of the EUM Attributes and Keys to Management Success
Segment 3a: Utility ‘Self-Assessment’	
(35 minutes)	• Overview of Self-Assessment
	• Exercise – Participants Conduct Self-Assessment of Their Own Utility
Break (~15 min)	
Segment 3b: ‘Self-Assessment’ Group Exercise	
(50 minutes)	• ‘Self-Assessment’ Chart Walk-through
	• Exercise – Discussion Among Participants About Results <ul style="list-style-type: none"> • What are your utility’s highest rated attributes (best performance)? • Which high ranking attributes (1-5 rankings) are most important for your utility to focus on improving?
	• Time permitting, what are a couple commonalities and differences among table participants’ attribute rankings and ratings?
Segment 3c: ‘Self-Assessment’ Group Report Out	
(30 minutes)	• Breakout Group Report Out
	• Poll #3 – Identify Your Top Two Attribute Areas
	• Attendees Select Their Attribute Areas for Afternoon
Adjourn for Lunch (~30 minutes)	
Segment 4a: Implementing EUM – Identifying Effective Practices	
(15 minutes)	• Roadmap Implementation Framework – Review and Identify Practices
	• Introduction to Effective Practices Exercise
Segment 4b: Implementing EUM – Identifying Effective Practices	
(30 minutes)	• Exercise – Participants Identify Effective Practices <ul style="list-style-type: none"> • Complete Exercise
	• Exercise – Discussion of Effective Practice Findings <ul style="list-style-type: none"> • During this exercise, which practices jumped out at you as new opportunities or useful for your utility?
(40 minutes)	• Did you identify any additional or alternative practices in this Attribute area that were not listed in the worksheet? What are these practices and why are they important to include here?
Segment 4c: Implementing EUM – Effective Practices Breakout Room Report Out	
(25 minutes)	• Breakout Group Report Out
	• Plenary Discussion of Findings
Break (~15 Minutes)	
Segment 5: Developing an Action Plan	
(20 minutes)	• Linking Attributes to Measures
	• Benchmarking Resources
	• Group Discussion on Measures
	• EUM Dashboard Example
	• EUM Case Example

CONTINUED

Segment 6: Bringing EUM to Your Utility	
(35 minutes)	<ul style="list-style-type: none"> • Example Start-up Plan • Action Plan Break-out Group Discussion (No Report Out)
Segment 7: Feedback Session	
(20 minutes)	<ul style="list-style-type: none"> • Real-time Feedback “Open Mic” • Participants Complete Evaluation Form
Segment 8: Wrap-up	
(10 minutes)	<ul style="list-style-type: none"> • What We Covered in Workshop • Additional Resources (www.watereum.org)
Adjourn	

Resources to be Covered at the Workshop

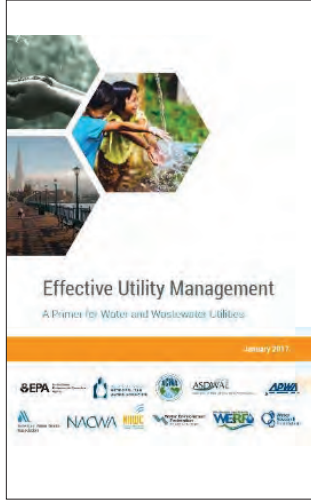
The Collaborating Organizations have worked with utilities, water associations, research organizations, and technical assistance providers to create materials that help utilities address challenges and capture improvement opportunities. These materials include Effective Utility Management Primer. You can find these resources at www.watereum.org.

You will also learn about other resources available to support your EUM implementation efforts, including Moving Toward Sustainability: Sustainable and Effective Practices for Creating Your Water Utility Roadmap

REGISTER NOW at www.weau.org

Cost to Attend

- \$100 for WEAU member
- \$125 for non-member



Lunch will be provided.

The EUM Collaborating Organizations

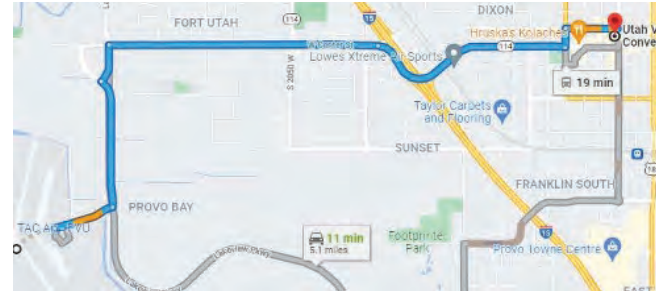


Workshop Location

Utah Valley Convention Center
 220 West Center Street
 Provo, UT 84601
 801-851-2200

Driving Directions

From Provo Airport (9 minutes) (map link)
 Head east toward Lakeshore Drive
 Turn left onto Lakeview Parkway
 Turn right onto Lakeshore Drive
 Turn right at the 1st cross street onto Center Street
 Stay on Center Street until 500 West
 Turn left onto 500 West Turn right onto 100 N
 Destination will be on the right



From Salt Lake City Airport (46 minutes)

Get on I-80 E from Crossbar Road and Terminal Drive
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 Take exit 265 from I-15 S
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Considering the Quarter Century Operator Club?

The Quarter Century Operator Club recognizes operators of wastewater treatment facilities for their service and dedication in a difficult and dangerous profession. The Club was created under the sponsorship of Frank Woodbury Jones, who served as the Clubs' first registrar.

WEAU would like to make all of those that work in the wastewater field aware of the requirements to be eligible for the Quarter Century Operator Club.

Eligibility Criteria

- Member of WEF for a minimum of five consecutive years immediately preceding application.
- Significant, full-time participant in the water environment profession for a minimum of 25 years.
- 10 years of which must have been in active participation in the day-to-day collections, maintenance, operations, laboratory, or management of a wastewater transportation or treatment facility.
- Completed and signed application (found on the WEF website under Quarter Century Operator Club)

Applications are accepted from WEF Professional Wastewater Operations Members.

Email applications to Tori Cox, Manager of WEF Association Engagement, at tcocox@wef.org.

Mail applications to:

Water Environment Federation Awards Program

Tori Cox, Manager, Association Engagement
601 Wythe Street
Alexandria VA 22314
Phone: 703-684-2400 (Ext. 7070)

If you have questions and want to talk to a local, feel free to reach out to Chad Burrell at cburrell@sbwrld.org or by calling 435-659-5805.

Join WEAU on Social Media

Follow the new WEAU social media accounts on Facebook, Twitter, Instagram, and TikTok! We will have fun updates, promotions of activities and trainings, as well as an interactive group to talk about water and WEAU on social media! Feel free to drop in, ask questions, and reply to any posts

Facebook: WEAU – Water Environment Association of Utah

Twitter: @UTWEAU

Instagram: WEAU 



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