MWEA COLLECTION SYSTEM OUTREACH PROGRAM 11/20/24

SPEAKER BIOS AND ABSTRACTS

1) Michael Vavruska

Mike got his start in the wastewater industry with the **City of Marshfield** back in 2006, where he was the **Wastewater Collection Superintendent**, and later as the **Assistant Wastewater Treatment Plant Superintendent**.
After leaving Marshfield he spent 2 years with **Missouri Rural Water Association** (MRWA) serving as
a W**astewater Technicians** for the entire state of Missouri.
In January of 2022, Mike began with **Midwest Infrastructure Coatings** as their **Regional Director**.

Manhole rehabilitation

Prep process Prior to applying coatings:

- Grinding of the metal ring to remove all rust
- Power-washing at 4000 psi cleaning all grease foreign material and loose debris from the walls
- Once washed all materials from the invert will be removed and rinsed one last time
- Start the drying process **(Heat and force air to dry hole completely)**
- After the drying process is complete, all leaks and wet spots will be address using hydro cement or a chemical grout
- If any additional repairs are needed, they will be addressed at this time

Application:

- Steel Primer is applied on the metal ring to increase adhesion to the casting
- **(Adhesion layer)** 50 mils of OBIC 1000 polyurea will be applied from flow line in invert to metal ring below lid
- **(Surface Layer)** 400 mils of OBIC 1306 will be applied (6-8 PCF Closed-Cell Polyurethane Foam)
- **(Barrier Layer)** 50 mills of OBIC 1000 polyurea will be applied completing the 500-mil lining
- The second of the 2 crew members will then enter the structure to look to if there are any visible areas that need addressed and performs the Holiday Spark Test
- After this is completed and the structure passes the Holiday Spark Test, it receives a completion date stamp at the top of each structure which indicates the start of the 10 yr. warranty period.

**** Manholes will be ACTIVE during the application process. OBIC Armor can be applied in all temperatures ****

Structural Integrity: Polyurea adds some structural integrity to the area it is applied, it is not a rigid material! Flexibility and stability are the name of the game with Polyurea it will move and give with freezing and thawing temperatures and ground movement.

2) **Ryan Poertner**

Ryan Poertner is a General Manager of Ace Pipe Cleaning, Inc. and lives in St. Louis, MO. Ryan manages the St. Louis office, as well as the Cured-In-Place-Pipe division within APC. Ryan is directly responsible for the safety and quality of work for these divisions. Ryan's main focus is on the growing market involving trenchless CIPP rehabilitation. APC is a leader in the industry providing all types of rehabilitation solutions for municipalities in need. Ryan has spent his 20+ years working in the water and wastewater rehabilitation fields. Prior to the 13+ years currently with APC Ryan spent 8 years working for Insituform Technologies, Inc. in roles as Engineer, Trainer, Estimator, and Project Manager. Ryan is an active member of NASTT, NASSCO, WEF and local engineering organizations.

Lateral Connections Repair

Cured in place methods of eliminating I&I in service laterals.

3) **David Hamberlin**

MSI and Ai for Asset Management

David Hamberlin is a Business Development Manager of Water and Wastewater solutions for Hydromax USA. David has over 20 years of experience in wastewater collection system evaluations. He has managed or completed field work on projects that include all aspects of sewer assessment projects. David has been involved with more than 450 projects across the U.S. that have included pipes ranging in size from 2" to 220".

David has been a certified NASSCO trainer since 2012 and is the Chair of the NASSCO O&M Committee. He has also been on the WWETT Show Educational Advisory board since 2017.

Large Diameter Multi Sensor Inspections (MSI) are advanced inspection techniques used to assess the condition of large sewer pipelines. These inspections utilize a combination of high-resolution digital cameras, laser profiling, and sonar to provide comprehensive, three-dimensional views of the sewer infrastructure. The integration of multiple sensors allows for the accurate detection of structural defects, blockages, and

sediment accumulation, which are critical for maintaining the integrity and functionality of the sewer system. By providing detailed data, MSI enables proactive maintenance, reducing the risk of costly repairs and environmental hazards.

The benefits of MSI extend beyond simple defect detection. This technology facilitates a more precise understanding of the sewer's internal conditions, supporting informed decision-making for rehabilitation projects and asset management. The data collected can be used to create detailed maps and models of the sewer network, aiding in long-term planning and resource allocation. Additionally, MSI minimizes the need for disruptive, invasive inspections, promoting efficiency and safety in sewer management operations.

4) **David Jarrett**

David Jarret has 33 years in the coatings industry working with prior coating manufacturers and as a coating business owner, with 9 years currently with Sherwin-Williams. He has used his NACE Certification for project development and technical support in the field as a Protective and Marine representative. He currently collaborates with owners and engineers supporting the Water and wastewater infrastructure for several states Arkansas, Kansas, Missouri, and Oklahoma. As well as supporting the sales team for coating recommendations, technical support, and site surveys. He is currently a committee member of Missouri -AWWA MAC, with memberships in Kansas-AWWA and Southwest-AWWA. He is also active in supporting the Rural water association in the states he covers.

Partnering with Owners, Engineers, Architects, Contractors and GC’s he helps to achieve successful projects by providing specifications and recommendations for high performance architectural and industrial coatings. Water tanks, treatment plants, manufacturing plants, industrial facilities and specialty architectural projects are amongst his specialties with a very wide portfolio of projects and product knowledge.

I & I abatement using structural epoxy liners.

Learning Objectives:

- Explore The challenges of coating above ground vs. below-grade.
- Learn the benefits and limitations of various lining technologies within the sewer collection system.
- Explore the features necessary for applied linings to successfully abate inflow and infiltration. (I&I)
- Understand what a structural epoxy liner is.

5) Barry Howell

Thirty-five years' experience in the public works, construction, and public utilities industry.

Areas of Expertise:

CCTV Analysis	Training, Technical Seminars, Webinars
Data Management	Proposal Development
Account Management	Technical Writing
Capital Planning	Presentations and Public Speaking
Specification Writing	Business Acquisition Analysis/Research

- **Professional Experience:**
  - ✓ **Visu-Sewer, Inc.** (2009 to present) Business Development: New territory development for corporate office and Visu-Sewer of Missouri LLC sewer rehabilitation and evaluation contractor. Duties include sales, specification writing, engineering analysis, marketing research, and business acquisitions.
  - ✓ **KEG Technologies, Inc.** (2003-2009) VP and General Manager:
  - ✓ **Advanced Drainage Systems (ADS)** (1997-2003) Sales Representative.
  - ✓ **Entergy Corporation** (1988-1996) Senior Project Manager.
- **Education:**
  - ✓ **University of Mississippi –** Bachelor of Business Administration, 1981.

A look at Sewer Evaluation Techniques and Nomenclature

What do all those codes mean?

- **Should we use NASSCO Ratings"**
  - **What is PACP?**
  - **What do the codes mean?**
  - **What do those indices mean?**
  - **What is QSR, OPRI, JOL, AMH?**
- **If we bid this, how do we specify what is required?**
  - **Contractors?**
  - **Consulting Firms?**
  - **Other Sources?**

6) Rich Gardner

Regional Manager at Underground Solutions, Inc., an Aegion company.

Rich is a veteran in the water industry, with more than 30 years of experience in providing technical solutions for water and wastewater clients and customers. Rich specializes in providing trenchless technology solutions for new pipeline construction and rehabilitation project needs. He has further extensive experience in water system

valves, hydrants, hot taps, smart metering, acoustical leak detection, water management system software, and data analytics platforms for utilities. Rich holds a Bachelor of Science Degree in Industry & Technology from Northern Illinois University.

More about Underground Solutions, Inc.: UGS provides infrastructure technologies for water, sewer, as well as underground power conduit applications. Aegion's products are among the most innovative solutions for pipeline installation and rehabilitation which include Fusible PVC® products, Fusible C-900® pipe, TerraBrute Restrained Joint PVC pipe, Primus Liner for water and sewer main applications. All of which comply with AWWA C900 and C905, and applicable related AWWA standards respectively and are certified to NSF 61. Other Aegion solutions include Insituform CIPP products, Vylon Gravity Sewerage Pipe, and Cor-Pro Corrosion Protection Systems.

Sliplining, Pipe Bursting & other Trenchless Methods Using PVC

The presentation will cover specifics of each listed solution, overview of their field application uses, and installation methods as it relates to the rehabilitation of collection systems pipelines.

7) Mark Gaines

Mark Gaines is an experienced sales and technical product specialist with a history of working in the Safety field specializing in personal protective products including Confined Space Equipment and Fall Protection Industry. Formally trained in OSHA fall protection standards and risk assessment, and Confined Space Equipment set-up and use. which enables him to train others in how to navigate high risk environments. Mark's 25 years of experience in the fall protection industry across various brands of products, also allows him to bring insights and guidance into finding the best solutions.

Confined Space issues and Solutions

- **5 key requirements for confined space entry**
- **Best practice for atmosphere testing CO, H2S, O2 & LEL**
- **Confined Space entry and rescue equipment**

8) **Nick Davis**

Nick Davis is the current Vice President of Hydro-Kinetics Corporation.

Nick Davis attended the University of Illinois at Urbana-Champaign and graduated in 2005 with a degree in General Engineering with a concentration in Business Systems Integration & Consulting.

Nick started his career with Hydro-Kinetics in March of 2006. After over a decade serving as project manager, Nick transitioned to an outside sales role, handling aftermarket and engineered sales opportunities.

Nick has served on the executive board of the Missouri Section of the American Water Works Association since 2020; he is the current Secretary-Treasurer for the Missouri Section.

Collection System Flow Monitoring

Flow metering with purpose.

SUMMARY

This short presentation will discuss the reasons for conducting flow metering. From pre to post rehab, inflow and infiltration, system capacity, model updates, city interconnections, and more.

This presentation will discuss flow metering/measurement in open channel wastewater collection systems. Open channel flow basics are covered, as well as the reasons behind why this is done and the technologies that are typically used to do it.

OUTLINE

- Reasons to meter flow?
  - Pre/Post
  - I/I
  - System Capacity
  - Model
- BMcD Example Projects
  - MSD
  - Columbia
- Lessons Learned
  - More is not always better.
  - Planning.
  - Never to late to adjust