

MWEA LPC 2022 Fall Workshop Abstracts

- **“What to Expect When You’re Expecting...an Inspection”**

Presented by: Katie Bruegge, City of St. Joseph

Wastewater treatment facilities and personnel should always be ready for an inspection. Even if the inspection is not scheduled in advance, there should be no such thing as an “unexpected” inspection. The US Environmental Protection Agency (EPA) and the Missouri Department of Natural Resources (MDNR) provide inspection guidance documents with checklists that can aid wastewater professionals in preparing for the inevitable facility inspection. Earlier in 2022, the MDNR conducted three inspections with the City of St. Joseph Water Protection Division. This presentation will review EPA and MDNR guidance, as well as provide details from the City of St. Joseph’s recent MDNR inspections. The focus will be on what to expect during a laboratory inspection, but other types of inspections will also be addressed.

- **“PFAS: The Forever Chemical”**

Presented by Billy Stone, Missouri DNR

PFAS have been around for over half a century, and there are very few people who know anything about them. What are PFAS? Where can PFAS be found? Why are PFAS such a concern? This presentation will answer those questions and introduce the listener to the State’s and Federal’s plans for regulating this “Forever Chemical”.

EPA’s Strategic Roadmap highlights the challenges EPA has faced with PFAS contamination. EPA’s ongoing and upcoming goals and objectives will be discussed with chemical safety and pollution prevention, water protection, land management, air emissions, and additional research. Water protection will be the main focus.

This presentation will also discuss the PFAS Monitoring Project conducted by the Missouri Department of Natural Resources.

- **Topic: Data Integrity and Ethics for a WWTP Laboratory**

Presented by Karla Pierce, Missouri DNR

Data integrity and ethics related to laboratory results: quality assurance is implemented and maintained to ensure routinely generated analytical data are scientifically valid and defensible, and are of known and acceptable precision and accuracy.

A review of integrity, ethics, improper practice, fraud, falsification, fabrication, and failure to follow SOPs. Discussion of how and when to report data integrity issues and participate in group discussion around examples of breaches of ethical behavior.

- **Debunking Phosphorus Testing in Wastewater Treatment**

Presented by Rachelle Thibert, HACH Company

In wastewater treatment, phosphorus testing can quickly become confusing. For example, there are three different tests. So, which test was performed? Test results can be displayed in two different forms. So, which form was utilized? Tests can measure both particulate and dissolved phosphorus. So, was the sample filtered?

Knowing which test to run, which units of measurement to choose, and how to express the result can be over whelming for even the most seasoned chemist. This session is designed to cut through the noise and confusion by applying simple, easy-to-understand information for the non-chemist about the different forms and analytical methods for phosphorus in water—so that you can choose the right test and communicate the results confidently.

- **I Spy: Filamentous Edition**

Presented by Emily Lute, City of Moberly

Let's take a dive into the messy world of filamentous bacteria. Understanding these bacteria can tell an operator a great deal about their plant. Filamentous bacteria serve as a base of the structure on which other bacteria can attach and form flocs which are important in flocculation and settling. However, excessive amount of the filamentous bacteria in wastewater may cause problems with sludge settling (bulking and foaming) and have impact on wastewater treatment efficiency. Topics covered will include slide preparation, identification, and causes. A few keys factors to look into for prevention and cleanup will be discussed as well.

- **"What do you do with all this data?"**

Presented by Dr. Brian Stapleton, Kansas City Water

Dr. Stapleton will be discussing, "What do you we do with all this data?", how to manage data before it manages you. We all collect lots of data and we use it in regulatory filings, treatment process control, and special studies amongst others uses. He will discuss the process that KC Water went through to develop a streamlined method to move data from lab analyses to Laboratory Information Management Systems (LIMS) and then use this data to visualize and extend the data sets with data from other utilities systems to develop a more insightful picture of our distribution and collection systems.

- **"Sample Collection & Handling for Wastewater**

Presented by: Aurora Shields, Kansas City Water

Sample collection and handling are critical functions that can have a direct impact on testing results, operational decisions, and compliance. This presentation focusses on elements for establishing sample collection and sample handling protocols using regulatory requirements and best practices.