



NAWT 8TH WASTE TREATMENT SYMPOSIUM
Doubletree Conference Center, Monroeville, PA
McCutcheon Enterprises, Inc., Apollo, PA
Training Conference and Facility Tour

Wednesday and Thursday

August 23-24, 2017

AGENDA

Wednesday General Session

7:00 AM Breakfast – Courtesy of **Septic Services**

8:00 AM Welcome and Introduction Tom Frank and Tom Ferrero
Symposium Co-Chairman

8:15 AM Safety Issues in the Treatment Plant – William Krulac, MEI

Wastewater treatment facilities are themselves industrial processes, with inherent hazards of machinery, energy and chemicals. The primary purpose of the municipal wastewater treatment plant is to protect the population from exposure to harmful disease organisms, and to prevent harm to the environment from chemical pollution. Furthermore, they are literally downstream of any number of industrial, agricultural and health care facilities, each generating an almost infinite combination of biological and chemical hazards. The gathering network is exposed to all mode of transportation, and may receive harmful or dangerous chemicals from accidents or illegal dumping. This presentation is intended to provide awareness of occupational chemical, biological and physical safety hazards, focusing on primarily municipal wastewater treatment. Hazards are addressed in terms of primary, secondary and tertiary treatment stages.

William Krulac Senior Hazardous Materials Emergency Response Coordinator McCutcheon Enterprises, Inc., Apollo, PA Bill is the responsible for emergency preparedness, training and response to hazardous materials emergencies for a regional integrated waste management company. The company serves as the certified Hazardous Materials Response Team for several Pennsylvania counties and companies in the energy production, manufacturing and transportation sectors. In his current position he assists organizations as diverse as research laboratories, oil and gas producers, chemical products manufacturers and maritime operations with training, exercises and emergency responses to oil and hazardous materials incidents.

8:45 AM Presenting Yourself to the Bank – Dan Mikesic, PennVest

A brief look at Pennvest's role in funding infrastructure projects as well as a Pennvest project specialist's perspective on business planning, and asset management and how they are viewed from a lender's point of view.

Dan Mikesic has a B.S. in Biology from the University of Pittsburgh. Prior to working for Pennvest he served in various capacities at PA DEP, all in the drinking water program. The majority of his time at DEP was dedicated to assisting water systems with technical, managerial, and financial outreach. He

worked closely with funding agencies such as Pennvest in implementing various infrastructure projects. He has been with Pennvest since April 2016.

9:15 AM Break

Concurrent Session 1

9:30 AM Analyzing Your Resources – Getting Started – Tom Frank

10:00 AM Unit Processes -
10:00 to 10:30 Screening - Grit Removal – John Olson, Lakeside

Lakeside Equipment Corporation has been providing equipment for wastewater treatment since 1928. Of particular interest is their products that have been used in the Headworks of WWTP's for primary treatment. Products have been developed for Screening, grit removal, and complete plants that provide both functions. This presentation will focus on these products and provide in-depth information about their use and their function within the wastewater treatment system.

John E. Olson, P.E. Regional Sales Manager at Lakeside Equipment Corporation Mr. Olson is from Upper Michigan and has a degree in Environmental Science from Lake Superior State University in Sault Ste. Marie. He is a Professional Environmental Engineer with over 40 years of experience in environmental science and engineering fields. He has worked for Lakeside Equipment Corporation as a Regional Sales Manager since 2013. He has performed all aspects of complex engineering projects, including client development, project identification, and project management. He has designed, managed construction and started-up many new water and wastewater treatment systems in both municipal and industrial applications. During his career, he has performed a variety of engineering / scientific studies, prepared complicated reports, facility plans, and written many papers. The part of his responsibilities that he most enjoys is providing operational training and coordinating staff during construction and start-up phases of projects. Mr. Olson is also a licensed Wastewater Treatment Operator and has managed the operation of several large municipal and industrial environmental facilities.

10:30 to 11:00 Chemical Addition – Polymers – Peter Herlihy, UGSI

11:00 to 11:30 Pumps – Drew Vollbrecht, Boerger Pumps

11:30 to 12:00 Odor Control -Biofilters – Tom Ferrero

At any treatment facility odor will be an issue with the public so all facilities should address odor issues up front. Biofilters are a performance and cost effective way to manage odors. This presentation will give you the basics required to build your own biofilter.

Beginning as a septic tank pumper in a family owned business, Tom Ferrero now has over fifty years of experience in the septage industry and has held positions in the septage industry Associations on a National, State, and local

level. Tom has owned and operated several septage treatment facilities since 1984, at times treating as much as 200,000 gallons per day total at his facilities.

Concurrent Session 2

9:30 AM Biosolids Stabilization – Diane Garvey, Garvey Resources

Biosolids Class A Class B and Vector Attraction Reduction Abstract This presentation will describe the regulatory options for achieving pathogen and vector attraction reduction in biosolids. What must be done to achieve Exceptional Quality (EQ) Biosolids which may be marketed like Milorganite, or distributed in agriculture with fewer regulatory requirements. Photographs will be used to describe a case study of a septage hauling and processing company, EnviroVentures, that makes and distributes an EQ product that is used as fertilizer on feed crops.

Ms. Garvey has a B.S., Civil/Environmental Engineering, Rutgers University and is a Certified Nutrient Management Specialist in PA. With over 20 years of experience, Ms. Garvey's work includes Biosolids Management Planning, Use of Biosolids in Agriculture and Reclamation, Development of Biosolids Distribution and Marketing Programs, Septage Processing and Management, Feasibility Studies, Cost Analyses, Checking for Regulatory Compliance, Formulating Monitoring Plans, Performing Conceptual Design Calculations, Assessing Treatment Plant Operations, and Evaluating Alternatives

Ms. Garvey's work history includes employment by municipal government, research organizations, and consulting firms.

10:20 AM The No Discharge Alternative – Dave Flagg, Septic Services

This is a case history for the development of a 'no discharge' septage treatment facility.

Dave Flagg founded Septic Services in 1982. In addition to a septage treatment facility, Septic Services provides septic system installation, pumping, and repair, portable toilet rentals, and aerator sales and services. Septic Services has serviced over 60,000 residential and commercial septic systems.

11:15 AM New Technologies – PWTech and NewTech

12:00 Noon Lunch Courtesy of **Elkhart Environmental Processing Corp**

Concurrent Session 3

1:00 PM Unit Processes -
Dewatering Options-
1:00 to 1:20 Screw Press – Jim Capell, FKC

Over 5,000 FKC screw presses are in operation worldwide in a wide variety of industries and applications. Sludge dewatering applications are some of the most common applications. This presentation will focus on screw press construction, features, and benefits primarily for septage, grease trap waste and hydro-vac mud dewatering applications. Process flow diagrams for typical sludge dewatering and also for FKC's patented Class A process will be reviewed.

Jim Capell is currently senior VP of FKC Co., Ltd. He has been with the company since 1992. Jim has performed over 100 pilot screw press trials, an untold number of lab evaluations and started-up well over 120 screw presses even though his primary responsibility is sales and marketing primarily for industrial applications. He has extensive expertise with a wide variety of application in numerous industries including septage, grease trap and mud dewatering. Jim holds a Bachelor of Science degree from Boise State University and a Master of International Management from the Thunderbird School of Global Management located in Glendale, AZ. He also speaks, reads and writes Japanese which helps communication with FKC's parent company, Fukoku Kogyo Co. (FKC Japan) headquartered in Tokyo.

1:20 to 1:40 Rotary Press - Brett McQuade, Fournier

The Fournier rotary press is a proven, reliable technology for dewatering municipal sludge that has been in use since 1989. The rotary press uses two slowly rotating screens to create a 2" wide channel that the sludge passes through as it dewater. A pressure restrictor on the outlet of the press allows for the operator to vary the degree of cake dryness in the final product. The rotary press has very few components and is designed for ease of maintenance and unattended operation. The totally enclosed design mitigates odors and allows for the operator to stay out of direct contact with the sludge. The rotary press can be equipped with a single dewatering channel or can be expanded up to eight channels on a single machine.

Brett McQuade is the Eastern regional sales manager for Fournier Industries and had been in this position for 5 years. Prior to this role, he was with Parkson and before that a long time USFilter / Siemens employee doing both engineering and sales. He has a degree in Chemical Engineering, an MBA and holds a PE license in the state of Florida.

1:40 to 2:00 Belt Press - Mike Smith, MSD

2:00 to 2:20 Container Filter – Teresa Johnston, FloTrend

2:20 to 2:40 Volute Dewatering Press - Kyle Kinard, PWTech

2:40 to 3:00 NewTech – Robert Dimmick

NewTech explains its dewatering equipment options, when dewatering makes sense, disposal options, investment recovery calculations, and the services provided to its customers.

President and founder of NewTech, Inc., Robert Dimmick, has been in the wastewater business for over 30 years. Robert started with portable toilet rentals in the late 1980's. His interest in efficiently transporting and handling wastewater caused him to begin working with and designing dewatering systems. Robert built and operated his own dewatering facility, which helped him test and redesign equipment to be user-friendly and make financial sense. Robert works side by side with his customers to figure out what their needs are and designs a system that will best fit their needs. He will assist with the startup of the equipment as well as train the customer on how to operate it most efficiently.

Concurrent Session 4

1:00 PM Public-Private Grease Acceptance – Todd Musser, Altoona Water Authority

This presentation is being provided to show how the Altoona Water Authority handles hauled in waste to the two AWA WWTFs. It will also show how the produced Biosolids are handled. In addition, a perspective will be given as to why the Authority, although it handles all waste through the forward flow, is unable to accept all wastes a hauler might want to deliver.

Todd has been involved in the Wastewater and Water industry most of his working career. He has been a certified Wastewater operator since 1991 and a certified Water operator since 1992. In that time, he has been the Superintendent/Manager of several smaller municipal systems throughout central PA. While doing that, he co-founded Musser Sewer & Septic, LLC a full service wastewater firm that performed mainline cleaning, televising and rehabilitation as well as mobile dewatering and ultimately contract Wastewater and Water treatment plant operations. Currently, Todd is the Director of Wastewater Treatment Operations for the Altoona Water Authority. His responsibilities include overseeing the EPA approved, industrial pretreatment program which has 20 permitted industries and 70 restaurants. He also oversees the Bio-solids management for the Authority including permitting, the calculation of land application rates and spreading and landfill disposal. Additionally, Todd is responsible for the Wastewater Treatment operations at the Authority's two wastewater facilities with current permitted daily capacities of 20 MGD with peak capacities of 95 MGD. He is also responsible for the oversight of the aging collection system that encompasses 240 miles of Authority piping. In his free time, Todd is an active PA DEP state certified Sewage Enforcement Officer and practices in 8 municipalities. He also manages and operates several small water and wastewater systems in central Pennsylvania. He is also a Township Supervisor for a second-class Township in PA.

1:40 PM Acceptance of Grease Trap waste into anaerobic digester – Tom Darby, Hermitage Food Waste to Energy Facility

2:20 PM Sampling - Laboratory procedures – Brian Schaffner, Pace Labs

Pace Analytical in conjunction with KU Resources will present a discussion on Waste Water Sampling. Presenters: Brian Schaffner of Pace Analytical and Logan Lowanse of KU Resources will discuss the types of sampling equipment, Composite & grab samples, Auto sampler set up, Bottles, Labels, Chain of Command & Hold Times, Contamination issues, and a Virtual Lab Tour

Pace Analytical operates one of the largest full service commercial laboratory networks in the nation, providing project support for thousands of industry, consulting, engineering and government professionals. Brian Schaffner has served as an Account Executive for

the last 12 years with Pace Analytical. Additionally Mr. Schaffner has logged over 35 years in the environmental laboratory field. KU Resources is an environmental management, site development, and economic development consulting firm that specializes in preparing environmentally-impaired properties for safe, timely, and cost-effective redevelopment. Logan Lowanse is an environmental scientist with KU Resources. Mr. Lowanse is experienced in environmental monitoring, oversight, water quality issues and remediation techniques. His expertise involves NPDES, water, soil and air sampling techniques.

3:00 PM Break

General Session

3:15 PM Life Threatening Vocational Hazards – William Krulac, MEI

This presentation focuses primarily on biological hazards in primarily municipal wastewater treatment. Hazards discussed are viruses, bacteria, protozoa, helminths (worms) and endotoxins. Consideration is also given to non-biological toxins to which workers may be exposed. Information required to meet the OSHA Blood Borne Pathogens (BBP) standard, 29 CFR 1910.1030 is presented. The BBP is augmented with additional information regarding pathogens and exposure scenarios in wastewater treatment. Exposure pathways of inhalation, ingestion, absorption and injection are considered as well as discussion of reported research into health effects of exposure in wastewater workers. Throughout the presentation, participants will be encouraged to exchange experiences and best practices that have been developed in their respective facilities

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4:00 PM Case History ‘How Did We Get Here?’ – Calvin McCutcheon, McCutcheon Enterprises

4:45 PM Networking time, Cash Bar

5:30 PM Dinner provided at the Conference Center

AGENDA
General Session

Thursday

Coffee and Donuts at McCutcheon Facility – Courtesy of **Septic Services**

7:15 AM

Buses leave for Facility

8:30 AM

Partnering Successfully with your POTW
Owen Biltz (MEI) and Dennis Duryea (KVVWPCA)

9:15 AM

Demonstration Equipment on Display

9:15 AM

Split into assigned groups:

Tour of Operating Septage/Grease Trap Waste Treatment Facility
McCutcheon Enterprises, Apollo, PA

Tour of Kiski Valley WPCA

12:30 Noon Lunch at McCutcheon Enterprises Courtesy of Jack Doheny Supplies

1:30 PM

Continuation of tours

4:30 PM

Buses Return to Conference Center