

# The 70th Michigan Onsite Wastewater Conference 2022

## Professional Onsite Wastewater Management

Day 1 – January 11, 2022

8:45-9 a.m.	Welcome and Morning Announcements
9-9:55 a.m.	<p><b>Concurrent Tracks - Session #1</b></p> <ul style="list-style-type: none"> <li>• EGLE / LHD             <ol style="list-style-type: none"> <li>1. ELGE Onsite Wastewater Program Welcome and Updates – <i>David Cotton (EGLE) (20 min)</i> <ul style="list-style-type: none"> <li>▪ <i>BIO: Dave is a Professional Engineer working for the state since the spring of 2014. He graduated from Michigan Tech and has worked in the field of decentralized wastewater management his entire career. Dave has worked in many aspects of the onsite industry, including design, regulation, installation, manufacture, training, and operation &amp; maintenance.</i></li> <li>▪ <b>DESCRIPTION:</b> Meet the Onsite Wastewater Staff and learn what’s been going on over the past 20 months in the world of onsite wastewater. Get an overview of some of the exciting offerings this conference and other updates.</li> </ul> </li> <li>2. Regulatory Structure for Sanitary and Non-Sanitary Wastewater – <i>Kristine Rendon (EGLE) (25 min)</i> <ul style="list-style-type: none"> <li>▪ <i>BIO: Kristine Rendon is the Groundwater Permits Unit Supervisor for the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Water Resources Division. Before her current position, she worked as an Environmental Quality Analyst in the Onsite Wastewater Program with the EGLE Drinking Water and Environmental Health Division. She also has experience as an Environmental Health Sanitarian with two District Health Departments across the State of Michigan. She is a Registered Environmental Health Specialist through the National Environmental Health Association with a Bachelor of Science degree in Biology from Ohio Dominican University and a Master of Environmental Health degree from the University of Saint Francis.</i></li> <li>▪ <b>DESCRIPTION:</b> This presentation is to help assist local health departments when permitting sanitary sewage systems construction by exploring the relationship between local county, district, and/or city health departments permitting and EGLE. To understand the relationship between local permitting and EGLE, it is important to know the rules and regulations that EGLE operates under for groundwater discharges; specifically, Part 31 of the Natural Resources and Environmental Protection Act (NREPA) and the Part 22 and Part 41 Administrative Rules.</li> </ul> </li> <li>3. Q&amp;A (10 min)</li> </ol> </li> <li>• MSTA             <ol style="list-style-type: none"> <li>1. Septage Dewatering Ideas - <i>Therese Wheaton (Crystal Environmental)</i> <ul style="list-style-type: none"> <li>▪ Bio: Coming Soon</li> <li>▪ Description: Coming Soon</li> </ul> </li> </ol> </li> </ul>

	<ul style="list-style-type: none"> <li>• General Wastewater             <ol style="list-style-type: none"> <li>1. Advanced Treatment and ReUse – Design Considerations for Reuse or Surface Discharge - <i>Marianne Willson (Waterloo Biofilter Systems, Inc.)</i> <ul style="list-style-type: none"> <li>▪ <i>BIO: Marianne is trained as an Environmental Technologist and has held positions as Land Use Planner and Provincial Officer for the Ministry of Environment in Ontario for Sewage system regulations. She has been involved in many aspects of research, design and installation education for Waterloo Biofilter for the past 24 years. She is now most actively engaged in the Technical Sales and Field Support role for Waterloo Biofilter as the Lead for the western side of Ontario and State of Michigan.</i></li> <li>▪ DESCRIPTION: With the increasing frequency of development occurring in rural areas either due to lack of infrastructure or limited capacity of existing facilities, many industries continue to push into unserved areas for expansion. Large subservice disposal fields may not always be advantageous and discharge capacity limits may be imposed to protect natural environments receiving water. In these scenarios, reuse can be the solution to embracing development and increasing development revenue within rural communities that depend on it. Waterloo Biofilter will discuss our experiences with these projects and some of the challenges and solutions that have been implemented to meet these development needs.</li> </ul> </li> </ol> </li> </ul>
<p><b>10:05-11 a.m.</b></p>	<p><b>Concurrent Tracks - Session #2</b></p> <ul style="list-style-type: none"> <li>• EGLE / LHD             <ol style="list-style-type: none"> <li>1. Part 41 and Flow Determination for Community Systems – <i>Charles Hill (EGLE) (25 min)</i> <ul style="list-style-type: none"> <li>▪ <i>BIO: Charlie received a bachelor’s degree in chemical engineering from the University of Michigan and a master’s degree in civil and environmental engineering from Wayne State University and is a licensed professional engineer in the State of Michigan.</i></li> <li>▪ Description: Part 41 of Act 451 gives the State authority to regulate public use wastewater systems, including a wastewater construction permit program. A key aspect of the permit program is determining flows to be used in the basis of design for wastewater projects. This presentation will cover a brief introduction to the Part 41 wastewater construction permit program, and present methods and approaches for determining flows for community systems that are subject to Part 41.</li> </ul> </li> <li>2. High Strength Wastewater and Food Processing – <i>Kristine Rendon (EGLE) (20 min)</i> <ul style="list-style-type: none"> <li>▪ <i>BIO: Kristine Rendon is the Groundwater Permits Unit Supervisor for the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Water Resources Division. Before her current position, she worked as an Environmental Quality Analyst in the Onsite Wastewater Program with the EGLE Drinking Water and Environmental Health Division. She also has experience as an Environmental Health Sanitarian with two District Health Departments across the State of Michigan. She is a Registered Environmental Health Specialist through the National Environmental Health Association with a Bachelor of Science degree in Biology from Ohio Dominican University and a Master of Environmental Health degree from the University of Saint Francis.</i></li> <li>▪ Description: Wastewater discharges from food processing facilities containing high strength wastewater have been found to have caused metals such as arsenic, iron, and manganese to be released into the groundwater, resulting in</li> </ul> </li> </ol> </li> </ul>

	<p>the contamination of groundwater, including public and private wells. EGLE has found many of these food processors have either never been permitted or have been permitted under a permit that may not be appropriate for the wastewater being discharged. Appropriately permitting all unpermitted and under permitted food processors with high strength wastewater is critical to protecting both groundwater and surface water resources.</p> <p>3. Q&amp;A (10 min)</p> <ul style="list-style-type: none"> <li>• MSTA             <ol style="list-style-type: none"> <li>1. Hours of Service and Michigan Drug and Alcohol Laws for CDL Drivers - <i>Erick Kestila (Michigan Center for Truck Safety)</i> <ul style="list-style-type: none"> <li>▪ <i>BIO: Erick is a graduate from Northern Michigan University. He retired from the Michigan State Police Commercial Vehicle Enforcement Division after 31 years. He served as a Driver’s License Examiner for State of Michigan 30 years and now is a safety specialist at the Michigan Center for Truck Safety.</i></li> <li>▪ <b>DESCRIPTION:</b> This session will discuss the hours-of-service new rules that have changed for short haul drivers and a few other exceptions. It will also cover the Michigan drug and Alcohol Laws and how they effect CDL drivers.</li> </ul> </li> </ol> </li> <li>• General Wastewater             <ol style="list-style-type: none"> <li>1. Modeling the fate of Carbon and Nitrogen in Drainfields - <i>Steve Safferman &amp; Younsuk Dong (MSU)</i> <ul style="list-style-type: none"> <li>▪ <b>Bio:</b> Steve Safferman is an Associate Professor, Extension Specialist, and Graduate Program Coordinator in the Department of Biosystems and Agricultural Engineering at MSU. He has a M.S. and Ph.D. in environmental engineering and a B.S. in civil engineering, all from the University of Cincinnati, and holds Ohio and Michigan professional engineering licenses. His research and extension programs focus on wastewater treatment, fate and transport of nutrients applied to agriculture land, and system designs for waste to resource technologies. Younsuk Dong is an Irrigation Specialist in the Department of Biosystems and Agricultural Engineering (BAE) at MSU. He has a B.S., M.S., and Ph.D in BAE from MSU. He has been involved in research on soil modeling of wastewater land application system, phosphorus removal from wastewater using a nano-engineered sorption media, and safe recycling of food processing wastewater.</li> <li>▪ <b>Description:</b> Modeling wastewater drainfields provides insight on design and operation strategies. Research was conducted using the software HYDRUS, calibrated and verified using large soil trenches. Data will be presented on the depth required for carbon removal, impacts of organic and hydraulic loadings on performance, and operational strategies to maximize nutrient removal.</li> </ul> </li> </ol> </li> </ul>
<p><b>11:30 a.m. – 12:50 p.m.</b></p>	<p><b>Virtual Exhibit Hall</b></p>
<p><b>1:30-2:25 p.m.</b></p>	<p><b>Concurrent Tracks - Session #3</b></p> <ul style="list-style-type: none"> <li>• EGLE / LHD             <ol style="list-style-type: none"> <li>1. Introduction to MiEHDWIS and the Onsite Wastewater Management (OWM) Collaboration Portal – <i>Regina Young, (EGLE)</i> <ul style="list-style-type: none"> <li>▪ <i>BIO: Regina Young serves as an Environmental Quality Analyst with the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Drinking Water and Environmental Health Division, Environmental Health Programs Unit, Onsite Wastewater Program. Prior to joining EGLE in 2019, Regina served her community for thirty (30) plus years as a</i></li> </ul> </li> </ol> </li> </ul>

	<p><i>Registered Sanitarian in the Environmental Health Division of a local public health department. Regina seeks to share her enthusiasm in onsite wastewater management for the betterment of Michigan’s residents and visitors.</i></p> <ul style="list-style-type: none"> <li>▪ DESCRIPTION: The EGLE Onsite Wastewater Program began using the Michigan Environmental Health and Drinking Water Information System (MiEHDWIS) in July 2021. This new application serves as a means for local health departments (LHD’s) to submit Onsite Wastewater Management (OWM) Requests and/or OWM Training Requests to EGLE. This presentation will introduce the current OWM functionality, demonstrate the use by LHD’s of the My Work-Customer Portal to submit requests for program assistance, upload files, and initiate EGLE consultations. We’ll look at the way MiEHDWIS sends notifications to external local health department customers and how LHD users notify EGLE staff by using workflows in the application. Finally, you will see that the OWM Collaboration Portal is more than a file or record sharing tool.</li> </ul>
	<ul style="list-style-type: none"> <li>• MSTA             <ol style="list-style-type: none"> <li>1. Permit Required Confined Spaces – An Overview of the MIOSHA Standard - <i>Rory Huddas, MIOSHA</i> <ul style="list-style-type: none"> <li>▪ <i>Bio: Rory Huddas joined MIOSHA in 2014 as an Industrial Hygienist in the General Industry Safety and Health Division. In that capacity, he conducted inspections at high-hazard industries, investigated workplace fatalities and reports of occupational illnesses, and responded to questions and concerns about occupational health issues. In 2019, Rory was appointed to the position of Industrial Hygienist with MIOSHA’s Consultation, Education and Training Division. In this position, he consults with and advises general industry and construction employers, workgroups, and governmental agencies in the areas of occupational health hazards. He also conducts hazard surveys and delivers training seminars and workshops.</i></li> <li>▪ Description: Provide an overview of both the construction and general industry rules related to confined spaces and permit-required confined spaces. Examples of actual spaces will be used to clarify the definitions and facilitate proper identification of confined spaces versus permit-required confined spaces. Lastly, will discuss the three means of entering a permit-required confined space as described in MIOSHA Standards Part 35, 90, and 490. These entry procedures will be discussed along with a brief description of their individual implementation.</li> </ul> </li> </ol> </li> </ul>
	<ul style="list-style-type: none"> <li>• General Wastewater             <ol style="list-style-type: none"> <li>1. Minnesota’s Septic System Professional Certification and Licensing Program - <i>Nick Haig (Minnesota Pollution Control Agency)</i> <ul style="list-style-type: none"> <li>▪ <i>Bio: Nick is the supervisor of the Pollution Control Agency’s Certification and Training Unit. The unit delivers training, administration, and program development for wastewater operators, landfill operators, and septic system professionals who must hold certification for their work. His primary focus is on improving the quality and relevance of the environmental professional certification process. He was a program administrator before assuming a leadership role, where he worked on SSTs and Solid Waste program development. Before coming to the MPCA, he was the program coordinator for the Onsite Sewage Treatment Program at the University of Minnesota for seven years and spent three years engaging small communities in the wastewater infrastructure upgrade process.</i></li> </ul> </li> </ol> </li> </ul>

	<ul style="list-style-type: none"> <li>▪ Description: Minnesota's septic system professional licensing and certification program became mandatory in 1996. They have nearly 1300 separate businesses licensed in the state, with over 3,000 certified professionals. The program establishes a basis for professional accountability and protects the environment and public health by defining minimum standards and best practices through rule, training, and technical support. The Minnesota Pollution Control Agency collaborates with the University of Minnesota to plan and deliver 30-40 workshops every year. The program includes nine certification specialty areas certification exams on the design, installation, care, and inspection of septic systems. Each specialty area is periodically updated through the Need-to-Know process, a stakeholder-driven job analysis procedure used to define what professionals need to know to competently practice their profession. Its objective is to align the job tasks, curriculum priorities, and exam competencies that warrant certification for professionals and provides an important way to define and continuously improve septic system training and exams. The presentation will provide an overview of Minnesota’s program and dive into the Need-to-Know process, methods, and work products that add value and relevance to the certification program and create legally defensible certification exams.</li> </ul>
<p>2:35-4 p.m.</p>	<p><b>Concurrent Tracks - Session #4</b></p> <ul style="list-style-type: none"> <li>• EGLE / LHD             <ol style="list-style-type: none"> <li>1. Fundamental Components of Tanks and Soil Dispersal – <i>Marisa Faraldo (EGLE) (25 min)</i> <ul style="list-style-type: none"> <li>▪ <i>BIO: Marisa has a Bachelor of Science in Geology and a Master of Science in Environmental Health. Both degrees were received from Old Dominion University. She is also a Registered Sanitarian with the National Environmental Health Association. She previously worked at the Kent County Health Department as a general sanitarian before coming to EGLE as an Environmental Quality Analyst in the Onsite Wastewater Program in September 2021.</i></li> <li>▪ Description: Appropriately designed and operated onsite wastewater systems have two primary functions: treatment and dispersal. This presentation will touch on the fundamental components of a typical onsite wastewater (septic) system. Topics will include the varying types of tank designs, soil dispersal designs, and additional parts and components commonly used in Michigan.</li> </ul> </li> <li>2. Pump Stations, Uses, and Design – <i>David Cotton (EGLE) (20 min)</i> <ul style="list-style-type: none"> <li>▪ <i>BIO: Dave is a Professional Engineer working for the state since the spring of 2014. He graduated from Michigan Tech and has worked in the field of decentralized wastewater management his entire career. Dave has worked in many aspects of the onsite industry, including design, regulation, installation, manufacture, training, and operation &amp; maintenance.</i></li> <li>▪ DESCRIPTION: Pump usage in onsite wastewater treatment systems is increasing. They allow for pumping uphill, reduced mound sizing with pressure distribution, and are required for systems with flows of 2,000 gallons a day or greater. This session will discuss the pump station design considerations.</li> </ul> </li> <li>3. LHD and OWP Navigating the permitting authorities and WRD Programs Together – <i>Kristine Rendon, Dale Ladouceur, Charles Hill, Rob Wolfe (EGLE) (25 min)</i> <ul style="list-style-type: none"> <li>▪ <i>BIO: Kristine Rendon is the Groundwater Permits Unit Supervisor for EGLE’s, Water Resources Division. Before her current position, she worked as an Environmental Quality Analyst in the Onsite Wastewater Program with the EGLE Drinking Water and Environmental Health Division. She also has experience as an Environmental Health Sanitarian with two District Health Departments across the State of Michigan. She is a Registered Environmental Health Specialist through</i></li> </ul> </li> </ol> </li> </ul>

	<p><i>the National Environmental Health Association with a Bachelor of Science degree in Biology from Ohio Dominican University and a Master of Environmental Health degree from the University of Saint Francis. Dale Ladouceur is a Registered Sanitarian. He is employed as an Environmental Quality Specialist with EGLE’s Drinking Water and Environmental Health Division, Environmental Health Programs Unit, Onsite Wastewater Program and has worked in the program for 21+ years. Before working for the State, Dale worked for a district health department for over 12 years. Dale has a B.S. degree in Environmental Health from Ferris State College (presently known as Ferris State University). Charlie is a wastewater engineering specialist for EGLE - Water Resources Division, coordinating statewide programs for wastewater construction permits and wet weather discharge control, among other duties. He has worked for EGLE since 2000. Charlie received a bachelor’s degree in chemical engineering from the University of Michigan and a master’s degree in civil and environmental engineering from Wayne State University and is a licensed professional engineer in the State of Michigan. Rob Wolfe has worked at the State of Michigan for 28 years. He started in the wetland’s determination section of DNR, then went into the Groundwater Section, Solid Waste Section, Hazardous Waste Section, and finally landed in the Environmental Health Programs beginning in 2001 in the Marquette District. Rob is the regulatory consultant for the Well Construction Section, Septage Program, Onsite Wastewater Program and Biosolids Land Application Program for the Water Resources Division for all the Upper Peninsula counties.</i></p> <ul style="list-style-type: none"><li>▪ DESCRIPTION: Onsite systems are subject to several regulations, administered by various agencies with regulatory and permitting oversight. This panel discussion will address navigating the regulations that might apply to a particular onsite system and identify when planning and coordination between owners and the administering agencies is crucial. The panel will include EGLE staff who represent the various programs that cover onsite systems.</li></ul>
	<ul style="list-style-type: none"><li>• MSTA<ol style="list-style-type: none"><li>1. Advance Treatment System Maintenance - <i>Cory Lyon (OrencoSystems Inc.)</i><ul style="list-style-type: none"><li>▪ BIO: <i>Cory Lyon is the National Sales Manager for Onsite Systems at Orenco Systems®, Inc., a wastewater equipment manufacturing firm based in Sutherlin, Oregon. In this role, he oversees sales, product training, and support for engineers, regulators, and contractors in the United States and Canada. A skilled presenter, Cory regularly gives trainings to diverse groups, including regulators, engineers, installers, service providers, electricians, and distributors. Cory holds an Associate of Applied Science degree in civil engineering technology from Umpqua Community College.</i></li><li>▪ DESCRIPTION: O&amp;M Technicians are faced with a variety of treatment technologies and how they best operate. This presentation will provide a primer on O&amp;M for a packed bed filters, and other common onsite treatment technologies.</li></ul></li></ol></li></ul>
	<ul style="list-style-type: none"><li>• General Wastewater<ol style="list-style-type: none"><li>1. Update of NOWRA Activities for 2021: A Year of Transition and Success - <i>Thomas Groves (NOWRA) (40 min)</i><ul style="list-style-type: none"><li>▪ Bio: Tom Groves is the current Executive Director of NOWRA. He took over the position in January 2021 from Eric Casey who held that position for 10 years. Prior to NOWRA, Tom served as the Director of Wastewater and Onsite Programs for the New England Interstate Water Pollution Control Commission (NEIWPC), a quasi-government non-profit agency. In his capacity at NEIWPC, he worked on all wastewater related issues large scale municipal and small onsite/decentralized, including overseeing NEIWPC’s training and certification programs. He served two terms on the NOWRA Board of Directors representing the regulatory category. He was president of NOWRA from 2008 – 2010 where he was involved with the hiring of Eric Casey as the first full-time Executive Director of NOWRA. Tom also has</li></ul></li></ol></li></ul>

	<p>experience as a State Affiliate of NOWRA. He was one of the founding members of the New England chapter of NOWRA – Yankee Onsite Wastewater Association where he served as board member, President, and Treasurer. He has enjoyed his first 12 months on the job and is looking forward to the future with NOWRA.</p> <ul style="list-style-type: none"> <li>▪ Description: An update on NOWRA’s transition, activities, and accomplishments of 2021 will be discussed by the new Executive Director, Tom Groves. Discussion will focus on resources for state affiliates and members, such as online learning, outreach and publications, conferences, partnerships, and advocacy activities.</li> </ul> <p>2. EPA’s Decentralized Wastewater Program - <i>Zach Lowenstein (EPA)</i> (40 min)</p> <ul style="list-style-type: none"> <li>▪ Bio: <i>Zach Lowenstein is an Environmental Scientist in EPA’s Office of Wastewater Management (OWM), located in Washington, DC. Zach has been with EPA’s OWM since 2017, with the Decentralized Wastewater Program, managing initiatives such as SepticSmart Week and the Decentralized Wastewater MOU Partnership. Prior to his employment at EPA, Zach worked for a couple of years in water use and well permitting at the South Florida Water Management District, and before that, as an environmental scientist at a small consulting firm in the oil and gas sector, focused on groundwater and soil remediation. Zach holds a Bachelor’s in Environmental Science and Master’s in Public Health, both from the University of Florida.</i></li> <li>▪ Description: The U.S. Environmental Protection Agency (EPA)’s, Office of Wastewater Management, Decentralized Wastewater Program provides resources, education, and outreach at a national level for managing and maintaining decentralized wastewater systems. This presentation will highlight the major accomplishments and updates of the Decentralized Program in 2021, including SepticSmart Week and the ongoing work of the Decentralized Wastewater MOU Partnership. The Decentralized Program’s annual outreach campaign, SepticSmart Week, promotes proper care and maintenance of septic systems primarily for homeowners. EPA’s Decentralized Wastewater MOU Partnership, which consists of associations and experts in the decentralized field, play a key role in the success of SepticSmart Week. This presentation will include progress updates on the MOU Partnership priorities such as homeowner outreach, data needs, technology, finance, and workforce development.</li> </ul>
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**Day 2 – January 12, 2022**

<b>8:45-9 a.m.</b>	<b>Welcome and Morning Announcements</b>
<b>9-11 a.m.</b>	<b>Concurrent Tracks - Session #5</b>
	<ul style="list-style-type: none"> <li>• EGLE / LHD             <ol style="list-style-type: none"> <li>1. Importance of Soil in Wastewater Treatment and Dispersal - <i>David Cotton, Dale Ladouceur, Marisa Faraldo, Rob Wolfe, Regina Young (EGLE)</i> <ul style="list-style-type: none"> <li>▪ <i>BIO: Dave Cotton is a Professional Engineer working for the State since the spring of 2014. He graduated from Michigan Tech and has worked in the field of decentralized wastewater management his entire career. Dave has worked in many aspects of the onsite industry, including design, regulation, installation, manufacture, training, and operation &amp;</i></li> </ul> </li> </ol> </li> </ul>

*maintenance. Dale Ladouceur is a Registered Sanitarian. He is employed as an Environmental Quality Specialist with EGLE's Drinking Water and Environmental Health Division, Environmental Health Programs Unit, Onsite Wastewater Program and has worked in the program for 21+ years. Before working for the State, Dale worked for a district health department for over 12 years. Dale has a B.S. degree in Environmental Health from Ferris State College (presently known as Ferris State University). Marisa Faraldo has a Bachelor of Science in Geology and a Master of Science in Environmental Health. Both degrees were received from Old Dominion University. She also a Registered Sanitarian with the National Environmental Health Association. She previously worked at Kent County Health Department as a general sanitarian before coming to EGLE as an Environmental Quality Analyst in the Onsite Wastewater Program in September 2021. Rob Wolfe has worked at the State of Michigan for 28 years. He started in the wetland's determination section of DNR, then went into the Groundwater Section, Solid Waste Section, Hazardous Waste Section, and finally landed in the Environmental Health Programs beginning in 2001 in the Marquette District. Rob is the regulatory consultant for the Well Construction Section, Septage Program, Onsite Wastewater Program and Biosolids Land Application Program for the Water Resources Division for all the Upper Peninsula counties. Regina Young serves as an Environmental Quality Analyst with EGLE's Drinking Water and Environmental Health Division, Environmental Health Programs Unit, Onsite Wastewater Program. Prior to joining EGLE in 2019, Regina served her community for thirty (30) plus years as a Registered Sanitarian in the Environmental Health Division of a local public health department.*

- DESCRIPTION: Soil is the most important treatment and dispersal mechanism for many onsite wastewater treatment systems. During this session we will review soil terminology, soil characteristics, fluid flow through soil, and share resources available to assist local health department staff in soil evaluations.

2. Soil Properties and Texturing – *David Cotton, Dale Ladouceur, Marisa Faraldo, Rob Wolfe, Regina Young (EGLE)*

- *BIO: Dave Cotton is a Professional Engineer working for the State since the spring of 2014. He graduated from Michigan Tech and has worked in the field of decentralized wastewater management his entire career. Dave has worked in many aspects of the onsite industry, including design, regulation, installation, manufacture, training, and operation & maintenance. Dale Ladouceur is a Registered Sanitarian. He is employed as an Environmental Quality Specialist with EGLE's Drinking Water and Environmental Health Division, Environmental Health Programs Unit, Onsite Wastewater Program and has worked in the program for 21+ years. Before working for the State, Dale worked for a district health department for over 12 years. Dale has a B.S. degree in Environmental Health from Ferris State College (presently known as Ferris State University). Marisa Faraldo has a Bachelor of Science in Geology and a Master of Science in Environmental Health. Both degrees were received from Old Dominion University. She also a Registered Sanitarian with the National Environmental Health Association. She previously worked at Kent County Health Department as a general sanitarian before coming to EGLE as an Environmental Quality Analyst in the Onsite Wastewater Program in September 2021. Rob Wolfe has worked at the State of Michigan for 28 years. He started in the wetland's determination section of DNR, then went into the Groundwater Section, Solid Waste Section, Hazardous Waste Section, and finally landed in the Environmental Health Programs beginning in 2001 in the Marquette District. Rob is the regulatory consultant for the Well Construction Section, Septage Program, Onsite Wastewater Program and Biosolids Land Application Program for the Water Resources Division for all the Upper Peninsula counties. Regina Young serves as an Environmental Quality Analyst with EGLE's Drinking Water and Environmental Health Division, Environmental Health Programs Unit, Onsite*

	<p><i>Wastewater Program. Prior to joining EGLE in 2019, Regina served her community for thirty (30) plus years as a Registered Sanitarian in the Environmental Health Division of a local public health department.</i></p> <ul style="list-style-type: none"> <li>▪ DESCRIPTION: Proper soil identification as it relates to site suitability and system design is critically important to local health department staff working in an onsite wastewater program. Understanding the soil properties of soil depth, soil texture, and soil structure is crucial when determining the appropriate soil loading rate when a soil dispersal system is being considered. This session will review the above soil properties and include step-by-step guidance and demonstrations on how to determine soil textures by the “feel” method.</li> </ul> <ul style="list-style-type: none"> <li>• MSTA             <ol style="list-style-type: none"> <li>1. Septage Land Application Agronomic Loading Rates - <i>Greg Merricle (EGLE)</i> <ul style="list-style-type: none"> <li>▪ BIO: <i>Greg has a BS in Biology from Alma College and a MS in Hazardous Waste Management from the College of Engineering at Wayne State University. Greg has worked for EGLE by various names for 20+ years, where his focus was on beneficial reuse and agricultural land application programs such as the Biosolids Program, the CAFO Program, and, most recently, the Septage Program. Greg now serves as the Septage Program Coordinator.</i></li> <li>▪ DESCRIPTION: A basic introduction to the environmental and public health reasons for agronomic rate restrictions, an explanation of the specific restrictions that Part 117 employs, and an in-depth look at soil testing and reports, agronomic rate determinations and calculations, and cropping plan paperwork.</li> </ul> </li> </ol> </li> <li>• General Wastewater             <ol style="list-style-type: none"> <li>1. Pumping Systems - Choosing the Right Pump and System Curves and Pump Curves - <i>Cory Lyon, OrencoSystems Inc</i> <ul style="list-style-type: none"> <li>▪ BIO: <i>Cory Lyon is the National Sales Manager for Onsite Systems at Orenco Systems®, Inc., a wastewater equipment manufacturing firm based in Sutherlin, Oregon. In this role, he oversees sales, product training, and support for engineers, regulators, and contractors in the United States and Canada. A skilled presenter, Cory regularly gives trainings to diverse groups, including regulators, engineers, installers, service providers, electricians, and distributors. Cory holds an Associate of Applied Science degree in civil engineering technology from Umpqua Community College.</i></li> <li>▪ DESCRIPTION: Choosing the right pump curve to match up against the hydraulic needs of a system can be challenge. This presentation will go selecting a pump curve that will not only meet the hydraulic needs and help you avoid unnecessary O&amp;M.</li> </ul> </li> <li>2. NAWT - <i>Kim Seipp (NAWT)</i> <ul style="list-style-type: none"> <li>▪ Bio: Coming Soon</li> <li>▪ Description: Coming Soon</li> </ul> </li> </ol> </li> </ul>
<p><b>11:30 a.m. – 12:50 p.m.</b></p>	<p><b>Virtual Exhibit Hall</b></p>
<p><b>1:30-2:25 p.m.</b></p>	<p><b>Concurrent Tracks - Session #6</b></p> <ul style="list-style-type: none"> <li>• EGLE / LHD             <ol style="list-style-type: none"> <li>1. Wastewater Characteristics Residential and Highstrength Domestic - <i>David Cotton (EGLE) (20 min)</i> <ul style="list-style-type: none"> <li>▪ BIO: <i>Dave is a Professional Engineer working for the state since the spring of 2014. He graduated from Michigan Tech and has worked in the field of decentralized wastewater management his entire career. Dave has worked in many</i></li> </ul> </li> </ol> </li> </ul>

	<p><i>aspects of the onsite industry, including design, regulation, installation, manufacture, training, and operation &amp; maintenance.</i></p> <ul style="list-style-type: none"> <li>▪ DESCRIPTION: All wastewater is not equal, even domestic wastewater which includes home and restaurant varies greatly. We will discuss the constituents of concern and their concentrations found in domestic wastewater.</li> </ul> <p>2. Concepts for Designing Soil Based Wastewater Treatment – <i>David Cotton (EGLE)</i> (20 min)</p> <ul style="list-style-type: none"> <li>▪ <i>BIO: Dave is a Professional Engineer working for the state since the spring of 2014. He graduated from Michigan Tech and has worked in the field of decentralized wastewater management his entire career. Dave has worked in many aspects of the onsite industry, including design, regulation, installation, manufacture, training, and operation &amp; maintenance.</i></li> <li>▪ DESCRIPTION: Soil is an important treatment and dispersal mechanism for all onsite wastewater treatment systems. System placement in the soil profile, organic and hydraulic loading rates, and system geometry are all critical to promoting an optimal environment for biological treatment and minimizing groundwater mounding beneath the system.</li> </ul> <p>3. Q&amp;A (10 min)</p>
	<ul style="list-style-type: none"> <li>• MSTA</li> </ul> <p>1. Part 117 and the Exemptions – <i>Greg Merricle (EGLE)</i></p> <ul style="list-style-type: none"> <li>▪ <i>BIO: Greg has a BS in Biology from Alma College and a MS in Hazardous Waste Management from the College of Engineering at Wayne State University. Greg has worked for EGLE by various names for 20+ years, where his focus was on beneficial reuse and agricultural land application programs such as the Biosolids Program, the CAFO Program, and, most recently, the Septage Program. Greg now serves as the Septage Program Coordinator.</i></li> <li>▪ DESCRIPTION: An exploration of the little-known corners of Part 117 where the exemptions and other oddities reside.</li> </ul>
	<ul style="list-style-type: none"> <li>• General Wastewater</li> </ul> <p>1. Before it Hits the Fan: Top Tips to Communicate through Conflict - <i>Jordan Burroughs &amp; Lindsey Gardner (MSU)</i> (2 hours)</p> <ul style="list-style-type: none"> <li>▪ <i>BIO: Jordan Burroughs and Lindsey Gardner are statewide specialists in leadership and community engagement from Michigan State University Extension. Jordan is a Co-Director of the Great Lakes Leadership Academy and manages the Emerging Leaders Program. Jordan has a Master of Science in Fisheries and Wildlife from Michigan State University and a Bachelor of Science from University of Missouri-Columbia. She spent the first 15 years of her career as a wildlife outreach specialist at MSU. Lindsey has a Bachelor of Science in Human and Organizational Development and a Master of Education in Community Development from Vanderbilt University and is certified in the Thomas-Kilmann Conflict Mode Instrument.</i></li> <li>▪ DESCRIPTION: The Communicating through Conflict workshop will provide participants with an overview of the tools and techniques to handle tense situations and interpersonal conflict more effectively. Last fall, Michigan State University Extension launched a special self-paced certificate course called "<a href="#">Communicating through Conflict</a>". Join us as we share top tips for self-management in heated situations and strategies for deescalating conflict with others.</li> </ul>
<p><b>2:35-3:30 p.m.</b></p>	<p><b>Concurrent Tracks - Session #7</b></p>
	<ul style="list-style-type: none"> <li>• EGLE / LHD</li> </ul> <p>1. Understanding Land Divisions – <i>James McManus (Barry County Planning)</i> (20 min)</p>

<ul style="list-style-type: none"> <li>▪ <i>Bio: James McManus, AICP, has been the Planning Director in Barry County for 2 years. James is also a part-time instructor at WMU for the past 31 years.</i></li> <li>▪ Description: This session will provide an overview of the land division application and permitting process. It will also include those situations that are exempt from the review process.</li> </ul> <p>2. Floodplain Management for Local Health Departments - <i>Donna Cervelli (EGLE) (25 min)</i></p> <ul style="list-style-type: none"> <li>▪ <i>Bio: Donna Cervelli, P.E., has worked almost 20 years as a Floodplain Engineer with EGLE’s Water Resources Division. She enjoys opportunities for outreach and plans to continue to learn and grow in the exciting field of floodplain management.</i></li> <li>▪ Description: Does a proposed development site have potential to flood? How does this impact the onsite wastewater design? During this presentation you will learn about resources available to determine if a site is in a floodplain. We will discuss the FEMA National Flood Insurance Rate Maps and state floodplain services through the Department of Environment, Great Lakes, and Energy, Water Resources Division. We will also review the state floodplain permit requirements, as well as basic design standards for septic systems within the flood provisions of the Michigan Building Code.</li> </ul> <p>3. Q&amp;A (10 min)</p>	<ul style="list-style-type: none"> <li>• MSTA</li> </ul> <p>1. Is this the time to sell your business? The COVID-19 Pandemic Effect – <i>Curtis Kuttner, Fred Manuel (Golden Circle Advisors, Inc.)</i></p> <ul style="list-style-type: none"> <li>▪ <i>BIO: Curtis Kuttner and Fred Manuel are Co-Founders and Senior Partners with Golden Circle Advisors (GCA), with offices in both Traverse City and Plymouth. Golden Circle Advisors is a business intermediary and business brokerage advisory firm specializing in working with small to mid-size privately held businesses specializing in the wastewater treatment industry. GCA is focused on working with owners to provide a professional market valuation, position, and market their businesses for sale. Using a comprehensive process, GCA can identify appropriate acquirers through various marketing methods and utilizing an extensive network, including private equity firms, owners of privately held corporations and individual investors. Over the past 6 years, Curtis and Fred have worked with several members of MSTA successfully selling their businesses. To maximize the value of their clients’ businesses, GCA performs a business valuation and assists in the preparation of MSTA member businesses for sale. Our goal is taking every measure to obtain the highest possible price for every seller.</i></li> <li>▪ DESCRIPTION: We will address major concerns business owners have regarding the financial impact of the COVID-19 Pandemic on the value of wastewater businesses. Topics will include:             <ul style="list-style-type: none"> <li>○ Timing to sell your business</li> <li>○ COVID-19 pandemic impact on the septic industry and the possible “Silver Lining” that have been created</li> <li>○ The valuation process and possible pandemic impact on business value</li> <li>○ Who are the potential buyers?</li> <li>○ Elements of a deal structure</li> <li>○ Has COVID-19 impacted the value of your business?</li> <li>○ Learn about the “Silver Lining” created for this industry from the COVID-19 Virus.</li> </ul> </li> </ul>
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	<ul style="list-style-type: none"> <li>○ Review the various pitfalls to avoid when selling your business</li> </ul>
	<ul style="list-style-type: none"> <li>● General Wastewater - <i>Previous session continued</i></li> </ul>
<p><b>3:35-4 p.m.</b></p>	<p><b>Concurrent Tracks - Session #8</b></p> <ul style="list-style-type: none"> <li>● EGLE / LHD             <ol style="list-style-type: none"> <li>1. Michigan Criteria and the Administrative Rules: Appeals and Variances – <i>Regina Young (EGLE)</i> <ul style="list-style-type: none"> <li>▪ <i>BIO: Regina Young serves as an Environmental Quality Analyst with EGLE’s Drinking Water and Environmental Health Division, Environmental Health Programs Unit, Onsite Wastewater Program. Prior to joining EGLE in 2019, Regina served her community for thirty (30) plus years as a Registered Sanitarian in the Environmental Health Division of a local public health department.</i></li> <li>▪ DESCRIPTION: This session will highlight the provisions for variances and/or appeals for both the Michigan Criteria for Subsurface Sewage Disposal (MCSSD) and the Administrative Rules for On-Site Water Supply and Sewage Disposal applicable to certain land divisions, subdivisions, and condominium project reviews. The session will identify the agency(s) authorized to consider appeals and/or variances and in which situations. The role of the State-EGLE as the sole department authorized to consider appeals of decisions of the LHD pursuant to the MCSSD including systems treating less than 1,000 gallons per day evaluated in accordance with the LHD ‘s regulation will be explained.</li> </ul> </li> </ol> </li> <li>● MSTA - <i>Previous Session Continued</i></li> </ul>