

## Calendar of Events

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February 25, 2020  
- February 26, 2020

### **A & B Municipal Wastewater Operator Exam Prep**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517-641-7377

depling@mi-wea.org

*A&B Prep Review class.*

*Considering the advanced level of these exams, it is assumed that class participants will have a thorough understanding of the operational principals of the various wastewater treatment processes.*

*As such, this course will not follow the general lecture format of other MWEA classes. Instead, most of the class time will be devoted to solving problems and addressing questions from class participants.*

*Emailed one month prior to class, is a list of questions that are similar to what will likely be on the A or B Exam. It is recommended that prior to class you review and attempt to answer these questions in order to identify subject areas that you want to discuss during the class.*

*The emailed questions are property of MWEA and CANNOT be distributed to others. That being said....we would like you to work with others in your class to go thru the attached questions. To do this, you will need to reply to the email granting permission to share your email with each other. (The Instructor will also be on this email chain, to monitor where there may be areas to address during the class time)*

February 26, 2020

**Borchardt Conference**

**University of Michigan**

Ingra Stimach, 734-764-6024

istimach@umich.edu

*2019 Borchardt Conference*

*and Borchardt-Glysson Water Treatment Innovation Prize*

*25th Triennial Symposium on Advancements in Water & Wastewater*

*University of Michigan, Ann Arbor, MI*

*February 25th - 26th, 2020*

*Every three years, the Borchardt Conference brings together a diverse group of engineers, scientists, practitioners and students to present and discuss the latest issues and advances in water and wastewater science and engineering.*

*Registration is open with the American Water Works Association Michigan Section until February 18, 2020, or by clicking [HERE](#).*

*Keynote speakers: Borchardt Keynote Lecturer: Dr. Michèle Prévost, Professor and Principal Chairholder, NSERC Industrial Chair on Drinking Water, Department of Civil, Geological and Mining Engineering, Polytechnique Montreal.  
Glysson Keynote Lecturer: Dr. Charles Bott, Director of Water Technology and Research, Hampton Roads Sanitation District (HRSD) and Adjunct Professor at Virginia Tech and Old Dominion University.*

February 27, 2020

**Fund. of Activated Sludge 2**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
*EGLE CECs: 0.5 WW Technical*  
Course Code: 1958

*This program explains further the basis for specific process control strategies, the calculations used to implement them and the sampling programs to support them.*

*There is minimal overlap between this course and Activated Sludge 1, and while taking Activated Sludge 1 is highly recommended, it is not a prerequisite for Activated Sludge 2. Therefore, this class can be considered a stand alone option.*

*WARNING: This course is not for beginners in the wastewater treatment profession or those who have not been exposed to the activated sludge process in their job.*

*Topics Include:*  
*Sequencing Batch Reactor*  
*Trickling Filters*  
*Rotating Biological Contractor*  
*Review on Activated Sludge*  
*Waste Activated Sludge*  
*Return Activated Sludge*  
*Nitrogen and Phosphorus Removal*  
*Math Problems*

March 3, 2020  
- March 4, 2020

**A & B Municipal Wastewater Operator Exam Prep**  
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March 5, 2020

**Fund. of Anaerobic Digester Operation & Control**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

EGLE CECs: 0.5 WW Technical

Course Code: 2134

*The absence of oxygen makes anaerobic digestion a unique solids management process. Using consistent heat and mixing result in the reduction of solids volume and volatile solids content that creates a stabilized product (biosolids) that is used for alternative disposal methods such as land application as an agricultural fertilizer.*

*An additional byproduct of this method is the production of methane biogas which, when used with a combined heat and power system, can be a source of renewable energy.*

*After taking this class, operators will have an improved understanding of the system and strategies, and be better prepared for the day to day tasks of completing this portion of the treatment process.*

*Topics Covered:*

*Process Description*

*Description of Facilities*

*Management of Operations*

*Normal Operations*

*Operational Problems*

*Data Collections and Laboratory Controls*

*Maintenance*

*Locations:*

*South Huron Valley Utility Authority*

*Grand Rapids WRRF*

*Boyne WTP*

*34001 W Jefferson. Ave*

*1300 Market Ave*

*1261 Lagoon Drive*

*Brownstown Township, MI 48173*

*Grand Rapids, Michigan 49503*

*Boyne, Michigan 49712*

*Bay City WWTP  
Grandville  
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Taylor - Downriver Wastewater Treatment Fac*

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*2001 N Lincoln - 400 Bldg. Besse Health and Tech  
TBD*

*Escanaba, MI 49829*

*North Kent Sewer Authority  
SCCUMA*

*4775 Coit Ave  
TBD*

*Grand Rapids, Michigan 49525*

March 10, 2020  
- March 11, 2020

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March 12, 2020

**Fund. of Preliminary, Primary and Secondary Treatment**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

*EGLE CECs: 0.5 WW Technical*

*Course Code: 2598*

*The path of wastewater is a long and winding one, beginning at its source (domestic, commercial and industrial) and ending with its clean, safe return to surface water or groundwater where it can take its place in the hydrological cycle.*

*This course offers a thorough examination of the process and hurdles that must be overcome (the what, when, how) and provides strategies and tools necessary to address those hurdles and segments of treatment.*

*Topics Covered:*

*Characteristics of Wastewater*

*Screening*

*Oxidation Ditches*

*Wastewater Stabilization Ponds*

*Grit Removal, Sampling & Analysis*

*Pre Aeration & Aeration*

*Primary and Secondary Clarifiers*

*Rotating Biological Contractors (RBCs)*

*Trickling Filters*

*Secondary Treatment Effluent*

March 12, 2020

**2020 - Fund. of Wastewater Math 1**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
*EGLE CECs: 0.6 WW Technical*  
*Course Code: 1776*

*Math is a basic skill that is necessary for the function of any wastewater plant. This course will cover much of the basic math and calculations used regularly in wastewater treatment.*

*This course serves as an excellent part of review and preparation for all levels of the EGLE Operator Certification Exams.*

*Topics Covered*

*Basic Arithmetic*  
*Area and Volume Measurements*  
*Detention Time*  
*Pounds Formula*  
*Chemical Dose*  
*Percent Removal Calculations*  
*Practice Problems*  
*Conversion Factors and Formulas*



March 18, 2020  
- March 19, 2020

**C & D Municipal Wastewater Operator Exam Prep (2 Day Cram Class)**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

*Participants should bring a calculator and have basic knowledge of wastewater treatment methods and equipment.*

*March 18 & 19: Linden WRRF*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*March 24 & 25: Grand Rapids*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*March 26 & 27: Boyne*

*Registration: 8:30 a.m. Class: 9:00 a.m. - 4:00 p.m.*

*March 31 & April 1: Downriver Water Treatment Plant - Veolia - Taylor*

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*April 1 & 2: South Huron Valley Utility Authority WTTP*

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*September 15 & 16: Bay City*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*September 22 & 23: Kalamazoo Clean Water Plant*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*September 29 & 30: Grandville*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*October 6 & 7: Linden WRRF*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*October 7 & 8: South Huron Valley Utility Authority WTTP*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*Locations:*

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*Grand Rapids WRRF*

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*North Kent Sewer Authority  
SCCUMA*

*4775 Coit Ave  
TBD*

*Grand Rapids, Michigan 49525*

*Note: There are no CECs available as this is a class to help you study for the exam.*

March 18, 2020

**Fund. of Wastewater Math 2**  
**Various Locations throughout Michigan**  
07:00 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
EGLE Cecs: 0.6 WW Technical  
Course Code: 1787

*Math is a basic skill that is necessary for the function of any wastewater plant. This course will cover more advanced math and calculations used regularly in wastewater treatment.*

*There is minimal overlap between this course and Wastewater Math 1, and while taking Math 1 is highly recommended, it is not a prerequisite for Wastewater Math 2. Therefore, this class can be considered a stand alone option.*

*WARNING: This course is NOT For beginners in the wastewater treatment profession.*

*Topics Covered:*

*Wastewater math Conversions and Formulas*  
*Flows, Flow Rate and Velocity*  
*Pounds Formula*  
*Performance of Facilities*  
*Sludge Volume and Sludge Density*  
*Trickling Filters and RBC's*  
*Process Removal Efficiency*  
*Food/Microorganism Ratio (F/M Ratio)*  
*Mean Cell Residence Time (MCRT)*

March 20, 2020

**Fund. of Wastewater Math 2**  
**Various Locations throughout Michigan**  
07:00 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
EGLE Cecs: 0.6 WW Technical  
Course Code: 1787

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*There is minimal overlap between this course and Wastewater Math 1, and while taking Math 1 is highly recommended, it is not a prerequisite for Wastewater Math 2. Therefore, this class can be considered a stand alone option.*

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*Topics Covered:*

*Wastewater math Conversions and Formulas  
Flows, Flow Rate and Velocity  
Pounds Formula  
Performance of Facilities  
Sludge Volume and Sludge Density  
Trickling Filters and RBC's  
Process Removal Efficiency  
Food/Microorganism Ratio (F/M Ratio)  
Mean Cell Residence Time (MCRT)*

March 24, 2020  
- March 25, 2020

**C & D Municipal Wastewater Operator Exam Prep (2 Day Cram Class)**

**Various Locations throughout Michigan**

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depling@mi-wea.org

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*March 26 & 27: Boyne*

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*March 31 & April 1: Downriver Water Treatment Plant - Veolia - Taylor*

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*Grand Rapids, Michigan 49525*

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March 25, 2020

**MI Watershed Summit 2020**

**Eagle Eye Banquet Facility**

**15500 Chandler Rd.**

**East Lansing, MI 48823**

08:00 AM - 05:00 PM EST

MWEA, 517-641-7377

restis@mi-wea.org

*Wednesday, March 25th, 2020*

*Eagle Eye Banquet Facility | East Lansing, MI*

*[View Full Agenda](#)*

March 25, 2020

- March 26, 2020

**Biosolids Conference - Holland**

**DoubleTree by Hilton Hotel Holland**

**650 E 24th St**

**Holland, MI 49423**

MWEA, 517-641-7377

*The 2020 Biosolids Conference is a 2-day event: Wednesday, March 25th & Thursday, March 26th, 2020 in Holland, Michigan. The conference includes a tour of the Holland Energy Park and Zeeland Farm Services, as well as a dinner reception on Wednesday. A full day of technical and managerial sessions follow on Thursday.*

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- March 27, 2020

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April 2, 2020

**Sustainable Process Seminar**

**Oakland Schools Conference Center & Clinton River Water Resource Recovery Facility**

**2111 Pontiac Lake Rd**

**Waterford, MI 48328**

07:00 AM - 03:45 PM EST

MWEA, 517-641-7377

restis@mi-wea.org

*The Process & Sustainable Energy Committees are teaming up to bring you a joint seminar, which will take place on Thursday, April 2nd, 2020 in Oakland County, Michigan. The conference includes tours of the Clinton River Water Resource Recovery Facility, and technical sessions at the Oakland Schools Conference Center.*

April 7, 2020  
- April 8, 2020

**C & D Municipal Wastewater Operator Exam Prep (2 Day Cram Class)**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

*Participants should bring a calculator and have basic knowledge of wastewater treatment methods and equipment.*

*March 18 & 19: Linden WRRF*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*March 24 & 25: Grand Rapids*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*March 26 & 27: Boyne*

*Registration: 8:30 a.m. Class: 9:00 a.m. - 4:00 p.m.*

*March 31 & April 1: Downriver Water Treatment Plant - Veolia - Taylor*

*Registration: 7:30 a.m. Class: 8:00 a.m. - 3:00 p.m.*

*April 1 & 2: South Huron Valley Utility Authority WTTP*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*April 7 & 8: Kalamazoo Clean Water Plant*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*September 15 & 16: Bay City*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*September 22 & 23: Kalamazoo Clean Water Plant*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*September 29 & 30: Grandville*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*October 6 & 7: Linden WRRF*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*October 7 & 8: South Huron Valley Utility Authority WTTP*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*Locations:*

*South Huron Valley Utility Authority*

*Grand Rapids WRRF*

*Boyne WTP*

*34001 W Jefferson. Ave*

*1300 Market Ave*

*1261 Lagoon Drive*

*Brownstown Township, MI 48173*

*Grand Rapids, Michigan 49503*

*Boyne, Michigan 49712*

*Bay City WWTP  
Grandville  
Midland WTP*

*2905 N Water St.  
15 Baldwin Ave  
2607 Bay City Road*

*Bay City , Michigan 48078  
Jenison, Michigan 49428  
Midland, Michigan 48642*

*Linden WRRF  
Kalamazoo Water Rec Facility  
Taylor - Downriver Wastewater Treatment Fac*

*6450 Silver Lake Rd  
1415 Harrison  
797 Central Ave*

*Linden, Michigan 48451  
Kalamazoo, Michigan 49007  
Wyandotte, Michigan 48192*

*Bay College  
Lansing*

*2001 N Lincoln - 400 Bldg. Besse Health and Tech  
TBD*

*Escanaba, MI 49829*

*North Kent Sewer Authority  
SCCUMA*

*4775 Coit Ave  
TBD*

*Grand Rapids, Michigan 49525*

*Note: There are no CECs available as this is a class to help you study for the exam.*

April 7, 2020  
- April 9, 2020

**C & D License Exam Prep (3 Day Concentrated Class)**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise, 517.641.7377

depling@mi-wea.org

*Participants should bring a calculator and have basic knowledge of wastewater treatment methods and equipment.*

*April 7,8,9:SCUMA 3671 W Herbison Rd, Dewitt, MI 48820*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*October 7,14,21: Lansing MWEA*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*Note: There are no CECs available as this is a class to help you study for the exam.*

April 9, 2020  
- April 10, 2020

**A & B Municipal Wastewater Operator Exam Prep**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517-641-7377

depling@mi-wea.org

*A&B Prep Review class.*

*Considering the advanced level of these exams, it is assumed that class participants will have a thorough understanding of the operational principals of the various wastewater treatment processes.*

*As such, this course will not follow the general lecture format of other MWEA classes. Instead, most of the class time will be devoted to solving problems and addressing questions from class participants.*

*Emailed one month prior to class, is a list of questions that are similar to what will likely be on the A or B Exam. It is recommended that prior to class you review and attempt to answer these questions in order to identify subject areas that you want to discuss during the class.*

*The emailed questions are property of MWEA and CANNOT be distributed to others. That being said....we would like you to work with others in your class to go thru the attached questions. To do this, you will need to reply to the email granting permission to share your email with each other. (The Instructor will also be on this email chain, to monitor where there may be areas to address during the class time)*

April 15, 2020

**Fund. of Maintenance Practices 2**  
**Various Locations throughout Michigan**  
07:00 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
*EGLC CECs: 0.6 DW & WW Technical*  
*WW Course Code: 2431*  
*DW Course Code: 2534*

*This course takes the concept of providing proper training for maintenance staff to the next level. Persons completing this class will have a better base of knowledge and/or skills towards contributing to the overall success of any maintenance program.*

*There is very little overlap between this course and Maintenance Practices 1, and while taking that course is highly recommended, it is not a prerequisite for Maintenance Practices 2. Therefore, this class can be considered a stand alone option.*

*However, having persons responsible for maintenance duties attend both Maintenance Practice 1 and 2 could be thought of as a department performing due diligence for protecting one of a community's greatest assets.*

*Topics Covered:*

*Pump Basics, Types and Maintenance*  
*Valves Basics and Maintenance*  
*Gate Basics and Maintenance*  
*Gears and Gear Maintenance*  
*Sprockets and Chains*  
*Belts and Sheaves*  
*Trouble Shooting*

*Locations:*

*South Huron Valley Utility Authority*  
*Grand Rapids WRRF*  
*Boyne WTP*

*34001 W Jefferson. Ave*  
*1300 Market Ave*  
*1261 Lagoon Drive*

*Brownstown Township, MI 48173*  
*Grand Rapids, Michigan 49503*  
*Boyne, Michigan 49712*



*Bay City WWTP  
Grandville  
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*2001 N Lincoln - 400 Bldg. Besse Health and Tech*

*TBD*

*Escanaba, MI 49829*

*North Kent Sewer Authority  
SCCUMA*

*4775 Coit Ave  
TBD*

*Grand Rapids, Michigan 49525*

April 16, 2020

## **Fund. of Wastewater Disinfection and Tertiary Treatment**

### **Various Locations throughout Michigan**

07:00 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

*EGLE CECs: 0.5 WW Technical*

*WW Course Code: 2599*

*This course picks up the journey of wastewater as it nears the end of its trail through the treatment plant. This is where the pathogens are removed, preparing the water to be returned to the hydrological cycle in a safe form. Once this component of the process is completed, the water is no longer considered wastewater, but final effluent.*

*This is also the portion of the process that protects the public health. Once the water passes through this stage it must pass a number of rigid tests and comply with numerous state and federal regulations.*

*The importance of having operators well versed in the intricacies of this function cannot be overstated. This course will prepare attendees to perform tasks in the Disinfection and Tertiary Treatment areas.*

#### *Topics Covered:*

*Chlorine*

*Ultraviolet Systems*

*Chlorine Dioxide*

*Ozone*

*Dechlorination*

*Math Problems*

#### *Locations:*

*South Huron Valley Utility Authority*

*Grand Rapids WRRF*

*Boyne WTP*

*34001 W Jefferson. Ave*

*1300 Market Ave*

*1261 Lagoon Drive*

*Brownstown Township, MI 48173*

*Grand Rapids, Michigan 49503*

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*Bay College  
Lansing*

*2001 N Lincoln - 400 Bldg. Besse Health and Tech  
TBD*

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SCCUMA*

*4775 Coit Ave  
TBD*

*Grand Rapids, Michigan 49525*

April 17, 2020

**Fund. of Activated Sludge 1**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
*EGLE CECs: 0.5 WW Technical*  
*Course Code: 1910*

*This program explains the basis for specific process control strategies, the calculations used to implement them and the sampling programs to support them. Also included are general biological concepts related to activated sludge plants and the factors that affect these processes.*

*this course will serve as an excellent part of EGLE Operator Certification Exam preparation.*

*Topics Include:*

*Activated Sludge origin*  
*Process*  
*Sampling*  
*Microbiology*  
*Process Control*  
*Return Rates*  
*Mean Cell Residence Time*  
*Food to Microorganisms Ration*  
*Control Concerns*

April 21, 2020

**Fund. of Activated Sludge 1**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
*EGLE CECs: 0.5 WW Technical*  
*Course Code: 1910*

*This program explains the basis for specific process control strategies, the calculations used to implement them and the sampling programs to support them. Also included are general biological concepts related to activated sludge plants and the factors that affect these processes.*

*this course will serve as an excellent part of EGLE Operator Certification Exam preparation.*

*Topics Include:*

*Activated Sludge origin*  
*Process*  
*Sampling*  
*Microbiology*  
*Process Control*  
*Return Rates*  
*Mean Cell Residence Time*  
*Food to Microorganisms Ration*  
*Control Concerns*

April 23, 2020

**Purpose and Fundamentals of Wastewater Treatment**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

*EGLE CECs: 0.5 WW Technical*

*Course Code: 2424*

*This course appropriately begins with the water cycle. It is an overview of the wastewater treatment process, beginning to end.*

*This gives the individual the concepts of the entirety and impact of the work done in treatment plants.*

*This class will be excellent for those new to the profession and those who have had a limited scope of job duties.*

*This will be a unique opportunity of great value to persons providing products and services in the wastewater industry.*

*Topics Covered:*

*Why we treat wastewater*

*Sources of wastewater*

*Mechanical Equipment*

*Collection Systems*

*Treatment Plants*

*Effluent Disposal*

*Basics of Laboratory Analysis*

*Health and Safety*

*Emerging Issues*

*Locations:*

*South Huron Valley Utility Authority*

*Grand Rapids WRRF*

*Boyne WTP*

*34001 W Jefferson. Ave*

*1300 Market Ave*

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TBD*



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SCCUMA*

*4775 Coit Ave  
TBD*

*Grand Rapids, Michigan 49525*

April 23, 2020

**2020 - Fund. of Wastewater Math 1**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
*EGLE CECs: 0.6 WW Technical*  
*Course Code: 1776*

*Math is a basic skill that is necessary for the function of any wastewater plant. This course will cover much of the basic math and calculations used regularly in wastewater treatment.*

*This course serves as an excellent part of review and preparation for all levels of the EGLE Operator Certification Exams.*

*Topics Covered*

*Basic Arithmetic*  
*Area and Volume Measurements*  
*Detention Time*  
*Pounds Formula*  
*Chemical Dose*  
*Percent Removal Calculations*  
*Practice Problems*  
*Conversion Factors and Formulas*

April 29, 2020

## **Basic Health & Safety Practices for Water Treatment Systems**

### **Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

EGLE CECs: 0.6 DW and WW Technical

Course Code: 2423

*Staying safe and healthy while on the job is not common sense for all. Creating and maintaining a culture of safety first takes a great deal of training, emphasis and reinforcement. This class can be an important part of such a program.*

*Safety first must be more than just a trite sign on the walls of your facility. Each individual (with your help) has the obligation to return home each day in the same condition (or better) in which they left. Staff must be trained to understand basic safety practices and then to make the consistent choice to follow those practices.*

*Sending you personnel to this course sends the message of how critical the practice of safety is in your plant.*

#### *Topics Covered:*

*Medical Monitoring*

*Incident Investigations*

*Hazards*

*Personal Protective Equipment*

*Confined Space*

*Fire Safety/Emergency Action*

*Utility Location*

*Traffic Safety*

#### *Locations:*

*South Huron Valley Utility Authority*

*Grand Rapids WRRF*

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SCCUMA*

*4775 Coit Ave  
TBD*

*Grand Rapids, Michigan 49525*

May 12, 2020  
- May 13, 2020

**65th Annual UP Wastewater Operators Conference**

**Island Resort and Casino**

**W 399 US-2**

**Harris, MI 49845**

Paul Altobello, 906-486-4391

paulaltobello@att.net

*MWEA Local Section 21 presents the:*

*65th Annual UP Wastewater Operators Conference*

*More information coming soon!*

May 13, 2020

**Fund. of Solids Handling**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
*EGLE CECs: 0.5 WW Technical*  
*Course Code: 2426*

*All facilities are required to remove solids from their influent. There is a broad spectrum of approaches and methods for handling solids.*

*There is a difficult issue related to solids handling for individuals taking EGLE Operator Certification Exams. Questions related to this topic are included on the exams. No treatment facility is going to use all the various methods, therefore individuals can find it difficult to be able to answer questions about solids handling methods not used at their place of work.*

*Because of the dynamic of this topic, this course will serve as an invaluable part of review and preparation for all levels of EGLE Operator Certification exams.*

*Topics Covered:*

*Primary and Secondary Solids*  
*Gravity Thickeners*  
*Sludge Digestion*  
*Dewatering*  
*Mechanical Dewatering*  
*Sludge disposal*  
*Common Calculations and Practice Problems*

*Locations:*

*South Huron Valley Utility Authority*  
*Grand Rapids WRRF*  
*Boyne WTP*

*34001 W Jefferson. Ave*  
*1300 Market Ave*  
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*Brownstown Township, MI 48173*  
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TBD*

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*North Kent Sewer Authority  
SCCUMA*

*4775 Coit Ave  
TBD*

*Grand Rapids, Michigan 49525*



May 14, 2020

**Fund. of Wastewater Math 2**  
**Various Locations throughout Michigan**  
07:00 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
EGLE Cecs: 0.6 WW Technical  
Course Code: 1787

*Math is a basic skill that is necessary for the function of any wastewater plant. This course will cover more advanced math and calculations used regularly in wastewater treatment.*

*There is minimal overlap between this course and Wastewater Math 1, and while taking Math 1 is highly recommended, it is not a prerequisite for Wastewater Math 2. Therefore, this class can be considered a stand alone option.*

*WARNING: This course is NOT For beginners in the wastewater treatment profession.*

*Topics Covered:*

*Wastewater math Conversions and Formulas  
Flows, Flow Rate and Velocity  
Pounds Formula  
Performance of Facilities  
Sludge Volume and Sludge Density  
Trickling Filters and RBC's  
Process Removal Efficiency  
Food/Microorganism Ratio (F/M Ratio)  
Mean Cell Residence Time (MCRT)*

May 14, 2020

**Laboratory Practices Seminar**  
**Eagle Eye Banquet Facility**  
**15500 Chandler Rd**  
**East Lansing, Mi 48823**  
08:00 AM - 05:00 PM EST  
Rachel Estis, 517-641-7377  
Restis@mi-wea.org

*The Annual Lab Practices Committee Seminar is a joint event with the Michigan Section of the American Water Works Association and also the Michigan Water Environment Association. It is the premier education and networking event for Michigan's laboratory professionals.*

*The 2020 Laboratory Practices Seminar will be held at Eagle Eye Banquet Center in East Lansing, MI.*

May 15, 2020

**Fund. of Activated Sludge 2**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
*EGLE CECs: 0.5 WW Technical*  
*Course Code: 1958*

*This program explains further the basis for specific process control strategies, the calculations used to implement them and the sampling programs to support them.*

*There is minimal overlap between this course and Activated Sludge 1, and while taking Activated Sludge 1 is highly recommended, it is not a prerequisite for Activated Sludge 2. Therefore, this class can be considered a stand alone option.*

*WARNING: This course is not for beginners in the wastewater treatment profession or those who have not been exposed to the activated sludge process in their job.*

*Topics Include:*

*Sequencing Batch Reactor*  
*Trickling Filters*  
*Rotating Biological Contractor*  
*Review on Activated Sludge*  
*Waste Activated Sludge*  
*Return Activated Sludge*  
*Nitrogen and Phosphorus Removal*  
*Math Problems*

May 20, 2020

**26th Annual MWEA Scholarship Golf Scramble**

**Timber Trace Golf Club**

**1 Champions Cir**

**Pinckney, Mi 48169**

8:30 am check in - 10:00 am shotgun start

Rachel Estis, 517-641-7377

Restis@mi-wea.org

*Join us for the 26th Annual MWEA Scholarship Golf Outing.*

*May 20th, 2020 | Pinckney, MI*

*Timber Trace Golf Club*

*The Golf Scramble benefits the 4 MWEA Scholarships that are awarded annually.*

*Cost per golfer is only \$115*

*- Includes 18 holes of golf with cart*

*- Steak & chicken dinner*

*- Fantastic Prizes*

*- And More...*

*Hole Sponsorships are available for only \$200 per hole.*

*There are also \$500 Event Sponsorships available.*

May 21, 2020

**Fund. of Preliminary, Primary and Secondary Treatment**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

*EGL ECECs: 0.5 WW Technical*

*Course Code: 2598*

*The path of wastewater is a long and winding one, beginning at its source (domestic, commercial and industrial) and ending with its clean, safe return to surface water or groundwater where it can take its place in the hydrological cycle.*

*This course offers a thorough examination of the process and hurdles that must be overcome (the what, when, how) and provides strategies and tools necessary to address those hurdles and segments of treatment.*

*Topics Covered:*

*Characteristics of Wastewater*

*Screening*

*Oxidation Ditches*

*Wastewater Stabilization Ponds*

*Grit Removal, Sampling & Analysis*

*Pre Aeration & Aeration*

*Primary and Secondary Clarifiers*

*Rotating Biological Contractors (RBCs)*

*Trickling Filters*

*Secondary Treatment Effluent*

May 28, 2020

**Lagoon Seminar**

**Eagle Eye Banquet Facility**

**15500 Chandler Rd**

**East Lansing, Mi 48823**

08:00 AM - 05:00 PM EST

Rachel Estis, 517-641-7377

Restis@mi-wea.org

*Lagoon Operations are becoming increasingly complex. This seminar will help you catch up on all the current issues!*

*Be informed about continuous improvements in lagoon operations and other important information. Speakers will share their insights and experiences gained over many years.*

June 4, 2020

**2020 Effective Utility Management Workshop**  
**Eagle Eye Banquet Facility**  
**15500 Chandler Road**  
**East Lansing, MI 48823**  
09:00 AM - 04:30 PM EST  
MWEA, 517-641-7377  
mwea@mi-wea.org

*Thursday, June 4, 2020*

*9:00 am – 4:30 pm (8:30 am registration)*

*Eagle Eye Banquet Facility, East Lansing*

*EUM is simple, actionable, and affordable – it helps your utility protect its infrastructure investments, ensure that your workforce is able to address the challenges that they face every day, and help your utility in many other important ways.*

June 21, 2020  
- June 24, 2020

**95th Annual Conference: Attendee Registration**  
**Amway Grand Plaza**  
**187 Monroe Ave NW**  
**Grand Rapids, MI 49503**  
MWEA, 517-641-7377

*Make plans to join us for the 95th Anniversary of the MWEA Annual Conference!! The conference begins with a Welcome Reception on the evening of Sunday, June 21st at the Grand Rapids Art Museum. The opening session is on the morning of Monday, June 22nd, and the program concludes on Wednesday, June 24th at noon.*

June 21, 2020

**2020 MWEA Annual Conference - Exhibit / Sponsor**

**DeVos Place**  
**303 Monroe Ave NW**  
**Grand Rapids, MI 49503**  
MWEA, 517-641-7377  
mwea@mi-wea.org

*The 95th MWEA Annual Conference has many opportunities to help advertise and grow your business!*

*Sponsorship opportunities range from \$200- \$3,000 and include signage, info slides on the conference slideshow, listing in the MWEA website and conference page, golf scramble hole sponsors, networking event sponsors, and more! View the Sponsorship Opportunities and the Sponsorship Contract.*

*Exhibit Night takes place on Monday, June 22nd only, from 4:30 pm - 7:30 pm. This year the theme is Christmas in June - so decorate yourself and your booth in your favorite holiday decor. Attendees will vote that evening for the best booth, and the winner will receive \$100 off their 2020 booth. View the proposed Exhibit Map (subject to change) and Exhibitor Contract with pricing- all 72 booths are inside the main area exhibit hall!*

*We will have a conference APP again with an interactive exhibitor map and sponsor listing - increased exposure for your company. This year the App will include electronic or manual lead retrieval! The information collected on your registration will be directly uploaded to the app and will appear exactly as you enter it. MWEA will not be responsible for incorrect information.*

*\*\*Note: To register as a conference attendee, a separate "Attendee Registration" must be submitted\*\**

June 21, 2020

**2020 Annual Conference Golf Scramble**

**Quail Ridge Golf Club**  
**8375 36th St. SW**  
**Ada, MI 49301**  
MWEA, 517-641-7377  
mwea@mi-wea.org  
*Sunday, June 21st, 2020*  
*Quail Ridge Golf Club*

*Check-In / Registration: 8:00 a.m.*

*Shotgun Start: 9:00 a.m.*

*The 2020 Annual Conference Golf Outing will be a scramble format with prizes awarded to the winning teams. In addition, special prizes will be awarded for longest drive and closest to the pin.*

*Only \$115 per golfer*

*Only \$200 per Hole Sponsorship*

June 25, 2020

**Fund. of Wastewater Math 2**  
**Various Locations throughout Michigan**  
07:00 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
EGLE Cecs: 0.6 WW Technical  
Course Code: 1787

*Math is a basic skill that is necessary for the function of any wastewater plant. This course will cover more advanced math and calculations used regularly in wastewater treatment.*

*There is minimal overlap between this course and Wastewater Math 1, and while taking Math 1 is highly recommended, it is not a prerequisite for Wastewater Math 2. Therefore, this class can be considered a stand alone option.*

*WARNING: This course is NOT For beginners in the wastewater treatment profession.*

*Topics Covered:*  
*Wastewater math Conversions and Formulas*  
*Flows, Flow Rate and Velocity*  
*Pounds Formula*  
*Performance of Facilities*  
*Sludge Volume and Sludge Density*  
*Trickling Filters and RBC's*  
*Process Removal Efficiency*  
*Food/Microorganism Ratio (F/M Ratio)*  
*Mean Cell Residence Time (MCRT)*

July 16, 2020

**Fund. of Activated Sludge 1**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
EGLE CECs: 0.5 WW Technical  
Course Code: 1910

*This program explains the basis for specific process control strategies, the calculations used to implement them and the sampling programs to support them. Also included are general biological concepts related to activated sludge plants and the factors that affect these processes.*

*this course will serve as an excellent part of EGLE Operator Certification Exam preparation.*

*Topics Include:*  
*Activated Sludge origin*  
*Process*  
*Sampling*  
*Microbiology*  
*Process Control*  
*Return Rates*  
*Mean Cell Residence Time*  
*Food to Microorganisms Ration*  
*Control Concerns*

July 30, 2020

**Fund. of Activated Sludge 1**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
*EGLE CECs: 0.5 WW Technical*  
*Course Code: 1910*

*This program explains the basis for specific process control strategies, the calculations used to implement them and the sampling programs to support them. Also included are general biological concepts related to activated sludge plants and the factors that affect these processes.*

*this course will serve as an excellent part of EGLE Operator Certification Exam preparation.*

*Topics Include:*

*Activated Sludge origin*  
*Process*  
*Sampling*  
*Microbiology*  
*Process Control*  
*Return Rates*  
*Mean Cell Residence Time*  
*Food to Microorganisms Ration*  
*Control Concerns*

August 9, 2020

**Might Mac Swim Fundraiser - Water For People**  
**Straits of Mackinac between St. Ignas and Mackinaw City**  
Christine Kosmowski, ckosmowski@gmail.com,  
ckosmowski@gmail.com

*Fundraising Event for Water for People*

*The Mighty Mac Swim is an annual open water swimming event in the Straits of Mackinac between Mackinaw City and St. Ignace, Michigan held in August. It began in 2007 in celebration of the 50th anniversary of the Mackinac Bridge with 50 swimmers completing the crossing.*

*The event has grown to 400 and Michigan Water Environment Association (MWEA) member, Christine Kosmowski, will be one of the participants on August 9, 2020. Being on the Water For People Committee for the MWEA, Christine will raise funds for this worthy organization as a part of the event.*

*The goal of the swim is to raise \$5,000 for Water For People (WFP).*

*View Christine's Mighty Mac Swim flyer here*



August 12, 2020

**Fund. of Preliminary, Primary and Secondary Treatment**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

*EGLE CECs: 0.5 WW Technical*

*Course Code: 2598*

*The path of wastewater is a long and winding one, beginning at its source (domestic, commercial and industrial) and ending with its clean, safe return to surface water or groundwater where it can take its place in the hydrological cycle.*

*This course offers a thorough examination of the process and hurdles that must be overcome (the what, when, how) and provides strategies and tools necessary to address those hurdles and segments of treatment.*

*Topics Covered:*

*Characteristics of Wastewater*

*Screening*

*Oxidation Ditches*

*Wastewater Stabilization Ponds*

*Grit Removal, Sampling & Analysis*

*Pre Aeration & Aeration*

*Primary and Secondary Clarifiers*

*Rotating Biological Contractors (RBCs)*

*Trickling Filters*

*Secondary Treatment Effluent*

August 18, 2020

- August 19, 2020

**A & B Municipal Wastewater Operator Exam Prep**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517-641-7377

depling@mi-wea.org

*A&B Prep Review class.*

*Considering the advanced level of these exams, it is assumed that class participants will have a thorough understanding of the operational principals of the various wastewater treatment processes.*

*As such, this course will not follow the general lecture format of other MWEA classes. Instead, most of the class time will be devoted to solving problems and addressing questions from class participants.*

*Emailed one month prior to class, is a list of questions that are similar to what will likely be on the A or B Exam. It is recommended that prior to class you review and attempt to answer these questions in order to identify subject areas that you want to discuss during the class.*

*The emailed questions are property of MWEA and CANNOT be distributed to others. That being said...we would like you to work with others in your class to go thru the attached questions. To do this, you will need to reply to the email granting permission to share your email with each other. (The Instructor will also be on this email chain, to monitor where there may be areas to address during the class time)*

August 20, 2020

**Fund. of Wastewater Math 2**  
**Various Locations throughout Michigan**  
07:00 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
EGLE Cecs: 0.6 WW Technical  
Course Code: 1787

*Math is a basic skill that is necessary for the function of any wastewater plant. This course will cover more advanced math and calculations used regularly in wastewater treatment.*

*There is minimal overlap between this course and Wastewater Math 1, and while taking Math 1 is highly recommended, it is not a prerequisite for Wastewater Math 2. Therefore, this class can be considered a stand alone option.*

*WARNING: This course is NOT For beginners in the wastewater treatment profession.*

*Topics Covered:*

*Wastewater math Conversions and Formulas  
Flows, Flow Rate and Velocity  
Pounds Formula  
Performance of Facilities  
Sludge Volume and Sludge Density  
Trickling Filters and RBC's  
Process Removal Efficiency  
Food/Microorganism Ratio (F/M Ratio)  
Mean Cell Residence Time (MCRT)*

August 21, 2020

**Fund. of Preliminary, Primary and Secondary Treatment**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

*EGLE CECs: 0.5 WW Technical*

*Course Code: 2598*

*The path of wastewater is a long and winding one, beginning at its source (domestic, commercial and industrial) and ending with its clean, safe return to surface water or groundwater where it can take its place in the hydrological cycle.*

*This course offers a thorough examination of the process and hurdles that must be overcome (the what, when, how) and provides strategies and tools necessary to address those hurdles and segments of treatment.*

*Topics Covered:*

*Characteristics of Wastewater*

*Screening*

*Oxidation Ditches*

*Wastewater Stabilization Ponds*

*Grit Removal, Sampling & Analysis*

*Pre Aeration & Aeration*

*Primary and Secondary Clarifiers*

*Rotating Biological Contractors (RBCs)*

*Trickling Filters*

*Secondary Treatment Effluent*

August 25, 2020

- August 26, 2020

**A & B Municipal Wastewater Operator Exam Prep**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517-641-7377

depling@mi-wea.org

*A&B Prep Review class.*

*Considering the advanced level of these exams, it is assumed that class participants will have a thorough understanding of the operational principals of the various wastewater treatment processes.*

*As such, this course will not follow the general lecture format of other MWEA classes. Instead, most of the class time will be devoted to solving problems and addressing questions from class participants.*

*Emailed one month prior to class, is a list of questions that are similar to what will likely be on the A or B Exam. It is recommended that prior to class you review and attempt to answer these questions in order to identify subject areas that you want to discuss during the class.*

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August 27, 2020

**Fund. of Activated Sludge 1**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
*EGLE CECs: 0.5 WW Technical*  
*Course Code: 1910*

*This program explains the basis for specific process control strategies, the calculations used to implement them and the sampling programs to support them. Also included are general biological concepts related to activated sludge plants and the factors that affect these processes.*

*this course will serve as an excellent part of EGLE Operator Certification Exam preparation.*

*Topics Include:*

*Activated Sludge origin*  
*Process*  
*Sampling*  
*Microbiology*  
*Process Control*  
*Return Rates*  
*Mean Cell Residence Time*  
*Food to Microorganisms Ration*  
*Control Concerns*

August 27, 2020

**Fund. of Solids Handling**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
*EGLE CECs: 0.5 WW Technical*  
*Course Code: 2426*

*All facilities are required to remove solids from their influent. There is a broad spectrum of approaches and methods for handling solids.*

*There is a difficult issue related to solids handling for individuals taking EGLE Operator Certification Exams. Questions related to this topic are included on the exams. No treatment facility is going to use all the various methods, therefore individuals can find it difficult to be able to answer questions about solids handling methods not used at their place of work.*

*Because of the dynamic of this topic, this course will serve as an invaluable part of review and preparation for all levels of EGLE Operator Certification exams.*

*Topics Covered:*

*Primary and Secondary Solids*  
*Gravity Thickeners*  
*Sludge Digestion*  
*Dewatering*  
*Mechanical Dewatering*  
*Sludge disposal*  
*Common Calculations and Practice Problems*

*Locations:*

*South Huron Valley Utility Authority*  
*Grand Rapids WRRF*  
*Boyne WTP*

*34001 W Jefferson. Ave*  
*1300 Market Ave*  
*1261 Lagoon Drive*

*Brownstown Township, MI 48173*  
*Grand Rapids, Michigan 49503*  
*Boyne, Michigan 49712*

*Bay City WWTP  
Grandville  
Midland WTP*

*2905 N Water St.  
15 Baldwin Ave  
2607 Bay City Road*

*Bay City , Michigan 48078  
Jenison, Michigan 49428  
Midland, Michigan 48642*

*Linden WRRF  
Kalamazoo Water Rec Facility  
Taylor - Downriver Wastewater Treatment Fac*

*6450 Silver Lake Rd  
1415 Harrison  
797 Central Ave*

*Linden, Michigan 48451  
Kalamazoo, Michigan 49007  
Wyandotte, Michigan 48192*

*Bay College  
Lansing*

*2001 N Lincoln - 400 Bldg. Besse Health and Tech  
TBD*

*Escanaba, MI 49829*

*North Kent Sewer Authority  
SCCUMA*

*4775 Coit Ave  
TBD*

*Grand Rapids, Michigan 49525*

September 1, 2020  
- September 2, 2020

## **A & B Municipal Wastewater Operator Exam Prep**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517-641-7377

depling@mi-wea.org

*A&B Prep Review class.*

*Considering the advanced level of these exams, it is assumed that class participants will have a thorough understanding of the operational principals of the various wastewater treatment processes.*

*As such, this course will not follow the general lecture format of other MWEA classes. Instead, most of the class time will be devoted to solving problems and addressing questions from class participants.*

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September 3, 2020

## **Fund. of Activated Sludge 1**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

*EGLE CECs: 0.5 WW Technical*

*Course Code: 1910*

*This program explains the basis for specific process control strategies, the calculations used to implement them and the sampling programs to support them. Also included are general biological concepts related to activated sludge plants and the factors that affect these processes.*

*this course will serve as an excellent part of EGLE Operator Certification Exam preparation.*

*Topics Include:*

*Activated Sludge origin*

*Process*

*Sampling*

*Microbiology*

*Process Control*

*Return Rates*

*Mean Cell Residence Time*

*Food to Microorganisms Ration*

*Control Concerns*



September 9, 2020  
- September 10, 2020

**A & B Municipal Wastewater Operator Exam Prep**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
Denise Epling, 517-641-7377  
depling@mi-wea.org  
*A&B Prep Review class.*

*Considering the advanced level of these exams, it is assumed that class participants will have a thorough understanding of the operational principals of the various wastewater treatment processes.*

*As such, this course will not follow the general lecture format of other MWEA classes. Instead, most of the class time will be devoted to solving problems and addressing questions from class participants.*

*Emailed one month prior to class, is a list of questions that are similar to what will likely be on the A or B Exam. It is recommended that prior to class you review and attempt to answer these questions in order to identify subject areas that you want to discuss during the class.*

*The emailed questions are property of MWEA and CANNOT be distributed to others. That being said....we would like you to work with others in your class to go thru the attached questions. To do this, you will need to reply to the email granting permission to share your email with each other. (The Instructor will also be on this email chain, to monitor where there may be areas to address during the class time)*

September 15, 2020  
- September 16, 2020

**C & D Municipal Wastewater Operator Exam Prep (2 Day Cram Class)**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

*Participants should bring a calculator and have basic knowledge of wastewater treatment methods and equipment.*

*March 18 & 19: Linden WRRF*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*March 24 & 25: Grand Rapids*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*March 26 & 27: Boyne*

*Registration: 8:30 a.m. Class: 9:00 a.m. - 4:00 p.m.*

*March 31 & April 1: Downriver Water Treatment Plant - Veolia - Taylor*

*Registration: 7:30 a.m. Class: 8:00 a.m. - 3:00 p.m.*

*April 1 & 2: South Huron Valley Utility Authority WTTP*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*April 7 & 8: Kalamazoo Clean Water Plant*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*September 15 & 16: Bay City*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*September 22 & 23: Kalamazoo Clean Water Plant*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*September 29 & 30: Grandville*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*October 6 & 7: Linden WRRF*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*October 7 & 8: South Huron Valley Utility Authority WTTP*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*Locations:*

*South Huron Valley Utility Authority*

*Grand Rapids WRRF*

*Boyne WTP*

*34001 W Jefferson. Ave*

*1300 Market Ave*

*1261 Lagoon Drive*

*Brownstown Township, MI 48173*

*Grand Rapids, Michigan 49503*

*Boyne, Michigan 49712*

*Bay City WWTP  
Grandville  
Midland WTP*

*2905 N Water St.  
15 Baldwin Ave  
2607 Bay City Road*

*Bay City , Michigan 48078  
Jenison, Michigan 49428  
Midland, Michigan 48642*

*Linden WRRF  
Kalamazoo Water Rec Facility  
Taylor - Downriver Wastewater Treatment Fac*

*6450 Silver Lake Rd  
1415 Harrison  
797 Central Ave*

*Linden, Michigan 48451  
Kalamazoo, Michigan 49007  
Wyandotte, Michigan 48192*

*Bay College  
Lansing*

*2001 N Lincoln - 400 Bldg. Besse Health and Tech  
TBD*

*Escanaba, MI 49829*

*North Kent Sewer Authority  
SCCUMA*

*4775 Coit Ave  
TBD*

*Grand Rapids, Michigan 49525*

*Note: There are no CECs available as this is a class to help you study for the exam.*

September 17, 2020

**Fund. of Activated Sludge 2**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
*EGLE CECs: 0.5 WW Technical*  
*Course Code: 1958*

*This program explains further the basis for specific process control strategies, the calculations used to implement them and the sampling programs to support them.*

*There is minimal overlap between this course and Activated Sludge 1, and while taking Activated Sludge 1 is highly recommended, it is not a prerequisite for Activated Sludge 2. Therefore, this class can be considered a stand alone option.*

*WARNING: This course is not for beginners in the wastewater treatment profession or those who have not been exposed to the activated sludge process in their job.*

*Topics Include:*

*Sequencing Batch Reactor*  
*Trickling Filters*  
*Rotating Biological Contractor*  
*Review on Activated Sludge*  
*Waste Activated Sludge*  
*Return Activated Sludge*  
*Nitrogen and Phosphorus Removal*  
*Math Problems*

September 18, 2020

**Fund. of Solids Handling**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
*EGLE CECs: 0.5 WW Technical*  
*Course Code: 2426*

*All facilities are required to remove solids from their influent. There is a broad spectrum of approaches and methods for handling solids.*

*There is a difficult issue related to solids handling for individuals taking EGLE Operator Certification Exams. Questions related to this topic are included on the exams. No treatment facility is going to use all the various methods, therefore individuals can find it difficult to be able to answer questions about solids handling methods not used at their place of work.*

*Because of the dynamic of this topic, this course will serve as an invaluable part of review and preparation for all levels of EGLE Operator Certification exams.*

*Topics Covered:*

*Primary and Secondary Solids*  
*Gravity Thickeners*  
*Sludge Digestion*  
*Dewatering*  
*Mechanical Dewatering*  
*Sludge disposal*  
*Common Calculations and Practice Problems*

*Locations:*

*South Huron Valley Utility Authority*  
*Grand Rapids WRRF*  
*Boyne WTP*

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*1261 Lagoon Drive*

*Brownstown Township, MI 48173*  
*Grand Rapids, Michigan 49503*  
*Boyne, Michigan 49712*

*Bay City WWTP  
Grandville  
Midland WTP*

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Jenison, Michigan 49428  
Midland, Michigan 48642*

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Kalamazoo, Michigan 49007  
Wyandotte, Michigan 48192*

*Bay College  
Lansing*

*2001 N Lincoln - 400 Bldg. Besse Health and Tech  
TBD*

*Escanaba, MI 49829*

*North Kent Sewer Authority  
SCCUMA*

*4775 Coit Ave  
TBD*

*Grand Rapids, Michigan 49525*



September 22, 2020  
- September 23, 2020

**C & D Municipal Wastewater Operator Exam Prep (2 Day Cram Class)**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

*Participants should bring a calculator and have basic knowledge of wastewater treatment methods and equipment.*

*March 18 & 19: Linden WRRF*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*March 24 & 25: Grand Rapids*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*March 26 & 27: Boyne*

*Registration: 8:30 a.m. Class: 9:00 a.m. - 4:00 p.m.*

*March 31 & April 1: Downriver Water Treatment Plant - Veolia - Taylor*

*Registration: 7:30 a.m. Class: 8:00 a.m. - 3:00 p.m.*

*April 1 & 2: South Huron Valley Utility Authority WTP*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*April 7 & 8: Kalamazoo Clean Water Plant*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*September 15 & 16: Bay City*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*September 22 & 23: Kalamazoo Clean Water Plant*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*September 29 & 30: Grandville*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*October 6 & 7: Linden WRRF*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*October 7 & 8: South Huron Valley Utility Authority WTP*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*Locations:*

*South Huron Valley Utility Authority*

*Grand Rapids WRRF*

*Boyne WTP*

*34001 W Jefferson. Ave*

*1300 Market Ave*

*1261 Lagoon Drive*

*Brownstown Township, MI 48173*

*Grand Rapids, Michigan 49503*

*Boyne, Michigan 49712*

*Bay City WWTP  
Grandville  
Midland WTP*

*2905 N Water St.  
15 Baldwin Ave  
2607 Bay City Road*

*Bay City , Michigan 48078  
Jenison, Michigan 49428  
Midland, Michigan 48642*

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Kalamazoo Water Rec Facility  
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*Linden, Michigan 48451  
Kalamazoo, Michigan 49007  
Wyandotte, Michigan 48192*

*Bay College  
Lansing*

*2001 N Lincoln - 400 Bldg. Besse Health and Tech  
TBD*

*Escanaba, MI 49829*

*North Kent Sewer Authority  
SCCUMA*

*4775 Coit Ave  
TBD*

*Grand Rapids, Michigan 49525*

*Note: There are no CECs available as this is a class to help you study for the exam.*

September 23, 2020

**IPP Seminar**  
**Eagle Eye Banquet Facility**  
**15500 Chandler Rd**  
**East Lansing, MI 48808**  
07:00 AM - 05:00 PM EST  
Rachel Estis, 517-641-7377  
restis@mi-wea.org

*The Industrial Pretreatment Program Committee is hosting their Annual Seminar on Wednesday, September 23rd, 2020 in East Lansing at the Eagle Eye Banquet Facility.*

September 24, 2020

**Fund. of Anaerobic Digester Operation & Control**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

EGLE CECs: 0.5 WW Technical

Course Code: 2134

*The absence of oxygen makes anaerobic digestion a unique solids management process. Using consistent heat and mixing result in the reduction of solids volume and volatile solids content that creates a stabilized product (biosolids) that is used for alternative disposal methods such as land application as an agricultural fertilizer.*

*An additional byproduct of this method is the production of methane biogas which, when used with a combined heat and power system, can be a source of renewable energy.*

*After taking this class, operators will have an improved understanding of the system and strategies, and be better prepared for the day to day tasks of completing this portion of the treatment process.*

*Topics Covered:*

*Process Description*

*Description of Facilities*

*Management of Operations*

*Normal Operations*

*Operational Problems*

*Data Collections and Laboratory Controls*

*Maintenance*

*Locations:*

*South Huron Valley Utility Authority*

*Grand Rapids WRRF*

*Boyne WTP*

*34001 W Jefferson. Ave*

*1300 Market Ave*

*1261 Lagoon Drive*

*Brownstown Township, MI 48173*

*Grand Rapids, Michigan 49503*

*Boyne, Michigan 49712*

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Wyandotte, Michigan 48192*

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Lansing*

*2001 N Lincoln - 400 Bldg. Besse Health and Tech  
TBD*

*Escanaba, MI 49829*

*North Kent Sewer Authority  
SCCUMA*

*4775 Coit Ave  
TBD*

*Grand Rapids, Michigan 49525*

September 29, 2020  
- September 30, 2020

**C & D Municipal Wastewater Operator Exam Prep (2 Day Cram Class)**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

*Participants should bring a calculator and have basic knowledge of wastewater treatment methods and equipment.*

*March 18 & 19: Linden WRRF*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*March 24 & 25: Grand Rapids*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*March 26 & 27: Boyne*

*Registration: 8:30 a.m. Class: 9:00 a.m. - 4:00 p.m.*

*March 31 & April 1: Downriver Water Treatment Plant - Veolia - Taylor*

*Registration: 7:30 a.m. Class: 8:00 a.m. - 3:00 p.m.*

*April 1 & 2: South Huron Valley Utility Authority WTP*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*April 7 & 8: Kalamazoo Clean Water Plant*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*September 15 & 16: Bay City*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*September 22 & 23: Kalamazoo Clean Water Plant*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*September 29 & 30: Grandville*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*October 6 & 7: Linden WRRF*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*October 7 & 8: South Huron Valley Utility Authority WTP*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*Locations:*

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*Grand Rapids WRRF*

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*34001 W Jefferson. Ave*

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Midland, Michigan 48642*

*Linden WRRF  
Kalamazoo Water Rec Facility  
Taylor - Downriver Wastewater Treatment Fac*

*6450 Silver Lake Rd  
1415 Harrison  
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Kalamazoo, Michigan 49007  
Wyandotte, Michigan 48192*

*Bay College  
Lansing*

*2001 N Lincoln - 400 Bldg. Besse Health and Tech  
TBD*

*Escanaba, MI 49829*

*North Kent Sewer Authority  
SCCUMA*

*4775 Coit Ave  
TBD*

*Grand Rapids, Michigan 49525*

*Note: There are no CECs available as this is a class to help you study for the exam.*

October 6, 2020  
- October 7, 2020

**C & D Municipal Wastewater Operator Exam Prep (2 Day Cram Class)**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

*Participants should bring a calculator and have basic knowledge of wastewater treatment methods and equipment.*

*March 18 & 19: Linden WRRF*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*March 24 & 25: Grand Rapids*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*March 26 & 27: Boyne*

*Registration: 8:30 a.m. Class: 9:00 a.m. - 4:00 p.m.*

*March 31 & April 1: Downriver Water Treatment Plant - Veolia - Taylor*

*Registration: 7:30 a.m. Class: 8:00 a.m. - 3:00 p.m.*

*April 1 & 2: South Huron Valley Utility Authority WTP*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*April 7 & 8: Kalamazoo Clean Water Plant*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*September 15 & 16: Bay City*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*September 22 & 23: Kalamazoo Clean Water Plant*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*September 29 & 30: Grandville*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*October 6 & 7: Linden WRRF*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*October 7 & 8: South Huron Valley Utility Authority WTP*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*Locations:*

*South Huron Valley Utility Authority*

*Grand Rapids WRRF*

*Boyne WTP*

*34001 W Jefferson. Ave*

*1300 Market Ave*

*1261 Lagoon Drive*

*Brownstown Township, MI 48173*

*Grand Rapids, Michigan 49503*

*Boyne, Michigan 49712*

*Bay City WWTP  
Grandville  
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*Escanaba, MI 49829*

*North Kent Sewer Authority  
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*4775 Coit Ave  
TBD*

*Grand Rapids, Michigan 49525*

*Note: There are no CECs available as this is a class to help you study for the exam.*

October 7, 2020  
- October 8, 2020

**C & D Municipal Wastewater Operator Exam Prep (2 Day Cram Class)**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

*Participants should bring a calculator and have basic knowledge of wastewater treatment methods and equipment.*

*March 18 & 19: Linden WRRF*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*March 24 & 25: Grand Rapids*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

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*Registration: 8:30 a.m. Class: 9:00 a.m. - 4:00 p.m.*

*March 31 & April 1: Downriver Water Treatment Plant - Veolia - Taylor*

*Registration: 7:30 a.m. Class: 8:00 a.m. - 3:00 p.m.*

*April 1 & 2: South Huron Valley Utility Authority WTP*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*April 7 & 8: Kalamazoo Clean Water Plant*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*September 15 & 16: Bay City*

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*September 22 & 23: Kalamazoo Clean Water Plant*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*September 29 & 30: Grandville*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*October 6 & 7: Linden WRRF*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*October 7 & 8: South Huron Valley Utility Authority WTP*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*Locations:*

*South Huron Valley Utility Authority*

*Grand Rapids WRRF*

*Boyne WTP*

*34001 W Jefferson. Ave*

*1300 Market Ave*

*1261 Lagoon Drive*

*Brownstown Township, MI 48173*

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Lansing*

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TBD*

*Escanaba, MI 49829*

*North Kent Sewer Authority  
SCCUMA*

*4775 Coit Ave  
TBD*

*Grand Rapids, Michigan 49525*

*Note: There are no CECs available as this is a class to help you study for the exam.*



October 7, 2020  
- October 21, 2020

**C & D License Exam Prep (3 Day Concentrated Class)**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise, 517.641.7377

depling@mi-wea.org

*Participants should bring a calculator and have basic knowledge of wastewater treatment methods and equipment.*

*April 7,8,9: SCUMA 3671 W Herbison Rd, Dewitt, MI 48820*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*October 7,14,21: Lansing MWEA*

*Registration: 7:30 a.m. | Class: 8:00 a.m. - 3:00 p.m.*

*Note: There are no CECs available as this is a class to help you study for the exam.*

October 8, 2020

**2020 - Fund. of Wastewater Math 1**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

*EGLE CECs: 0.6 WW Technical*

*Course Code: 1776*

*Math is a basic skill that is necessary for the function of any wastewater plant. This course will cover much of the basic math and calculations used regularly in wastewater treatment.*

*This course serves as an excellent part of review and preparation for all levels of the EGLE Operator Certification Exams.*

*Topics Covered*

*Basic Arithmetic*

*Area and Volume Measurements*

*Detention Time*

*Pounds Formula*

*Chemical Dose*

*Percent Removal Calculations*

*Practice Problems*

*Conversion Factors and Formulas*

October 14, 2020

**Fund. of Activated Sludge 1**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
*EGLE CECs: 0.5 WW Technical*  
*Course Code: 1910*

*This program explains the basis for specific process control strategies, the calculations used to implement them and the sampling programs to support them. Also included are general biological concepts related to activated sludge plants and the factors that affect these processes.*

*this course will serve as an excellent part of EGLE Operator Certification Exam preparation.*

*Topics Include:*

*Activated Sludge origin*  
*Process*  
*Sampling*  
*Microbiology*  
*Process Control*  
*Return Rates*  
*Mean Cell Residence Time*  
*Food to Microorganisms Ration*  
*Control Concerns*

October 15, 2020

**Purpose and Fundamentals of Wastewater Treatment**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

*EGLE CECs: 0.5 WW Technical*

*Course Code: 2424*

*This course appropriately begins with the water cycle. It is an overview of the wastewater treatment process, beginning to end.*

*This gives the individual the concepts of the entirety and impact of the work done in treatment plants.*

*This class will be excellent for those new to the profession and those who have had a limited scope of job duties.*

*This will be a unique opportunity of great value to persons providing products and services in the wastewater industry.*

*Topics Covered:*

*Why we treat wastewater*

*Sources of wastewater*

*Mechanical Equipment*

*Collection Systems*

*Treatment Plants*

*Effluent Disposal*

*Basics of Laboratory Analysis*

*Health and Safety*

*Emerging Issues*

*Locations:*

*South Huron Valley Utility Authority*

*Grand Rapids WRRF*

*Boyne WTP*

*34001 W Jefferson. Ave*

*1300 Market Ave*

*1261 Lagoon Drive*

*Brownstown Township, MI 48173*

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TBD*

*Grand Rapids, Michigan 49525*

October 16, 2020

**Fund. of Anaerobic Digester Operation & Control**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

EGLE CECs: 0.5 WW Technical

Course Code: 2134

*The absence of oxygen makes anaerobic digestion a unique solids management process. Using consistent heat and mixing result in the reduction of solids volume and volatile solids content that creates a stabilized product (biosolids) that is used for alternative disposal methods such as land application as an agricultural fertilizer.*

*An additional byproduct of this method is the production of methane biogas which, when used with a combined heat and power system, can be a source of renewable energy.*

*After taking this class, operators will have an improved understanding of the system and strategies, and be better prepared for the day to day tasks of completing this portion of the treatment process.*

*Topics Covered:*

*Process Description*

*Description of Facilities*

*Management of Operations*

*Normal Operations*

*Operational Problems*

*Data Collections and Laboratory Controls*

*Maintenance*

*Locations:*

*South Huron Valley Utility Authority*

*Grand Rapids WRRF*

*Boyne WTP*

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*Grand Rapids, Michigan 49525*



October 20, 2020

**Fund. of Activated Sludge 2**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
*EGLE CECs: 0.5 WW Technical*  
*Course Code: 1958*

*This program explains further the basis for specific process control strategies, the calculations used to implement them and the sampling programs to support them.*

*There is minimal overlap between this course and Activated Sludge 1, and while taking Activated Sludge 1 is highly recommended, it is not a prerequisite for Activated Sludge 2. Therefore, this class can be considered a stand alone option.*

*WARNING: This course is not for beginners in the wastewater treatment profession or those who have not been exposed to the activated sludge process in their job.*

*Topics Include:*

*Sequencing Batch Reactor*  
*Trickling Filters*  
*Rotating Biological Contractor*  
*Review on Activated Sludge*  
*Waste Activated Sludge*  
*Return Activated Sludge*  
*Nitrogen and Phosphorus Removal*  
*Math Problems*

October 21, 2020

**Fund. of Maintenance Practices 2**  
**Various Locations throughout Michigan**  
07:00 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
*EGLC CECs: 0.6 DW & WW Technical*  
*WW Course Code: 2431*  
*DW Course Code: 2534*

*This course takes the concept of providing proper training for maintenance staff to the next level. Persons completing this class will have a better base of knowledge and/or skills towards contributing to the overall success of any maintenance program.*

*There is very little overlap between this course and Maintenance Practices 1, and while taking that course is highly recommended, it is not a prerequisite for Maintenance Practices 2. Therefore, this class can be considered a stand alone option.*

*However, having persons responsible for maintenance duties attend both Maintenance Practice 1 and 2 could be thought of as a department performing due diligence for protecting one of a community's greatest assets.*

*Topics Covered:*

*Pump Basics, Types and Maintenance*  
*Valves Basics and Maintenance*  
*Gate Basics and Maintenance*  
*Gears and Gear Maintenance*  
*Sprockets and Chains*  
*Belts and Sheaves*  
*Trouble Shooting*

*Locations:*

*South Huron Valley Utility Authority*  
*Grand Rapids WRRF*  
*Boyne WTP*

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TBD*

*Grand Rapids, Michigan 49525*

October 22, 2020

**Fund. of Collection Systems**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
*EGLE CECs: 0.5 WW Technical*  
*Course Code: 2427*

*Safe, sanitary and efficient collection of wastewater at its sources (domestic, commercial and industrial) and then its delivery to a facility begins the treatment process.*

*It is also usually the only part of the process of which the public has much awareness. That awareness all too often happens when there are issues with the system causing problems for the public (your customers).*

*The information covered in this course will help staff understand the basics of function, maintenance, operation, protection and preservation of the asset of your system.*

*Topics Covered*

*Purpose and Collection Systems*

*Common Definitions*

*Components*

*Importance of Maintenance*

*Service Delivery Options*

*Preventative Maintenance*

*Corrective Maintenance*

October 27, 2020

**Basic Health & Safety Practices for Water Treatment Systems**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

EGLE CECs: 0.6 DW and WW Technical

Course Code: 2423

*Staying safe and healthy while on the job is not common sense for all. Creating and maintaining a culture of safety first takes a great deal of training, emphasis and reinforcement. This class can be an important part of such a program.*

*Safety first must be more than just a trite sign on the walls of your facility. Each individual (with your help) has the obligation to return home each day in the same condition (or better) in which they left. Staff must be trained to understand basic safety practices and then to make the consistent choice to follow those practices.*

*Sending you personnel to this course sends the message of how critical the practice of safety is in your plant.*

*Topics Covered:*

*Medical Monitoring*

*Incident Investigations*

*Hazards*

*Personal Protective Equipment*

*Confined Space*

*Fire Safety/Emergency Action*

*Utility Location*

*Traffic Safety*

*Locations:*

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*Grand Rapids, Michigan 49525*



October 28, 2020

**Fund. of Maintenance Practices 1**  
**Various Locations throughout Michigan**  
07:00 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
*EGL ECECs: 0.6 DW & WW Technical*  
*WW Course Code: 2430*  
*DW Course Code: 2530*

*Wastewater treatment facilities are among a community's greatest assets, both in terms of value to the quality of life of its citizenry and capital investment. It is imperative that those in charge of said facilities take the utmost care of these crucial resources.*

*Having a good plan for maintaining the equipment of each component is only the beginning. Personnel assigned to perform the tasks associated with prolonging the life of the system assets must receive proper training. While some of maintenance can be quite specific to certain devices, there are many general principles, practices and skills that are helpful in almost every maintenance application.*

*Persons completing this class will have a better base of knowledge and/or skills towards contributing to the overall success of any maintenance program.*

*Topics Covered:*

*Maintenance Theory, Principles and Process*  
*Work orders and Documentation*  
*Personnel*  
*Tools and Equipment*  
*Lubrication*  
*Safety*

October 29, 2020

**Fund. of Activated Sludge 2**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
*EGLE CECs: 0.5 WW Technical*  
*Course Code: 1958*

*This program explains further the basis for specific process control strategies, the calculations used to implement them and the sampling programs to support them.*

*There is minimal overlap between this course and Activated Sludge 1, and while taking Activated Sludge 1 is highly recommended, it is not a prerequisite for Activated Sludge 2. Therefore, this class can be considered a stand alone option.*

*WARNING: This course is not for beginners in the wastewater treatment profession or those who have not been exposed to the activated sludge process in their job.*

*Topics Include:*

*Sequencing Batch Reactor*  
*Trickling Filters*  
*Rotating Biological Contractor*  
*Review on Activated Sludge*  
*Waste Activated Sludge*  
*Return Activated Sludge*  
*Nitrogen and Phosphorus Removal*  
*Math Problems*

November 3, 2020

**Fund. of Activated Sludge 2**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
*EGLE CECs: 0.5 WW Technical*  
*Course Code: 1958*

*This program explains further the basis for specific process control strategies, the calculations used to implement them and the sampling programs to support them.*

*There is minimal overlap between this course and Activated Sludge 1, and while taking Activated Sludge 1 is highly recommended, it is not a prerequisite for Activated Sludge 2. Therefore, this class can be considered a stand alone option.*

*WARNING: This course is not for beginners in the wastewater treatment profession or those who have not been exposed to the activated sludge process in their job.*

*Topics Include:*

*Sequencing Batch Reactor*  
*Trickling Filters*  
*Rotating Biological Contractor*  
*Review on Activated Sludge*  
*Waste Activated Sludge*  
*Return Activated Sludge*  
*Nitrogen and Phosphorus Removal*  
*Math Problems*

November 5, 2020

**Fund. of Preliminary, Primary and Secondary Treatment**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

*EGLE CECs: 0.5 WW Technical*

*Course Code: 2598*

*The path of wastewater is a long and winding one, beginning at its source (domestic, commercial and industrial) and ending with its clean, safe return to surface water or groundwater where it can take its place in the hydrological cycle.*

*This course offers a thorough examination of the process and hurdles that must be overcome (the what, when, how) and provides strategies and tools necessary to address those hurdles and segments of treatment.*

*Topics Covered:*

*Characteristics of Wastewater*

*Screening*

*Oxidation Ditches*

*Wastewater Stabilization Ponds*

*Grit Removal, Sampling & Analysis*

*Pre Aeration & Aeration*

*Primary and Secondary Clarifiers*

*Rotating Biological Contractors (RBCs)*

*Trickling Filters*

*Secondary Treatment Effluent*

November 6, 2020

**Fund. of Collection Systems**  
**Various Locations throughout Michigan**  
07:30 AM - 03:00 PM EST  
Denise Epling, 517.641.7377  
depling@mi-wea.org  
*EGLE CECs: 0.5 WW Technical*  
*Course Code: 2427*

*Safe, sanitary and efficient collection of wastewater at its sources (domestic, commercial and industrial) and then its delivery to a facility begins the treatment process.*

*It is also usually the only part of the process of which the public has much awareness. That awareness all too often happens when there are issues with the system causing problems for the public (your customers).*

*The information covered in this course will help staff understand the basics of function, maintenance, operation, protection and preservation of the asset of your system.*

*Topics Covered*  
*Purpose and Collection Systems*  
*Common Definitions*  
*Components*  
*Importance of Maintenance*  
*Service Delivery Options*  
*Preventative Maintenance*  
*Corrective Maintenance*

December 17, 2020

**Fund. of Preliminary, Primary and Secondary Treatment**

**Various Locations throughout Michigan**

07:30 AM - 03:00 PM EST

Denise Epling, 517.641.7377

depling@mi-wea.org

*EGLE CECs: 0.5 WW Technical*

*Course Code: 2598*

*The path of wastewater is a long and winding one, beginning at its source (domestic, commercial and industrial) and ending with its clean, safe return to surface water or groundwater where it can take its place in the hydrological cycle.*

*This course offers a thorough examination of the process and hurdles that must be overcome (the what, when, how) and provides strategies and tools necessary to address those hurdles and segments of treatment.*

*Topics Covered:*

*Characteristics of Wastewater*

*Screening*

*Oxidation Ditches*

*Wastewater Stabilization Ponds*

*Grit Removal, Sampling & Analysis*

*Pre Aeration & Aeration*

*Primary and Secondary Clarifiers*

*Rotating Biological Contractors (RBCs)*

*Trickling Filters*

*Secondary Treatment Effluent*

Coming Soon

### **Suwannee River Voyage Fundraiser - Water For People**

Gary De Kock,

*\*Please note, the voyage has been postponed until further notice. Updates will be shared on this page once we have them.*

#### *Fundraising Event for Water for People*

*Gary and Linda DeKock will paddle 342 miles in April, 2020 in order to raise \$25,000 for Water for People.*

*The Suwannee River Voyage (SRV) will begin at Kingfisher Landing in the Okefenokee National Wildlife Refuge near Folkston, Georgia. The planned route will follow 100 of the 120 miles of water trails in the Okefenokee. After nine days in the refuge, the route will enter Stephen C. Foster State Park. From there, the Suwannee River Wilderness Trail will be followed for 242 miles to the Gulf of Mexico before May 1, 2020.*

*[View the voyage flyer here](#)*

*[Sponsorship Information](#)*