

**EDUCATION AND TRAINING COMMITTEE
OF THE
BOARD FOR WATERWORKS AND WASTEWATER WORKS OPERATORS
AND ONSITE SEWAGE SYSTEM PROFESSIONALS**

Tentative AGENDA THURSDAY, JULY 27, 2023, 9:00 a.m.

**DPOR PERIMETER CENTER
9960 MAYLAND DRIVE, SUITE 400
RICHMOND, VIRGINIA 23233
BOARD ROOM 2**

- I. CALL TO ORDER**
- II. EMERGENCY EVACUATION PROCEDURES**
- III. APPROVAL OF AGENDA**
 - a. Committee Agenda, July 27, 2023
- IV. PUBLIC COMMENT PERIOD***
- V. REVIEW TRAINING COURSE APPLICATIONS****
 - a. Office of Water Programs at Sacramento State
 - i. Industrial Waste Treatment Vol. A: Introduction, Safety, Waste Monitoring, Preliminary Treatment
 - ii. Industrial Waste Treatment Vol. B: Physical and Physical/Chemical Treatment Processes
 - iii. Industrial Waste Treatment Vol. C: Instrumentation and Control and Facility Management
 - iv. Operation of Wastewater Treatment Plants Vol. 3A: Treatment Plants, Effluent Discharge
 - v. Operation of Wastewater Treatment Plants Vol. 3B: Instrumentation and Control
- VI. OTHER BUSINESS**
 - a. Review Updates to Board-Approved Training Course List
- VII. ADJOURN**

NEXT MEETING TENTATIVELY SCHEDULED FOR OCTOBER 19, 2023

* Five minute public comment, per person, with the exception of any open disciplinary or application files.

** Agenda materials made available to the public do not include disciplinary case files or application files pursuant to §54.1-108 of the *Code of Virginia*.

Persons desiring to participate in the meeting and requiring special accommodations or interpretative services should contact the Department at (804) 367-0362 at least ten days prior to the meeting so that suitable arrangements can be made for an appropriate accommodation. The Department fully complies with the Americans with Disabilities Act.

PERIMETER CENTER CONFERENCE CENTER
EMERGENCY EVACUATION OF BOARD AND TRAINING ROOMS
(Script to be read at the beginning of each meeting.)

PLEASE LISTEN TO THE FOLLOWING INSTRUCTIONS ABOUT EXITING THE PREMISES IN THE EVENT OF AN EMERGENCY.

In the event of a fire or other emergency requiring the evacuation of the building, alarms will sound. When the alarms sound, leave the room immediately. Follow any instructions given by Security staff

Board Room 1

Exit the room using one of the doors at the back of the room. Upon exiting the room, turn **RIGHT**. Follow the corridor to the emergency exit at the end of the hall.

Upon exiting the building, proceed straight ahead through the parking lot to the fence at the end of the lot. Wait there for further instructions.

Board Room 2

Exit the room using one of the doors at the back of the room. (Point) Upon exiting the room, turn **RIGHT**. Follow the corridor to the emergency exit at the end of the hall.

Upon exiting the building, proceed straight ahead through the parking lot to the fence at the end of the lot. Wait there for further instructions.

You may also exit the room using the side door, turn **Right** out the door and make an immediate **Left**. Follow the corridor to the emergency exit at the end of the hall.

Upon exiting the building, proceed straight ahead through the parking lot to the fence at the end of the lot. Wait there for further instructions.

Board Rooms 3 and 4

Exit the room using one of the doors at the back of the room. Upon exiting the room, turn **RIGHT**. Follow the corridor to the emergency exit at the end of the hall.

Upon exiting the building, proceed straight ahead through the parking lot to the fence at the end of the lot. Wait there for further instructions.

Training Room 1

Exit the room using one of the doors at the back of the room. Upon exiting the room, turn **LEFT**. Follow the corridor to the emergency exit at the end of the hall.

Upon exiting the building, proceed straight ahead through the parking lot to the fence at the end of the lot. Wait there for further instructions.

Training Room 2

Exit the room using one of the doors at the back of the room. Upon exiting the doors, turn **LEFT**. Follow the corridor to the emergency exit at the end of the hall.

Upon exiting the building, proceed straight ahead through the parking lot to the fence at the end of the lot. Wait there for further instructions.

PUBLIC COMMENT PERIOD

Five minute public comment, per person, with the exception of any open disciplinary or application files.

WWWOSSP Board Training & Education Committee Application Review Summary

PROVIDER NAME:	Office of Water Programs at Sacramento State
TYPE OF COURSE:	Wastewater Works Operator—Pre-license
SUBJECT/COURSE TITLE:	Industrial Waste Treatment Vol. A- Introduction, Safety, Waste Monitoring, Preliminary Treatment
DELIVERY METHOD OF INSTRUCTION:	Online
PREVIOUS BOARD APPROVALS:	Yes
STAFF RECOMMENDATION:	Approval Training credits to be determined by Committee (50.32 contact hours)

WWWOSSP Board Training & Education Committee

Application Review Summary

PROVIDER NAME:	Office of Water Programs at Sacramento State
TYPE OF COURSE:	Wastewater Works Operator—Pre-license
SUBJECT/COURSE TITLE:	Industrial Waste Treatment Vol. B-Physical and Physical/Chemical Treatment Processes
DELIVERY METHOD OF INSTRUCTION:	Online
PREVIOUS BOARD APPROVALS:	Yes
STAFF RECOMMENDATION:	Approval Training credits to be determined by Committee (45.72 contact hours)

WWWOSSP Board Training & Education Committee

Application Review Summary

PROVIDER NAME:	Office of Water Programs at Sacramento State
TYPE OF COURSE:	Wastewater Works Operator—Pre-license
SUBJECT/COURSE TITLE:	Industrial Waste Treatment Vol. C- Instrumentation and Control and Facility Maintenance
DELIVERY METHOD OF INSTRUCTION:	Online
PREVIOUS BOARD APPROVALS:	Yes
STAFF RECOMMENDATION:	Approval Training credits to be determined by Committee (39.5 contact hours)

WWWOSSP Board Training & Education Committee

Application Review Summary

PROVIDER NAME:	Office of Water Programs at Sacramento State
TYPE OF COURSE:	Wastewater Works Operator—Pre-license
SUBJECT/COURSE TITLE:	Operation of Wastewater Treatment Plants Vol. 3A Treatment Plants, Effluent Discharge
DELIVERY METHOD OF INSTRUCTION:	Online
PREVIOUS BOARD APPROVALS:	Yes
STAFF RECOMMENDATION:	Approval Retroactive to June 29, 2023 Training credits to be determined by Committee (28.18 contact hours)

WWWOSSP Board Training & Education Committee

Application Review Summary

PROVIDER NAME:	Office of Water Programs at Sacramento State
TYPE OF COURSE:	Wastewater Works Operator—Pre-license
SUBJECT/COURSE TITLE:	Operation of Wastewater Treatment Plants Vol. 3B Instrumentation and Control
DELIVERY METHOD OF INSTRUCTION:	Online
PREVIOUS BOARD APPROVALS:	Yes
STAFF RECOMMENDATION:	Approval Retroactive to June 29, 2023 Training credits to be determined by Committee (41.64 contact hours)

ALEXANDRIA SANITATION AUTHORITY

For more information please contact:

Jerry Barrett
1500 Eisenhower Avenue
Alexandria, VA 22314
(703) 549-3381

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Biological Nutrient Removal (BNR) Overview	0.3	June 20, 2002		X			
BNR and Methanol	0.3	June 20, 2002		X			
Centrifuge Thickening	0.3	June 20, 2002		X			
Filtration System	0.3	June 20, 2002	X	X	X		
Primary Effluent Pumping	0.3	June 20, 2002		X	X		
Process Air	0.3	June 20, 2002		X	X		
Solids Overview	0.3	June 20, 2002		X	X		
SSTS, RAS, and WAS Systems	0.3	June 20, 2002		X			

ALLEN BATURAY, P.E.

For more information please contact:

4005 Aldie Road
Catharpin, VA 20143
(703) 369-0004

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Sludge Incineration/Multiple Hearth Incineration	2	April 20, 2017		X			

AMERICAN ASSOCIATION OF WATER AND WASTEWATER PROFESSIONALS (AAWWP)

For more information please contact:

Dennis Campbell
502 Research Road
Richmond, VA 24236
(540) 915-6293

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Wastewater Math	0-4	June 8, 2010		X	X		

AMERICAN WATER COLLEGE

For more information please contact:

Joe Kirschner
P.O. Box 152
Valley Mills, TX 76689
(661) 874-1655

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Advanced Water Treatment	4.2	January 26, 2023	X				
Applied Chemistry	2.9	January 26, 2023	X	X	X		
Applied Hydraulics	2.0	January 26, 2023	X	X	X	X	X
Distribution System Review (4 hrs.)	0.4	January 26, 2023	X				
	0.2			X	X		X
Distribution System Review (8 hrs.)	0.8	January 26, 2023	X				
	4.0			X	X		X
Distribution System Review (12 hrs.)	1.2	January 26, 2023	X				
	.6			X	X		X
Distribution System Review (16 hrs.)	1.6	January 26, 2023	X				
	.8			X	X		X
Electricity for the Water Industry	1.3	January 26, 2023	X	X	X	X	
Introduction to Water Treatment	4.3	January 26, 2023	X				
Wastewater Operator Exam Preparation Class 1	5.8	January 26, 2023		X	X		
Wastewater Operator Exam Preparation Class 2	5.5	January 26, 2023		X	X		
Wastewater Operator Exam Preparation Class 3	4.9	January 26, 2023		X	X		
Wastewater Operator Exam Preparation Class 4	3.5	January 26, 2023		X	X		
Wastewater Treatment Review (4 hrs.)	0.4	January 26, 2023		X	X		X
Wastewater Treatment Review (12 hrs.)	1.2	January 26, 2023		X	X		X
Wastewater Treatment Review (21 hrs.)	2.1	January 26, 2023		X	X		X
	4.1		X				

Water Quality	3.5	January 26, 2023		X				
	2.0		X					
Water Sources	1.0	January 26, 2023		X	X			X
	4.8		X					
Water Transmission and Distribution I	2.1	January 26, 2023		X	X			
	4.8		X					
Water Transmission and Distribution II	1.4	January 26, 2023		X	X			
Water Treatment Math	3.6	January 26, 2023	X	X	X	X	X	X
	0.4		X					
Water Treatment Review (4 hrs.)	0.2	January 26, 2023		X	X			
	0.8		X					
Water Treatment Review (8 hrs.)	0.4	January 26, 2023		X	X			
	1.2		X					
Water Treatment Review (12 hrs.)	0.6	January 26, 2023		X	X			
	1.6		X					
Water Treatment Review (16 hrs.)	0.8	January 26, 2023		X	X			
	3.9		X					
Waterworks Operator Class 1	1.9	January 26, 2023		X	X			
	3.6		X					
Waterworks Operator Class 2	1.8	January 26, 2023		X	X			
	3.5		X					
Waterworks Operator Class 3	1.7	January 26, 2023		X	X			
	3.3		X					
Waterworks Operator Class 4	1.6	January 26, 2023		X	X			

AMERICAN WATER WORKS ASSOCIATION (AWWA), VIRGINIA SECTION

For more information please contact:

Cynthia Barnes

cynthia.barnes@vaawwa.org

(434) 238-5131

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Fire Hydrant and Water Main Maintenance	0.75	April 6, 1995	X				

Cross Connection Devices	1.60	November 14, 2017	X	X	X		
--------------------------	------	-------------------	---	---	---	--	--

AQUA-AEROBIC SYSTEMS, INC.

For more information please contact:

Monica Alfano
(815) 639-4511

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Innovative Treatment Technologies	0.36	April 26, 2018	X	X	X	X	X

AT YOUR PACE ONLINE

For more information please contact:

Tony Bowers
www.aypotech.com/virginia-water-operator-continuing-education
(877) 724-6150

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
5 Hour Water Utility Management Course	0.60	January 29, 2019	X				
	0.3			X			X

CALIFORNIA STATE UNIVERSITY (SACRAMENTO)

For more information please contact:

Jamie McCartney
Office of Water Programs
6000 J Street
Sacramento, CA 95819
www.owp.csus.edu
wateroffice@owp.csus.edu
(919) 278-6142

Course	Max. Allowable TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Class I Class II Class III							
Advanced Waste Treatment	-4.0 3.0 2.0	April 4, 1996		X			
CE28A Water Treatment Plant Operation I ₂	-1.0 2.0 4.0	June 21, 2006	X				
CE28B Water Treatment Plant Operation II ₂	-1.0 2.0 4.0	June 21, 2006	X				
CE29 Small Water System Operation & Maint. ₂	— 2.0 —	June 21, 2006	X				
Disinfection, Laboratory Procedures, and Math	-4.3 4.3 4.3	October 28, 2021	X	X	X		X
	2.1					X	
Industrial Wastes, Volume I	-4.0 2.0 1.0	April 4, 1996		X			
Industrial Wastes, Volume II	-4.0 2.0 1.0	April 4, 1996		X			
Math Applications in Water Treatment	2.1 2.1 2.1	April 18, 2019	X	X	X	X	X
Math Applications in Water Distribution	1.9 1.9 1.9	April 18, 2019	X	X	X	X	X
Manage for Success: Effective Utility Leadership Practices	-1.7 1.7 1.7	June 21, 2006	X	X	X	X	X
Operations & Maint. Of Wastewater Collection Systems, Vol. I	— 2.0 —	April 4, 1996		X			
Operations & Maint. Of Wastewater Collection Systems, Vol. II	— 6.4 6.4	November 3, 2021		X	X		X
	3.2		X			X	
Operation of Wastewater Treatment Plants, Vol. II	-1.0 2.0 4.0	April 4, 1996		X			
Pretreatment Facility Inspection	-7.5 -7.5 7.5	October 28, 2021		X			
Safety, Beginning Treatment, and Lagoon Systems	-4.0 4.0 4.0	October 28, 2021		X			
	-2.0 2.0 2.0	October 28, 2021	X		X		
Secondary Treatment	-3.6 3.6 3.6	October 28, 2021		X	X	X	X
Small Wastewater System Operation and Maint., I	-2.0 2.0 2.0	June 21, 2006		X	X		
Small Wastewater System Operation and Maint., II	-2.0 2.0 2.0	June 21, 2006		X	X		
Small Water System Operation and Maintenance	— 2.0 —	April 4, 1996	X				
Small Water Systems—WAT702A Water Sources ₁	— 0.4 —	June 21, 2006	X				
Small Water Systems—WAT702B Wells ₁	— 0.4 —	June 21, 2006	X				
Small Water Systems—WAT720C Small Water Treatment ₁	— 0.4 —	June 21, 2006	X				
Small Water Systems—WAT720D Disinfection ₁	— 0.4 —	June 21, 2006	X				
Small Water Systems—WAT720E Water Rates/Safety ₁	— 0.4 —	June 21, 2006	X				
Small Water Systems—WAT720F Laboratory ₁	— 0.4 —	June 21, 2006	X				
Small Water Systems Video Information Series	— 0.6 1.2	June 21, 2006	X				

	-2.6 2.6 2.6			X				
Treatment of Metal Wastestreams	-1.3 1.3 1.3	October 28, 2021	X		X			
Utility Management	-0.1 0.1 0.1	June 21, 2006	X	X				
Water Distribution System Operation and Maint.	— 1.0 2.0	April 4, 1996	X					
Water Systems Operation and Maint.	+ 1.0 + 2.0		X	X	X			X
Video Training Series	1.0	June 21, 2006				X		
Water Treatment Plant Operation, Vol. I	-1.0 2.0 4.0	April 4, 1996	X					
Water Treatment Plant Operation, Vol. II	-1.0 2.0 4.0	April 4, 1996	X					
	3.5			X				
Operation of Wastewater Treatment Plants, Vol. 2A	2.8	January 26, 2023	X					
Treatment Plants and Tertiary Treatments	1.7				X			
	4.0			X				
Operation of Wastewater Treatment Plants, Vol. 2B	1.7	January 26, 2023	X					
Solids Management and Plant Maintenance	2.0				X			
	2.2		X	X				
703A-Water Distribution: Safety	1.1	April 20, 2023			X	X	X	
	3.1		X	X				
703B-Water Distribution: Distribution Facilities	1.5	April 20, 2023			X			
703C-Water Distribution: Disinfection	2.1	April 20, 2023	X	X	X			
703D-Water Distribution: Operation & Maintenance	2.5	April 20, 2023	X	X	X			
703E-Water Distribution: Management	2.1	April 20, 2023	X	X	X			
CE38A-Operation of Wastewater Treatment Plants	9.0			X				
Vol. I-Wastewater Specialist Program	4.5	April 20, 2023	X		X			
CE38B-Operation of Wastewater Treatment Plants	12.0			X				
Vol. II-Wastewater Specialist Program	6.1	April 20, 2023	X		X			
CE39-Advanced Waste Treatment	10.5			X				
Wastewater Specialist Program	5.2	April 20, 2023	X		X			
Collection Systems: Methods for Evaluating and	2.3		X	X				
Improving Performance	1.1	April 20, 2023			X			
104C-Math Application in Wastewater	3.8	April 20, 2023	X	X	X	X	X	
101C-Math Application in Collection Systems	2.2	April 20, 2023	X	X	X	X	X	
	8.7			X				
Membrane Bioreactors	4.3	April 20, 2023	X		X			X
Collection System Operation & Maintenance	6.8	April 20, 2023	X	X	X			

Pretreatment Facility Inspection	5.9	April 20, 2023		X			
Training Videos	2.9		X		X		
Advanced Waste Treatment	10.2			X			
	5.1		X		X	X	X
CE28A-Water Treatment Plant Operation I 2	12.9		X				
	6.4			X	X	X	X
CE28B-Water Treatment Plant Operation II 2	13		X				
	6.5			X	X	X	X
CE29-Small Water System Operation & Maint. 2	11.5		X				
	5.7			X	X	X	X
Industrial Waste Treatment, Volume I	13			X			
	6.5		X		X		
Industrial Waste Treatment, Volume II	10.9			X			
	5.4		X		X		
Operations & Maint. Of Wastewater Collection Systems, Vol. I	9		X	X			
	4.5				X	X	X
Small Wastewater System Operation and Maint., I	6.6			X			
	3.3		X		X	X	X
Small Wastewater System Operation and Maint., II	6.6			X			
	3.3		X		X	X	X
702A Small Water Systems--Wells	2.2		X				
	1.1			X	X	X	X
702B Small Water Systems--Treatment Plants	2		X				
	1			X	X	X	X
702C Small Water Systems--Disinfection	2.4		X				
	1.2			X	X	X	X
702D Small Water Systems--Safety & Introduction to Small System Management	2.7		X				
	1.3			X	X	X	X
702E Small Water Systems--Lab Procedures	2.5		X	X	X		
Utility Management	1		X	X	X	X	X
Water Distribution System Operation and Maintenance	11.2		X	X	X	X	X
Water Treatment Plant Operation, Vol. I	12.7		X				
	6.3			X	X	X	X

Water Treatment Plant Operation, Vol. II	13.8		X				
	6.9			X	X	X	X

2 These courses are versions of "Water Treatment Plant Operation, Volumes I & II", and "Small Water System Operation and Maintenance" with an available on-line exam. Any person submitting a certificate for the "Water Treatment Plant Operation Specialist Certificate Program" indicating the completion of all three courses shall be eligible for the TC's earned in each course. The maximum allowable TC's will be based upon the class of licensure being applied for.

CENTRAL CAROLINA TECHNICAL COLLEGE/ENVIRONMENTAL TRAINING CENTER

For more information please contact:

Joshua Castleberry
 SC Environmental Training Center
 506 N Guignard Drive
 Sumter, SC 29150
castleberryjs@cctech.edu
 (803) 778-6656

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Biological Wastewater Treatment Operators Short School (Levels A, B, C, D)	2.0	February 9, 1994		X	X	X	X
	1.0		X				
Physical/Chemical Wastewater Treatment Plant Operators Short School (Levels A, B, C, D)	2.0	February 9, 1994	X	X	X		
Water Distributions System Operation & Maintenance Short School (Levels A, B, C, D)	2.0	February 9, 1994	X	X	X	X	X
Water Treatment Plant Operators Short School (Levels A, B, C, D)	2.0	February 9, 1994	X				
	1.0			X	X	X	X

CONTROL EQUIPMENT COMPANY

For more information please contact:

1019 Campbell Avenue, SE
 Roanoke, VA 24013
 (434) 973-5111

(800) 572-3220

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Sodium Hypochlorite Disinfection	0.4	September 19, 2002	X	X	X		
UV Disinfection	0.4	September 19, 2002	X	X	X		

DAVID H. PAUL, INC.

For more information please contact:

Darrell Cunningham
 1911 Rustic Place
 Farmington, NM 87401
 dcunningham@dhptraining.com
 (505) 326-3431

Course	Max. Allowable TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Class I Class II Class III							
Math, Chemistry, Biology INWT 145	1.0 1.0 1.0	December 21, 2000	X	X	X	X	X
Reverse Osmosis INWT 146	-1.0 1.0 2.0	December 21, 2000	X	X	X	X	X
R O Troubleshooting INWT 147	-0.5 1.0 2.0	December 21, 2000	X	X	X	X	X
High Purity Water from Ion INWT 160	1.0 1.0 1.0	December 21, 2000	X	X			
Ion Exchange Operation INWT 161	-1.0 1.0 1.0	December 21, 2000	X	X	X	X	X
Maintaining High Purity INWT 162	4.0	December 21, 2000	X				
	2.0			X	X		
Pretreatment Troubleshooting INWT 255	-0.5 0.5 1.5	December 21, 2000	X	X			
	0.7				X		
Scaling and Fouling Troubleshooting INWT 256	-1.5 1.5 2.0	December 21, 2000	X	X	X	X	X
Advanced R O Monitoring/Cleaning INWT 257	-1.5 1.5 2.0	December 21, 2000	X	X	X		
Feedwater & Pretreatment INWT 270	1.0 1.0 1.0	December 21, 2000	X	X	X	X	X
Ion Exchange Troubleshooting INWT 271	-1.0 1.5 2.0	December 21, 2000	X	X	X		
	1.0					X	X
Post Ion Exchange INWT 272	-0.5 0.5 1.5	December 21, 2000	X	X	X		
	0.7					X	X

Reverse Osmosis Specialist I Certification	3.8		X	X	X		
	1.9					X	X
(OLC110) Introduction to Water Treatment	0.9		X				
	0.4			X	X	X	X
(OLC111) Water Treatment Plant Fundamentals	1.8		X				
	0.5			X	X	X	X
(OLC112) Water Treatment Math	0.6		X	X	X	X	X
(OLC113) Water Treatment Chemistry	1		X	X	X		
	0.5					X	X
(OLC115) Piping and Instrumentation Diagrams	0.3		X	X	X	X	X
(OLC116) Reverse Osmosis Water Treatment	1.3		X	X	X		
	0.6					X	X
(OLC117) Reverse Osmosis Operation & Maintenance	1.3		X	X	X		
	0.6					X	X
(OLC118) Reverse Osmosis Monitoring & Troubleshooting	1.4		X	X	X		
	0.7					X	X
(OLC411) Ion Exchange Water Treatment	0.8		X	X	X		
	0.4					X	X
(OLC413) Distillation	0.2		X	X	X		
	0.1					X	X
(OLC501) OCM of RO Ssystem-ROSII	2.8		X	X	X		
	1.4					X	X

D.R. WANLESS AND ASSOCIATES LLC

For more information please contact:

Dennis R. Wanless
 427 Shadowbrook Drive
 Burlington, NC 27215
 (336) 538-2262

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Aeration Principles, Applications, and Technologies	0.4	October 26, 2017	X	X	X		
	0.2					X	X

ENVIRONMENTAL OPERATING SOLUTIONS, INC.

For more information please contact:

Brendan Luther
53 Portside Drive
Pocasset, MA 02559
bluther@microc.com
(423) 571-3720

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
EOSi Principles of BNR	0.5	July 25, 2019		X	X	X	X
	0.2		X				
Wastewater Training for Westrock	1.0	March 14, 2020		X			

(EPA) U.S. ENVIRONMENTAL PROTECTION AGENCY, WATER SECURITY DIVISION

For more information please contact:

Taner Durusu
3100 Clarendon Boulevard, Suite 400
Arlington, VA 22201
taner.durusu@cadmusgroup.com
(703) 247-6195

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Building Community Based Water Resilience	0.1		X				

FABL ENVIRONMENTAL REGULATORY SPECIALISTS, INC.

For more information please contact:

Regina B. Meehan
1102 Roe Ford Road
Greenville, SC 29617
www.environmental-training.com

(864) 246-6668

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Wastewater Clarifications, BODS	1.0	October 29, 1999		X	X		
Wastewater Clarifications, TSS	0.5	October 29, 1999		X	X		
Wonderful World of Widgets,- Materials Flow Balance Exercise	1.0	October 29, 1999					

H & V CONSULTING, LLC

For more information please contact:

Shawn H. Veltman, Principal Engineer
 106 A Landsdowne Street
 Blacksburg, VA 24060
www.hvconsultingcompany.com
 (540) 951-0054

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Monogram Foods Anaerobic Digestion/ Aerobic Treatment System	2.8	January 19, 2017		X			

HAMPTON ROADS SANITATION DISTRICT APPRENTICESHIP PROGRAM (HRSD)

For more information please contact:

Christina Perez
 1434 Air Rail Avenue
 Virginia Beach, VA 23455
 (757) 460-4226

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Biological Treatment Process I	2.1	September 7, 2010	X	X	X	X	
	1.0						X
Biological Treatment Process II	2.1	September 7, 2010	X	X	X	X	
	1.0						X

	2.1*		X	X	X		
Bearings and Lubrication	1.0*	December 10, 1992				X	X
Gearboxes	2.1*	December 10, 1992	X	X	X		
Incineration	2.1*	December 10, 1992		X	X		
Industrial Waste & Regulations	2.1	March 9, 1992		X			
Industrial Waste & Regulations (Online)	2.1	October 3, 2020		X			
Instrumentation & Controls Fundamentals of Electricity and Instrumentation (name change)	2.1		X	X	X		
	1.0	December 10, 1992				X	X
Introduction to Wastewater Treatment & Maintenance 1 (name change)	2.1*			X	X		
	1.0	December 10, 1992	X			X	X
Introduction to Treatment and Maintenance 2	2.1			X	X		
	1.0	December 10, 1992				X	
V-Belt, Coupling and Drive Alignment*	2.1		X	X	X		
	1.0	December 10, 1992				X	
Valves and Piping Systems*	2.1		X	X	X		
	1.0	March 19, 1992				X	
Pipe & Pipefitting*	2.1		X	X	X		
	1.0	March 19, 1992				X	
Preliminary and Primary Treatment*	2.1			X	X		
	1.0	December 10, 1992	X			X	X
Odor Control and Chemical Addition*	2.1			X	X		
	1.0	December 10, 1992	X			X	X
Pumping Systems I	2.1*		X	X	X		X
	1.0*	December 10, 1992				X	
Pumping Systems II	2.1		X	X	X		X
	1.0*	December 10, 1992				X	
Shop Prints & Schematics Shop Prints & Mechanical Drawing (name change)	2.1	March 19, 1992	X	X	X	X	X
Sanitary Chemistry I	2.1*		X	X	X		
	1.0*	December 10, 1992				X	X
Sanitary Chemistry II	2.1*		X	X	X		
	1.0*	May 1, 2016				X	X
	2.1*		X	X	X		

Wastewater Analysis*	1.0*	December 10, 1992				X	X
Solids Dewatering Biosolids Processing (name change)	2.1		X	X	X		
	1.0	December 10, 1992				X	X
Solids Thickening & Digestion Solids Handling & Management (name change)	2.1*			X	X		
	1.0*	December 10, 1992	X			X	X
	2.1			X	X		X
Stream Ecology	1.0	December 10, 1992	X				
	2.1			X	X		X
Stream Ecology (online)	1.0	March 22, 2013	X				
Leadership & Supervision I	2.1	March 19, 1992	X	X	X		
Leadership & Supervision II	2.1	March 19, 1992	X	X	X		
	2.1		X	X	X		
Biological Nutrient Removal I	1.0	December 10, 1992				X	X
	2.1		X	X	X		
Biological Nutrient Removal II	1.0	December 10, 1992				X	X
Disinfection	2.1*	December 10, 1992	X	X	X	X	X
	2.1			X	X		
Wastewater Treatment I	1.0	December 10, 1992	X			X	X
	2.1			X	X		
Wastewater Treatment II	1.0	December 10, 1992	X			X	X
Wastewater Treatment III	2.1*	December 10, 1992		X			
Treatment Plant Math I	2.1	December 10, 1992	X	X	X	X	X
Treatment Plant Math II	2.1	December 10, 1992	X	X	X	X	X
Treatment Plant Math III	2.1	December 10, 1992		X			

Operator experience credit may be given for grades of C or better for plant & maintenance operators enrolled in the apprenticeship program.

HEYWARD INCORPORATED OF VIRGINIA

For more information please contact:

Steve Childers
 10146 West Broad Street
 Glen Allen, VA 23060
 (804) 965-0086

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Regional Pump School	0.6	December 7, 2017	X	X	X	X	X

ILLINOIS STATE WATER SURVEY

For more information please contact:

Katie Buckley
 2204 Griffith Drive, 432
 Champaign, IL 61820
info@wateroperator.org
 (217)244-8239

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Groundwater and Well Care for Public Water Systems	0.2	July 25, 2019	X				
	0.1			X	X	X	X

INDIANA STATE UNIVERSITY—OFFICE OF INDEPENDENT (CORRESPONDENCE) STUDY

For more information please contact:

S.R. Wiersteiner, Ph.D.

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Class I	1.2	April 4, 1996					
Class II	0.75	April 4, 1996					
Class III	0.3	April 4, 1996					

LEWIS AND ZIMMERMAN ASSOCIATES, INC.

For more information please contact:

April Marshall
 6110 Executive Boulevard, Suite 512
 Rockville, MD 20852
 (301) 984-9509

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Wastewater Training Program	8.0	October 9, 1997		X			

LOGICAL CONCEPTS (See OmniSite)

LOUDON WATER

For more information please contact:

Samantha Hawa
 44865 Loudon Water
 Ashburn, VA 20147
 (571) 291-7783

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Ethics and Documentation	0.10	October 24, 2019	X	X	X		

MARYLAND CENTER FOR ENVIRONMENTAL TRAINING

For more information please contact:

Tara Jones
 8730 Mitchell Road
 La Plata, MD 20646
 (301) 934-7500

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Electrical Troubleshooting	0.7	March 11, 2003	X	X	X	X	X

MICHIGAN STATE UNIVERSITY (MSU)

For more information please contact:

Keith Bezant Niblett
<https://execed.broad.msu.edu/>

edp@broad.msu.edu
 (517) 353-8711

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Maintenance Management in Water & Wastewater	3.0	September 23, 1993	X	X	X	X	X
Supervisory Management in Water & Wastewater Field	3.0	September 23, 1993	X	X	X	X	X

MILLENNEUM SCIENCE & ENGINEERING, INC.

For more information please contact:

Ajit Louis

1364 Beverly Road, Suite 302

McLean, VA 22101

(703) 734-1090

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Introduction to PLCs	0.5	March 9, 2004	X	X			

MUNICIPAL H2O

For more information please contact:

Steve Glenn

650 S. Shackleford Road, Suite 325

Little Rock AR 72211

(800) 897-9425

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
EPA Risk Management Program: Internal Auditing for Water and Wastewater Facilities	0.5	April 18, 2019	X	X	X	X	X

NORTH CAROLINA STATE LABORATORY OF PUBLIC HEALTH

For more information please contact:

Michele Sartin
4312 District Drive
Raleigh, NC 27607
(919) 807-8879

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Bacteriological Methods for the Analysis of Drinking Water	1	April 16, 2015	X	X	X		
	0.5					X	X

OMNISITE

For more information please contact:

Emmie Ward
203 West Morris Street
Indianapolis, IN 46225
eward@omnisite.com
(317) 885-6330

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Technical Training	1.25	June 15, 2012	X	X	X	X	X

OPERATOR CERTIFICATION TRAINING, INC.

For more information please contact:

Katie L. Lewis
180 West Clarendon Street
Gladstone, OR 97027
(503) 650-2410

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Disinfection of Public Water Supplies Workshop	0.65	October 29, 1998	X				
Mathematics for Water Plant Operators Workshop Grades I-III	1.3	October 29, 1998	X				

Water Treatment Technology Review: Groundwater and Surface Water Plant Operations	0.65	October 29, 1998	X					
-----------------------------------------------------------------------------------	------	------------------	---	--	--	--	--	--

PENN STATE UNIVERSTIY CONFERENCES AND INSTITUTES

For more information please contact:

Jeanne Fudrow
 118 Keller Building
 University Park, PA 16802
 (814) 863-6106

Course	TC's	Approval Date	WWO	WWWO	OSSE	OSSI	OSSE
Activated Sludge	0.6	December 13, 2001		X			
BOD and Metabolism	0.3	June 20, 2002		X			
Denitrification	0.3	June 20, 2002		X			
Nitrification	0.3	June 20, 2002		X			
Settleability Problems and Loss of Solids	0.3	June 20, 2002		X			

PETER L. LAMONTAGNE, P.E.

For more information please contact:

190 North Tamenend Avenue
 New Britain, PA 18901
 (215) 348-7879

Course	TC's	Approval Date	WWO	WWWO	OSSE	OSSI	OSSE
Cost Effective Centrifugation	0.6	March 8, 2004	X	X			

SPOTSYLVANIA VOCATIONAL CENTER

For more information please contact:

Lee Browning
 6713 Smith Station Road

Spotsylvania, VA 22553
 (703) 891-1784

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Advanced Waterworks Operator's License Review	2.3	October 6, 1994	X				
Basic Waterworks Operator's License Review	2.3	October 6, 1994	X				

TECHNICAL ASSOCIATION OF THE PULP AND PAPER INDUSTRY (TAPPI)

For more information please contact:

Karen Ventri
 15 Technology Parkway
 Norcross, GA 30092
 (404) 446-1400

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Activated Sludge Plant Operations	1.4	February 9, 1994		X	X		
Activated Sludge Short Course	0.6	July 20, 1994		X	X		

THOMAS W. FORE (TOM FORE WATER & WASTEWATER CONSULTING)

For more information please contact:

(434) 944-3445

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Ethics for Water, Wastewater and Onsite Sewage System Professionals	0.3	July 27, 2017	X	X	X	X	X

TYSON FOODS, INC.

For more information please contact:

Herb Suggs
 2210 Oaklawn
 P.O. Box 2020

Springdale, AR 72765

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Industrial Pretreatment	2.9	February 9, 1994		X			

UF TREEO CENTER

For more information please contact:

Sienna Horton
3900 SW 63rd Boulevard
Gainesville, FL 32608
Springdale, AR 72765
(352) 392-9570
www.treeo.ufl.edu

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Wastewater Treatment Plant Operations Class C&B	14.7	October 27, 2022		X	X		
Training Course--Online	7.3		X			X	X

U.S. POULTRY & EGG ASSOCIATION

For more information please contact:

Paul J. Bredwell III
1530 Cooledge Road
Tucker, GA 30084
www.uspoultry.org
(678) 514-1973

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Poultry Wastewater Operators Training Course	1.5	January 19, 2017		X	X		
	0.7		X			X	X

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ)

For more information please contact:

Jason Spicer
 Operator Training & Assistance Water Division
 1111 East Main Street
 Richmond, VA 23219
 (804) 659-2658

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Advanced Wastewater Licensure Review	2.3	March 24, 1994		X			
Activated Sludge Process Control, Part 1	2.0	March 24, 1994		X			
(DEQ 13) Activated Sludge Process Control, Part 1 (Observations & Testing)	1.4	March 22, 2013		X	X		
	0.7		X			X	X
(DEQ 14) Activated Sludge Process Control, Part 2 (Process Control & Troubleshooting)	1.4	January 15, 2016		X	X		
	0.7		X			X	X
(DEQ 21) Activated Sludge Process Control, Part 3 (Microscopic Examination)	1.4	March 22, 2013		X	X		
	0.7		X			X	X
(DEQ22) Activated Sludge Process Control, Part 4 (BNR/EBPR Process Control and Troubleshooting)	1.4	February 29, 2016		X	X		
	0.7		X			X	X
(DEQ 19) Basic Lab Skills	1.0	March 7, 2007	X	X	X	X	X
(DEQ 18) Introduction to Biological Nutrient Removal (BNR)	0.7	January 15, 2016		X	X		
	0.3		X			X	X
(DEQ 17) Nutrient General Permit Reporting	0.3	December 4, 2008		X	X	X	X
	0.1		X				
Operator In-Service Training	0.05	March 24, 1994		X			
(DEQ 15) Package Treatment Plant Operation Workshop	1.3	September 9, 2003		X	X	X	X
	0.6		X				
(DEQ 12) Sampling & Testing for Small Wastewater Treatment Plants	1.0	April 15, 1999	X	X	X	X	X
Total & Volatile Suspended Solids Sampling and Testing Workshop	0.5	July 11, 1996		X			
Total Residual Chlorine & Ph Workshop	1.0	January 5, 1995		X			
(DEQ 16) VPDES Permit Recordkeeping and Reporting	0.35	September 14, 2005	X	X	X	X	X
(DEQ 20) Wastewater Math for Operators	2.0	September 14, 2005	X	X	X	X	X

Wastewater Operator Correspondence Course	4.0	March 24, 1994		X			
Wastewater Sampling & Testing Ammonia & TKN Workshop	1.0	October 5, 1995		X			
Wastewater Sampling & Testing: Ammonia Nitrogen	0.5	April 9, 1998		X			
Wastewater Sampling & Testing Nitrate & Nitrite Nitrogen	1.0	June 24, 1999		X			
Wastewater Sampling & Testing: Phosphorus	1.0	June 8, 2010		X			
(DEQ 100) Wastewater Works Operator Licensure Review	2.4	October 24, 2019		X	X	X	X
	1.2		X				

VIRGINIA DEPARTMENT OF HEALTH (VDH) LEXINGTON ENVIRONMENTAL HEALTH ENGINEERING FIELD OFFICE

For more information please contact:

Doug Caldwell
 1311 Walker Street
 Lexington, VA 24450
 (703) 463-3892

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Water Storage Tank Management Seminar	0.5	April 6, 1995	X				

VIRGINIA RURAL WATER ASSOCIATION (VRWA)

For more information please contact:

Andy Crocker
 2138 Sycamore Avenue
 Buena Vista, VA 24416
 (540) 261-7178

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Clean Water Act	0.6	June 15, 1993	X	X			
Collection of Drinking Water Samples	0.3	January 8, 1998	X				
Corrosion Control & Lead and Copper Rule	0.5	September 23, 1993	X				

Cross-Connection & Backflow Prevention	0.4	July 20, 1994	X	X	X		
Establishing a Preventative Maintenance Mgmt Program	0.3	June 15, 2000	X	X	X		
Gas Chlorination Operation, Management & Repair	0.5	September 23, 1993	X	X			
Safe Drinking Water	0.5	July 21, 1993	X				
Steel Storage Tank Inspection & Maintenance	0.5	October 5, 1995	X				
Wastewater Works Licensing Examination Preparation	0.5	July 21, 1993	X				
Waterworks Operator Licensing Examination Preparation	0.6	July 20, 1994		X			

VIRGINIA TECH WATERWORKS/WASTEWATER WORKS ANNUAL OPERATORS SHORT SCHOOL

For more information please contact:

Cary Hoge
cpeinfo@vt.edu
(540) 231-5182

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Water/Waste Operator Short Course Level 1	3.3		X	X	X		
Water/Waste Operator Short Course Level 2	3.3		X	X	X		
Water/Waste Operator Short Course Level 3	3.3		X	X	X		
Water/Waste Operator Short Course Level 4*	3.3	July 21, 1993	X	X	X		
Small Onsite System Course*	3.3	July 21, 1993		X	X	X	X

**Prior approved courses that were incorporated into the VA Tech Short School.*

VIRGINIA WESTERN WORKFORCE DEVELOPMENT SERVICES

For more information please contact:

Bryan Walke
3074 Colonial Avenue SW
Roanoke, VA 24015
bwalke@viriniawestern.edu
(540) 857-6492

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Using the ABC Wastewater Treatment Formula Table	1.8	October 25, 2018	X	X	X	X	X

Using the ABC Water Treatment Formula Table	1.8		X	X	X	X	X
---------------------------------------------	-----	--	---	---	---	---	---

WATER ENVIRONMENT FEDERATION

For more information please contact:

Steven Wisdom
 601 Wythe Street
 Alexandria, VA 22314
 (703) 684-2400

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
Operations Training/Activated Sludge/Process Control	2.0	September 21, 2000		X			
Operations Training/Pumps Operation and Maintenance	2.0	June 15, 2000	X	X	X		
Operations Training/Solids Handling	1.5	March 21, 2002		X			
Operation Training/Wastewater Treatment	4.0	June 15, 2000		X			

WATER POLLUTION BIOLOGY

For more information please contact:

Michael H. Gerardi
 196 Hemlock Lane
 Linden, PA 17744
 (570) 398-7260

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
A Correspondence Course in Wastewater Microbiology: Nitrification in the Activated Sludge Process	1.0	October 29, 1998		X			
Wastewater Microbiology	0.4	March 22, 2001		X	X		

OTHER BUSINESS

COMPLETE CONFLICT OF INTEREST
FORMS AND
TRAVEL VOUCHERS

ADJOURN