

**BOARD FOR WATERWORKS AND WASTEWATER WORKS OPERATORS  
AND ONSITE SEWAGE SYSTEM PROFESSIONALS**

*Tentative* **AGENDA THURSDAY, JULY 27, 2023  
10:00 A.M.**

**DPOR, PERIMETER CENTER  
9960 MAYLAND DRIVE  
RICHMOND, VIRGINIA 23233  
BOARD ROOM 2, SECOND FLOOR**

- I. CALL TO ORDER**
- II. EMERGENCY EVACUATION PROCEDURES**
- III. APPROVAL OF AGENDA**
  - a. Board Agenda, July 27, 2023
- IV. DPOR STAFF UPDATES**
- V. APPROVAL OF MINUTES**
  - a. Education and Training Committee Minutes, April 20, 2023
  - b. Board Meeting Minutes, April 20, 2023
  - c. WWW Regulatory Review Committee Minutes, May 15, 2023
  - d. Education and Training Committee Minutes, May 16, 2023
  - e. WWW Exam Task Force Minutes, June 26, 2023
- VI. PUBLIC COMMENT PERIOD - Five-minute public comment, per person, on those items not included on the agenda with the exception of any open disciplinary files.**
- VII. CASE FILES**
  - a. File Number 2020-02742, Raymond Kent Kendall  
Disciplinary—IFF by Duncan
  - b. File Number 2023-02057, Timothy G. Paul  
Licensing— IFF by Ewing
  - c. File Number 2023-01803, Alex A. Brown  
Licensing—IFF by Jackson-Bailey
  - d. File Number 2023-01814, Raymond Ayers Justice, Sr.  
Licensing— IFF by Jackson-Bailey
- VIII. REGULATORY ACTIONS**
  - a. Regulatory Action Update
- IX. OTHER BUSINESS**
  - a. WWO CPE Audit Report
  - b. Examination updates

- i. Examination Statistics Reports
- c. Update on Education and Training Committee
  - i. Review of Updated Pre-License Education Training Course List
  - ii. Office of Water Programs at Sacramento State
- d. Update on WWWO Examination Task Force
- e. Update on 2023 Legislation
- f. Consider Board Policy on Continuance of Case File Decisions
- g. Consider 2024 Meeting Dates
- h. Consider Resolutions for Service
- i. Board Financial Statement
- j. Update on Outreach Opportunities
- k. Other Business

**X. FUTURE MEETING DATES**

- a. October 19, 2023

**XI. COMPLETE CONFLICT OF INTEREST FORMS AND TRAVEL VOUCHERS**

**XII. ADJOURN**

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

\*\* 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*.

**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.

# **DPOR STAFF UPDATES**

**VIRGINIA BOARD FOR  
WATERWORKS AND WASTEWATER WORKS OPERATORS AND ONSITE  
SEWAGE SYSTEM PROFESSIONALS  
EDUCATION AND TRAINING COMMITTEE MEETING MINUTES**

The Education and Training Committee of the Virginia Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals (Board) met on April 20, 2023, at the Virginia Tech Richmond Center, 2810 N. Parham Road, Suite 300, Richmond, Virginia 23294.

The following members of the Committee were present:

John Ewing, Chair  
Thomas Wayne Fore  
Barry Matthews  
D. Wayne Staples

Committee member Rosa-Lee Cooke was not present at the meeting.

The following staff members were present for all or part of the meeting:

Trisha L. Lindsey, Executive Director  
Tanya M. Pettus, Board Administrator  
Raven Custer, Administrative Coordinator

Mr. Ewing called the meeting to order at 9:35 a.m.

**Call to Order**

Ms. Lindsey advised the Committee of the emergency evacuation procedures.

**Emergency  
Evacuation  
Procedures**

Mr. Fore moved to approve the agenda as presented. Mr. Staples seconded the motion which was unanimously approved by: Ewing, Fore, Matthews, and Staples.

**Approval of Agenda**

Bill Herman was present to address the Committee. Mr. Herman expressed his concern on the individuals he has experienced within the current labor force who are signing off on applicants' work experience. Mr. Herman also expressed his concern over the individuals and companies being subcontracted to perform drainfield work.

**Public Comment  
Period**

The Committee reviewed for approval the *703 A-Water Distribution: Safety* training course application from Office of Water Programs at Sacramento State. After review and discussion, Mr. Staples moved to recommend Board-approval of the course application, for a total of 2.2 training credits, and 22.7 contact hours, applicable to waterworks and wastewater works operators, and 1.1 training credits and 11.3 contact hours applicable to onsite sewage system operators. Mr. Fore seconded the motion which was unanimously approved by: Ewing, Fore,

**Review of Office of  
Water Programs at  
Sacramento State  
Course Applications**

Matthews, and Staples

The Committee reviewed for approval the *703 B-Water Distribution: Distribution Facilities* training course application from Office of Water Programs at Sacramento State. After review and discussion, Mr. Staples moved to recommend Board-approval of the course application, for a total of 3.1 training credits, and 31.4 contact hours, applicable to waterworks and wastewater works operators, and 1.5 training credits and 15.7 contact hours applicable to onsite sewage system operators. Mr. Fore seconded the motion which was unanimously approved by: Ewing, Fore, Matthews, and Staples.

The Committee reviewed for approval the *703 C-Water Distribution: Disinfection* training course application from Office of Water Programs at Sacramento State. After review and discussion, Mr. Staples moved to recommend Board-approval of the course application, for a total of 2.1 training credits, and 21.1 contact hours, applicable to waterworks, wastewater works, and onsite sewage system operators. Mr. Fore seconded the motion which was unanimously approved by: Ewing, Fore, Matthews, and Staples.

The Committee reviewed for approval the *703 D-Water Distribution: Operation and Maintenance* training course application from Office of Water Programs at Sacramento State. After review and discussion, Mr. Staples moved to recommend Board-approval of the course application, for a total of 2.5 training credits, and 25.2 contact hours, applicable to waterworks, wastewater works, and onsite sewage system operators. Mr. Fore seconded the motion which was unanimously approved by: Ewing, Fore, Matthews, and Staples.

The Committee reviewed for approval the *703 E-Water Distribution: Management* training course application from Office of Water Programs at Sacramento State. After review and discussion, Mr. Staples moved to recommend Board-approval of the course application, for a total of 2.1 training credits, and 21.3 contact hours, applicable to waterworks, wastewater works, and onsite sewage system operators. Mr. Fore seconded the motion which was unanimously approved by: Ewing, Fore, Matthews, and Staples.

The Committee reviewed for approval the *CE39-Advanced Waste Treatment-Wastewater Specialist Program* training course application from Office of Water Programs at Sacramento State. After review and discussion, Mr. Staples moved to recommend Board-approval of the course application, for a total of 10.5 training credits, and 105 contact

hours, applicable to wastewater works operators, and 5.2 training credits and 52.5 contact hours to waterworks and onsite sewage system operators. Mr. Fore seconded the motion which was unanimously approved by: Ewing, Fore, Matthews, and Staples.

The Committee reviewed for approval the *Collection Systems: Methods for Evaluating and Improving Performance* training course application from Office of Water Programs at Sacramento State. After review and discussion, Mr. Staples moved to recommend Board-approval of the course application, for a total of 2.3 training credits, and 23.2 contact hours, applicable to waterworks and wastewater works operators, and 1.1 training credits and 11.6 contact hours applicable to onsite sewage system operators. Mr. Fore seconded the motion which was unanimously approved by: Ewing, Fore, Matthews, and Staples.

The Committee reviewed for approval the *104C-Math Application in Wastewater* training course application from Office of Water Programs at Sacramento State. After review and discussion, Mr. Staples moved to recommend Board-approval of the course application, for a total of 3.8 training credits, and 38.9 contact hours, applicable to waterworks, wastewater works, and onsite sewage system operators. Mr. Fore seconded the motion which was unanimously approved by: Ewing, Fore, Matthews, and Staples.

The Committee reviewed for approval the *101C-Math Application in Collection Systems* training course application from Office of Water Programs at Sacramento State. After review and discussion, Mr. Staples moved to recommend Board-approval of the course application, for a total of 2.2 training credits, and 22.2 contact hours, applicable to waterworks, wastewater works, and onsite sewage system operators. Mr. Fore seconded the motion which was unanimously approved by: Ewing, Fore, Matthews, and Staples.

The Committee reviewed for approval the *Membrane Bioreactors* training course application from Office of Water Programs at Sacramento State. After review and discussion, Mr. Staples moved to recommend Board-approval of the course application, for a total of 0.8 training credits, and 8.7 contact hours, applicable to wastewater works operators, and 0.4 training credits and 4.3 contact hours to waterworks and onsite sewage system operators. Mr. Fore seconded the motion which was unanimously approved by: Ewing, Fore, Matthews, and Staples.

The Committee reviewed for approval the *Collection System Operation & Maintenance Training Videos* training course application from Office of Water Programs at Sacramento State. After review and discussion, Mr. Staples moved to recommend Board-approval of the course application, for a total of 0.6 training credits, and 6.8 contact hours, applicable to waterworks, wastewater works, and onsite sewage system operators -contingent upon confirmation of the method in which full course participation is monitored and verified. Mr. Fore seconded the motion which was unanimously approved by: Ewing, Fore, Matthews, and Staples.

The Committee reviewed for approval the *Pretreatment Facility Inspection Training Videos* training course application from Office of Water Programs at Sacramento State. After review and discussion, Mr. Staples moved to recommend Board-approval of the course application, for a total of 0.5 training credits, and 5.9 contact hours, applicable to wastewater works operators, and 0.2 training credits and 2.9 contact hours to waterworks and onsite sewage system operators contingent upon confirmation of the method in which full course participation is monitored and verified. Mr. Fore seconded the motion which was unanimously approved by: Ewing, Fore, Matthews, and Staples.

The Committee reviewed for approval the *CE28A-Operation of Wastewater Treatment Plants Vol. I-Wastewater Specialist Program* training course application from Office of Water Programs at Sacramento State. After review and discussion, Mr. Staples moved to recommend Board-approval of the course application, for a total of 9 training credits, and 90.9 contact hours, applicable to wastewater works operators, and 4.5 training credits and 45.4 contact hours to waterworks and onsite sewage system operators. Mr. Fore seconded the motion which was unanimously approved by: Ewing, Fore, Matthews, and Staples.

The Committee reviewed for approval the *CE38B-Operation of Wastewater Treatment Plants Vol. II-Wastewater Specialist Program* training course application from Office of Water Programs at Sacramento State. After review and discussion, Mr. Staples moved to recommend Board-approval of the course application, for a total of 12.3 training credits, and 123 contact hours, applicable to wastewater works operators, and 6.1 training credits and 61.5 contact hours to waterworks and onsite sewage system operators. Mr. Fore seconded the motion which was unanimously approved by: Ewing, Fore, Matthews, and Staples.



Ms. Pettus reminded the Committee of the meeting scheduled for May 16, 2023, for the purpose of reviewing the current list of Board-approved training courses to update the list according to the Committee's current approval process. Ms. Pettus advised that new course applications have been received from training providers who currently have approved courses on the list, and asked the Committee to consider reviewing the new course applications at the meeting. The Committee agreed by consensus to review those course applications received from training providers who already appear on the list. **Other Business**

There being no further business, the meeting was adjourned at 10:07 a.m. **Adjourn**

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Pamela M. Pruett, Chair

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Demetrios J. Melis, Secretary

**BOARD FOR  
WATERWORKS AND WASTEWATER WORKS OPERATORS AND ONSITE SEWAGE  
SYSTEM PROFESSIONALS**

**MINUTES OF MEETING**

The Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals met on April 20, 2023, at the Virginia Tech Richmond Center, 2810 N. Parham Road, Suite 300, Richmond, Virginia 23294.

The following members of the Board were present:

James N. Brockwell  
W. Jordan Evans  
John Ewing  
Thomas Wayne Fore, Vice Chair  
Pamela M. Pruett, Chair  
Dwayne Roadcap  
D. Wayne Staples  
Caleb Taylor

Board members Rosa-Lee Cooke, Erica Duncan, and Don Riggleman were not present at the meeting.

DPOR staff present for all or part of the meeting included:

Demetrios J. Melis, Director  
Trisha L. Lindsey, Executive Director  
Stephen Kirschner, Licensing and Regulatory Programs Division Deputy Director  
Tanya M. Pettus, Board Administrator  
Joseph C. Haughwout, Jr., Regulatory Affairs Manager  
Raven Custer, Administrative Coordinator

Elizabeth Peay, Assistant Attorney General with the Office of the Attorney General, was present.

Ms. Pruett, Chair, finding a quorum of the Board present, called the meeting to order at 10:15 a.m.

**Call to Order**

Ms. Lindsey advised the Board of the emergency evacuation procedures.

**Emergency  
Evacuation  
Procedures**

Mr. Fore moved to approve the agenda as presented. Mr. Evans seconded the motion which was unanimously approved by: Brockwell, Evans, Ewing, Fore, Pruett, Roadcap, Staples, and Taylor.

**Approval of  
Agenda**

Mr. Fore moved to approve the minutes of the January 25, 2023, Education & Training Committee meeting. Mr. Ewing seconded the motion, which was unanimously approved by: Brockwell, Evans, Ewing, Fore, Pruett, Roadcap, Staples, and Taylor.

**Approval of Minutes**

Mr. Fore moved to approve the minutes of the January 26, 2023, Board meeting. Mr. Staples seconded the motion, which was unanimously approved by: Brockwell, Evans, Ewing, Fore, Pruett, Roadcap, Staples, and Taylor.

Mr. Fore moved to approve the minutes of the February 2, 2023, WWWO Examination Taskforce meeting. Mr. Taylor seconded the motion, which was unanimously approved by: Brockwell, Evans, Ewing, Fore, Pruett, Roadcap, Staples, and Taylor.

Mr. Fore moved to approve the minutes of the February 10, 2023, OSSP Regulatory Review Committee meeting. Mr. Staples seconded the motion, which was unanimously approved by: Brockwell, Evans, Ewing, Fore, Pruett, Roadcap, Staples, and Taylor.

Mr. Fore moved to approve the minutes of the April 10, 2023, Technical Review Committee meeting. Mr. Brockwell seconded the motion, which was unanimously approved by: Brockwell, Evans, Ewing, Fore, Pruett, Roadcap, Staples, and Taylor.

Marcus Andrew addressed the Board regarding his concerns with the examinations and the lack of information provided to students who did not pass.

**Public Comment Period**

Mark Hollifield addressed the Board regarding his concerns for the future of the workforce. Mr. Hollifield stated that he believes reciprocity is a portion of the issue, but not the main solution.

Mike Collins addressed the Board regarding his concerns for the examination pass rates. Mr. Collins addressed the need for review information to be more easily accessible.

Hannah Pope addressed the Board regarding her concerns for onsite sewage system professionals and how outreach is necessary to help develop the industry. She expressed concern that there has been a great deal of discussion with the Board about waterworks and wastewater works operators but not onsite professionals.

Mr. Brockwell recused himself from the meeting for discussion and deliberation of File Number 2023-00362.

**Recusal of Board Member**

In the matter of **File Number 2023-00362, John Christian Pruitt**, the Board members reviewed the record which consisted of the Notice of Prima Facie Case, Report of Findings, evidence, and the Recommendation. Mr. Staples moved to accept the recommendation and find Mr. Pruitt in violation of 18 VAC 160-30-320.1 as outlined in Count 1. Mr. Fore seconded the motion which was unanimously approved by: Evans, Ewing, Fore, Pruett, Roadcap, Staples, and Taylor.

**File Number 2023-00362, John Christian Pruitt**

Mr. Fore then moved to accept the recommendation and impose a monetary penalty of \$0.00, and license revocation for violation of Count 1. Mr. Taylor seconded the motion. After discussion, the motion was unanimously approved by: Evans, Ewing, Fore, Pruett, Roadcap, Staples, and Taylor.

Mr. Brockwell returned to the meeting.

**Return of Board Member**

Mr. Staples recused himself from the meeting for discussion and deliberation of File Numbers 2023-00741 and 2023-01224.

**Recusal of Board Member**

In the matter of **File Number 2023-00741, James W. Morris**, the Board members reviewed the record which consisted of the application file, transcript, and exhibits from the Informal Fact-Finding Conference, and the Presiding Officer's Summary and Recommendation.

**File Number 2023-00741, James W. Morris**

Mr. Morris was present to address the Board. Mr. Morris thanked the Board for considering his application and provided information on his request for a waiver of experience.

Mr. Fore moved to accept the recommendation of the Presiding Officer and deny Mr. Morris' application for a Class 1 Wastewater Works Operator license. Mr. Evans seconded the motion.

After lengthy discussion, the motion was unanimously approved by: Brockwell, Evans, Ewing, Fore, Pruett, Roadcap, and Taylor.

In the matter of **File Number 2023-01224, William Joseph Balzer**, the Board members reviewed the record which consisted of the application file, transcript, and exhibits from the Informal Fact-Finding Conference, and the Presiding Officer's Summary and Recommendation. After discussion, Mr. Fore moved to accept the recommendation of the Presiding Officer and approve Mr. Balzer's application for a Class 5 Waterworks Operator license. Mr. Taylor seconded the motion which was unanimously approved by: Brockwell, Evans, Ewing, Fore, Pruett, Roadcap, and Taylor.

**File Number 2023-01224, William Joseph Balzer**

Mr. Staples returned to the meeting.

**Return of Board  
Member**

In the matter of **File Number 2023-01084, Scott Aaron Dunn**, the Board members reviewed the record which consisted of the application file, transcript, and exhibits from the Informal Fact-Finding Conference, and the Presiding Officer's Summary and Recommendation.

**File Number 2023-  
01084, Scott Aaron  
Dunn**

Mr. Dunn was present to address the Board. Mr. Dunn thanked the Board for considering his application.

After discussion, Mr. Fore moved to accept the recommendation of the Presiding Officer and approve Mr. Dunn's application for a Class 6 Waterworks Operator license. Mr. Staples seconded the motion which was unanimously approved by: Brockwell, Evans, Ewing, Fore, Pruett, Roadcap, Staples, and Taylor.

In the matter of **File Number 2023-01443, Paul Richard McCready**, the Board members reviewed the record which consisted of the application file, transcript, and exhibits from the Informal Fact-Finding Conference, and the Presiding Officer's Summary and Recommendation. After discussion, Mr. Fore moved to accept the recommendation of the Presiding Officer and approve Mr. McCready's application for a Class 4 Wastewater Works Operator license. Mr. Staples seconded the motion which was unanimously approved by: Brockwell, Evans, Ewing, Fore, Pruett, Roadcap, Staples, and Taylor.

**File number 2023-  
01443, Paul  
Richard  
McCready**

In the matter of **File Number 2023-01466, Paul Richard McCready**, the Board members reviewed the record which consisted of the application file, transcript, and exhibits from the Informal Fact-Finding Conference, and the Presiding Officer's Summary and Recommendation. After discussion, Mr. Fore moved to accept the recommendation of the Presiding Officer and approve Mr. McCready's application for a Class 5 Waterworks Operator license. Mr. Taylor seconded the motion which was unanimously approved by: Brockwell, Evans, Ewing, Fore, Pruett, Roadcap, Staples, and Taylor.

**File Number 2023-  
01466, Paul  
Richard  
McCready**

In the matter of **File Number 2023-01356, Colette Althea Battle**, the Board members reviewed the record which consisted of the application file, transcript, and exhibits from the Informal Fact-Finding Conference, and the Presiding Officer's Summary and Recommendation.

**File Number 2023-  
01356, Colette  
Althea Battle**

Ms. Battle was present to address the Board. Ms. Battle thanked the Board for considering her application and provided background for her case.

After discussion, Mr. Fore moved to accept the recommendation of the Presiding Officer and approve Ms. Battle's application for a Journeyman Conventional Onsite Sewage System Installer. Mr. Ewing seconded the motion which was

unanimously approved by: Brockwell, Evans, Ewing, Fore, Pruett, Roadcap, Staples, and Taylor.

In the matter of **File Number 2023-01445, William Jackson Mayhue**, the Board members reviewed the record which consisted of the application file, transcript, and exhibits from the Informal Fact-Finding Conference, and the Presiding Officer's Summary and Recommendation. After discussion, Mr. Fore moved to accept the recommendation of the Presiding Officer and approve Mr. Mayhue's application for a Class 2 Wastewater Works Operator license. Mr. Staples seconded the motion which was unanimously approved by: Brockwell, Evans, Ewing, Fore, Pruett, Roadcap, Staples, and Taylor.

**File Number 2023-01445, William Jackson Mayhue**

Mr. Haughwout provided an update on the current status of the regulatory review processes for the Board's regulatory packages.

**Regulatory Action Update**

Amendments regarding 2021 fee adjustments for Waterworks and Wastewater Works Operators Licensing Regulations and Onsite Sewage System Professionals Licensing Regulations are currently in the proposed stage as the Board reviewed and adopted the proposed amendments at the April 21, 2022, Board meeting. The proposed amendments were submitted for Executive Branch review on July 28, 2022. Completion of Executive Branch review is pending.

A Notice of Intended Regulatory Action (NOIRA) was filed on October 28, 2021, to initiate a General Review of the Onsite Sewage System Professionals Licensing Regulations. The NOIRA was submitted for Executive Branch review on May 16, 2022, which was completed on October 14, 2022. The NOIRA will be published in the Virginia Register on November 21, 2022, to commence a 30-day public comment period.

The Board Authorized filing A Notice of Intended Regulatory Action (NOIRA) on October 27, 2022, to initiate a General Review of the Waterworks and Wastewater Works Operators Licensing Regulations. The regulatory review committee has been formed and the NOIRA in development.

The Board reviewed the recommended amendments to the OSSP Licensing Regulations made by the OSSP Regulatory Review Committee.

**Consider Committee Recommendations for Amendments of the OSSP Licensing Regulations and Adopt Proposed Amendments**

The Board Recessed from 11:47 a.m. to 12:01 p.m.

**Recess**

The Board continued reviewing the recommended amendments to the OSSP Licensing Regulations.

After lengthy discussion, Mr. Fore moved to approve the amendments as revised by the Board. Mr. Evans seconded the motion which was unanimously approved by: Brockwell, Evans, Ewing, Fore, Pruett, Roadcap, Staples, and Taylor.

Ms. Lindsey provided the Board with an overview of the Universal License Recognition (ULR) bills that passed during the 2023 General Assembly Session. While there was legislation specific to waterworks and wastewater works operators with licenses in other states, the DPOR-specific ULR bill impacts OSSP applicants from other states. As the Board's regulations require that OSSP experience be verified by specific individuals, Ms. Lindsey advised the Board that those provisions in the regulations would not currently apply to applicants seeking licensure pursuant to ULR. Mr. Fore moved to authorize the Board to draft a guidance document to detail the specific individuals, or the equivalent in the other state, who may verify out-of-state experience. Mr. Staples seconded the motion which was unanimously approved by: Brockwell, Evans, Ewing, Fore, Pruett, Roadcap, Staples, and Taylor.

Ms. Lindsey provided the Board with an update from the WWW Exam Advisory Task Force.

Ms. Lindsey provided the Board with waterworks and wastewater works examination statistics from January 1, 2017, through April 3, 2023, and January 26, 2023, through April 3, 2023, as well as onsite examination statistics from January 1, 2023, to March 31, 2023, for informational purposes.

The Board was provided with waterworks and wastewater examination passing rates broken down by subject matter, as had been previously requested by the Board and other stakeholders. Ms. Lindsey advised the Board that these statistics would be provided at most quarterly at regularly scheduled Board meetings going forward.

Mr. Fore moved to approve all recommendations of Education & Training Committee who had met in the morning prior to the Board meeting. Mr. Ewing seconded the motion which was unanimously approved by: Brockwell, Evans, Ewing, Fore, Pruett, Roadcap, Staples, and Taylor. Training course applications from the Office of Water Programs at Sacramento State were approved as follows.

**Continue  
Considering  
Recommendations  
for Amendments  
to the OSSP  
Licensing  
Regulations**

**Consider  
Universal  
Licensing  
Recognition  
Regulatory  
Amendment and  
Authorize  
Regulatory  
Process**

**Update on WWW  
Exam Advisory  
Task Force**

**Examination  
Updates**

**Update on  
Education and  
Training  
Committee**

*703 A-Water Distribution: Safety*, for a total of 2.2 training credits, and 22.7 contact hours, applicable to waterworks and wastewater works operators, and 1.1 training credits and 11.3 contact hours applicable to onsite sewage system operators.

*703 B-Water Distribution: Distribution Facilities*, for a total of 3.1 training credits, and 31.4 contact hours, applicable to waterworks and wastewater works operators, and 1.5 training credits and 15.7 contact hours applicable to onsite sewage system operators.

*703 C-Water Distribution: Disinfection*, for a total of 2.1 training credits, and 21.1 contact hours, applicable to waterworks, wastewater works, and onsite sewage system operators.

*703 D-Water Distribution: Operation and Maintenance*, for a total of 2.5 training credits, and 25.2 contact hours, applicable to waterworks, wastewater works, and onsite sewage system operators.

*703 E-Water Distribution: Management*, for a total of 2.1 training credits, and 21.3 contact hours, applicable to waterworks, wastewater works, and onsite sewage system operators.

*CE39-Advanced Waste Treatment-Wastewater Specialist*, for a total of 10.5 training credits, and 105 contact hours, applicable to wastewater works operators, and 5.2 training credits and 52.5 contact hours to waterworks and onsite sewage system operators.

*Collection Systems: Methods for Evaluating and Improving Performance*, for a total of 2.3 training credits, and 23.2 contact hours, applicable to waterworks and wastewater works operators, and 1.1 training credits and 11.6 contact hours applicable to onsite sewage system operators.

*104C-Math Application in Wastewater*, for a total of 3.8 training credits, and 38.9 contact hours, applicable to waterworks, wastewater works, and onsite sewage system operators.

*101C-Math Application in Collection Systems*, for a total of 2.2 training credits, and 22.2 contact hours, applicable to waterworks, wastewater works, and onsite sewage system operators.

*Membrane Bioreactors*, for a total of 0.8 training credits, and 8.7 contact hours, applicable to wastewater works operators, and 0.4 training credits and 4.3 contact hours to waterworks and onsite sewage system operators.

*Collection System Operation & Maintenance Training Videos*, for a total of 0.6 training credits, and 6.8 contact hours, applicable to waterworks, wastewater works,



and onsite sewage system operators, contingent upon confirmation of the method in which full course participation is monitored and verified.

*Pretreatment Facility Inspection Training Videos*, for a total of 0.5 training credits, and 5.9 contact hours, applicable to wastewater works operators, and 0.2 training credits and 2.9 contact hours to waterworks and onsite sewage system operators, contingent upon confirmation of the method in which full course participation is monitored and verified.

*CE28A-Operation of Wastewater Treatment Plants Vol. I-Wastewater Specialist Program*, for a total of 9 training credits, and 90.9 contact hours, applicable to wastewater works operators, and 4.5 training credits and 45.4 contact hours to waterworks and onsite sewage system operators.

*CE38B-Operation of Wastewater Treatment Plants Vol. II-Wastewater Specialist Program*, for a total of 12.3 training credits, and 123 contact hours, applicable to wastewater works operators, and 6.1 training credits and 61.5 contact hours to waterworks and onsite sewage system operators.

Ms. Lindsey provided the Board with the most recent financial statements for review.

**Board Financial Statements**

Ms. Lindsey and Ms. Pettus advised the Board of recent and upcoming outreach opportunities.

**Update on Outreach Opportunities**

The Board discussed the upcoming Virginia Tech Short School examination pilot program.

Ms. Pruetz reminded the Board that the next scheduled meeting date is July 27, 2023.

**Future Meeting Dates**

Ms. Pruetz reminded the Board members to complete and return their conflict of interest forms and travel vouchers.

**Complete Conflict of Interest Forms and Travel Vouchers**

There being no further business, the meeting was adjourned at 1:37 p.m.

**Adjourn**

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Pamela M. Pruett, Chair

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Demetrios Melis, Secretary

DRAFT

WATERWORKS AND WASTEWATER WORKS OPERATORS LICENSING  
REGULATORY REVIEW COMMITTEE  
OF THE  
BOARD FOR WATERWORKS AND WASTEWATER WORKS OPERATORS AND  
ONSITE SEWAGE SYSTEM PROFESSIONALS

MINUTES OF MEETING

The WWWO Licensing Regulatory Review Committee of the Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals (Board) met on May 15, 2023, at the Department of Professional and Occupational Regulation (DPOR), 9960 Mayland Drive, 2<sup>nd</sup> Floor, Board Room 4, Richmond, Virginia 23233.

The following members were present:

Wendy Callahan  
Thomas Fore  
Charles Phillips  
Pamela Pruett, Ex-officio  
Jason Spicer  
D. Wayne Staples  
Caleb M. Taylor

Committee members Mike Collins, W. Jordan Evans, Erica Duncan, and Jason Yetter were not present at the meeting.

DPOR staff present for all or part of the meeting included:

Trisha L. Lindsey, Executive Director  
Tanya M. Pettus, Board Administrator  
Raven Custer, Administrative Coordinator

Mr. Fore called the meeting to order at 10:04 a.m.

**Call to Order**

Ms. Lindsey advised the Committee of the emergency evacuation procedures.

**Emergency  
Evacuation  
Procedures**

Mr. Taylor moved to approve the agenda as presented. Ms. Pruett seconded the motion which was unanimously approved by: Callahan, Fore, Phillips, Pruett, Spicer, Staples, and Taylor.

**Approval of Agenda**

There were no members of the public present who wished to address the

**Public Comment**

Committee.

**Period**

Ms. Lindsey provided an overview of the responsibilities before the Committee.

**Overview**

Ms. Lindsey provided the Committee with an overview of the regulatory review process and timeline.

The Committee recessed from 11:10 a.m. to 11:44 a.m.

**Recess**

The Committee was provided with current versions of applicable laws and regulations, as well as Senate Bill 999 and House Bill 1940 which provides criteria for universal license recognition for out-of-state waterworks and wastewater works operator applicants.

**Resources and Information**

Discussion was held on potential amendments to definitions, entry requirements, renewal and reinstatement, standards of conduct and practices, and training courses.

**Consider Necessary Regulatory Changes**

The Committee agreed by consensus to begin review of the regulations, to include definitions and entry requirements, at its next meeting.

Ms. Lindsey advised the Committee that staff will provide dates for consideration by Committee members for the next meeting. The Committee will be notified of the date when it has been confirmed.

**Set Next Meeting Date**

Mr. Fore reminded the Committee members to complete their conflict of interest forms and travel vouchers.

**Complete Conflict of Interest Forms and Travel Vouchers**

There being no further business, the meeting was adjourned at 12:49 p.m.

**Adjourn**

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Pamela M. Pruett, Chair

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Demetrios J. Melis, Secretary

DRAFT

**VIRGINIA BOARD FOR  
WATERWORKS AND WASTEWATER WORKS OPERATORS AND ONSITE  
SEWAGE SYSTEM PROFESSIONALS  
EDUCATION AND TRAINING COMMITTEE MEETING MINUTES**

The Education and Training Committee of the Virginia Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals (Board) met on May 16, 2023, at the offices of the Department of Professional and Occupational Regulation (DPOR), Perimeter Center, 9960 Mayland Drive, 2<sup>nd</sup> Floor, Hearing Room 4, Richmond, Virginia 23233.

The following members of the Committee were present:

John Ewing, Chair  
Thomas Wayne Fore  
Barry Matthews  
D. Wayne Staples

Committee member Rosa-Lee Cooke and was not present at the meeting.

The following staff members were present for all or part of the meeting:

Stephen Kirschner, Licensing and Regulatory Programs Division Deputy Director  
Tanya M. Pettus, Board Administrator  
Raven Custer, Administrative Coordinator

Mr. Ewing called the meeting to order at 10:02 a.m.

**Call to Order**

Ms. Pettus advised the Committee of the emergency evacuation procedures.

**Emergency  
Evacuation  
Procedures**

Ms. Pettus requested the Board amend the agenda to review items under Part VI prior to Part V. Mr. Fore moved to approve the agenda as amended. Mr. Matthews seconded the motion which was unanimously approved by: Ewing, Fore, Matthews, and Staples.

**Approval of Agenda**

There were no members of the public present for comment.

**Public Comment  
Period**

The Committee was provided with Part V of section 18VAC-160-30 of the Board's regulations for reference.

**Resources**

The Committee reviewed the current list of Board-approved training courses to determine whether any updates to the list were needed. The Committee considered the current number of training credits approved for each course, as well as the license types for which course credit was approved. Ms. Pettus provided updated course information and materials received from currently approved training programs. In

**Consider Updates to  
Currently Approved  
Training Programs  
and Courses**

addition, Ms. Pettus provided information regarding training programs and courses appearing on the list that are no longer offered.

The Committee recessed from 11:11 a.m. to 11:24 a.m.

**Recess**

The Committee reviewed for approval the following David H. Paul, Inc. course applications:

**Review of Newly Submitted Training Courses by Currently Approved Providers**

*Reverse Osmosis Specialist I Certification*, for 3.8 training credits and 38.4 contact hours, applicable to waterworks, wastewater works, and onsite sewage system operators, and for 1.9 training credits and 19.2 contact hours applicable to onsite sewage system installers and onsite soil evaluators, contingent upon confirmation of course hours.

*Introduction to Water Treatment*, for 0.9 training credits, and 9.6 contact hours applicable to waterworks operators, and for 0.4 training credits and 4.8 contact hours applicable to wastewater works and onsite sewage system operators, onsite sewage system installers, and onsite soil evaluators, contingent upon confirmation of course hours.

*Water Treatment Plant Fundamentals*, for 1.8 training credits and 10.8 contact hours applicable to waterworks operators, and for 0.5 training credits and 5.4 contact hours applicable to wastewater works and onsite sewage system operators, onsite sewage system installers, and onsite soil evaluators, contingent upon confirmation of course hours.

*Water Treatment Math*, for 0.6 training credits and 6 contact hours, applicable to waterworks operators, wastewater works operators, onsite sewage system operators, onsite sewage system installers, and onsite soil evaluators, contingent upon confirmation of course hours.

*Water Treatment Chemistry* for 1 training credit and 10.8 contact hours applicable to waterworks, wastewater works and onsite sewage system operators, and for 0.5 training credits and 5.4 contact hours applicable to onsite sewage system installers and onsite soil evaluators, contingent upon confirmation of course hours.

*Piping and Instrumentation Diagrams*, for 0.3 training credits and 3.6 contact hours applicable to waterworks operators, wastewater works operators, onsite sewage system operators, onsite sewage system installers, and onsite soil evaluators, contingent upon confirmation of course hours.

*Reverse Osmosis Water Treatment*, for 1.3 training credits and 13.2 contact hours, applicable to waterworks, wastewater works and onsite sewage system operators, and for 0.6 training credits and 6.6 contact hours applicable to onsite sewage system installers and onsite soil evaluators, contingent upon confirmation of course hours.

*RO Operation and Maintenance*, for 1.3 training credits and 13.2 contact hours, applicable to waterworks, wastewater works and onsite sewage system operators, and for 0.6 training credits and 6.6 contact hours applicable to onsite sewage system installers and onsite soil evaluators, contingent upon confirmation of course hours.

*Reverse Osmosis Monitoring and Troubleshooting*, for 1.4 training credits and 14.4 contact hours applicable to waterworks, wastewater works, and onsite sewage system operators, and for 0.7 training credits and 7.2 contact hours applicable to onsite sewage system installers and onsite soil evaluators, contingent upon confirmation of course hours.

*Ion Exchange Water Treatment*, for 0.8 training credits and 8.4 contact hours, applicable to waterworks, wastewater works, and onsite sewage system operators, and for 0.4 training credits, and 4.2 contact hours applicable to onsite sewage system installers and onsite soil evaluators, contingent upon confirmation of course hours.

*Distillation*, for 0.2 training credits and 2.4 contact hours applicable to waterworks, wastewater works, and onsite sewage system operators, and for 0.1 training credits and 1.2 contact hours, applicable to onsite sewage system installers and onsite soil evaluators, contingent upon confirmation of course hours.

*Operation, Control Monitoring & Maintenance of RO Systems Level 2*, for 2.8 training credits and 28.8 contact hours applicable to waterworks, wastewater works, and onsite sewage system operators, and for 1.4 training credits and 14.4 contact hours applicable to onsite sewage system installers and onsite soil evaluators, contingent upon confirmation of course hours.

The Committee reviewed for approval the following course applications from Sacramento State Office of Water Programs:

*Advanced Waste*, for a total of 10.2 training credits, and 102.6 contact hours, applicable to wastewater works operators, and 5.1 training credits and 51.3 contact hours applicable to waterworks operators, onsite sewage system operators, onsite sewage system installers, and



onsite soil evaluators.

*Water Treatment Plant Operations, Vol. I*, for a total of 12.9 training credits, and 129 contact hours, applicable to waterworks operators, and 6.4 training credits and 64.5 contact hours applicable to wastewater works operators, onsite sewage system operators, onsite sewage system installers, and onsite soil evaluators.

*Water Treatment Plant Operations, Vol II*, for a total of 13 training credits, and 130 contact hours, applicable to waterworks operators, and 6.5 training credits and 65 contact hours applicable to wastewater works operators, onsite sewage system operators, onsite sewage system installers, and onsite soil evaluators.

*Small Water System Operation and Maintenance*, for a total of 11.5 training credits, and 115 contact hours, applicable to waterworks operators, and 5.7 training credits and 57.5 contact hours applicable to wastewater works operators, onsite sewage system operators, onsite sewage system installers, and onsite soil evaluators.

*Industrial Waste Treatment, Vol. I*, for a total of 13 training credits, and 130 contact hours, applicable to wastewater works operators, and 6.5 training credits and 65 contact hours applicable to waterworks operators and onsite sewage system operators.

*Industrial Waste Treatment, Vol. II*, for a total of 10.9 training credits, and 109 contact hours, applicable to wastewater works operators, and 5.4 training credits and 54.5 contact hours applicable to waterworks operators and onsite sewage system operators.

*Operation and Maintenance of Wastewater Collection Systems, Vol. I*, for a total of 9 training credits, and 90 contact hours, applicable to waterworks and wastewater works operators, and 4.5 training credits and 45 contact hours applicable to onsite sewage system operators, onsite sewage system installers, and onsite soil evaluators.

*Small Wastewater System Operation & Maintenance, Vol I*, for a total of 6.6 training credits, and 66 contact hours, applicable to wastewater works operators, and 3.3 training credits and 33 contact hours applicable to waterworks operators, onsite sewage system operators, onsite sewage system installers, and onsite soil evaluators.

*Small Wastewater System Operation & Maintenance, Vol II*, for a total of 6.6 training credits, and 66 contact hours, applicable to wastewater

works operators, and 3.3 training credits and 33 contact hours applicable to waterworks operators, onsite sewage system operators, onsite sewage system installers, and onsite soil evaluators.

*702A Small Water Systems: Wells*, for a total of 2.2 training credits, and 22.5 contact hours, applicable to waterworks operators, and 1.1 training credits and 11.2 contact hours applicable to wastewater works operators, onsite sewage system operators, onsite sewage system installers, and onsite soil evaluators.

*702B Small Water Systems: Treatment Plans*, for a total of 2 training credits, and 20 contact hours, applicable to waterworks operators, and 1 training credit and 10 contact hours applicable to wastewater works operators, onsite sewage system operators, onsite sewage system installers, and onsite soil evaluators.

*702C Small Water Systems: Disinfection*, for a total of 2.4 training credits, and 24 contact hours, applicable to waterworks operators, and 1.2 training credits and 12 contact hours applicable to wastewater works operators, onsite sewage system operators, onsite sewage system installers, and onsite soil evaluators.

*702D Small Water Systems: Safety and Introduction to Small System Management*, for a total of 2.7 training credits, and 27 contact hours, applicable to waterworks operators, and 1.3 training credits and 13.5 contact hours applicable to wastewater works operators, onsite sewage system operators, onsite sewage system installers, and onsite soil evaluators.

*702E Small Water Systems: Laboratory Procedures*, for a total of 2.5 training credits and 25 contact hours, applicable to waterworks, wastewater works, and onsite sewage system operators.

*Utility Management*, for a total of 1 training credit and 10 contact hours, applicable to waterworks operators, wastewater works operators, onsite sewage system operators, onsite sewage system installers, and onsite soil evaluators.

*Water Distribution System Operation and Maintenance*, for a total of 11.2 training credits, and 112 contact hours, applicable to waterworks operators, wastewater works operators, onsite sewage system operators, onsite sewage system installers, and onsite soil evaluators.

*Water Treatment Plant Operation, Vol. I*, for a total of 12.7 training

credits and 127 contact hours, applicable to waterworks operators, and 6.3 training credits and 63.5 contact hours applicable to wastewater works operators, onsite sewage system operators, onsite sewage system installers, and onsite soil evaluators.

*Water Treatment Plant Operation, Vol. II*, for a total of 13.8 training credits and 138 contact hours, applicable to waterworks operators, and 6.9 training credits and 69 contact hours applicable to wastewater works operators, onsite sewage system operators, onsite sewage system installers, and onsite soil evaluators.

The Committee reviewed for approval the *Using the ABC Water Treatment Formula Table* course application from Virginia Western Workforce Development Services for 1.8 training credits and 18 contact hours, applicable to waterworks operators, wastewater works operators, onsite sewage system operators, onsite sewage system installers, and onsite soil evaluators contingent upon confirmation of the course hours.

After review and discussion, Mr. Fore moved to recommend Board-approval of the training course list as amended, to include the approval of the newly submitted training courses as determined by the Committee. Mr. Staples seconded the motion which was unanimously approved by Ewing, Fore, Matthews, and Staples.

There was no other business for the Committee to discuss.

**Other Business**

There being no further business, the meeting was adjourned at 12:28 p.m.

**Adjourn**

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Pamela M. Pruett, Chair

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Demetrios J. Melis, Secretary

**VIRGINIA BOARD FOR  
WATERWORKS AND WASTEWATER WORKS OPERATORS AND ONSITE  
SEWAGE SYSTEM PROFESSIONALS  
WATERWORKS AND WASTEWATER WORKS OPERATORS  
EXAMINATION TASK FORCE**

The Waterworks and Wastewater Works Operators Examination Task Force of the Virginia Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals (Board) met on June 26, 2023, at the offices of the Department of Professional and Occupational Regulation (DPOR), Perimeter Center, 9960 Mayland Drive, 2<sup>nd</sup> Floor, Board Room 1, Richmond, Virginia 23233.

The following members of the Task Force were present:

Erica Duncan  
Thomas Fore  
Doug Grimes  
Ryan Hendrix  
Barry Matthews  
Jamie Morris  
Mike Ritchie  
Wayne Staples  
Caleb Taylor, Chair  
Mark Titcomb  
David Van Gelder

The following staff members were present for all or part of the meeting:

Stephen Kirschner, Licensing and Regulatory Programs Division Deputy Director  
Tanya M. Pettus, Board Administrator  
Gregory Emerson, Examinations Director  
Raven Custer, Administrative Coordinator

Mr. Taylor called the meeting to order at 10:03 a.m.

**Call to Order**

Ms. Pettus advised the Task Force of the emergency evacuation procedures.

**Emergency  
Evacuation  
Procedures**

Mr. Fore moved to approve the agenda as presented. Mr. Staples seconded the motion which was unanimously approved by: Duncan, Fore, Hendrix, Matthews, Morris, Ritchie, Staples, Taylor, Titcomb, and Van Gelder.

**Approval of Agenda**

Mr. Grimes arrived at 10:06 a.m.

**Arrival of Task Force  
Member**

There were no members of the public present for comment.

**Public Comment Period**

The Task Force was provided with (i) current versions of applicable waterworks and wastewater works operators' statutes and regulations, (ii) current versions of applicable examination "Need to Know" criteria from Water Professionals International (WPI); (iii) applicable examination statistics; and (iv) training course and exam preparation resources.

**Resources and Information**

Barry Matthews of the Office of Drinking Water at the Virginia Department of Health (VDH) shared a presentation on training courses provided by VDH, as well as training course statistics with the Task Force. Mr. Matthews also provided information on grant funding for programs within the Office of Drinking Water. Discussion was held on upcoming training opportunities and accessibility of training.

**Presentations**

Aline Jackson-Diggs with the Virginia Department for Aging and Rehabilitative Services (DARS) and Jennifer Hynson with the Virginia Department of Labor and Industry (DOLI) shared a presentation on career pathways and assistance with examinations for individuals with disabilities, as well as the DOLI Registered Apprenticeship Program. Discussion was held on recruitment opportunities and ways DARS and DOLI could expand outreach.

The Task Force recessed from 11:37 a.m. to 12:11 p.m.

**Recess**

Mr. Kirschner introduced Gregory Emerson, DPOR Examination Director, to the Task Force.

**Introduction of Staff**

Ms. Pettus provided the Task Force with waterworks and wastewater works examination statistics from January 21, 2023, through June 6, 2023.

**Review Current Exam Statistics**

The Task Force was provided with waterworks and wastewater examination passing rates broken down by subject matter. Ms. Pettus advised that these statistics would be provided quarterly and available for regularly scheduled Board meetings going forward.

The Task Force was provided with statistics on examination passing rates as related to post examination survey responses as previously requested by the Task Force.

Ms. Pettus provided an overview of the Universal License Recognition (ULR) bills that passed during the 2023 General Assembly Session.

**Universal Licensing Recognition**

Ms. Pettus also advised the Task Force of work being done by the Board's Education & Training Committee to expand pre-license education opportunities, as well as ongoing staff projects to streamline review of experience and application processing.

**DPOR Updates**

Ms. Pettus advised that a meeting was held with Tom Healy of WPI to discuss concerns raised by the Task Force at its February meeting. Ms. Pettus relayed information on projects currently in progress at WPI. The Task Force was also provided an update on the WPI job analysis survey.

**WPI Updates**

Ms. Pettus informed the Task Force that she is working to have Dr. Ramzi Mahmood of the Office of Water Programs at Sacramento State speak at the next meeting.

**Discussion of Next Meeting**

The Task Force discussed other additional topics that they wish to address at the next meeting.

The Task Force agreed by consensus to meet following receipt of results and exam statistics from VA Tech Short School to be held in August, wherein exams will be offered at Short School and proctored in-person. Ms. Pettus advised that staff will provide dates for consideration for the next meeting. The Task Force will be notified of the date when it has been confirmed.

Mr. Taylor reminded the Task Force members to complete their conflict of interest forms and travel vouchers.

**Complete Conflict of Interest Forms and Travel Vouchers**

Virginia Board for Waterworks and Wastewater Works Operators and Onsite Sewage System  
Professionals'  
Water Works and Wastewater Works Examination Advisory Task Force  
June 26, 2023  
Page 4

There being no further business, the meeting was adjourned at 2:03 **Adjourn**  
p.m.

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Pamela M. Pruett, Chair

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Demetrios J. Melis, Secretary

# **PUBLIC COMMENT PERIOD**

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



# Board for Waterworks and Wastewater Works Operators and Onsite Sewage Systems Professionals

## Update on Regulatory Actions

(as of July 12, 2023)

### Action: Onsite Sewage System Professionals Licensing Regulations – 2022 General Review

#### Current Stage: Proposed Stage

- Board adopted Regulatory Review Committee recommended proposed amendments on 4/20/2023.
- Proposed stage filing in process.

#### Next Step: Executive Branch Review

- Submission of proposed amended regulation for Executive Branch review.

### Action: Waterworks and Wastewater Works Operators Licensing Regulations – 2023 General Review

#### Current Stage: NOIRA

- Board authorized formation of regulatory review committee on 10/27/22.
- Board authorized filing of NOIRA on 10/27/22.
- Regulatory review committee was formed and conducted its first meeting on 5/15/23
- NOIRA anticipated to be filed on 7/21/2023.

#### Next Step: Regulatory Review Committee

- Regulatory review committee will review regulation and recommend possible amendments.

### Action: Waterworks and Wastewater Works Operators Licensing Regulations – 2021 Fee Adjustment

#### Current Stage: Proposed

- Board reviewed and adopted proposed amendment on 4/21/22.
- Submitted for Executive Branch review on 7/28/22. Currently in Executive Branch review.

#### Next Step: Executive Branch Review/Public Comment

- Completion of Executive Branch review.
- Publication in the Virginia Register and 60-day public comment period, to include public hearing.

### Action: Onsite Sewage System Professionals Licensing Regulations – 2021 Fee Adjustment

#### Current Stage: Proposed

- Board reviewed and adopted proposed amendment on 4/21/22.
- Submitted for Executive Branch review on 7/28/22. Currently in Executive Branch review.

# **Board for Waterworks and Wastewater Works Operators and Onsite Sewage Systems Professionals**

## **Next Step: Executive Branch Review/Public Comment**

- Completion of Executive Branch review.
- Publication in the Virginia Register and 60-day public comment period, to include public hearing.

# 2023 WATERWORKS OPERATOR CPE Audit Report

## Memo

**To:** WWWOSSP Board Members  
**From:** Tanya M. Pettus, Board Administrator  
**Date:** July 27, 2023  
**Re:** 2023 WWO CPE Audit Report

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This memo provides information regarding the 2023 Waterworks Operator CPE Audit Report.

**April 12, 2023:** The regulant population of waterworks operators eligible for audit totaled 62 per Eagles. Note: Regulants licensed less than two years were manually excluded.

Initial letter and CPE audit form mailed to regulants selected for audit.

**May 15, 2023:** Due date of CPE audit form and required documentation.

**May 19, 2023:** Final notices mailed to non-responsive auditees.

**June 5, 2023:** Final due date of CPE audit form and required documentation.

**Update:** Responses received as of June 30, 2023:

Total Received	62
Passed	54
Incomplete	1
Pending Review	0
Surrendered	2
No Response	5
Referred for Disciplinary Action	5

# PFA Summary

1/2/2017 through 7/12/2023

Delivery Method: ALL

**Client:** Virginia Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals(ABC-VA)

**Test Program:** Virginia Wastewater Works Operator Class 1 Examination - VAWW1

**Exam Type:** Virginia Wastewater Works Operator Class 1 Examination - CLASS1

	<b>Total Tested</b>	<b>Pass</b>	<b>%</b>	<b>Fail</b>	<b>%</b>	<b>Absent</b>	<b>%</b>	<b>Total</b>
<b>First Time</b>	340	61	17.9%	279	82.1%	16	4.5%	356
<b>Repeater</b>	547	126	23.0%	421	77.0%	19	3.4%	566
<b>Total</b>	887	187	21.1%	700	78.9%	35	3.8%	922

**Test Program:** Virginia Wastewater Works Operator Class 2 Examination - VAWW2

**Exam Type:** Virginia Wastewater Works Operator Class 2 Examination - CLASS2

	<b>Total Tested</b>	<b>Pass</b>	<b>%</b>	<b>Fail</b>	<b>%</b>	<b>Absent</b>	<b>%</b>	<b>Total</b>
<b>First Time</b>	559	135	24.2%	424	75.8%	13	2.3%	572
<b>Repeater</b>	714	157	22.0%	557	78.0%	28	3.8%	742
<b>Total</b>	1273	292	22.9%	981	77.1%	41	3.1%	1314

**Test Program:** Virginia Wastewater Works Operator Class 3 Examination - VAWW3

**Exam Type:** Virginia Wastewater Works Operator Class 3 Examination - CLASS3

	<b>Total Tested</b>	<b>Pass</b>	<b>%</b>	<b>Fail</b>	<b>%</b>	<b>Absent</b>	<b>%</b>	<b>Total</b>
<b>First Time</b>	587	187	31.9%	400	68.1%	17	2.8%	604
<b>Repeater</b>	660	186	28.2%	474	71.8%	19	2.8%	679
<b>Total</b>	1247	373	29.9%	874	70.1%	36	2.8%	1283

**Test Program:** Virginia Wastewater Works Operator Class 4 Examination - VAWW4

**Exam Type:** Virginia Wastewater Works Operator Class 4 Examination - CLASS4

	<b>Total Tested</b>	<b>Pass</b>	<b>%</b>	<b>Fail</b>	<b>%</b>	<b>Absent</b>	<b>%</b>	<b>Total</b>
<b>First Time</b>	603	185	30.7%	418	69.3%	19	3.1%	622
<b>Repeater</b>	757	190	25.1%	567	74.9%	22	2.8%	779
<b>Total</b>	1360	375	27.6%	985	72.4%	41	2.9%	1401

## PFA Summary

1/2/2017 through 7/12/2023

Delivery Method: ALL

**Client:** Virginia Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals(ABC-VA)

**Test Program:** Virginia Waterworks Operator Class 1 Examination - VAWA1

**Exam Type:** Virginia Waterworks Operator Class 1 Examination - CLASS1

	Total Tested	Pass	%	Fail	%	Absent	%	Total
<b>First Time</b>	330	82	24.8%	248	75.2%	3	0.9%	333
<b>Repeater</b>	472	110	23.3%	362	76.7%	23	4.6%	495
<b>Total</b>	802	192	23.9%	610	76.1%	26	3.1%	828

**Test Program:** Virginia Waterworks Operator Class 2 Examination - VAWA2

**Exam Type:** Virginia Waterworks Operator Class 2 Examination - CLASS2

	Total Tested	Pass	%	Fail	%	Absent	%	Total
<b>First Time</b>	398	201	50.5%	197	49.5%	16	3.9%	414
<b>Repeater</b>	427	117	27.4%	310	72.6%	11	2.5%	438
<b>Total</b>	825	318	38.5%	507	61.5%	27	3.2%	852

**Test Program:** Virginia Waterworks Operator Class 3 Examination - VAWA3

**Exam Type:** Virginia Waterworks Operator Class 3 Examination - CLASS3

	Total Tested	Pass	%	Fail	%	Absent	%	Total
<b>First Time</b>	435	229	52.6%	206	47.4%	20	4.4%	455
<b>Recredentialing</b>	10	1	10.0%	9	90.0%	0	0.0%	10
<b>Repeater</b>	346	123	35.5%	223	64.5%	8	2.3%	354
<b>Total</b>	791	353	44.6%	438	55.4%	28	3.4%	819

**Test Program:** Virginia Waterworks Operator Class 4 Examination - VAWA4

**Exam Type:** Virginia Waterworks Operator Class 4 Examination - CLASS4

	Total Tested	Pass	%	Fail	%	Absent	%	Total
<b>First Time</b>	366	212	57.9%	154	42.1%	12	3.2%	378
<b>Repeater</b>	216	85	39.4%	131	60.6%	5	2.3%	221
<b>Total</b>	582	297	51.0%	285	49.0%	17	2.8%	599

## PFA Summary

1/2/2017 through 7/12/2023

Delivery Method: ALL

**Client:** Virginia Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals(ABC-VA)

**Test Program:** Virginia Waterworks Operator Class 5 Examination - VAWA5

**Exam Type:** Virginia Waterworks Operator Class 5 Examination - CLASS5

	<b>Total Tested</b>	<b>Pass</b>	<b>%</b>	<b>Fail</b>	<b>%</b>	<b>Absent</b>	<b>%</b>	<b>Total</b>
<b>First Time</b>	134	114	85.1%	20	14.9%	4	2.9%	138
<b>Repeater</b>	25	9	36.0%	16	64.0%	1	3.8%	26
<b>Total</b>	159	123	77.4%	36	22.6%	5	3.0%	164

**Test Program:** Virginia Waterworks Operator Class 6 Examination - VAWA6

**Exam Type:** Virginia Waterworks Operator Class 6 Examination - CLASS6

	<b>Total Tested</b>	<b>Pass</b>	<b>%</b>	<b>Fail</b>	<b>%</b>	<b>Absent</b>	<b>%</b>	<b>Total</b>
<b>First Time</b>	83	43	51.8%	40	48.2%	1	1.2%	84
<b>Repeater</b>	47	24	51.1%	23	48.9%	2	4.1%	49
<b>Total</b>	130	67	51.5%	63	48.5%	3	2.3%	133

# PFA Summary

4/20/2023 through 7/12/2023

Delivery Method: ALL

**Client:** Virginia Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals(ABC-VA)

**Test Program:** Virginia Wastewater Works Operator Class 1 Examination - VAWW1

**Exam Type:** Virginia Wastewater Works Operator Class 1 Examination - CLASS1

	<b>Total Tested</b>	<b>Pass</b>	<b>%</b>	<b>Fail</b>	<b>%</b>	<b>Absent</b>	<b>%</b>	<b>Total</b>
<b>First Time</b>	21	6	28.6%	15	71.4%	0	0.0%	21
<b>Repeater</b>	26	10	38.5%	16	61.5%	0	0.0%	26
<b>Total</b>	47	16	34.0%	31	66.0%	0	0.0%	47

**Test Program:** Virginia Wastewater Works Operator Class 2 Examination - VAWW2

**Exam Type:** Virginia Wastewater Works Operator Class 2 Examination - CLASS2

	<b>Total Tested</b>	<b>Pass</b>	<b>%</b>	<b>Fail</b>	<b>%</b>	<b>Absent</b>	<b>%</b>	<b>Total</b>
<b>First Time</b>	21	5	23.8%	16	76.2%	0	0.0%	21
<b>Repeater</b>	27	9	33.3%	18	66.7%	2	6.9%	29
<b>Total</b>	48	14	29.2%	34	70.8%	2	4.0%	50

**Test Program:** Virginia Wastewater Works Operator Class 3 Examination - VAWW3

**Exam Type:** Virginia Wastewater Works Operator Class 3 Examination - CLASS3

	<b>Total Tested</b>	<b>Pass</b>	<b>%</b>	<b>Fail</b>	<b>%</b>	<b>Absent</b>	<b>%</b>	<b>Total</b>
<b>First Time</b>	31	9	29.0%	22	71.0%	0	0.0%	31
<b>Repeater</b>	39	9	23.1%	30	76.9%	2	4.9%	41
<b>Total</b>	70	18	25.7%	52	74.3%	2	2.8%	72

**Test Program:** Virginia Wastewater Works Operator Class 4 Examination - VAWW4

**Exam Type:** Virginia Wastewater Works Operator Class 4 Examination - CLASS4

	<b>Total Tested</b>	<b>Pass</b>	<b>%</b>	<b>Fail</b>	<b>%</b>	<b>Absent</b>	<b>%</b>	<b>Total</b>
<b>First Time</b>	31	8	25.8%	23	74.2%	0	0.0%	31
<b>Repeater</b>	27	7	25.9%	20	74.1%	3	10.0%	30
<b>Total</b>	58	15	25.9%	43	74.1%	3	4.9%	61

# PFA Summary

4/20/2023 through 7/12/2023

Delivery Method: ALL

**Client:** Virginia Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals(ABC-VA)

**Test Program:** Virginia Waterworks Operator Class 1 Examination - VAWA1

**Exam Type:** Virginia Waterworks Operator Class 1 Examination - CLASS1

	<b>Total Tested</b>	<b>Pass</b>	<b>%</b>	<b>Fail</b>	<b>%</b>	<b>Absent</b>	<b>%</b>	<b>Total</b>
<b>First Time</b>	12	5	41.7%	7	58.3%	0	0.0%	12
<b>Repeater</b>	27	6	22.2%	21	77.8%	3	10.0%	30
<b>Total</b>	39	11	28.2%	28	71.8%	3	7.1%	42

**Test Program:** Virginia Waterworks Operator Class 2 Examination - VAWA2

**Exam Type:** Virginia Waterworks Operator Class 2 Examination - CLASS2

	<b>Total Tested</b>	<b>Pass</b>	<b>%</b>	<b>Fail</b>	<b>%</b>	<b>Absent</b>	<b>%</b>	<b>Total</b>
<b>First Time</b>	11	5	45.5%	6	54.5%	2	15.4%	13
<b>Repeater</b>	22	6	27.3%	16	72.7%	0	0.0%	22
<b>Total</b>	33	11	33.3%	22	66.7%	2	5.7%	35

**Test Program:** Virginia Waterworks Operator Class 3 Examination - VAWA3

**Exam Type:** Virginia Waterworks Operator Class 3 Examination - CLASS3

	<b>Total Tested</b>	<b>Pass</b>	<b>%</b>	<b>Fail</b>	<b>%</b>	<b>Absent</b>	<b>%</b>	<b>Total</b>
<b>First Time</b>	18	6	33.3%	12	66.7%	2	10.0%	20
<b>Repeater</b>	21	4	19.0%	17	81.0%	0	0.0%	21
<b>Total</b>	39	10	25.6%	29	74.4%	2	4.9%	41

**Test Program:** Virginia Waterworks Operator Class 4 Examination - VAWA4

**Exam Type:** Virginia Waterworks Operator Class 4 Examination - CLASS4

	<b>Total Tested</b>	<b>Pass</b>	<b>%</b>	<b>Fail</b>	<b>%</b>	<b>Absent</b>	<b>%</b>	<b>Total</b>
<b>First Time</b>	13	9	69.2%	4	30.8%	1	7.1%	14
<b>Repeater</b>	9	2	22.2%	7	77.8%	1	10.0%	10
<b>Total</b>	22	11	50.0%	11	50.0%	2	8.3%	24



# PFA Summary

4/20/2023 through 7/12/2023

Delivery Method: ALL

**Client:** Virginia Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals(ABC-VA)

**Test Program:** Virginia Waterworks Operator Class 5 Examination - VAWA5

**Exam Type:** Virginia Waterworks Operator Class 5 Examination - CLASS5

	<b>Total Tested</b>	<b>Pass</b>	<b>%</b>	<b>Fail</b>	<b>%</b>	<b>Absent</b>	<b>%</b>	<b>Total</b>
<b>First Time</b>	9	8	88.9%	1	11.1%	0	0.0%	9
<b>Repeater</b>	2	0	0.0%	2	100.0%	1	33.3%	3
<b>Total</b>	11	8	72.7%	3	27.3%	1	8.3%	12

**Test Program:** Virginia Waterworks Operator Class 6 Examination - VAWA6

**Exam Type:** Virginia Waterworks Operator Class 6 Examination - CLASS6

	<b>Total Tested</b>	<b>Pass</b>	<b>%</b>	<b>Fail</b>	<b>%</b>	<b>Absent</b>	<b>%</b>	<b>Total</b>
<b>First Time</b>	5	4	80.0%	1	20.0%	0	0.0%	5
<b>Repeater</b>	1	0	0.0%	1	100.0%	0	0.0%	1
<b>Total</b>	6	4	66.7%	2	33.3%	0	0.0%	6

**Virginia Waterworks April 1, 2023 through June 30, 2023**

<b>Virginia Waterworks Class I</b>	
<b>Content Area</b>	<b>Pass Rate</b>
Treatment Process	26%
Laboratory Analysis	33%
Equipment Operation and Maintenance	28%
Source Water Characteristics	39%
Security, Safety, Compliance, and Administrative Procedures	52%

<b>Virginia Waterworks Class II</b>	
<b>Content Area</b>	<b>Pass Rate</b>
Treatment Process	14%
Laboratory Analysis	31%
Equipment Operation and Maintenance	28%
Source Water Characteristics	69%
Security, Safety, Compliance, and Administrative Procedures	56%

<b>Virginia Waterworks Class III</b>	
<b>Content Area</b>	<b>Pass Rate</b>
Treatment Process	17%
Laboratory Analysis	22%
Equipment Operation and Maintenance	24%
Source Water Characteristics	68%
Security, Safety, Compliance, and Administrative Procedures	83%

<b>Virginia Waterworks Class IV</b>	
<b>Content Area</b>	<b>Pass Rate</b>
Treatment Process	35%
Laboratory Analysis	50%
Equipment Operation and Maintenance	46%
Source Water Characteristics	65%
Security, Safety, Compliance, and Administrative Procedures	85%

<b>Virginia Waterworks Class V</b>	<b>Pass Rate</b>
	57%

<b>Virginia Waterworks Class VI</b>	<b>Pass Rate</b>
	38%

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**Overall Pass Rates**

- Waterworks Class I - 35%
  - Waterworks Class II - 31%
  - Waterworks Class III - 27%
  - Waterworks Class IV - 50%
  - Waterworks Class V - 64%
  - Waterworks Class VI - 50%
-

VA ONSITE SEWAGE SYSTEM PROFESSIONALS (OSSP)

STATISTICAL OVERALL SUMMARIES

ALTERNATIVE AND CONVENTIONAL EXAMINATIONS

JANUARY 1, 2023 TO JULY 13, 2023

Alternative	Took	Pass	Pass Percentage
System Installer	28	07	25.00%
System Operator	15	07	46.66%
Soil Evaluator	05	04	80.00%
Overall	48	18	37.50%

Conventional	Took	Pass	Pass Percentage
System Installer	21	06	28.57%
System Operator	04	02	50.00%
Soil Evaluator	08	07	87.50%
Overall	33	15	45.45%

July 14, 2023

EXAMS -RGS

**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
<del>Fire Hydrant and Water Main Maintenance</del>	0.75	April 6, 1995	X				

Cross Connection Devices	1.60	November 14, 2017	X	X	X		
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**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](http://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](http://www.owp.csus.edu)  
[wateroffice@owp.csus.edu](mailto:wateroffice@owp.csus.edu)  
(919) 278-6142

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



	<del>-2.6</del>   <del>2.6</del>   2.6			X				
Treatment of Metal Wastestreams	<del>-1.3</del>   <del>1.3</del>   1.3	October 28, 2021	X		X			
<del>Utility Management</del>	<del>-0.1</del>   <del>0.1</del>   <del>0.1</del>	<del>June 21, 2006</del>	<del>X</del>	<del>X</del>				
<del>Water Distribution System Operation and Maint.</del>	<del>—</del>   <del>1.0</del>   <del>2.0</del>	<del>April 4, 1996</del>	<del>X</del>					
Water Systems Operation and Maint.	<del>+</del> <del>1.0</del> <del>+</del> 2.0		X	X	X			X
Video Training Series	1.0	June 21, 2006				X		
<del>Water Treatment Plant Operation, Vol. I</del>	<del>-1.0</del>   <del>2.0</del>   <del>4.0</del>	<del>April 4, 1996</del>	<del>X</del>					
<del>Water Treatment Plant Operation, Vol. II</del>	<del>-1.0</del>   <del>2.0</del>   <del>4.0</del>	<del>April 4, 1996</del>	<del>X</del>					
	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](mailto: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
<b>Class I   Class II   Class III</b>							
Math, Chemistry, Biology INWT 145	<del>1.0</del>   <del>1.0</del>   1.0	December 21, 2000	X	X	X	X	X
Reverse Osmosis INWT 146	<del>-1.0</del>   <del>1.0</del>   2.0	December 21, 2000	X	X	X	X	X
R O Troubleshooting INWT 147	<del>-0.5</del>   <del>1.0</del>   2.0	December 21, 2000	X	X	X	X	X
High Purity Water from Ion INWT 160	<del>1.0</del>   <del>1.0</del>   1.0	December 21, 2000	X	X			
Ion Exchange Operation INWT 161	<del>-1.0</del>   <del>1.0</del>   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	<del>-0.5</del>   <del>0.5</del>   1.5	December 21, 2000	X	X			
	0.7				X		
Scaling and Fouling Troubleshooting INWT 256	<del>-1.5</del>   <del>1.5</del>   2.0	December 21, 2000	X	X	X	X	X
Advanced R O Monitoring/Cleaning INWT 257	<del>-1.5</del>   <del>1.5</del>   2.0	December 21, 2000	X	X	X		
Feedwater & Pretreatment INWT 270	<del>1.0</del>   <del>1.0</del>   1.0	December 21, 2000	X	X	X	X	X
Ion Exchange Troubleshooting INWT 271	<del>-1.0</del>   <del>1.5</del>   2.0	December 21, 2000	X	X	X		
	1.0					X	X
Post Ion Exchange INWT 272	<del>-0.5</del>   <del>0.5</del>   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](mailto: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				
<del>Wastewater Training for Westrock</del>	1.0	<del>March 14, 2020</del>		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](mailto:taner.durusu@cadmusgroup.com)  
(703) 247-6195

Course	TC's	Approval Date	WWO	WWWO	OSSO	OSSI	OSSE
<del>Building Community Based Water Resilience</del>	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](http://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](http://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
<del>Gearboxes</del>	<del>2.1*</del>	<del>December 10, 1992</del>	<del>X</del>	<del>X</del>	<del>X</del>		
Incineration	2.1*	December 10, 1992		X	X		
<del>Industrial Waste &amp; Regulations</del>	<del>2.1</del>	<del>March 9, 1992</del>		<del>X</del>			
<del>Industrial Waste &amp; Regulations (Online)</del>	<del>2.1</del>	<del>October 3, 2020</del>		<del>X</del>			
<del>Instrumentation &amp; Controls</del> 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	
<del>Shop Prints &amp; Schematics</del> 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
<del>Solids Dewatering</del> Biosolids Processing (name change)	2.1		X	X	X		
	1.0	December 10, 1992				X	X
<del>Solids Thickening &amp; Digestion</del> 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				
<del>Leadership &amp; Supervision I</del>	<del>2.1</del>	<del>March 19, 1992</del>	<del>X</del>	<del>X</del>	<del>X</del>		
<del>Leadership &amp; Supervision II</del>	<del>2.1</del>	<del>March 19, 1992</del>	<del>X</del>	<del>X</del>	<del>X</del>		
	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
<del>Wastewater Treatment III</del>	<del>2.1*</del>	<del>December 10, 1992</del>		<del>X</del>			
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
<del>Treatment Plant Math III</del>	<del>2.1</del>	<del>December 10, 1992</del>		<del>X</del>			

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](mailto: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					
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**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](http://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](http://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
<del>Advanced Wastewater Licensure Review</del>	<del>2.3</del>	<del>March 24, 1994</del>		X			
<del>Activated Sludge Process Control, Part 1</del>	<del>2.0</del>	<del>March 24, 1994</del>		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				
<del>Operator In-Service Training</del>	<del>0.05</del>	<del>March 24, 1994</del>		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
<del>Total &amp; Volatile Suspended Solids Sampling and Testing Workshop</del>	<del>0.5</del>	<del>July 11, 1996</del>		X			
<del>Total Residual Chlorine &amp; Ph Workshop</del>	<del>1.0</del>	<del>January 5, 1995</del>		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
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**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		

# WWWOSSP Board Training & Education Committee

## Application Review Summary

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

# WWWOSSP Board Training & Education Committee Application Review Summary

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

# WWWOSSP Board Training & Education Committee

## Application Review Summary

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

# WWWOSSP Board Training & Education Committee

## Application Review Summary

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



# WWWOSSP Board Training & Education Committee

## Application Review Summary

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

**UPDATE ON WWWO**  
**EXAM TASK FORCE**

**UPDATE ON 2023**  
**LEGISLATION**

**CONSIDER BOARD POLICY ON**  
**CONTINUANCE OF CASE FILE DECISIONS**

## 2024 TENTATIVE BOARD MEETING SCHEDULE

WWWOSSP BOARD	
Education & Training Committee	Board Meeting
Thursday, January 25, 2024 @ 9:00 am Board Room 1	Thursday, January 25, 2024 @ 9:30 am Board Room 1
Thursday, April 11, 2024 @ 9:00 am Board Room 2	Thursday, April 11, 2024 @ 9:30 am Board Room 2
Thursday, July 11, 2024 @ 9:00 am Board Room 4	Thursday, July 11, 2024 @ 9:30 am Board Room 4
Thursday, October 24, 2024 @ 9:00 am Board Room 4	Thursday, October 24, 2024 @ 9:30 am Board Room 4

# Commonwealth of Virginia



## Department of Professional and Occupational Regulation Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals

### Resolution for

# Trisha L. Lindsey

WHEREAS, **Trisha L. Lindsey** did faithfully and diligently serve the Board for Waterworks and Wastewater Works and Onsite Sewage System Professionals, since its inception, and the Department of Professional and Occupational Regulation;

WHEREAS, **Trisha L. Lindsey**, did devote generously of her time, talent and leadership to the Board;

WHEREAS, **Trisha L. Lindsey**, did endeavor at all times to render decisions with fairness and good judgement in the best interest of the citizens of the Commonwealth and these professions; and

WHEREAS, the Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals wishes to acknowledge its gratitude for devoted service of a person who is held in high esteem by the members of the Board and the citizens of the Commonwealth;

NOW THEREFORE BE IT RESOLVED, by the Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals this twenty-seventh day of July 2023, that **Trisha L. Lindsey** be given all honors and respect due her for her outstanding service to this Board and the Commonwealth and its citizens; and

BE IT FURTHER RESOLVED, that this Resolution be presented to her and be made a part of the official minutes of the Board so that all may know of the high regard in which she is held by this Board.

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Pamela M. Pruet, Chair

# Commonwealth of Virginia



## Department of Professional and Occupational Regulation Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals

### Resolution Honoring

# Ronald R. Thomas

WHEREAS, the Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals and the broader Onsite Sewage System Professionals community lost a valued member on May 25, 2023, with the death of **Ronnie Thomas**;

WHEREAS, **Ronnie Thomas**, did devote generously of his time, talent and leadership to the Board, and countless onsite sewage system professionals;

WHEREAS, **Ronnie Thomas**, served with excellence on the Board and had a life-long commitment to bringing government to the people through his diligent effort to shape the licensure program when Onsite Sewage System Professionals were added to the Board;

WHEREAS, **Ronnie Thomas'** leadership, professionalism, and sense of humor enriched those fortunate enough to know and work with him;

NOW THEREFORE BE IT RESOLVED, the Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals honors the memory of **Ronnie Thomas**, celebrates his legacy of commitment to the profession and remembers his service to the Board, as well as the community on this twenty-seventh day of July 2023; and

BE IT FURTHER RESOLVED, that this Resolution be made a part of the official minutes of the Board so that all may know the Board gratefully acknowledges his many contributions to the profession.

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Pamela M. Pruet, Chair

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Demetrios J. Melis, Secretary

**Department of Professional and Occupational Regulation  
Statement of Financial Activity**

**Board for WWOOSSP  
954530**

**2022-2024 Biennium**

**April 2023**

	April 2023 Activity	Biennium-to-Date Comparison	
		July 2020 - April 2021	July 2022 - April 2023
<b>Cash/Revenue Balance Brought Forward</b>			126,089
<b>Revenues</b>	13,505	269,901	297,917
<b>Cumulative Revenues</b>			424,006
<b>Cost Categories:</b>			
<b>Board Expenditures</b>	2,105	22,778	35,094
<b>Board Administration</b>	4,318	71,244	75,378
<b>Administration of Exams</b>	221	12,534	7,455
<b>Enforcement</b>	234	4,481	4,816
<b>Legal Services</b>	0	892	1,312
<b>Information Systems</b>	4,826	49,489	43,777
<b>Facilities and Support Services</b>	3,318	39,046	34,250
<b>Agency Administration</b>	2,576	32,744	50,427
<b>Other / Transfers</b>	0	0	(75)
<b>Total Expenses</b>	17,598	233,208	252,434
<b>Transfer To/(From) Cash Reserves</b>	(366)	0	(12,716)
<b>Ending Cash/Revenue Balance</b>			184,288

<b>Cash Reserve Beginning Balance</b>	86,854	0	99,203
<b>Change in Cash Reserve</b>	(366)	0	(12,716)
<b>Cash Reserve Ending Balance</b>	86,487	0	86,487

**Number of Regulants**

Current Month	5,793
Previous Biennium-to-Date	5,775



# **UPDATE ON OUTREACH**

# **OPPORTUNITIES**

# **OTHER BUSINESS**

**COMPLETE CONFLICT OF INTEREST**  
**FORMS AND**  
**TRAVEL VOUCHERS**

**ADJOURN**