Office of Drinking Water
Safe Drinking Water for a Healthy Virginia

VDH VIRGINIA DEPARTMENT OF HEALTH

Commonwealth Of Virginia

Operator Certification Annual Report

Reporting Period July 1, 2022 to June 30, 2023

2023

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Annual Operator Certification Report in Virginia

Executive Summary

The Virginia Operator Certification Program (OpCert) remains a robust, effective program. No backsliding has occurred since the last report. All public health objectives are met by Virginia's Operator Certification Program. Since the Environmental Protection Agency (EPA) published the *Federal Operator Certification Guidelines,* in Virginia, there are 1578 waterworks required to have licensed operators. The compliance rate (percentage of waterworks with a properly licensed operator) is over 99 percent.

The Virginia Department of Health – Office of Drinking Water (VDH – ODW) funds many training opportunities for waterworks operators through the EPA's Drinking Water State Revolving Fund (DWSRF) set-asides. Training partners design the courses to assist operators gain new and improved skills as well as a better understanding of their industry. These courses provide continuing education credits for operators' licensure renewal. VDH – ODW has monitored a decrease in licensed operators that staff attributes to the need for high-quality, low-cost training courses.

The Department of Professional and Occupational Regulation (DPOR) has the power to discipline and fine any licensee and to suspend or revoke or refuse to renew or reinstate any license. The agency also has the authority to deny any application for a license. There were no disciplinary actions taken during this time.

Waterworks Operator/Wastewater Works Operator Regulatory Review Committee was formed to conduct a general review of all current waterworks and wastewater works operator regulations. First meeting took place on May 15, 2023, goal for review completion is October 2023. Exam Task Force was formed to discuss current exam statistics and explore avenues to improve exam scores among operators as well general issues within the industry work force. First meeting took place in February 2023, next meeting scheduled for June 25, 2023. A Technical Review Committee met April 2023 to review experience and facility requirements in other states for the purpose of developing a matrix for licensing staff to determine equivalency of qualifications for out-of-state applicants. The experience verification form submitted with applications is in the process of being revised based on recommendations from the Committee.

Purpose

Virginia's 22nd annual report provides detailed information on OpCert in Virginia. This report addresses the nine guidelines of the Federal *Final Guidelines for Certification and Recertification of the Operators of Community (CWS) and Nontransient Noncommunity (NTNC) Public Water Systems.*

The document is organized in accordance with Federal Operator Certification Guidelines*;* the October 15, 2001, Office of Water memorandum "*Annual Submittal for State Operator Certification Programs*," and "*Recommended Operator Certification Annual Submittal Reporting Requirements*" provided by EPA. This report covers the nine baseline standards in the order published in the *Federal Register.*

Background

VDH – ODW is the primacy agency that regulates waterworks in Virginia by means of the Virginia *Waterworks Regulations*. DPOR administers the water operators' licensure program, not the drinking water primacy agency. Since operation of a waterworks is in the interest of public health and safety, operator licensure is required for all operators of community and nontransient noncommunity waterworks.

Within DPOR, the Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals (Licensing Board) is the regulatory board and governing body. Chapter 23, Title 54.1, *Code of Virginia* authorizes the Licensing Board to regulate waterworks operator licensure under its *Waterworks and Wastewater Works Operators Licensing Regulations*.

The Licensure Board provides for the testing of operators and issues licenses. Licenses issued are specific to operator classifications to attest to the competency of an operator to supervise and operate specific classes of waterworks while protecting public health, safety, and welfare, and conserving and protecting the water resources of the Commonwealth. The Licensure Board is comprised of eleven stakeholder members as follows:

- the Director of the VDH – ODW, or his/her designee;
- the Executive Director of the State Water Control Board, or his/her designee;
- a currently employed waterworks operator having a valid license of the highest classification (Class 1) issued by the Licensure Board;
- a currently employed wastewater works operator having a valid license of the highest classification (Class 1) issued by the Licensure Board;
- a faculty member of a state university or college whose principal field of teaching is management or operation of waterworks or wastewater works;
- a representative of an owner of a waterworks;
- a representative of an owner of a wastewater works;
- a licensed alternative onsite sewage system operator;
- a licensed alternative onsite sewage system installer; and
- a licensed onsite soil evaluator.

The Licensure Board limits owner representation to one representative or employee operator. The term for Licensure Board members is four years, and members are eligible to serve a maximum of two full terms.

Operator Certification Annual Report

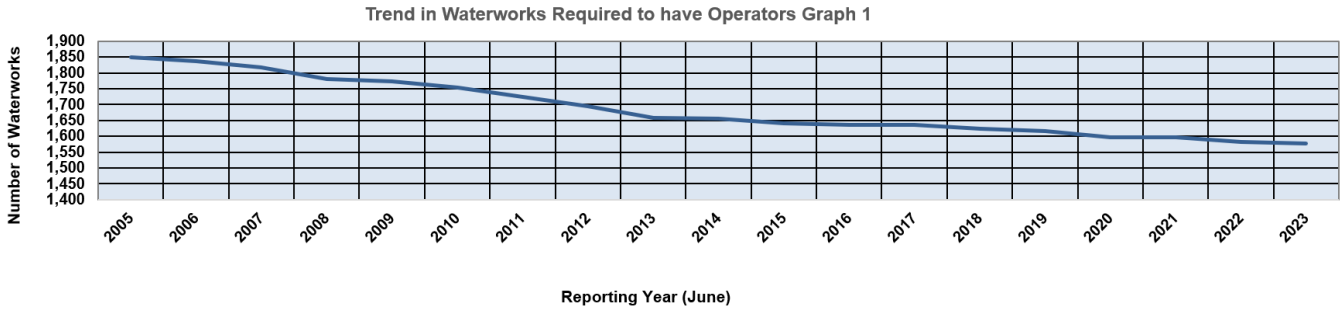
1.0 Authorization

The Licensure Board made no changes or revisions to the licensure regulations since the last submittal of the Attorney General's certification to the Environmental Protection Agency (EPA). The primacy agency has made no changes or revisions to regulations that would affect the licensure or classification of licenses held by waterworks operators.

2.0 Classification of Systems, Facilities, and Operators

In Virginia, VDH-ODW classifies community and nontransient noncommunity waterworks by the potential health risks based on size, population served, source, and complexity. There are six classifications from the lowest, Class 6, to the highest, Class 1. In 1999, when EPA published the *Federal Operator Certification Guidelines*, there were 1,992 operators.

As of June 5, 2023, the total number of Community (1075) and Nontransient Noncommunity waterworks (503) in Virginia required to have a licensed operator is 1578; this total represents a decline of 5 waterworks since the last report. This decline is a positive trend as very small waterworks make up much of the decline (through consolidation).



The total number of licensed waterworks operators in Virginia is 2212. This reporting period saw a decrease of 110 operators in total. See below table. Staff attributes this decrease to an aging workforce and operators retiring. To help operators pass their exams and join the workforce, VDH – ODW plans to continue offering low-cost education solutions, which are now more important than ever. Data obtained from DPOR on June 2, 2023.

Table 1
Number of Operators by Class as of June 2, 2023

Class License	Number of 2022 Licensees	Number of 2023 Licensees	Net Gain (Loss) Since 2022 Report
6	222	183	-39
5	240	217	-23
4	321	251	-70
3	369	300	-69
2	334	292	-42
1	726	666	-60
Total	2212	1909	-303

2.1 Class 6 Waterworks A Class 6 waterworks licensee may operate any waterworks as follows: a waterworks providing no treatment other than hypo-chlorination and corrosion control using calcite feeders and serving fewer than 400 persons or a waterworks classified by VDH-ODW as a Class 6 waterworks. As of June 2023, Virginia has 893 Class 6 waterworks; a decrease of 6 from last year's report.

2.2 Class 5 Waterworks A Class 5 waterworks licensee may operate any waterworks as follows:

- a waterworks serving 400 or more persons which (i) provides no treatment or (ii) employs hypo-chlorination for disinfection; or
- a waterworks classified by VDH-ODW as either a Class 5 or Class 6 waterworks. The Class 5 also serves as the distribution system classification.

As of June 2023, Virginia had 273 Class 5 waterworks; a decrease of one from last year's report.

2.3. Class 4 Waterworks A Class 4 waterworks licensee may operate any waterworks as follows:

- a waterworks serving fewer than 5,000 persons or having a design hydraulic capacity of less than 0.5 million gallons per day (MGD), employing one or more of the following (i) disinfection other than with hypo-chlorination, (ii) corrosion control, (iii) iron and manganese removal, (iv) ion exchange, (v) membrane technology without pretreatment, (vi) slow sand filtration, (vii) aeration, (viii) rechlorination other than with hypo-chlorination, or (ix) activated carbon contactors; or
- a waterworks classified by the VDH-ODW as either a Class 4, 5, or 6 waterworks.

As of June 2023, Virginia has 261 Class 4 waterworks; an increase of one from last year's report.

2.4. Class 3 Waterworks A Class 3 waterworks licensee may operate any waterworks as follows:

- a waterworks serving fewer than 5,000 persons or having a design capacity less than 0.5 MGD, employing chemical coagulation or lime softening in combination with one or more of the following (i) sedimentation, (ii) rapid sand filtration with a rate of 2 gallons per minute (gpm)/square foot or less, (iii) fluoridation, (iv) disinfection, (v) aeration, (vi) corrosion control, or (vii) membrane technologies;
- a waterworks serving 5,000 or more persons or having a design hydraulic capacity of 0.5 MGD, employing one or more of the following; (i) disinfection other than with hypo-chlorination, (ii) corrosion control, (iii) iron and manganese removal, (iv) ion exchange, (v) membrane technology without pretreatment, (vi) slow sand filtration, (vii) aeration, (viii) rechlorination other than with hypo-chlorination, or (ix) activated carbon contactors;
- a waterworks employing (i) membrane technology requiring pretreatment consisting of pH adjustment; or (ii) diatomaceous earth filtration, coupled with aeration, corrosion control, disinfection, or fluoridation; a waterworks employing fluoridation which is not under a higher classification; or
- a waterworks classified by VDH-ODW as either a Class 3, 4, 5 or 6 waterworks.

As of June 2023, Virginia had 44 Class 3 waterworks; an increase of one from last year's report.

2.5. Class 2 Waterworks A Class 2 waterworks licensee may operate any waterworks as follows:

- a waterworks serving 5,000 or more persons but fewer than 50,000 persons or having a design hydraulic capacity of 0.5 MGD or more but less than 5.0 MGD employing chemical coagulation or lime softening in combination with one or more of the following; (i) sedimentation, (ii) rapid

sand filtration, (iii) fluoridation, (iv) disinfection, (v) aeration, (vi) corrosion control, or (vii) membrane technologies;

- a waterworks serving fewer than 50,000 persons or having a design hydraulic capacity of less than 5.0 MGD which employs chemical coagulation or lime softening coupled with multimedia granular filtration or granular filtration at rates above 2.0 gpm/square foot (high rate filtration) in combination with one or more of the following: (i) sedimentation, (ii) fluoridation, (iii) disinfection, (iv) aeration, or (v) corrosion control; a waterworks employing biological activated carbon contactors or membrane technology requiring pretreatment other than pH adjustment; or
- a waterworks classified by the VDH-ODW as either a Class 2, 3, 4, 5 or 6 waterworks.

As of June 2023, Virginia had 77 Class 2 waterworks; no change from last year's report.

2.6. Class 1 Waterworks A Class 1 waterworks licensee may operate any waterworks. A Class 1 waterworks is a waterworks serving 50,000 or more persons or having a design hydraulic capacity of 5.0 MGD or more which employ chemical coagulation or lime softening with rapid sand or high-rate granular media filtration or membrane or other alternative filtration technologies.

As of June 2023, Virginia had 36 Class 1 waterworks; no change from last year's report.

Below is a table showing the number of designated operators (systems) by class. Information queried from the State Drinking Water Information System (SDWIS) on June 5, 2023.

Table 2
Number of Designated Operators (DO) by Class

Class License	Number of DO
6	177
5	123
4	333
3	427
2	181
1	318
Total	1559

The next table shows the breakdown of operators by system type; staff obtained the information from the State Drinking Water Information System (SDWIS). Since DPOR does not track by type of system and only tracks operators by class, these numbers may differ slightly from other reported percentage of operators. In addition, this data does not count more than one operator per system, only if the system had an active designated operator during the reporting period.

Table 3 Percent of Waterworks with Licensed Designated Operators			
System Type	**# of Systems**	**# of Systems with Active Designated Operator**	**% of Systems with Active Designated Operator**
C	1075	1067	99.26%
NTNC	503	499	99.20%
Total	**1578**	**1566**	**99.24%**

3.0 Operator Qualifications

The Licensure Board bases licensing on having applicable experience and education as well as demonstrating knowledge of core competencies through an examination.

3.1. Exams Beginning January 2017, the Virginia Board began the process of transitioning to the ABC examination. That process is now complete and applicants have been taking the ABC exams in Virginia for 2 years. On June 1, 2018, Virginia began using ABC's 2017 Standardized Exam, which replaces the 2012 version, for class 1 through 4 exam candidates. Virginia's class 5 candidates continue to take ABC's Very Small Water Systems examination, and the class 6 examination consists of questions from ABC's item bank and is a Virginia customized exam.

3.2. Experience DPOR requirements express length of experience in terms of calendar periods of full-time employment as an operator or as an operator-in-training at a waterworks in the same category as the license. Regulations define one year of experience as a minimum of 220 days or 1,760 hours. All experience claimed on the licensure application is certified by the individual's immediate supervisor or a representative of the facility owner if the immediate supervisor is unavailable. Operators-in-training must gain experience under the supervision of an operator holding a valid waterworks operator license of a classification equal to or higher than the classification of the waterworks. The supervising operator or a representative of the facility owner certifies the experience on the application form as accurate and relevant to the classification of license for the applicant.

Regulations limit the experience to the operation of water treatment and distribution systems. Credit applies differently for laboratory work and treatment plant maintenance. Non-operating duties are not counted as experience as an operator or as an operator-in-training. DPOR gives credit for experience limited to distribution system operations and maintenance only when applying for a Class 5 or Class 6 waterworks operator license.

3.3. Education The minimum education requirement for an operator's license is a high school diploma or General Educational Development (GED) certificate. There are provisions in the Licensure Regulations for a candidate without a high school diploma to get a license by substituting more operator in-training experience for education.

3.4 Specific requirements for licenses

3.4.1. Specific requirements for a Class 6 license Candidates for licensure as a Class 6 waterworks operator shall meet one of the following requirements and pass a board-approved exam (40.5% Pass Rate):

- have (i) a high school diploma or GED certificate and (ii) at least six months of experience as an operator-in-training in a Class 6 or higher waterworks; or
- have (i) no high school diploma and (ii) at least one year of experience as an operator-in-training in a Class 6 or higher waterworks.

The Licensure Board determined in its *Regulations* that experience as an operator at a Class 6 facility is not transferable to higher classifications.

3.4.2. Specific requirements for a Class 5 license Candidates for licensure as a Class 5 waterworks operator shall meet one of the following requirements and pass a board-approved exam (68.2% Pass Rate):

- have (i) a high school diploma or GED certificate and (ii) at least six months of experience as an operator-in-training in a Class 5 or higher, waterworks; or
- have (i) no high school diploma and (ii) at least one year of experience as an operator-in-training in a Class 5 or higher waterworks.

The Licensure Board determined in its *Regulations* that experience as an operator at a Class 5 facility is not transferable to higher classifications.

3.4.3. Specific requirements for a Class 4 license Candidates for licensure as a Class 4 waterworks operator shall meet one of the following requirements and pass a board-approved exam (45.6% Pass Rate):

- have (i) a high school diploma or GED certificate and (ii) at least six months of experience as an operator-in-training in a Class 4 or higher waterworks; or
- have (i) no high school diploma and (ii) at least one year of experience as an operator-in-training in a Class 4 or higher waterworks.

3.4.4. Specific requirements for a Class 3 license Candidates for licensure as a Class 3 waterworks operator shall meet one of the following requirements and pass a board-approved exam (43.6% Pass Rate):

- have (i) a bachelor's or master’s degree in engineering or engineering technology, or in a related physical, biological, environmental, or chemical science; and (ii) at least six months of experience as an operator-in-training in a Class 4 or higher waterworks;
- have (i) an associate’s degree in waterworks or wastewater works, or in a related physical, biological, environmental, or chemical science; (ii) a Class 4 license; and (iii) a total of at least nine months of experience as an operator or operator-in-training in a Class 4 or higher

waterworks, of which at least six months without substitutions shall be as an operator-in-training in a Class 4 or higher waterworks;

- have (i) a high school diploma or GED certificate and (ii) at least one year of experience as an operator-in-training in a Class 4 or higher waterworks, of which at least six months without substitutions shall be as an operator-in-training in a Class 4 or higher waterworks; or
- have (i) no high school diploma, (ii) a Class 4 license, and (iii) a total of at least three years of experience as an operator or operator-in-training in a Class 3 or higher waterworks, of which at least one-and-one-half months without substitutions shall be as an operator-in-training in a Class 3 or higher waterworks.

3.4.5. Specific requirements for a Class 2 license Candidates for licensure as a Class 2 waterworks operator shall meet one of the following requirements and pass a board-approved exam (49.3% Pass Rate):

- have (i) a bachelor's or master's degree in engineering or engineering technology, or in a related physical, biological, environmental, or chemical science; and (ii) a total of at least one year of experience, of which at least six months without substitutions shall be as an operator-in-training in a Class 3 or higher waterworks;
- have (i) an associate's degree in waterworks or wastewater works, or in a related physical, biological, environmental, or chemical science; and (ii) a total of at least 1-1/2 years of experience, of which at least nine months without substitutions shall be as an operator-in-training in a Class 3 or higher waterworks;
- have (i) a high school diploma or GED certificate, and (ii) a total of at least two years of experience, of which at least one year without substitutions shall be as an operator or operator in-training in a Class 3 or higher waterworks; or
- have (i) no high school diploma, (ii) a Class 3 license, and (iii) a total of at least five years of experience, of which at least 3 ½ years without substitutions shall be as an operator or operator in-training in a Class 2 or higher waterworks.

3.4.6. Specific requirements for a Class 1 license Candidates for licensure as a Class 1waterworks operator shall meet one of the following requirements and pass a board-approved examination (25.1% Pass Rate):

- have (i) a bachelor's or master's degree in engineering or engineering technology, or in a related physical, biological, environmental, or chemical science; (ii) a Class 2 license; and (iii) a total of at least two years of experience, of which at least one year without substitutions shall be as an operator or operator-in-training in a Class 2 or as a Class 1waterworks;
- have (i) an associate's degree in waterworks or wastewater works, or in a related physical, biological, environmental, or chemical science; and (ii) a total of at least three years of experience, of which at least 1-1/2 years without substitutions shall be as an operator-in-training in a Class 2 or Class 1 waterworks;

- have (i) a high school diploma or GED certificate , (ii) a Class 2 license and (iii) a total of at least four years of experience, of which at least two years without substitutions shall be as an operator or operator-in-training in a Class 2 or a Class 1waterworks; or

- have (i) no high school diploma, (ii) a Class 2 license, and (iii) a total of at least nine years of experience, of which at least 4- ½ years without substitutions shall be as an operator or operator in-training in a Class 2 or Class 1waterworks.

3.5. Grandparenting Licensure regulations have no provisions for grandparenting of waterworks operators.

3.6. Reciprocity The Board does not specifically recognize any other state's license as meeting its requirements for licensure. However, per 18 *Virginia Administrative Code* §160-30-80, "an applicant holding a valid license or certificate in another jurisdiction who meets the requirements of this chapter, including having equivalent experience and education, shall pass a board approved examination to become licensed." For waterworks operators, the current Board approved examination is the ABC national exam. Out-of-state applicants are not required to retake the ABC examination in Virginia if they have already passed the ABC exam. The Board would accept equivalent experience and education in another state as meeting its requirements. A letter of good standing issued by the licensing authority in the other state would need to be submitted with an application and would need to include the method of licensure (exam, experience, education) for the board to consider an out-of-state license equivalent.

4.0 Enforcement

4.1. Waterworks Operators The Licensure Board has the power to discipline and fine any licensee and to suspend or revoke or refuse to renew or reinstate any license as well as the power to deny any application for a license under the provisions of Chapter 23 of Title 54.1 of the *Code of Virginia* and its regulations for any of the following:

- Violating, inducing another to violate, cooperating with another to violate, or combining or conspiring with or acting as agent, partner, or associate for another to violate any of the

  provisions of Chapter 1 (§ 54.1-100 et seq.), 2 (§ 54.1-200 et seq.), or 23 (§ 54.1-2300 et seq.) of Title 54.1 of the Code of Virginia, or any of the regulations of the board;

- Allowing a license to be used by another;

- Obtaining or attempting to obtain a license by false or fraudulent representation, or maintaining or renewing a license through false or fraudulent representation;

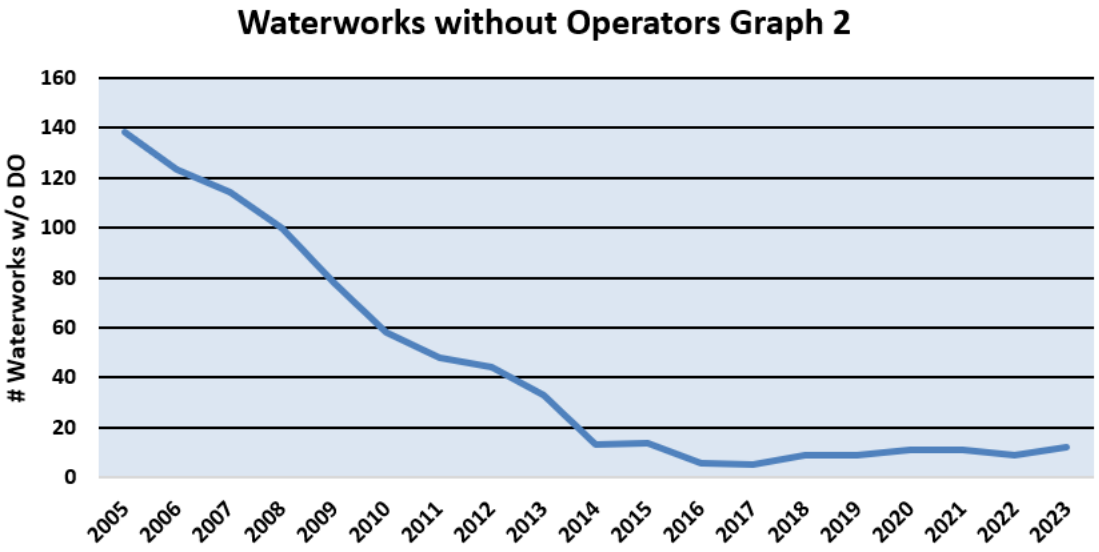
- Convicted or found guilty by a court in any jurisdiction of any felony or of any misdemeanor involving lying, cheating, stealing, sexual offense, drug distribution, or physical injury, or relating to the practice of the profession, there being no appeal pending therefrom or the time for appeal having lapsed. Any plea of *nolo contendere* is a conviction for purposes of this subsection. Having been subject to disciplinary action taken by any jurisdiction, board, or

administrative body of competent jurisdiction; Failing to notify the Board within 30 days of a conviction, finding of guilt, or disciplinary action.

- Not demonstrating reasonable care, judgment, or application of the required knowledge, skill, and ability in the performance of the licensee's duties;
- Having undertaken to perform or performed a professional assignment that the licensee is not qualified to perform by education, experience, training, or any combination thereof.
- Failing to notify the Board within 30 days of a change of name or address, or any change in any of the requirements and qualifications for licensure;
- Negligence, misconduct, or incompetence, in the practice as a waterworks operator;
- Making any misrepresentation or engaging in acts of fraud or deceit in providing professional services;
- Failing to adequately supervise and review work performed by licensed or unlicensed employees under direct supervision of the licensee;
- Submitting or recording or assisting another in the submission or recording of false or misleading operational information relating to the performance and monitoring requirements of a waterworks; and
- Failing to act in providing waterworks and wastewater works operator services in a manner that safeguards the interests of the public. There were no disciplinary actions taken against waterworks operators by DPOR during the reporting period.

4.2. Waterworks Owners The *Waterworks Regulations*, 12VAC5-590-460, requires waterworks owners to designate operators in responsible charge. The license must be of a classification equal to or higher than that of the waterworks. When no designated operator is on duty or in communication with the operating personnel in attendance at the waterworks, the owner shall designate a substitute operator. The substitute operator shall possess a valid operator license of a classification equal to or greater than that of the waterworks. Operators must have a license, if they make process control/system integrity decisions about water quality or quantity that affects public health. Any waterworks that fail to comply with this requirement may face further enforcement action, which may include administrative orders, criminal prosecution, civil actions, and penalties.

As of June 5, 2023, waterworks without a licensed operator in the State Drinking Water Information System (SDWIS) database totaled 12 systems. This equates to a compliance rate of 99.24%.



Waterworks owners are responsible for notifying VDH – ODW when they have secured a licensed operator. When notified, VDH – ODW updates the operator in responsible charge in SDWIS after checking the online DPOR operator database. Routine verification occurs when VDH – ODW staff inspects the waterworks.

5.0 Certification Renewal

5.1. License Expiration Licenses for waterworks operators expire on the last day of February of each odd numbered year. The board may deny renewal of a license for the same reasons as it may refuse initial licensure or discipline a licensee.

5.2. Continuing Education Each licensed waterworks operator is required to have completed the following number of continuing professional education (CPE) contact hours required for his or her class of license before the license is renewed:

- Class 1, 2, and 3 operators shall obtain a minimum of 20 contact hours during each license renewal cycle;
- Class 4 operators shall obtain a minimum of 16 contact hours during each license renewal cycle;
- Class 5 operators shall obtain a minimum of eight contact hours during each license renewal cycle; or
- Class 6 operators shall obtain a minimum of four contact hours during each license renewal cycle.

The audit process for continuing education randomly selects operators from the operator database for an audit. There were not any licenses reported revoked by DPOR for failure to comply with CPE requirements. There were no operators required to take additional training.

6.0 Resources Needed to Implement the Program

Waterworks management and staff request free and low-cost training alternatives, as waterworks continue to face revenue shortfalls. Low certification exam pass rates place an even greater demand for ODW sponsored and in-house training sponsored by individual waterworks and partners, such as

Mountain Empire Community College (MECC), Virginia Chapter of the American Water Works Association (VA AWWA), Southeast Rural Community Assistance Project (SERCAP) and the Virginia Rural Water Association (VRWA).

The training offered through Drinking Water State Revolving Fund (DWSRF) set-aside funds included many Virginia Tech trainings, short courses, and seminars. Examples are *Continuing Professional Education Water Quality Broadcast* series, the *Applied Math and Basic Science* short course, the *Contaminants of Concern* short course and the weeklong *Operation and Maintenance of Distribution Systems* courses. Report Sections 6.3.3 through 6.3.8 provide details on Virginia Tech training offerings. ODW provides funding support for MECC through the Capitalization Grant set-asides.

6.1. Program Funding DPOR funds the operator-licensing program through the collection of exam fees, license application fees, and license renewal fees. DPOR uses no general or grant funds to support the licensure program.

6.2. Operator Training Issues There are few opportunities for affordable training in Virginia, except those subsidized by VDH. However, other training offered, even by nonprofit organizations, can be costly for the waterworks owner, operator, or candidate to attend. For example, the registration fee to attend the Virginia Tech Summer Short School is approximately $1300.00. Total cost for training is much higher with mileage and evening meals. Adding these costs raises the training expense to over $1400.00. When added to the week each operator is absent from work, owners of small waterworks face considerable costs. For some small waterworks, if their sole operator attends, they must contract for a replacement. Under the Fair Labor Standards Act, waterworks owners must compensate operators for Sunday travel or attending evening study halls with overtime. VDH provides six scholarships to operators from small waterworks to attend the August Short School courses.

The year 2023, VDH – ODW and VT transitioned back to face-to-face courses. Operators and other industry personnel have attended these courses, with attendees indicating a positive response to the trainings.

6.3. DWSRF Sponsored Training VDH continues to offer training and other operator certification support using DWSRF set-asides.

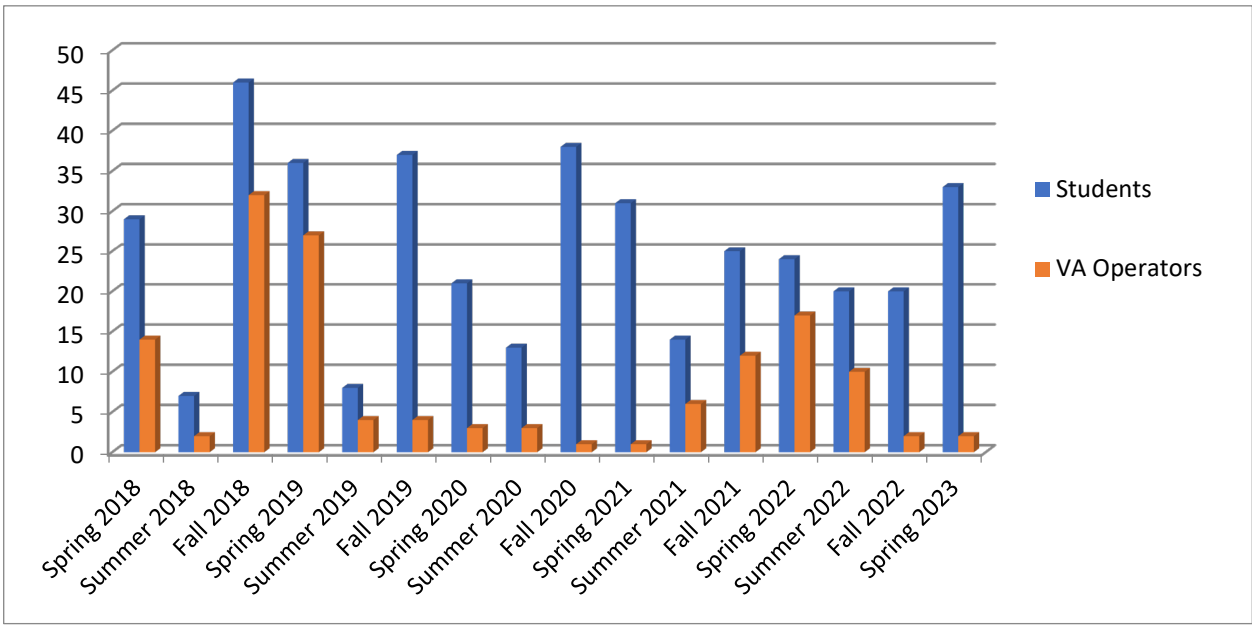
6.3.1. CPE Video Teleconference Series The VDH-CPE Broadcast Series is a series of webinars hosted by Virginia Tech and sponsored by the Virginia Department of Health Office of Drinking Water featuring various instructors that cover a variety of topics specific to water operations and utilities. These virtual workshops are broadcast throughout the Commonwealth of Virginia via Zoom. Using interactive technology, participants can engage in discussions and to ask specific questions of the presenters and participants around the state. The webinars are held on a Wednesday in February, March, April, May, June, July, September, October, and November and are scheduled from 12:00PM to 3:00PM. Evaluations and feedback from attendees are consistently positive.

Table 4 Continuing and Professional Education Video Teleconference Series			
Title	**Date**	**Location**	**Attendees**
July Virtual Water Quality Broadcast: PFAS in Virginia	07/13/2022	Webinar	174
September Virtual Water Quality Broadcast: Cross Connection Control: Regulation and Best Management Practices	09/21/2022	Webinar	161
October Virtual Water Quality Broadcast: Correcting Hydraulic Deficiencies at Existing Water and Wastewater Treatment Plants	10/12/2022	Webinar	138
November Virtual Water Quality Broadcast: Methods for Addressing a Variety of Inorganic Contaminants in Water Treatment Plant Operations	11/16/2022	Webinar	133
Feb Virtual Water Quality Broadcast: Water System Hydraulics	02/15/2023	Webinar	90
Mar Virtual Water Quality Broadcast: Sampling: Collection, Monitoring and Interpretation	03/15/2023	Webinar	156
Apr Virtual Water Quality Broadcast: Managing and Developing the Water & Wastewater Professional	04/12/2023	Webinar	133
May Virtual Water Quality Broadcast: Postponed – Instructor Emergency	05/17/2023	Webinar	N/A
Jun Virtual Water Quality Broadcast: Alternative Disinfectants	06/14/2023	Webinar	Future Program

6.3.2. Mountain Empire Community College (MECC) Online Degree Program VDH-ODW uses set-aside funds from the DWSRF to fund a two-year associate's degree program for waterworks and wastewater works by paying for the development and implementation of drinking water courses and web hosting. Funding support is limited to paying the salary of the Assistant Professor, head of the program, who is responsible for website management and curriculum development, along with all other duties that will assist in the training and addition of operators to the water treatment field. VDH – ODW believes its support not only helps to develop operators professionally, but also promotes waterworks operation as a career to students. MECC has started a new campaign to increase enrollment and early results indicate some success in this effort. MECC joined the Extended Learning Institute to get additional exposure for students to register through their program but take classes through MECC.

Since MECC started offering online licensing renewal courses in water, we have seen an increase in enrollment. The graph below shows that a high percentage of the AAS Degree students are not current operators. This is encouraging as they may represent potential operators. MECC also started offering classes through Virginia Western and Dabney Lancaster Community Colleges, which also helps with enrollment.

Enrollment has increased this semester, with a total of 33 current students. You can also see from the graph below that approximately half of our AAS Degree students are not current operators in the field, which is encouraging to think of the potential operators up and coming.



MECC's outreach to waterworks to use a federally approved apprenticeship program to attract high school and community college students into the drinking water industry has not been successful. However, waterworks are willing to allow MECC students obtain experience (under a licensed operator) for licensure fulfilled at their waterworks.

MECC has been working with the Department of Conservation and Recreation for the past nine years providing online licensing renewal courses for their operators. This partnership will continue in the future. MECC is currently working with the Department of Corrections regarding licensing renewal for its operators. This partnership has been ongoing for five years.

MECC began a partnership with SERCAP in 2021, but due to the pandemic, efforts were delayed. SERCAP is promoting the online water program at MECC, as well as providing laptops and paying for a laptop and free online math tutoring for low-income individuals. Once the student completes the program, they are allowed to keep the laptop. Since partnering with SERCAP, a total of 11 students have been recruited and provided laptop assistance. This began in the Fall 2021 semester.

Future:
After this summer, MECC will be offering the entire Career Studies Certificate to the entire Virginia Community College System (VCCS). A scheduled timeline must be developed for all courses before they meet the requirements. Videos will be developed for math tutorials, helping to better understand the proper steps to follow. A new SCADA class will be created to help show students how the system is used to help operate the plant.

6.3.3. Basic Groundwater Course for Small Systems This two-day Basic Groundwater Course teaches operators of very small waterworks to learn competencies for a Class 6 operator. The course material may also be suitable for some Class 5 operators; however, the curriculum does not cover all competencies for a Class 5 operator. Due to COVID the course was changed into a webinar-based course. During the reporting period, Short Course dates were February 7-7, 2023, with 20 attendees.

6.3.4. Applied Math and Basic Science Course VT offered this four-and-a-half-day short course June 5-9, 2023, with 20 students. This course covers the math and science of real-world, water treatment applications. It is an intensive course that builds from introductory, basic skills to the application of many important principles.

6.3.5. Hands-on Training at a Full-Scale Water Plant This program focuses on hands-on full-scale exercises at a water treatment plant. Subject matter experts provide the actual instruction, i.e., supervisors and lead operators, at the plant under a facilitator from the Department of Civil and Environmental Engineering at Virginia Tech. The program of instruction demonstrates and supplements lessons learned in the annual summer short courses at Virginia Tech. The goal is to offer training that will help operators understand the function of treatment systems, operate their systems optimally, and produce safe water. VT conducted the course on March 23-24, 2023, with 11 attendees.

6.3.6. Water Operations Math VT and ODW designed this 20-hour course to help both licensure candidates and experienced operators strengthen their understanding of the applied math used in the operation of conventional water plants and small water systems. Licensure candidates will find this course helpful when preparing to face the math portions of Class VI – Class I certification exams. VT offered the course on March 6, 2023, with 20 attendees.

6.3.7. Operation and Maintenance of Distribution Systems The City of Virginia Beach, Western Virginia Water Authority and Virginia Tech present this weeklong short course for distribution system operators. This "team approach" enables a comprehensive course specifically for distribution system workers. City of Virginia Beach Department of Public Utilities and Western Virginia Water Authority hosts this training. Partners other than those mentioned above included the City of Salem and the Virginia Rural Water Association in the planning phase. In addition to the instructors provided by the above partners, the Cities of Chesapeake and Lynchburg and the New River Valley Regional Water Authority provided instructors.

Organizers hold lectures and demonstrations in the mornings and demonstrations in the field and hands-on exercises are in the afternoons. Hands-on or demonstration topics included: proper lifting techniques, installation of pipes and valves, fire hydrant maintenance and flushing, water main leak detection, GPS and utility location, water main breaks and repairs, service connections and meter installation, pipe repairs, confined space entry, fall safety, trailer operation, excavation equipment, shoring excavated trenches, using an automated valve operator, industrial control systems, and pumps. VT held this course on May 22, 2023, with 10 attendees.

6.3.8. Contaminants of Concern The Virginia Department of Health decided to cancel this course in 2020 due to COVID. In recent years, participants learned about Contaminants of Emerging Concern (CECs), Contaminant Candidate Listings (CCLs), and the chemistry, toxicity, and effectiveness of treatment options for several chemicals of concern through case studies. This course was cancelled in 2022 but will be held June 27-29, 2023.

6.4. Other VDH Sponsored Training

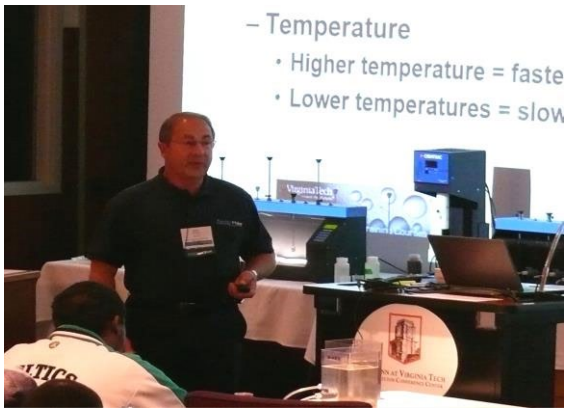
6.4.1. Drinking Water Fluoridation Course Due the absence of a Fluoridation Coordinator there were no courses provided during the reporting period.

6.4.2. Cross-Connection Control Workshop AWWA offers this 16-contact hour workshop in support of the Safe Drinking Water Act and the Virginia *Waterworks Regulations*. The workshop design gives participants a thorough classroom and hands-on review of the methods to test and inspect reduced pressure zone and other backflow prevention devices. Training includes both classroom and hands-on work with actual devices.

This training course addresses the following topics: definitions and related terms; controlling agencies and regulations; cross-connection record keeping; examples of cross connections; types of backflow protection devices and equipment; in-line inspection; and hands-on practice with test equipment. ODW assisted with two cross-connection control workshops in one location. Class size is restricted to support the wet lab training. AWWA provides 1.4 CEUs or 16 CPE approved contact hours for this workshop. During this reporting period, a Cross Connection Control Training took place in Virginia Beach, Virginia, on Mar 13-17, 2023. There were 19 registered attendees.

6.4.3. Waterworks Operator Short Course The flagship of Operator Certification training is the weeklong Short Course that has been held at Virginia Tech since the 1940's. Virginia Tech recorded many sessions and had a few live virtual sessions for this course. There are four levels to the course: introductory, intermediate, advanced, and supervisory. The curricula for the intermediate, advanced, and supervisory sessions build on the preceding year's course. VT held the virtual course August 1 through August 9, 2022, and 96 people attended this training.

- The first-year course concentrates on small waterworks using groundwater for their source with an introduction to other treatment technologies. The core subjects taught are cross connection control, disinfection, basic electricity, and safety. Fifty-two people attended Year 1 training.
- The second-year course is primarily an introduction to surface water treatment. The instructor introduces topics like zeta potential,



optimizing the coagulation process, pretreatment chemistry, and taste and odor control. Twenty-six people attended Year 2 training.

- The third year focuses on surface water treatment with filtration, disinfection and disinfection byproducts, nuisance organisms, sedimentation, and flow measurement. Eighteen people attended Year 3 training.
- The fourth year focuses on advanced treatment technologies and supervisory skills. Virginia Tech CPE cancelled Year 4 last year due to low registration.

Virginia Tech funds the course through student registration fees. Instructors volunteer their time on a pro bono basis. VDH staff provide in-kind instruction at many of the sessions.

6.4.4. All Hazards Security Training
All Hazards Emergency Preparedness and Security Training

The Virginia Department of Health - Office of Drinking Water has been recruiting for an Emergency Manager for nearly a year. During the reporting period there has been no training for waterworks operators directly from the Office of Drinking Water on security or emergency management. Field office staff continue to monitor and provide technical assistance as need related to emergency events. ODW leadership continues to engage in the Virginia Emergency Support Team (VEST) with the Virginia Department of Emergency Management (VDEM). Several VDEM trainings (VERTEX) events were attended by Mr. Dwayne Roadcap, Director – Office of Drinking Water. Mr. Jason Yetter and Mr. Barry Matthews also participated in VERTEX events.

6.5 Other Partner Sponsored Training

6.5.1. Virginia Section American Water Works Association Training Below is a list of training conducted throughout Virginia by the VA AWWA. The list excludes the previously highlighted Cross Connection Control trainings.

Table 5
Virginia Section American Water Works Association Training

Title	Date	Location	Attendees
Cross Connection Control Training (40-hour course)	11-Jul-22	Henrico County Water Treatment Plant	11
Leadership Academy 21-22: Emotional Intelligence	21-Jul-22	Richmond, VA	26

Good Lab Practices Conference	July 25-26, 2022	Charlottesville, VA	145
Achieve and Maintain Compliance with the SDWA (EPA Grant)	28-Jul-22	Franklin VA	32
Trending in an Instant: A Risk Communication Guide for Water Utilities	9-Aug-22	Webinar	19
Technology Services Roundtable: Practical Ways to Address the Lead and Copper Rule Revision (LCRR)	18-Aug-22	Webinar	90
Unpacking the Latest Guidance on the Lead and Copper Rule Revisions (LCRR)	30-Aug-22	Webinar	100
Leadership Academy 22-23: Kickoff- Visualizing your Leadership Goals and Accountability	14-Sep-22	Virginia Beach, VA	28
Cross Connection Control Training (16-hour course)	October 19-21, 2022	Virginia Beach, VA	23
Contractor Perspective: Current Market Challenges	28-Oct-22	Webinar	141
Leadership Academy 22-23: Enduring Leadership Project	2-Nov-22	Richmond, VA	28
Fall 2022 Plant Operations Seminar	4-Nov-22	Lynchburg Department of Water Resources	28
EUM in Action: Current VA Effective Utility Management Case Studies	16-Nov-23	Webinar	141
Technology Services Roundtable: AWIA Requirements for Small Utilities	17-Nov-23	Webinar	28
Thoughtful Tuesday: The Humanity in Us - A Workshop on Equitable Decision-Making	10-Jan-23	Webinar	51
Technology Services Roundtable: Vendor Trust Management	19-Jan-23	Webinar	36
Leadership Academy 22-23: Ethical Leadership- Case Studies from Industry Leaders	25-Jan-23	Williamsburg, VA	28
2023 Utility Management Panel Discussion Series I	1-Feb-23	Webinar	52
2023 Utility Management Panel Discussion Series II	8-Feb-23	Webinar	52
Thoughtful Tuesday: Let's Talk Love	14-Feb-23	Webinar	20

2023 Utility Management Panel Discussion Series III	15-Feb-23	Webinar	52
Leadership Academy 22-23: Crucial Conversations Book Discussion Part I	16-Feb-23	Webinar	28
2023 Utility Management Panel Discussion Series IV	22-Feb-23	Webinar	52
The Latest on PFAS In Virginia	23-Feb-23	Webinar	90
Cross Connection Control Training (40-hour course)	March 13-17, 2023	Town of Leesburg Utility Maintenance Facility	19
Thoughtful Tuesday: Advancing Woman Leaders through Mentorship/Allyship	14-Mar-23	Webinar	54
Technology Services Roundtable: IT/OT Synergy	16-Mar-23	Webinar	56
A National Lens on PFAS Regulations and Treatment	21-Mar-23	Webinar	56
Leadership Academy 22-23: Crucial Conversations Book Discussion Part II	29-Mar-23	Webinar	28
Virtual Lunch and Learn: Advanced Water Treatment	18-Apr-23	Webinar	15
Drinking Water Quality and Research Annual Seminar: Plant of the Future- What Will Drive Long-term Changes?	19-Apr-23	Jepson Alumni Center	80
2023 Spring Distribution Systems Seminar	26-Apr-23	Henrico DPU Operations Facility	60
Achieve and Maintain Compliance with the SDWA (EPA Grant)	9-May-23	Gloucester, VA	28
Get the Lead Out 2023: A Progress Report	11-May-23	Webinar	53
Leadership Academy 22-23: Five Dysfunctions of a Team	15-May-23	Fairfax Water, Occoquan VA	28
Technology Services Roundtable: Taming SCADA- An Overview of the ISA112 Lifecycle	18-May-23	Webinar	77

6.5.2. Virginia Rural Water Association (VRWA) Training VRWA conducts training sessions throughout Virginia. VRWA continues to reach out to small systems and provide needed training. One area of much needed training is the "Need-to-Know" for Operator Certification. Examples of training are:

Exam Preparation Class – offered several times throughout the year focus on the 2017 ABC Need-to-Know Criteria for Levels 1-4. Instructors discuss examination preparation, studying tips, and exam question format. Students review the top five water and wastewater formulas and troubleshooting. VWRA provides time management, test-taking tips, and exam practice questions.

Management of Water & Wastewater Facilities in the Real World – held several times during the year. Water and wastewater are vital to every community, and management of utility processes is a significant responsibility. The presenter has over three decades of operational and management experience in a wide variety of water and wastewater facilities and circumstances. Planned topics include Employee Relations, Budgets and Financial Reports, Customer Relations, Regulatory Relations and Emerging Trends in Water and Wastewater Facility Management. Operators can improve their job performance by learning proven "real world" management techniques while satisfying the CPE requirements of DPOR.

Table 6
Virginia Rural Water Association Training

Title	Date	Location	Attendees
Water Storage and Distribution	7/21/2022	Rocky Mount	9
Leadership in the New Millennium	8/25/2022	Roanoke	52
Workforce Development	8/25/2022	Roanoke	53
Paying the Bills - Where is the Money Coming From?	8/25/2022	Roanoke	51
Emergency! Emergency! Emergency! Are you Ready?	8/25/2022	Roanoke	50
Cyber Security: Identifying & Responding to Current & Future Threats	8/26/2022	Roanoke	55
Leadership Roundtable Discussion	8/26/2022	Roanoke	36
ABC Certification Training	9/7/2022	Big Stone Gap	10
Asset Management & Rate Setting Team (Pt 1)	9/20/2022	webinar	23
Operation of Water Distribution in Coal Mining Regions	9/21/2022	Wise	7
Diving Deeper into the Science of Manholes	9/22/2022	Woodstock	8
Pump Operation & Maintenance	9/28/2022	Big Stone Gap	27
Asset Management & Rate Setting Team (Pt 2)	10/4/2022	webinar	21
VDOT Basic Work zone Safety and Flagger Certification	10/17/2022	Fishersville	22
Don't Get Stuck - Tips & Trips for Asphalt Repairs	10/18/2022	Fishersville	65

Keep on Trucking: CDL Training to Keep you Rolling	10/18/2022	Fishersville	91
Notes from the Field: Moderated Discussion of Water Experts	10/18/2022	Fishersville	81
How to Keep Pumping: Understanding Pumps and Contingency Plans	10/18/2022	Fishersville	54
Treatment Plant Safety: Watch out for Hazards at Work	10/19/2022	Fishersville	64
It's Not Simply Concrete Pipe - Asbestos Pipe: Identifying & Handling	10/19/2022	Fishersville	76
VDOT Basic Work zone Safety and Flagger Certification	10/20/2022	Broadway	10
Water Distribution Product Training	10/25/2022	Ashburn	93
Management of W/WW Facilities in the Real World	10/26/2022	Wise	8
Water Distribution Product Training	10/27/2022	Richmond	62
Water Distribution Product Training	11/1/2022	Norfolk	61
Water Distribution Product Training	11/3/2022	Roanoke	49
Five Steps to Protect Your Utility - Cybersecurity	11/15/2022	webinar	10
Operation & Safety: Chlorine	11/16/2022	Wise	9
Conflict Resolution	11/17/2022	webinar	12
Management in the Real World	12/5/2022	Emporia	17
Operation & Safety: Chlorine	12/6/2022	Emporia	14
Utility Ethics	12/8/2022	webinar	14
Managing Job Performance	1/12/2023	webinar	20
Management in the Real World	1/23/2023	Richlands	13
Operational & Safety Aspects: W/WW Chlorine	1/24/2023	Richlands	12
Management in the Real World	2/6/2023	Buena Vista	20
Operational & Safety Aspects: W/WW Chlorine	2/7/2023	Buena Vista	11
Effective I&I Abatement Program for Small Utilities	2/16/2023	Lebanon	24
Pump Operation & Maintenance	2/21/2023	Buena Vista	22
Safety & Security for W/WW Operations	2/22/2023	Wise	16
Conf 2023 - Tools and Tech for Business Continuity	4/17/2023	Roanoke	36
Conf 2023 - OSHA at a Glance	4/17/2023	Roanoke	72
Conf 2023 - Anaerobic Treatment: One Solution to High Strength Food & Beverage Waste Streams	4/18/2023	Roanoke	41
Conf 2023 - Basic Asset Management & Preventative	4/18/2023	Roanoke	46

Maintenance Equals Lower Costs, Grant Money, and Higher Reliability			
Conf 2023 - Being a Woman in Rural Water: Panel Discussion	4/18/2023	Roanoke	46
Conf 2023 - Challenges in Supply Chain and Proactive Solutions to Overcome It	4/18/2023	Roanoke	42
Conf 2023 - How to Achieve LCRR Compliance with Confidence	4/18/2023	Roanoke	73
Conf 2023 - Lagoon Aeration Technology: Reduces Energy, Activates & Digests Sludge	4/18/2023	Roanoke	33
Conf 2023 - Navigating the Flood of Advanced Metering Technology	4/18/2023	Roanoke	47
Conf 2023 - Science of Water Main Breaks & Service Line Leaks	4/18/2023	Roanoke	72
Conf 2023 - The Art of Direct Procurement: Streamline the Process and Reduce Costs	4/18/2023	Roanoke	57
Conf 2023 - The Future of Pump Control	4/18/2023	Roanoke	72
Conf 2023 - The Show Must Go On: Business Continuity, Succession Planning, Emergency Response	4/18/2023	Roanoke	68
Conf 2023 - Smart Sewer Technology Tracks I&I and Avoids Spills Across Small Communities	4/18/2023	Roanoke	32
Conf 2023 - Sustainable Water & Wastewater Treatment: Reducing Carbon Footprint of Operations	4/18/2023	Roanoke	60
Conf 2023 - Crisis Communications in the Instant Information Age: Lessons Learned from the Texas Freeze	4/18/2023	Roanoke	73
Conf 2023 - Fundamentals of Water Distribution	4/18/2023	Roanoke	78
Conf 2023 - Remote Zero-Discharge and Hybrid Reuse Onsite Wastewater Treatment Systems in Virginia	4/18/2023	Roanoke	32
Conf 2023 - Cybersecurity: Why OT & IT are Needed	4/18/2023	Roanoke	44

Conf 2023 - A Case Study of a PFAS Lawsuit and PFAS Removal Pilot Project	4/19/2023	Roanoke	32
Conf 2023 - Advance Monitoring of Wastewater	4/19/2023	Roanoke	21
Conf 2023 - Best Practices for Leveraging Technology in Facility Asset Management	4/19/2023	Roanoke	38
Conf 2023 - Efficient Way to Develop a Lead Service Line Inventory	4/19/2023	Roanoke	69
Conf 2023 - Guarantee the Success of Upgrading Your Wastewater Plant Using the ESCO Model	4/19/2023	Roanoke	23
Conf 2023 - New Technologies for Joining & Restraining Pipe	4/19/2023	Roanoke	61
Conf 2023 - PFAS Considerations	4/19/2023	Roanoke	61
Conf 2023 - Pumping Contingency Plans	4/19/2023	Roanoke	23
Conf 2023 - Safety Benefits of Hydro Excavation	4/19/2023	Roanoke	46
Conf 2023 - Teams Matter: How to Increase Morale and Productivity on Your Team	4/19/2023	Roanoke	77
Conf 2023 - Town of Dayton Water Plant Up-Grade Success Story	4/19/2023	Roanoke	40
Conf 2023 - UDSA Rural Development Funding Opportunities	4/19/2023	Roanoke	51
Basic VDOT Work zone & Flagger Certification	5/15&16/2023	Courtland	9
Emerging Contaminants	5/17/2023	Buena Vista	19
Emerging Contaminants	5/17/2023	Abingdon	18

7.0 Recertification

The Licensing Board may allow for the recertification of operators who failed to renew their licenses by the license expiration date, in accordance with its regulations. The Licensing Board permits reinstatement if they receive the application for renewal more than 30 days late, but less than 12 months after the expiration date. The date on which the renewal application, any required documentation and the required fees are received determines whether the license is eligible for renewal. If still eligible, the operator pays a reinstatement fee as established in *18VAC160-30-40.* The board may deny recertification of a license for the same reasons as it may refuse initial licensure. DPOR provided no recertifications during the reporting period. There was a waiver in place because of the COVID-19 public health emergency that extended the validity of all licenses throughout the applicable reporting period, thus no licenses would have been subject to late renewal or reinstatement.

An individual who fails to renew his license within 12 months after the expiration date printed on the license is ineligible for reinstatement. The operator must then apply for a new license by examination in accordance with the *Regulations (18VAC160-30-20 et seq.).* However, the individual is eligible to sit for the examination in the same category and class of license as the expired license.

8.0 Stakeholder Involvement

8.1 Operator Training Stakeholder Advisory Group Stakeholder committee members are responsible for giving their respective organizational input into the planning and evaluation of operator training programs. ODW formed a standing stakeholder group to address how to best train small waterworks operators and has met throughout the development and implementation phases. During the reporting period, the standing advisory group met on March 16, 2023. Individual members change as their affiliations appoint replacements. The list of the current members/affiliations is below.

Table 7
Operator Training Advisory Group

Member	Affiliation
Caleb Taylor	Professor of Civil and Environmental Engineering, Virginia Tech
Bob Canova	Instructor, Virginia Western Community College
Trisha Henshaw	DPOR
Rosa Lee Cooke	MECC
Geneva Hudgins	VA AWWA
Caleb Taylor	New River Valley Regional Water Authority
Andy Crocker	SERCAP
Adrianna Dimperio	Community Outreach, Draper Aden
Vacant	CDBG- Community Development
Julie Cavalier	Environmental Finance Network
Mike Ritchie	VRWA
Dwayne Roadcap	ODW Director
Barry Matthews	Director - Capacity Development, ODW
Jason Yetter	ODW Training Coordinator Operator Certification
Julie Floyd	ODW Capacity Development Supervisor

8.2. Licensure Board The VDH – ODW Director is a member of the DPOR Licensure Board. VDH-ODW's Training, Capacity Development and Outreach Manager attends the DPOR Licensure Board's Education Committee meetings and the Operator Training Coordinator serves as a consultant to the Licensure Board and provides guidance in the area of operator certification and training when needed. The Operator Training Coordinator reports on training activities and stakeholder recommendations to

the Licensure Board and participates on ad hoc committees and work groups to address topics such as review of training courses submitted for board approval.

8.3. Virginia Section-AWWA Education ODW's Operator Training Coordinator attends the VA AWWA Education Committee's meetings as a permanent appointee. The committee's goal is to ensure that the section meets identified training needs. The committee coordinates with other committees that provide training. The Education Committee offers webinars two to three times per year.

8.4. Waterworks Advisory Committee The Waterworks Advisory Committee (WAC), is a standing committee appointed by the Commissioner and consists of 13 appointed members and 3 ex officio members specified below. Appointed members serve at the discretion of the Commissioner with staggered terms that are three years in duration. The WAC makes recommendations to the Commissioner regarding waterworks and water supply policies and procedures, as well as ODWs programs.

The Commissioner appoints to the WAC one individual each from the following affiliations:

(a) a member of the VA AWWA;
(b) a member of the Virginia Society of Professional Engineers;
(c) a member of the Virginia Water Well Association, Inc.;
(d) a member of the Consulting Engineers Council;
(e) a water treatment plant operator having a valid license of the highest classification in waterworks issued by the Licensure Board;
(f) a faculty member of a state university or college whose principal field of teaching is Environmental Engineering;
(g) a community waterworks owner;
(h) a nontransient noncommunity representative;
(i) a representative from Virginia Rural Water Association;
(j) a representative from Southeast RCAP;
(k) a representative from the Virginia Association of Counties; and (l) a citizen representative.

During the reporting period, the WAC met February 16, 2022, March 4, 2022, July 20, 2022, September 21, 2022, and December 22, 2022. (Next meeting is scheduled June 12, 2023) The meetings are open to the public.

8.5. Public Hearings

There were no Public Hearings during this reporting period.

9.0 Program Review

9.1. Licensure Board Meetings There were four board meetings held during the reporting period: 7/14/2022; 10/27/2022; 1/26/23; and 4/20/2023.

9.2. Licensure Examination Review Committee Since the transition to the ABC examination, this committee is no longer in use.

9.3. Education and Training Committee of the WWWOOSSP Board The Education and Training Committee met four times during the reporting period: 10/27/2022; 1/25/2023; 4/20/2023; 5/16/2023. During these meetings, the Committee reviewed 60 training program applications recommended them for Board approval (the Licensing Board granted approval of all applicants), as well as reviewed existing approved courses for the purpose of updating the number of training credits permitted for experience requirement substitutions.

9.4. Internal Review VDH conducted an internal review as part of the March 16, 2023, stakeholders meeting. VDH staff and stakeholder advisory group members reviewed all areas of the Operator Certification program (see stakeholder meeting minutes).

9.5. Operator Certification Program External Review As required by the Federal Guidelines, the next formal external review is due 2026.