

North Carolina
Water Treatment Facility Operators Certification Board

2022 Annual Report

To the Honorable Roy Cooper
Governor of North Carolina

Prepared by:

Ann Wall, Second Vice-Chair
NCWTFOCB

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A. Description of the Program:

In 1969, the North Carolina General Assembly passed a law providing for the professional certification of water treatment facility operators. N.C. General Statute (NCGS) 90A-20 through 90A-32 provides for the establishment of the Water Treatment Facility Operators Board of Certification (i.e., the “Board”), for the classification of water treatment facilities, and for the issuance of licensing certificates to water treatment facility operators.

NCGS 90A-20 states that the purpose of the certification program is “to protect the public health and to conserve and protect the water resources of the State; to protect the public investment in water treatment facilities; to provide for the classifying of public water treatment facilities; to require the examination of water treatment facility operators and the certification of their competency to supervise the operation of water treatment facilities; and to establish the procedures for classification and certification. Further, it is the purpose of this Article to provide for the certification of personnel operating the distribution portion of a water treatment facility.”

The Operator Certification Program is located within the Public Water Supply Section of the Division of Water Resources and provides staff support to the Board. The program includes education and training specialists as well as administrative support staff. Staff perform a variety of functions that include administering statewide examinations, approving and auditing professional growth courses, managing database and state records, providing training and outreach, processing fee receipts, participating in the enforcement of *Rules Governing Water Treatment Facility Operators* (Title 15A Subchapter 18D) and coordinating an annual license renewal process.

The existence and successful function of the State’s certification efforts have consequences with respect to federal funding. On an annual basis, the U.S. Environmental Protection Agency (EPA) reviews and approves certification program activities and reserves the authority to withhold 20 percent of the Drinking Water State Revolving Fund, a federal grant that supports drinking water infrastructure, if baseline program expectations are not met. To date, EPA has always approved North Carolina’s certification program activities.

B. Budgetary Considerations:

Certification activities are supported by operator fees generated by the program (as per 15A NCAC 18D .0304). The program does not receive money from the general fund, nor does it regularly receive federally appropriated funds. Fee receipts are used for a variety of purposes, including salary support, IT services/software development, capital equipment and expenditures associated with training and examinations administered throughout the State.

Table 1 (below) provides five years of historical data relevant to the program’s financial status. Additional financial data is available for earlier years and available upon request.

Table 1. Historical financial data (dollars)

Financial Indicator:	FY2018	FY2019	FY2020	FY2021	FY2022
Projected Budgetary Needs	339,052	284,903	276,519	283,413	323,142
Actual Expenses	317,460	277,688	325,219	313,743	239,163
Actual Fee Receipts	318,895	319,495	325,220	315,569	293,980

C. Status of Professional Operators:

North Carolina requires four distinct categories of certified professionals to operate the State’s drinking water treatment facilities. These categories include surface, well, distribution and cross connection operators. To become certified, an operator must complete a Board-approved training program and also pass an examination administered by the certification program.

The State’s community of certified operators has remained relatively stable over the past five years, as shown below in Table 2. Initial certifications and the number of upgraded certifications issued rebounded as compared to the 2020 numbers. This is likely due to a resumption in exams administered following earlier COVID-19 restrictions.

Table 2. Trend indicators regarding certified operators

Trend Indicator:	2018	2019	2020	2021	2022
No. of Certified Operators	5,683	5,760	5,655	5,656	5,626
Initial Certifications Issued	411	337	219	337	347
Upgraded Certifications Issued	497	625	192	335	405
No. of Operators Decertified	519	377	446	430	660

D. Enforcement Activities:

With few exceptions, public water systems in North Carolina must have a certified operator in responsible charge (ORC) for each water treatment facility that: (i) alters the physical, chemical or microbiological characteristics of the water; (ii) has approved plans for such alterations; or (iii) has equipment installed for such alterations (as per 15A NCAC 18D .0206). The Operator Certification Program, with input from Public Water Supply Section’s Regional Office staff and water system officials, maintains ORC information for all the State’s public water systems. In instances of non-compliance, the program issues notices of violation (NOVs). The Section Chief of the Public Water Supply Section has designated authority to assess administrative penalties (APs) in cases when non-compliance exceeds 90 days. Once an administrative penalty is assessed, the Technical Services Branch of the Public Water Supply Section pursues enforcement actions with assistance from the N.C. Department of Justice. Table 3 (below) shows a summary of enforcement activities that have occurred over the last five years. During this reporting period, there were 5 NOVs and 3 APs issued.

The Board has authority to take disciplinary action and revoke certifications in cases where negligence, operator incompetence, or criminal activity has occurred. The Board did not have any disciplinary actions to consider during this reporting cycle.

Table 3. Enforcement related activities

	2018	2019	2020	2021	2022
No. of NOVs	0	20	6	8	5
No. of APs	0	5	0	0	3
Disciplinary Actions	0	2	1	0	0

E. Program Goals and Objectives:

The certification program maintains a set of general objectives that are used to prioritize staff activities. The program continued to successfully meet these objectives in 2022. The program’s general objectives include:

1. **Ensure public water treatment facilities have properly certified operators.** As discussed in section D of this report, the program tracks ORC assignments at all applicable water systems across the State. Upon completion of the annual renewal cycle, a report is submitted to regional office staff which indicates any system whose ORC was expired for either failure to pay renewal fees or lack of accrual of professional growth hours for the year. To assist systems with ORC placement, the program provides lists of available operators, upon request, to any water system attempting to fill a vacancy.
2. **Certify water treatment facility operators by examination.** Historically, paper examinations are held across the State on a quarterly basis. In addition, three electronic

exams are offered in the interim. In 2022, the certification program administered 1,704 examinations with an overall pass rate of 51 percent for all certifications combined.

3. **Provide logistical support for the Board.** Program staff support the Board by conducting its routine business and functioning as secretary during the Board's quarterly meetings. Activities typically include logistics and support, which include compiling statistical reports, preparing documents, creating meeting agendas and providing input on policy decisions.
4. **Provide online availability of operator records and information.** Certified operators expect and are provided information that is continually updated and delivered via the program's website. Information of interest includes forms and publications, rule reference materials, course offerings for approved schools and professional growth and monthly updates on operator status. Additional access to operator records is afforded through an operator portal developed to allow individuals to establish secure accounts and access information related to their certifications.
5. **Review and pre-approval of courses for professional growth.** Certification program staff review requests from external vendors and trainers for approval of professional growth opportunities for the State's operators. To date, the program has approved approximately 3,660 courses for professional growth.
6. **Maintain operator records.** The program maintains an IBEAM database to permanently record activities related to licensure. Information includes a history of exams taken, schools completed, professional growth hours earned, personal/contact information, active certifications, ORC appointments, and fees paid to the Board.
7. **Manage the annual operator renewal process.** The certification program coordinates the annual renewal process for approximately 8,660 professional certifications in the State. The renewal process includes billing, processing fees, verifying professional growth hours, updating database records and expiring ineligible operators. The process is intensive but has been noticeably improved with the introduction of electronic payment options. Wallet cards are printed and mailed to operators at the end of the renewal process.

F. Anticipated Program Improvements and Recommendations for 2023:

The most significant potential for improvement to the certification program continues to be via IT initiatives and solutions. Such improvements are consistent with the division's instructions to identify and implement program efficiencies. In 2023, the program intends to continue pursuit of the following:

- a. Completion of a consolidated database for managing all certified operator information. The database will house information on both drinking water and wastewater operators and will facilitate automated document generation and archiving procedures.
- b. Development of "on demand" examinations. Operators frequently inquire about the possibility of taking an examination outside the times of the program's published schedule. An on-site computer lab is operational and has been utilized for exam administration.
- c. Enhancements to the electronic payment system will include multiple payment options (i.e., more than one invoice paid at a time) and electronic uploading of payment data to the operator database.
- d. Conversion of all program applications and forms to online, fillable documents and to potentially allow for electronic submittal. Additionally, all documents are being evaluated for consistency across programs (drinking water and wastewater) and will be consolidated where appropriate.

The improvements listed above will increase the efficiency of efforts required by staff as well as benefit the State's operators of drinking water facilities.