

**NORTH CAROLINA
ANNUAL
EPA CERTIFICATION
PROGRAM
REPORT**

May 2014

North Carolina Division of Water Resources
Public Water Supply Section
North Carolina Operators Certification Program

North Carolina Water Treatment Facility Operators Certification Program

Annual Report to EPA
May 2013 to May 2014

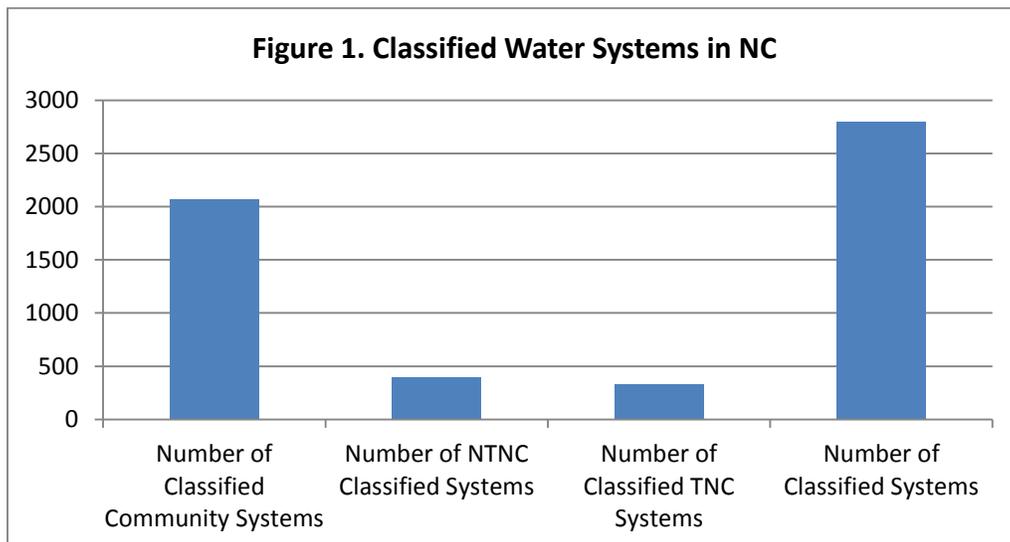
This report outlines the Environmental Protection Agency’s (EPA) nine baseline standards for state operator certification programs. It describes in detail the status of the Operators Certification Program in North Carolina as related to these standards.

1. Authorization

North Carolina General Statutes 90A-20 through 90A-34 and N.C. Administrative Code Title 15A Subchapter 18D (15A NCAC 18D), *Rules Governing Water Treatment Facility Operators*, govern the training, certification and performance of water treatment facility operators, as well as the classification and maintenance of water treatment facilities. The N.C. Water Treatment Facility Operators Certification Board (NCWTFOCB) has rule-making authority in our state. The NCWTFOCB did not revise 15A NCAC 18D during the current reporting cycle.

2. Classification of Systems, Facilities and Operators

All public water systems in North Carolina, except transient non-community systems with either or both ultraviolet light disinfection or softening, 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). North Carolina has 2070 community water systems and 401 non-transient non-community (NTNC) systems, as shown in Figure 1 below. All of these systems have been classified to determine the level of certified operator required. In addition, NC has approximately 328 classified transient non-community (TNC) systems that require a certified operator. TNC systems in NC are classified for certification purposes if the facility provides disinfection other than ultraviolet treatment.

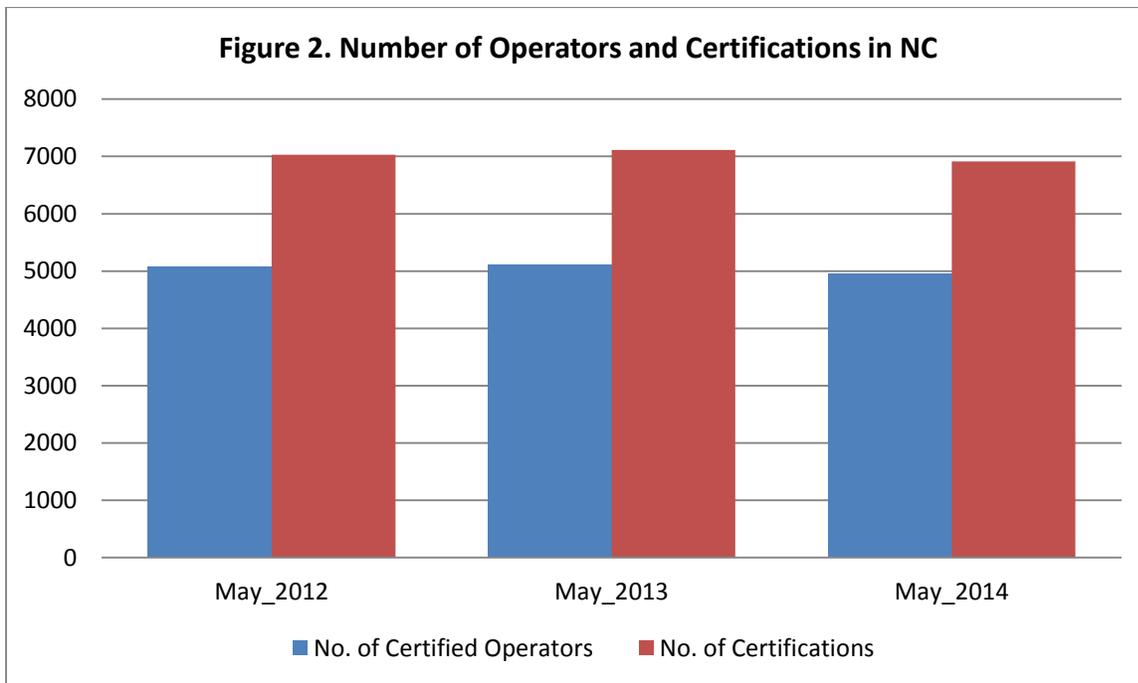


The state’s ORC information is received and maintained by the Operators Certification Program. Operators are required to inform the NCWTFOCB whenever ORC designations are changed (15A NCAC 18D .0701 (e)). In addition, during the annual certification renewal period, certified operators must submit a form that lists facilities for which they serve as ORC. The Operators Certification Program annually updates its database for ORC designations based upon information received during the renewal period.

For additional verification, the Public Water Supply (PWS) Section’s Regional Office staff inspects treatment facilities and their distribution systems to determine the classification of each system. Regional Office staff also verifies during sanitary surveys that systems have a properly certified ORCs. Each ORC must hold a certification that is equal to or greater than the classification of the facility under their supervision (15A NCAC 18D .0206). After a sanitary survey, the Regional Office staff submits ORC changes or violations to the Operators Certification Program.

During this reporting period there were 85 systems that received notification letters requiring information to confirm ORC qualifications.

Currently, there are 4954 certified operators holding 6915 certifications in North Carolina. Figure 2 (below) displays a 3-year data trend. Current year statistics reflect a 3% decrease in the state’s population of certified operators as compared to the previous reporting cycle. Greater system consolidation is a likely contributor to the slight reduction of certified operators.



The NCWTFOC Board has authority to issue temporary certifications in cases where: (i) operators are in the process of upgrading their certification, and (ii) where operators with the proper certification are not readily available within the local vicinity. In all such cases, the operator requesting a temporary certification must demonstrate to the Board that they are

competent and able to fulfill duties in accordance with 15A NCAC 18C. During this reporting period, the NCWTFOCB issued two temporary certifications.

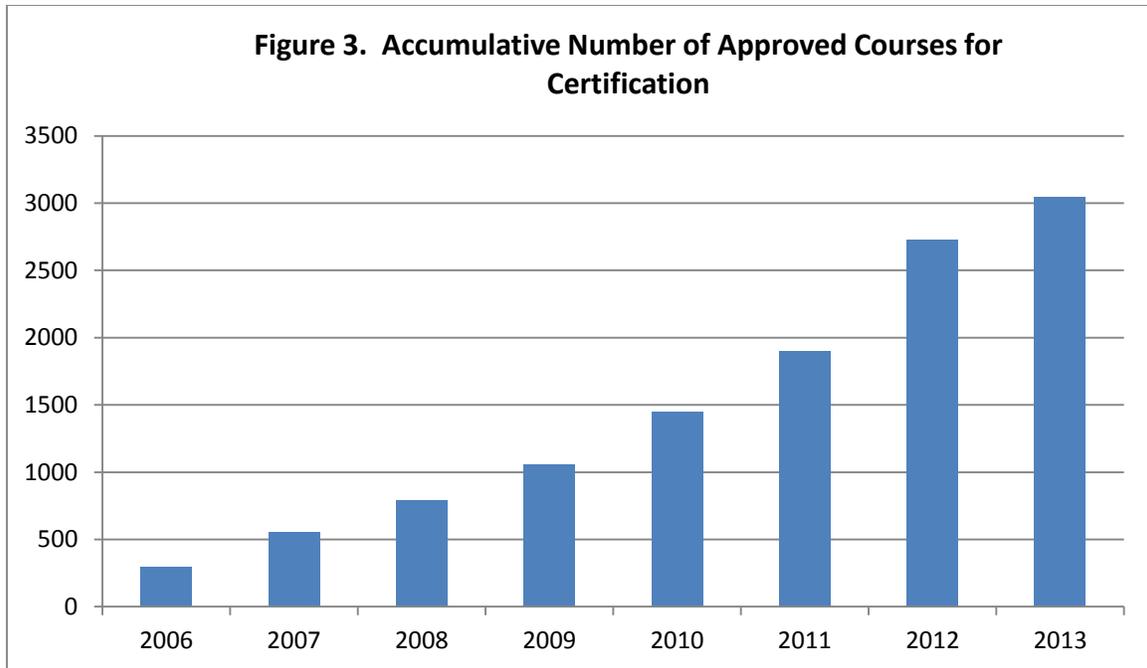
3. Operator Qualifications

The *Rules Governing Water Treatment Facility Operators* requires individuals applying for state certification to meet specific education and experience requirements. Operators must successfully complete a required training school approved by the NCWTFOCB (15A NCAC 18D .0201). Attendance rosters from the schools are forwarded to the Operators Certification Program, and the database is continually updated to include this information. The state does not have a “grandfathering” option that allows exceptions to the requirements for certification.

Potential operators must pass a comprehensive examination that demonstrates they have the necessary knowledge and ability deemed appropriate for their desired level of certification. Traditional examinations are offered in paper format and on a quarterly basis, with exam locations distributed across the state (e.g., Morganton, Kinston and Raleigh). In addition to the traditional examinations, computer based exams are administered three times annually. Program staff and applicants prefer computerized exams, with advantages including immediate results, greater accuracy, more convenience and enhanced security. Should any potential operators fail the same type and level of examination three times, they are required to re-take the appropriate school before repeating the examination (15A NCAC 18D .0202).

Applicants must demonstrate “acceptable experience” as defined by 15A NCAC 18D .0105. The required amount of acceptable experience varies in accordance with the requested classification level. NC has an option to allow applicants to become certified apprentices in Level C, D, or Cross Connect without experience if they pass an appropriate examination. The certified apprentice may be upgraded to full certification once the required acceptable experience has been obtained.

To maintain certification, operators are required to complete six acceptable professional growth hours annually. The NCWTFOCB has developed a preapproval policy, and the Operators Certification Program uses an IBEAM database to track professional growth hours and pre-approved courses. The program’s website is continually updated to display pre-approved courses. This information enables operators to select courses that are acceptable and appropriate for their specific professional growth needs. To date, 3,043 classes have been pre-approved as shown in Figure 3. Also, 361 trainers have been approved and seven organizations have been approved as sponsors.



4. Enforcement

The NCWTFOCB approved action to expire the certifications of 300 operators during the reporting period. Two hundred operator certifications were expired for failure to obtain the required six contact hours of professional growth, and 100 certifications were expired due to nonpayment of annual renewal dues.

The Operators Certification Program's IBEAM database allows instantaneous confirmation that drinking water facilities remain in compliance with state regulations, and that operators continue to maintain their certification requirements. If a facility does not have a properly certified ORC, the program sends a Notice of Deficiency to the system requesting ORC designation. The system owner is required to respond within 15 days. If the system owner does not respond or designate a properly certified ORC within 15 days, a notice of violation/administrative order (NOV/AO) is sent to the system owner, who then has 90 days to respond. If the problem is not resolved within 90 days, the information is sent to the PWS Section's Enforcement Unit for penalty preparation. The Chief of the PWS Section has delegated authority to assess administrative penalties. The maximum administrative penalty for this violation is \$100 per day from the date of the NOV/AO. There were 19 notices of violation and 5 administrative penalties issued this period for failure to have a properly certified operator (see Table 1).

**Table 1
NOV/AO Issued to Facilities**

Facility ID #	Facility Name	Date
0157427	NANTAHALA MIDDLE SCHOOL	May 6, 2013
0145010	CITY OF HENDERSONVILLE - CC	June 7, 2013
0145010	CITY OF HENDERSONVILLE - DIST.	June 7, 2013
0111151	NORTHVIEW MHP-DIST.	July 16, 2013
0111151	NORTHVIEW MHP-WELL	July 16, 2013
7071054	TOWN OF ATKINSON-CC	July 16, 2013

7071054	TOWN OF ATKINSON-DIST.	July 16, 2013
7071054	TOWN OF ATKINSON-WELL	July 16, 2013
2080064	GOLD HILL MARKET & GRILL	July 16, 2013
2080001	THE STAMP MILL CAFE	July 18, 2013
0136227	HOLLY FAYE MHP	October 3, 2013
0363035	TOWN OF TAYLORTOWN	October 3, 2013
0180201	GREEN ACRES MHP	October 28, 2013
0351040	TOWN OF PINE LEVEL	January 14, 2014
4051006	TOWN OF PINE LEVEL – FIRE TOWER	January 14, 2014
0494010	TOWN OF PLYMOUTH	January 14, 2014
0136111	CHAPEL GROVE MHP	January 14, 2014
7065038	HWY 421 PROPERTIES LLC A	January 14, 2014
7065055	HWY 421 PROPERTIES LLC B	January 14, 2014
Administrative Penalties Issued to Facilities		
Facility ID #	Facility Name	Date of NOV
0279692	GIDEON GROVE TRAILER PARK NO. 1	August 19, 2013
0276128	LEROY'S TRAILER PARK	August 19, 2013
0111170	MOUNTAIN VIEW MHP	August 19, 2013
0136055	RAGAN VILLAGE WATER ASSOCIATION	August 19, 2013
0136227	HOLLY FAYE MHP	April 8, 2014

A data link exists between the PWS Section’s Safe Drinking Water Information System (SDWIS) and the Certification Program’s IBEAM database. This link ensures that the most current ORC information is readily available to state inspectors during sanitary surveys or other site visits.

Another enforcement procedure exists to evaluate trainers during audits of courses offered for professional growth. Audits are performed on a random basis, with some being unannounced. Additionally, an audit is performed if any questions arise regarding how a class is conducted or the quality of its content. The Operators Certification Program has the authority to revoke preapproval status whenever the quality of training is deemed unacceptable and/or training providers do not adhere to established policy. There were eighteen class audits during the period for this report. During audits, program staff considers organization, subject knowledge, method and impact of delivery, training aids, and instructional monitoring along with efficient use of time and interaction with students. Audits have identified and corrected a variety of problems, including instructors not covering pertinent information, students leaving a session prematurely, and outdated information printed on course materials.

5. Certification Renewal

For certification renewal, operators are required to obtain six professional growth hours each year and pay an annual renewal fee of \$30 per certification. To meet the demand for approved courses and training, the Operators Certification Program works closely with training organizations such as the N.C. Section of the American Water Works Association, N.C. Section of the Waterworks Operators Association, N.C. Rural Water Association, the N.C. Community College System as well as private training providers.

Professional growth courses taken for certification renewal must have the approval of the NCWTFOCB. A course preapproval and tracking policy was adopted by the Board in 2006.

This policy allows preapproval of various courses types, including classroom, online and delivery via webinar. The policy also provides a mechanism for training organizations to become “approved sponsor.” Any organization that would like to receive preapproval for courses or to obtain sponsor status must submit a formal application and sign an agreement to comply with NCWTFOCB education requirements.

The Board has established a review committee, which meets as needed to evaluate and approve continuing education courses. The committee has the authority to approve webinars for professional growth hours, and on-line training as well as in-class sessions. In response to recommendations from our trainers, the review committee now considers requests “on demand.” The previous policy included a bulk, monthly processing routine of applications, which resulted in delays in promoting and refining new educational opportunities.

6. Resources Needed to Implement the Program

Presently, the Operators Certification Program is self-supported through a fee-based structure that is codified within N.C. General Statute 90A. Renewal and application fees are the primary revenue sources. The program does not receive money from the state’s 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 trainings and examinations administered throughout the state.

Table 2 (below) provides five years of historical data relevant to the program’s financial status. Additional financial data is available for earlier years and is available upon request. Unspent funds remaining at the end of the fiscal year are non-recurring and are transferred to the General Assembly.

Table 2. Historical financial data (in dollars)

Financial Indicator:	FY2009*	FY2010	FY2011	FY2012	FY2013
Projected Budgetary Needs	393,955	303,078	291,655	303,226	306,458
Actual Expenses	346,990	268,822	263,059	286,984	282,963
Actual Fee Receipts	376,626	285,970	291,175	292,570	292,300

* FY2009 included an EPA grant in addition to fee receipts.

7. Stakeholder Involvement

The NCWTFOCB meets quarterly in March, June, September and December. The meetings are open to the public, and public comment and participation is encouraged. Minutes taken at each Board meeting are public record. They are available upon request and also posted on the program’s website. Stakeholders traditionally have provided guidance, recommendations and input into rule revisions. Stakeholders have also endorsed anticipated programmatic improvements, including an electronic payment option and examinations “on demand” versus the quarterly schedule.

8. Program Review

The Operators Certification Program is subject to an annual internal review. The second Vice Chair of the NCWTFOCB conducts an internal review with results presented to the full Board. Board Member Danny Sloan conducted the internal audit in April of 2014. Each activity of the program was reviewed, and the results will be presented to the Board at the June 2014 meeting. A copy of the internal review is attached.

External reviews are conducted every five years by an entity outside the program's primary agency. The most current external review (April 2013) was conducted by Anthony Arnold, Owner and Instructor of Training Options for Professionals (TOPS). A copy of this external review was submitted to EPA as a component of the 2013 annual report and is not repeated in this reporting cycle.

The N.C. American Water Works Association (AWWA) and program staff regularly review and revise the distribution school curriculum, *Needs to Know*. *Needs to Know* is an outline of topics required for each level of certification and includes references within the textbooks used by the schools. The N.C. AWWA Board of Education and Examiners and program staff meet after each examination to review the results of distribution and cross-connection examinations and make any necessary changes. Similarly, The N.C. Waterworks Operators Association Board of Education and program staff periodically review and revise the well and surface school curriculum, *Needs to Know*. In addition, if examination results indicate a high percentage of students answered a specific question incorrectly, the wording of the question is checked for ambiguity. Ambiguous questions may be removed or clarified for future examinations. References on the answer key are also checked to ensure they are understandable and clear.

During this reporting period, program staff offered free training sessions for system operators. Staff held review sessions for operators to give them the opportunity to review their individual examinations and ask questions.

9. Implementation Schedule Update

The Operators Certification Program has recently entered into an era of change that will result in greater efficiencies and expanded services to the state's community of operators. The following changes and/or improvements are currently in process and will be implemented throughout the current year:

1. The program experienced major structural changes in September of 2013. A consolidation of the Division of Water Quality and the Division of Water Resources resulted in creation of a new organization unit which combines the certification functions of the state's wastewater operators, animal waste operators, and drinking water facility operators. A mandate to identify and implement program efficiencies and consistencies accompanied the reorganization. The new unit employs a full time staff of seven and manages professional certifications for over 15,000 operators in the state.

2. Following a server failure that disabled the program's document storage and retrieval system, a new structure to transfer paper documents into electronic format was developed and

initiated. In the new electronic format, operator records are searchable and can be retrieved readily by a variety of options. The new system includes secure access and conforms to the records retention and disposition schedule approved by the NC Historical Resources Director in April of 2012.

3. In accordance with a legislative directive, the *Rules Governing Water Treatment Facility Operators* (15A NCAC 18D), will be closely examined to identify candidates for rule change or readoption. There is an opportunity for clarification as well as insertion of new rule language to better serve the state's certified operators. The schedule for 18D is commencing in 2014.

4. The most significant potential improvements to the certification program is via IT initiatives and solutions. Such improvements are consistent with the Division's mandate to implement program efficiencies. In 2014, the program will pursue the following:

- (a) Development of new software to receive electronic rosters:
Course instructors and vendors often provide a written record of operators who have completed schools and professional growth classes (especially those instructors serving wastewater operators). In 2014 we will rewrite and release software that is web-based and allows electronic submission of roster data. In addition to drinking water operators, the new software will include provisions to accept waste water and animal waste operator certification information. These improvements have potential to eliminate a significant amount of data entry, enabling the staff to focus on technical, customer services activities that better support the state's operators.
- (b) Initiate a mechanism to accept electronic fee payment:
Many of the state's operators would prefer to pay fees via credit card over a secure website. Such a service is requested on a frequent basis. Currently, the certification program can only accept a traditional paper check for fee payment. Implementing this IT improvement will likely be a major undertaking.
- (c) Decouple sensitive information from the IBEAM database:
As per NCGS 93B-14, "Information on applicants for licensure," the Operators Certification Program is required to collect and maintain social security numbers from all applicants for licensure. The information can only be released upon request to the Department of Health and Human Services or the Department of Revenue. Securing this information has been a source of concern for our database programmers. In 2014 the program will explore options to decouple sensitive information from the database tables and maintain it in an alternate, highly secured server that is designed specifically for such information.
- (d) Initiate "on demand" examinations:
Operators frequently inquire about the possibility of taking an examination outside the times of the program's published schedule. In 2014 we intend to explore the possibility of creating an on-site computer lab that will allow operators to take an electronic, web-based exam at their convenience.