

Fiscal Impacts of Proposed Amendments to 15A NCAC 18D Rules Governing Water Treatment Facility Operators

Name of Commission: NC Water Treatment Facility Operators Certification Board (NCWTFOCB)

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Impact Summary:

State government:	Yes
Local government:	Yes
Private industry:	Yes
Substantial impact:	No
Federal government:	No

Authority: G.S. 90A-20 through 90A-34

Necessity: NCWTFOCB is requesting an amendment to current rules to serve the public interest. Presently, there is a shortage of certified water treatment facility operators. Also, it is difficult for individuals to get hired without certification and they cannot become certified unless already hired. Under the current rules, to be certified, an individual must complete a school approved by the board, pass the certification examination and complete 3 to 6 months experience at a water facility. Given the lower rate of passage of the certification exam, facilities take a risk when hiring individuals who have not completed their certification. Therefore, hiring managers continue to call the Board asking for help in locating certified operators to fill vacant positions. The Board also receives requests for temporary certifications, which require strict advertising of positions and proof that efforts to obtain a certified operator have been exhausted. Given the challenge of hiring qualified people, the water treatment industry has requested that the Board allow testing prior to experience in an effort to minimize turnover in those positions. The Board feels that an apprenticeship certificate would be the best way to mitigate this problem, while at the same time ensuring that skilled professionals are overseeing the treatment and distribution of safe drinking water.

Summary: The North Carolina Water Treatment Facility Operators Certification Board is proposing two amendments to 15A NCAC 18D. These changes would add an optional apprentice certification that individuals can obtain without experience and require former operators to re-complete the appropriate school when requesting reinstatement if certification has been expired, revoked, or retired for more than five years. DENR estimates that the net cost of the proposed rule changes could be between \$3,265 and \$4,000. The apprentice certification would shift costs for schooling and certification from local governments to private citizens who voluntarily choose to be program participants. These cost shifts do not change the certification costs. The state anticipates net benefits of approximately \$3,400. Local governments would

have net benefits of about \$28,200. Individuals who pursue the apprentice certification would have net costs of \$34,865-\$35,600. The following table depicts these impacts. The proposed rule changes would go into effect on December 1, 2011.

Estimated Annual Cost and Revenue Changes from Proposed Rule .0201, .0304, and .0309						
	Upgrading Revenue	Cost of Schooling	Cost of Certification	Cost of Upgrading Certification	Cost of Reinstatement Training	Net Change
State ¹	\$6,000			-\$2,600		+\$3,400
Local Government ²		\$28,200	\$6,000	-\$6,000		+\$28,200
Private Individuals		-\$28,200	-\$6,000		-\$665 to -\$1,400	-\$34,865 to -\$35,600
Total	\$6,000	\$0	\$0	-\$8,600	-\$665 to -\$1,400	-\$3,265 to -\$4,000

¹ Does not include additional potential administrative costs, which are likely to be minor.

² Does not include cost savings related to lower turnover in these positions.

I. Introduction and Purpose of Rule Changes

To protect the public health and the public water resources of the State, the North Carolina Water Treatment Facility Operators Certification Board (NCWTFOCB) certifies individuals who are competent to operate water treatment facilities. NCWTFOCB is proposing amendments to "Rules Governing Water Treatment Facility Operators" 15A NCAC 18D. 0201, .0304 and .0309. The proposed changes would add an apprentice certification for people without job experience and require former operators to re-complete the appropriate school when requesting reinstatement if certification has been expired, revoked, or retired for five or more years. The text for these proposed changes is in Appendix A.

Presently applicants for certification must meet educational and on-the-job training requirements and pass an exam administered by the Board. It is difficult for individuals to get hired without certification and they cannot become certified unless already hired. In addition, facilities have hired and trained individuals who were later unable to pass the exam. These people are released from employment and the facility must search for another candidate to train and certify. Hiring and training workers who are unable to pass the professional exam is costly and inefficient. The regulated community has voiced a strong desire for allowing operators to take the examination without experience first. NCWTFOCB conducted a stakeholders meeting on July 11, 2011 and the result from that was strong approval for these amendments. The Board is trying to change the rule to help the local facilities.

The amendments to .0201 and .0304 would create an apprentice certification that would allow applicants to take the certification examination without obtaining the experience presently required. The Board would certify applicants who pass the examination as apprentices. When the apprentices obtain experience, they can have their certification upgraded to a Grade C, D, or

CC certification. .0304 states that the fee for upgrading an apprentice to Grade C, D, or CC certification shall be fifty dollars (\$50.00). Apprentice renewal fees would fall under the same rules as other certifications. The annual renewal fee is \$30 for everyone. The new apprenticeship certification may mean that people renew their certifications sooner than in the past, and this may lead to a negligible increase in state revenue, and equal cost to those individuals. The maximum time an individual may hold an apprenticeship certification is 5 years.

An amendment is proposed for 15ANCAC 18D .0309 would require an operator to re-complete the appropriate school when requesting reinstatement of his certification if his certificate has been expired, retired, or revoked for more than five years prior to the date the Board considers the request.

There are approximately 2,572 facilities and 5,119 operators in North Carolina. The average number of new operators annually is 239 based on data pulled from the NCWTFOCB database from the year 2000 through year 2010. The board has not noticed any trend in the data and is using an average to reflect past activity.

II. Costs

Costs of Proposed Rule Changes .0201 and .0304

State Government:

The apprenticeship certificate requires the same amount of work/resources as issuing a regular certificate and therefore the difference in cost to state government from the new rule is just cost related to upgrading. There would be minor application processing and certificate issuing costs associated with upgrading apprentice certifications. Staff estimates that it takes one hour to process an application and that the worker who performs this task has an hourly compensation rate of \$21.64. This would make the total annual cost of upgrading the apprenticeship certifications around \$2,600. This estimate does not include overhead costs. The NCWTFOCB would not need additional resources to handle the expenses involved with implementing this program and maintaining the information in the database because the additional income of \$50 from the apprentice certification upgrade would cover the cost.

Local Governments:

There would be a new fee for upgrading the apprentice certification to a C, D, or CC grade certification. This fee would be \$50. If all apprentices upgrade their certification when eligible, this cost would be approximately \$6,000 annually. Employers usually pay for certifications but sometimes the individual employees are responsible for this expense. Under some agreements, workers pay for their cost of their certification so some of this cost could shift to individuals.

Private Individuals:

If every new operator chose to become an apprentice prior to full certification, the total increase in costs to private individuals would be approximately \$12,000 annually. However, becoming an apprentice is not a requirement for certification. Applicants can still gain experience first. Since this is an optional step, DENR estimates that half of all new operators will seek the apprentice certification. Total cost for certification would be approximately \$6,000. This is a cost shift from local governments who would have paid for an individual's certification.

However, local facilities would have to hire from available candidates. If there are no certified apprentice applicants, they would have to hire uncertified operators and go the route of experience prior to certification. Given the demand for workers, it is unlikely that facilities could demand that employees have the apprentice certification before employment. Rather, certification is an indication of an individual's ability to be successful and dedicated to a career in waterworks.

The second cost to these individuals would be the cost of the training school. Cost varies by the specific class taken, but range from \$110 to \$235. The major board approved schools are conducted by the North Carolina American WaterWorks Association (NCAWWA) and North Carolina Waterworks Operators Association (NCWOA). C-Distribution schools cost \$195 for members of NCAWWA and nonmembers pay \$225 if they register early. Late registration fee is \$235. The cost of D-Distribution is \$130 for members of NCAWWA and \$145 for non-members. Late registration fee is \$155.00. The cost of C-Surface and C-Well schools for members of NCWOA is \$145 and the nonmember rate is \$175. The cost of D-Well is \$110 for members and \$140 for non-members. There is no D-Surface certification.¹

The average number of new operators annually is 239 based on data pulled from the NCWTFOCB database from the year 2000 through year 2010. The board has not noticed any trend in the data and is using an average to reflect past activity. DENR estimates that half of all new operators would seek the apprentice certification. Total cost for certification would be approximately \$6,000. If 120 students pay for the class each year, they would expend between \$13,200 and \$28,200. These costs are shifted from local governments to individuals.

Combined, these shifted costs for the school and certification are roughly \$19,200-\$34,200 annually.

Cost of Proposed Rule Change .0309

State Government:

There is no or negligible additional cost for this proposed rule. The state would expend time to review new requests, which they already do for recertification applicants. We have no reason to anticipate the number of reinstatement applications increasing in the future as a result of these rule changes.

Local Government: No costs

Individual Cost:

Based on data for the last five years, the average number of operators who have requested reinstatement of certifications that have been expired, retired or revoked for more than five years is seven. Applicants for reinstatement would face the additional cost of attending training. School costs range from \$95 to \$200 based on the type of certification school.² Therefore, the cost would most likely be between \$665 and \$1,400.

¹ http://www.ncsafewater.org/wp-content/uploads/2011/06/2011springtrainingcatalog_0404111.pdf;
http://www.ncwoa.com/index.php?option=com_content&task=view&id=26&Itemid=41;

² *Ibid*

III. Benefits

Benefits of Proposed Rule Changes .0201 and .0304

State:

There are presently approximately 2,572 facilities and 5,119 operators in North Carolina. The average number of new operators annually is 239 based on data pulled from the NCWTFOCB database from 2000 through 2010. If every new operator chose to become an apprentice prior to full certification, the total increase in revenue to NCWTFOCB would be approximately \$11,950 annually. However, becoming an apprentice is not a requirement for certification. For this reason, DENR estimates that half of all operators would seek the apprenticeship certification. This would make the state's total increase in income approximately \$6,000.³

Local Governments:

The apprentice certification would benefit facilities because there would be applicants who have already passed the required examination to become certified. This reduces the risk of hiring someone who is unable to become a certified operator. Presently, facilities hire individuals and train them. When the required experience is obtained, the individual takes the certification exam. If the individual does not pass the examination, most facilities require them to pay for taking the exam again themselves. Also, most facilities hire individuals under the condition that they become certified within a specified amount of time. If certification is not obtained the individual is released from employment. Facilities are training people who will never become certified and there is substantive turnover in employees. DENR is unable to quantify this benefit. Local governments also would no longer have to pay for the training school and certification costs for some new workers. This benefit would be up to approximately \$34,200 annually.

Individuals:

Private individuals who would like to work in a water treatment facility would have the opportunity to distinguish themselves from other job candidates by obtaining the apprentice certification. This is no different than a worker investing in a college education or any other career certification.

Benefit of Proposed Rule Change .0309

State:

The state would have greater certainty that individuals who request reinstatement of their certification would have current knowledge of industry practices. DENR is unable to place a monetary value on this benefit.

³ Some community colleges offer water treatment classes. The effect on community colleges will be minimal because the colleges offer very limited courses, perhaps one every two or three years and these classes are offered as part of a degree program, not for certification purposes. In addition, most potential operators will prefer board approved classes offered by the American Water Works Association and Waterworks Operators Associations because they last 3-5 days and not an entire semester.

Local Governments:

Local governments would have greater certainty that hired individuals who request reinstatement of their certification would have current and comprehensive knowledge of industry practices. DENR is unable to place a monetary value on this benefit.

Cost/Benefit Summary

DENR estimates that the net cost of the proposed rule changes is between \$3,265 and \$4,000. The apprentice certification shifts costs for schooling and certification from local governments to private citizens who voluntarily choose to be program participants. These cost shifts do not change the certification costs. The state government would incur slight additional costs for this new certification but would fund this increase in costs through the certification fee. Local governments would have net benefits of about \$28,200 since their training and certification costs would decline. The greatest benefit for local governments would be a reduction in training and employment costs for individuals who are unable to pass the certification exam. Individuals who pursue the apprentice certification or must complete training for recertification would have costs of approximately \$34,865-\$35,600. The following table depicts these impacts.

Additional, un-quantified benefits include skilled water facility operators, increased knowledge and potential job opportunities gained by private individuals.

Estimated Annual Cost and Revenue Changes from Proposed Rule .0201, .0304, and .0309						
	Upgrading Revenue	Cost of Schooling	Cost of Certification	Cost of Upgrading Certification	Cost of reinstatement Training	Net Change
State	\$6,000			-\$2,600		+\$3,400
Local Governments		\$28,200	\$6,000	-\$6,000		\$28,200
Private Individuals		-28,200	-\$6,000		-\$665 to -\$1,400	-\$34,865 to -\$35,600
Total	\$6,000	\$0	\$0	-\$8,600	-\$665 to -\$1,400	-\$3,265 to -\$4,000

Appendix A: Proposed Amendments

15A NCAC 18D .0201 is proposed for amendment as follows:

15A NCAC 18D .0201 GRADES OF CERTIFICATION

(a) Applicants for the various grades of certification shall be at least 18 years old and meet the following educational and experience requirements:

- (1) GRADE A-SURFACE shall have one year acceptable experience at a surface water facility while holding a Grade B-Surface certificate and have satisfactorily completed an A-Surface school conducted by the Board.
- (2) GRADE B-SURFACE shall:
 - (A) Be a college graduate with a bachelor's degree in the physical or natural sciences or be a graduate of a two year technical program with a diploma in water and wastewater technology, have six months of acceptable experience at a surface water facility, and have satisfactorily completed an B-Surface school conducted by the Board, or
 - (B) Have one year of acceptable experience at a surface water facility while holding a Grade C-Surface certificate and have satisfactorily completed a B-Surface school conducted by the Board.
- (3) GRADE C-SURFACE shall:
 - (A) Be a college graduate with a bachelor's degree in the physical or natural sciences or be a graduate of a two year technical program with a diploma in water and wastewater technology, have six months of acceptable experience at a surface water facility, and have satisfactorily completed an C-Surface school conducted by the Board, or
 - (B) Be a high school graduate or equivalent, have six months acceptable experience at a surface water facility and have satisfactorily completed a C-Surface school conducted by the Board.
- (4) GRADE A-WELL shall have one year of acceptable experience at a well water facility while holding a Grade B-Well certificate and have satisfactorily completed an A-Well school conducted by the Board.
- (5) GRADE B-WELL shall:
 - (A) Be a college graduate with a bachelor's degree in the physical or natural sciences or be a graduate of a two year technical program with a diploma in water and wastewater technology, have six months of acceptable experience at a well water facility, and have satisfactorily completed an B-Well school conducted by the Board, or

- (B) Have one year of acceptable experience at a well water facility while holding a Grade C-Well certificate and have satisfactorily completed a B-Well school conducted by the Board.
- (6) GRADE C-WELL shall:
- (A) Be a college graduate with a bachelor's degree in the physical or natural sciences or be a graduate of a two year technical program with a diploma in water and wastewater technology, have three months of acceptable experience at a well water facility, and have satisfactorily completed an C-Well school conducted by the Board, or
 - (B) Be a high school graduate or equivalent, have six months of acceptable experience at a well water facility, and have satisfactorily completed a C-Well school conducted by the Board, or
 - (C) Hold a Grade A-Surface certification and have satisfactorily completed a C-Well school conducted by the Board.
- (7) GRADE D-WELL shall be a high school graduate or equivalent, have three months of acceptable experience at a well water facility, and have satisfactorily completed a C-Well or D-Well school conducted by the Board.
- (8) GRADE A-DISTRIBUTION shall have one year of acceptable experience at Class B or higher distribution system while holding a Grade B-Distribution certificate and have satisfactorily completed an A-Distribution school conducted by the Board.
- (9) GRADE B-DISTRIBUTION shall:
- (A) Be a college graduate with a bachelor's degree in the physical or natural sciences or be a graduate of a two year technical program with a diploma in water and wastewater technology, have six months of acceptable experience at a Class B or higher distribution system, have satisfactorily completed an B-Distribution school conducted by the Board, and shall hold a certificate of completion of trench shoring training conducted by the Board; or
 - (B) Have one year of acceptable experience at a Class C or higher distribution system while holding a Grade C-Distribution certificate and have satisfactorily completed a B-Distribution school conducted by the Board.
- (10) GRADE C-DISTRIBUTION shall hold a certificate of completion of trench shoring training conducted by the Board and shall:
- (A) Be a college graduate with a bachelor's degree in the physical or natural sciences, or be a graduate of a two year technical program with a diploma in water and wastewater technology, have three months of acceptable experience at a Class C or higher distribution system, and have satisfactorily completed an C-Distribution school conducted by the Board, or

- (B) Be a high school graduate or equivalent, have six months of acceptable experience at a Class D or higher distribution system and have satisfactorily completed a C-Distribution school conducted by the Board.
- (11) GRADE D-DISTRIBUTION shall be a high school graduate or equivalent, have three months of acceptable experience at a distribution system, and have satisfactorily completed a D-Distribution school conducted by the Board.
- (12) GRADE CROSS-CONNECTION-CONTROL shall:
- (A) Be a college graduate with a bachelor's degree in the physical or natural sciences or be a graduate of a two-year technical program with a degree in water and wastewater or civil engineering technology, and have satisfactorily completed a cross connection control school conducted by the Board, or
- (B) Be a high school graduate or equivalent, have six months of acceptable experience at Class D -Distribution or higher system or have one year experience in the operations of cross connection control devices, and have satisfactorily completed a cross connection control school conducted by the Board, or
- (C) Be a plumbing contractor licensed by the State of North Carolina and have satisfactorily completed a cross connection control school conducted by the Board.
- (13) APPRENTICE shall at a minimum be a high school graduate or equivalent. The apprentice shall have satisfactorily completed a Grade C or Grade D school conducted by the Board and shall have successfully passed an examination designed for the class of certification for which the applicant is applying. The apprentice certification may be renewed annually for a maximum of five years, pursuant to the continuing education and renewal requirements of this Subchapter. An apprentice shall not act as a certified operator or an ORC for a facility. An apprentice is eligible for Grade C, D, or CC certification after meeting the applicable experience requirements as set forth in this Rule and making application to the Board.

(b) Applications for certification of an operator certified in a state other than North Carolina shall be submitted on the Board's form. The application shall supply information to assist the Board in determining whether or not the requirements under which the out-of-state certification was obtained are equal to those required by the rules of the Water Treatment Facility Operators Board of Certification

History Note: Authority G.S. 90A-21(c); 90A-22; 90A-23; 90A-24;
 Eff. February 1, 1976;
 Amended Eff. September 1, 1977;
 Readopted Eff. March 1, 1979;
 Amended Eff. May 1, 2006; September 1, 2004; August 1, 2000; August 1, 1998; May 3, 1993; August 3, 1992; July 1, 1991; December 31, 1980.

Amended effective December 1, 2011

15A NCAC 18D is proposed for amendment as follows:

15A NCAC 18D .0304 FEE SCHEDULE

- (a) The cost of examination and certification shall be fifty dollars (\$50.00). The cost of upgrading an apprentice to Grade C, D, or CC certification shall be fifty dollars (\$50.00).
- (b) The cost of a temporary certificate shall be fifty dollars (\$50.00).
- (c) The examination and certification fee must be paid to the Board when the application is submitted.
- (d) The cost of the annual certification renewal shall be thirty dollars (\$30.00). Renewal fees shall be due December 31 of each calendar year and shall be delinquent on the first day of February. Delinquent certifications shall be charged an additional fee of thirty dollars (\$30.00).
- (e) The operator shall notify the Board, in writing, within 30 days of any change in his/her address.

History Note: Authority G.S. 90A-27;

Eff. February 1, 1976;

Amended Eff. July 1, 1977;

Readopted Eff. March 1, 1979;

*Amended Eff. September 22, 2004; August 1, 2000; August 3, 1992;
December 1, 1990; December 1, 1989; June 30, 1981.*

Amended effective December 1, 2011

15A NCAC 18D .0309 is proposed for amendment as follows:

15A NCAC 18D .0309 CERTIFICATION REINSTATEMENT

(a) An operator whose certification has expired may seek reinstatement within two years of expiration by paying any renewal fees in arrears, including late fees and either providing proof of continuing education for each calendar year as required in Rule .0308 of this Section, or passing another examination of that grade.

(b) Any person having a certification expired for more than two years or revoked shall apply to the Board for approval to be eligible for any further certification or reinstatement of certificate.

(c) In addition to other conditions it may require for certification reinstatement, the Board shall require a person to first satisfactorily complete the appropriate school conducted by the NCWTFOCB if his certificate has been expired, retired, or revoked for more than five years from the date of consideration of the request by the Board. Satisfactory completion of said school is in addition to any original school that was completed for the original certification.

History Note: Authority G.S. 90A-25.1; 90A-26;

Eff. August 1, 1998;

Amended Eff. May 1, 2006; August 1, 2004; August 1, 2000.

Amended effective December 1, 2011