

**NORTH CAROLINA
ANNUAL
EPA CERTIFICATION
PROGRAM REPORT**

May 2016

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

North Carolina Water Treatment Facility Operators Certification Program

Annual Report to EPA
May 2015 to May 2016

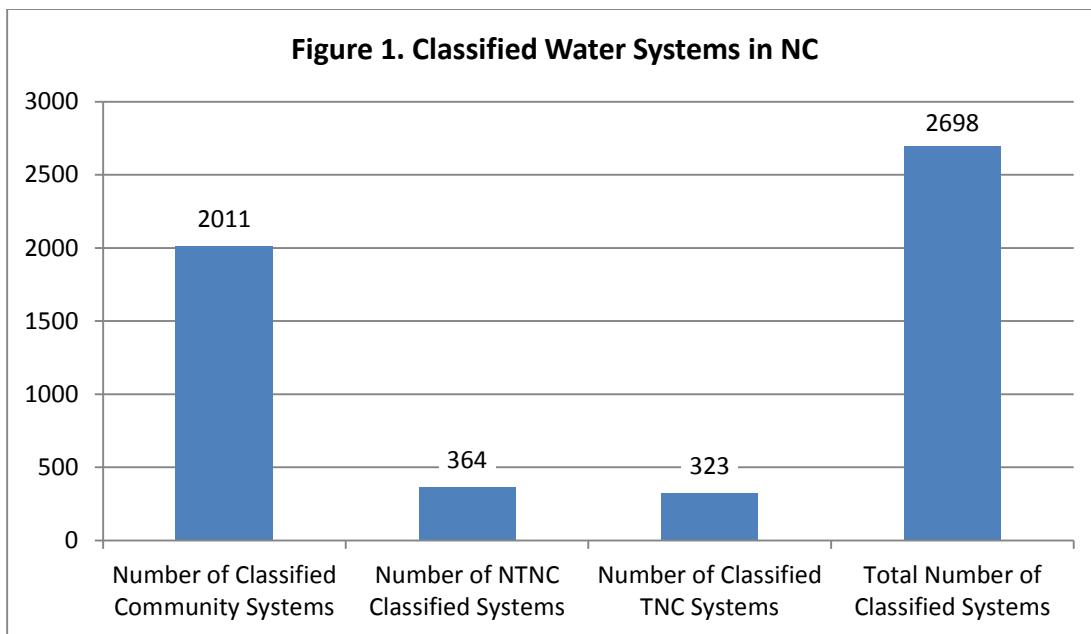
This report outlines the Environmental Protection Agency's (EPA) nine baseline standards for state operator certification programs. It describes in detail the status of the North Carolina Operators Certification Program as related to these standards.

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 facilities that treat and provide water for public consumption. The N.C. Water Treatment Facility Operators Certification Board (NCWTFOCB) has rule-making authority in our state. The *Rules Governing Water Treatment Facility Operators* are currently included as part of a Division-wide comprehensive rules-review and revision process that was initiated during the current reporting cycle. All sections of 15A NCAC 18D were evaluated for the need to reopen and or revise rule language. During this reporting period there was a required public comment period and rules will undergo further evaluation and revision subsequent to a State Rules Revision Commission determination in late May 2015.

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 2011 community water systems and 364 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, North Carolina has 323 classified transient non-community (TNC) systems that require a certified operator. TNC systems in North Carolina are classified for certification purposes if the facility provides disinfection other than ultraviolet treatment.



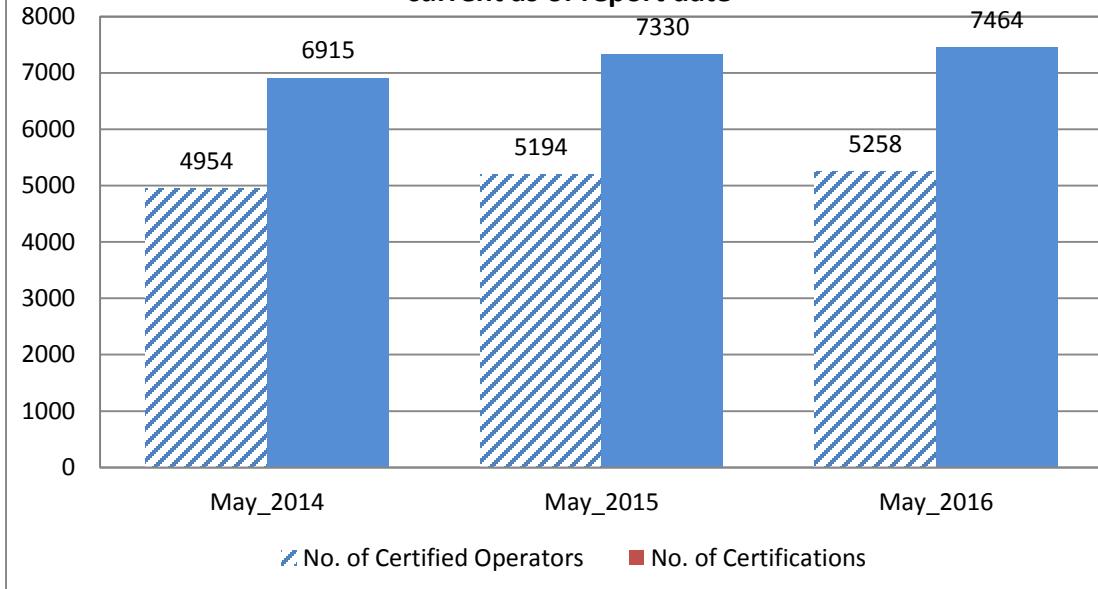
The state's ORC information is received and maintained by the Operators Certification Program. Operators are required to inform the NCWTFOCB whenever ORC designations are changed (15A NCAC 18D .0701 (e)). In addition, during the annual certification renewal period, certified operators must submit a form 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 ORC. Each ORC must hold a certification that is equal to or greater than the classification of the facility under its 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 68 public water systems that received notification letters requiring information to confirm ORC qualifications.

At the time of this report, there are 5258 certified operators holding 7464 certifications in North Carolina. Figure 2 (below) displays a three-year data trend. Current year statistics reflect a 1.2% increase in the state's population of certified operators as compared to the previous reporting cycle. The number of licensed operators over the three-year period appears stable and sufficient to meet demand.

**Figure 2. Number of Operators and Certifications in NC,
current as of report date**



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. Requests for temporary certifications are rare. During this reporting period, the NCWTFOCB did not issue any temporary certifications.

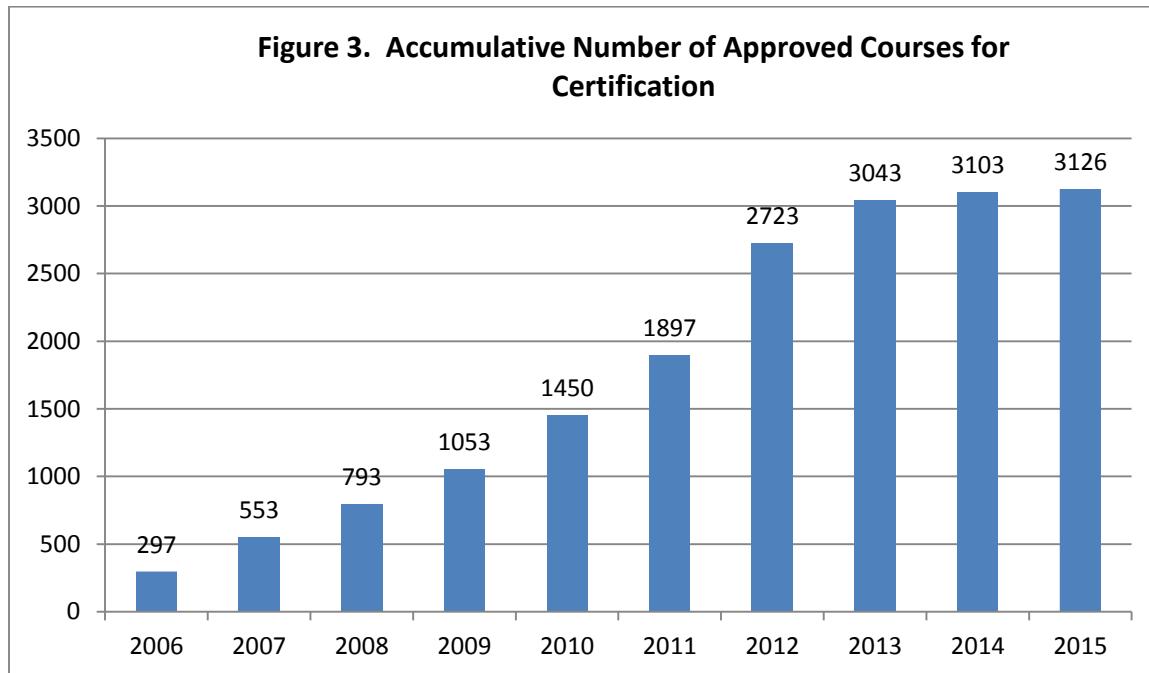
3. Operator Qualifications

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, offering convenience and immediate results to the operators. Should any examinees 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. North Carolina has an option to allow applicants to become certified apprentices in Level C, D, or Cross Connect without experience if they successfully 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, 3,064 courses have been pre-approved as shown in Figure 3. Also, 375 trainers have been approved and seven organizations have been approved as training sponsors.



4. Enforcement

The NCWTFOCB approved action to expire the certifications of 613 operators during the current reporting period. There were 323 operator certifications expired for failure to obtain the required six contact hours of professional growth, and 290 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 44 notices of violation and 12 administrative penalties issued this period for failure to retain a properly certified operator (Table 1).

Table 1

NOV/AO Issued to Facilities		
Facility ID #	Facility Name	Date NOV Issued
3079008	OAK LEVEL BAPTIST ACADEMY	8/10/2015
0332106	WHISPERING PINES MHP	8/10/2015
0112569	LINVILLE FALLS	8/10/2015
0106481	LINVILLE FALLS CAMPGROUND	8/10/2015
7071022	HAMPSTEAD PINES	8/10/2015
0106512	SHOPS OF TYMNCastle	8/10/2015
0111151	NORTHVIEW MHP	8/10/2015
4068022	OUR PLAYHOUSE PRESCHOOL	8/10/2015
0416191	BIG RIDGE MHP	8/10/2015
0217101	CAROLINA MANOR MHP	8/10/2015
0363124	CIRCLE H MHP	8/10/2015
0118129	CONOVER MHP	8/10/2015
0276035	FRANKLINVILLE, TOWN OF	8/10/2015
0180115	GADDY MHP	8/10/2015
0136227	HOLLY FAYE MHP	7/22/2015
0118467	LAKE HICKORY RV RESORT	8/10/2015
0291514	LITTLE TROOPERS CHILD DEVELOP	8/10/2015
0111170	MOUNTAIN VIEW MHP	8/10/2015
0161010	SPRUCE PINE, TOWN OF	8/10/2015
0239472	NATIONAL GUARD CAMP BUTNER	8/10/2015
7071018	CASTLE BAY S/D	8/10/2015
0235010	TOWN OF FRANKLINTON	8/10/2015
0235010	TOWN OF FRANKLINTON	8/10/2015
0474140	THOMAS MOBILE PARK NO 2	8/10/2015
0474142	THOMAS MOBILE PARK NO 3	8/10/2015
0197050	TOWN OF RONDA	10/6/2015
0286175	ORCHARD VIEW PARK	10/6/2015
3041099	SUMMERFIELD CHARTER ACADEMY	10/6/2015
0428015	TOWN OF KILL DEVIL HILLS	10/6/2015

0235521	KIDS ZONE DAYCARE	1/11/2016
0452010	TOWN OF MAYSVILLE	1/11/2016
273104	FLAT RIVER MOBILE HOME COMMUNITY	11/9/2015
0201600	ACE SPEEDWAY	4/12/2016
3041084	BANK OF OAK RIDGE OPERATIONS CENTER	4/12/2016
0157155	EL SHADDAI	4/12/2016
0105015	JEFFERSON, TOWN OF	4/12/2016
3041085	KENSINGTON PLACE S/D	4/12/2016
0326428	MACEDONIA BAPTIST CHURCH	4/12/2016
0368443	MT HERMON BAPTIST CHURCH	4/12/2016
3041060	RACHEL'S LANDING	4/12/2016
3041015	SPENCER'S GROVE S/D	4/12/2016
3041022	WEATHERSTONE @OLD FOREST S/D	4/12/2016
0111127	WIND SHADOWS CIRCLE MHP	4/12/2016
0160409	LARKHAVEN GOLF CLUB	4/12/2016

Administrative Penalties Issued to Facilities

Facility ID #	Facility Name	Date Penalty Issued
0332106	WHISPERING PINES MHP	2/5/2016
0111151	NORTHVIEW MHP	2/5/2016
4068022	OUR PLAYHOUSE PRESCHOOL	2/5/2016
0416191	BIG RIDGE MHP	2/5/2016
0363124	CIRCLE H MHP	2/5/2016
0118129	CONOVER MHP	2/5/2016
0180115	GADDY MHP	2/5/2016
0291514	LITTLE TROOPERS CHILD DEVELOP	2/5/2016
0111170	MOUNTAIN VIEW MHP	2/5/2016
0161010	SPRUCE PINE, TOWN OF	2/5/2016
0286175	ORCHARD VIEW PARK	2/5/2016
3041099	SUMMERFIELD CHARTER ACADEMY	2/5/2016

A data link exists between the PWS Section's Safe Drinking Water Information System (SDWIS) and the Operators Certification Program 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 twelve class audits during the current reporting period. 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 identification of outdated information printed on course materials.

5. Certification Renewal

For license 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, and the N.C. Community College System, as well as private training providers.

Professional growth courses accepted for certification renewal must have the approval of the NCWTFBCB. 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 an “approved sponsor.” Any organization wishing to receive preapproval for courses or to obtain sponsorship status must submit a formal application and sign an agreement to comply with NCWTFBCB 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 the state’s training providers, 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 may be transferred to the General Assembly.

Table 2. Historical financial data (in dollars)

Financial Indicator:	FY2011	FY2012	FY2013	FY2014	FY2015
Projected Budgetary Needs	291,655	303,226	306,458	306,458	310,144
Actual Expenses	263,059	286,984	282,963	250,609	265,080
Actual Fee Receipts	291,175	292,570	292,300	297,660	301,570

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 Steve Scruggs conducted the internal audit in April of 2016. Each activity of the program was reviewed, and the results will be presented to the Board at the June 2016 meeting. A copy of the Board's 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, commonly referred to as *Needs to Know*. The *Needs to Know* is an outline of topics required for each level of certification and includes references cited 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. 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 continued to offer review sessions for operators that provides them the opportunity to review their individual examinations and ask questions.

9. Implementation Schedule Update

The North Carolina Operators Certification Program has recently identified and initiated programmatic changes that will result in greater efficiencies and expanded services to the state's community of operators. The following changes and/or improvements are in process and will be implemented throughout the current year:

1. In 2013, a consolidation of the Divisions of Water Quality and Water Resources resulted in creation of a new organizational unit which combined 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 reorganized Operators Certification Program employs a full time staff of seven and manages professional certifications for nearly 16,000 operators in the state.

2. In accordance with a legislative directive, the *Rules Governing Water Treatment Facility Operators* (15A NCAC 18D), will be examined to identify candidates for rule revision and re-adoption. There is an opportunity for clarification as well as insertion of new rule language to better serve the state's certified operators. The Board has already approved and submitted a rule-classification report to the N.C. Rules Review Commission (RRC). The RRC granted a 3-year time period for completion of rules revisions, which closes on November 30, 2018. Staff has begun the process of revisions and will include stakeholders in the process.

3. The area of IT initiatives and solutions continues to provide opportunities for program improvements. Such improvements are consistent with the Division's mandate to implement program efficiencies. In 2016, the program will continue to pursue the following:

(a) Improve the mechanism to accept electronic fee payments:

In 2015, an online electronic payment system was developed and successfully implemented for the annual operator renewal cycle in November. Approximately 14% of the certified operators utilized this option. In addition to providing options to the operators, electronic payments helped achieve program efficiencies by reducing the volume of paper associated with mailed invoices and traditional checks. In 2016, plans to expand the electronic payment program include exam fee payments and multiple payments by municipal and organizational users, as well as the capacity to automatically upload electronic payment info directly to the operator database. These features will provide additional customer services and further enhance efficiencies in data management.

(b) Enhance development of a "portal" for operator access to personal information in database:

A web-based portal was developed to allow operators to log in and verify changes to their personal data, as well as access to professional growth data, information regarding certifications held and payments received by the program. The portal also allows access to the electronic payment site discussed in item (a) above. The operator portal is now fully operational and has been well-received by the regulated community.

(c) Initiate “on demand” examinations:

Operators frequently inquire about the possibility of taking an examination outside the times of the program’s published schedule. In 2015, space was secured and renovations were completed in 2016 on a training room and computer-based testing facility primarily intended for operator certification program utilization. The program anticipates the ability to administer exams on demand before the end of 2016. A scheduling system and procedures for effective utilization of the training room are being developed at present.

(d) Develop single database for operator certification program:

The 2013 consolidation of the drinking water and wastewater operator certification programs was intended to prompt a move toward efficiencies within the program and to provide for more consistency in program elements. One area that can greatly benefit in that regard is in data management. Currently, both programs maintain separate databases (DW-IBeam; WW/AW – BIMS). A project has been proposed to consolidate all operator certification data and a new database will be developed and maintained. The new database will allow opportunities for automation, thus making the program business processes more efficient. The project is slated for initiation in Fall 2016.

4. The WFOCB adopted as policy, a measure to allow veterans to apply for drinking water certifications utilizing the experience gained in the service. The policy accepts the appropriate military training in lieu of the requirement to attend a training school for the certification that is sought and will facilitate entry of veterans into the certified operator community.